



SHEET INDEX

- A0.0 COVER SHEET
- A0.1 GENERAL NOTES
- A0.2 ENERGY COMPLIANCE

- 1 OF 1 SITE SURVEY

- C1.0 DEMO AND TESC PLAN
- C2.0 SITE PLAN
- C3.0 UTILITY PLAN
- C3.1 NOTES AND DETAILS

- A1.0 TREE SITE PLAN
- A1.1 SITE PLAN

- A2.0a DEMO PLAN - MAIN
- A2.0b DEMO PLAN - MAIN
- A2.1a FLOOR PLAN - MAIN
- A2.1c OUTDOOR PATIO PLAN
- A2.2 FLOOR PLAN - UPPER
- A2.3a ROOF PLAN
- A2.3b ROOF PLAN

- A3.0 EXTERIOR ELEVATIONS
- A3.1 EXTERIOR ELEVATIONS
- A3.2 EXTERIOR ELEVATIONS
- A3.3 EXTERIOR ELEVATIONS

- A4.0 BUILDING SECTIONS
- A4.1 BUILDING SECTIONS
- A4.2 BUILDING SECTIONS
- A4.3 BUILDING SECTIONS

- A5.0 ARCHITECTURAL DETAILS
- A6.0 DOOR & WINDOW SCHEDULES

- S-0.0 STRUCTURAL NOTES
- S-0.1A PIPE PILE PLAN
- S-0.1B PIPE PILE PLAN
- S-1.0A FOUNDATION PLAN
- S-1.0B FOUNDATION PLAN
- S-1.1A MAIN FLOOR FRAMING PLAN
- S-1.1B MAIN FLOOR FRAMING PLAN
- S-2.0A UPPER FLOOR FRAMING
- S-2.0B UPPER FLOOR FRAMING
- S-3.0A ROOF FRAMING PLAN
- S-3.0B ROOF FRAMING PLAN
- S-4.0 PARTIAL PLANS

- SD-1 STRUCTURAL DETAILS
- SD-2 STRUCTURAL DETAILS
- SD-3 STRUCTURAL DETAILS
- SD-4 STRUCTURAL DETAILS
- SD.01 FOUNDATION DETAILS
- SD.01 FOUNDATION DETAILS

PROJECT DATA

PARCEL #: 866140-0040

SITE ADDRESS: 5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040

OWNER: ROGER & NANCY MACPHERSON

DESIGNER & BUILDER: MACPHERSON CONSTRUCTION & DESIGN, LLC
CONTACT: ROGER MACPHERSON
21626 SE 28TH STREET,
SAMMAMISH, WA 98075-7125
P: (425) 391-3333
F: (425) 557-2841

CIVIL ENGINEER: ETHOS CIVIL, LLC
CONTACT: ANDY EPSTEIN, P.E.
1901 65TH AVE W SUITE 250
TACOMA, WA 98466
P: (253) 414-1989

STRUCTURAL ENGINEER: MULHERN & KULP
RESIDENTIAL STRUCTURAL ENGINEERING
CONTACT: NICK J. MARTIGNETTI, PE, SE
7220 TRADE STREET, SUITE 350
SAN DIEGO, CA 92121
P: (619) 650-0010 x166

GEOTECH ENGINEER: COBALT GEOSCIENCES, LLC
CONTACT: PHIL HABERMAN, PE, LG, LEG
P: (206) 331-1097

JURISDICTION/CODES

LEAD AGENCY: CITY OF MERCER ISLAND
DEVELOPMENT SERVICES - BUILDING & PLANNING
9611 SE 36th ST, MERCER ISLAND, WA 98040
PH: 206.275.7605

BUILDING CODE: 2021 (IRC)
MERCER ISLAND MUNICIPAL CODE - CH. 19

ENERGY CODE: 2021 WASHINGTON STATE ENERGY CODE (WSEC)

CLIMATE ZONE: MARINE 4 (KING COUNTY)

SEISMIC DESIGN CATEGORY: D

BASIC WIND SPEED: 110 MPH

MINIMUM SNOW LOAD: 25 LB/SF

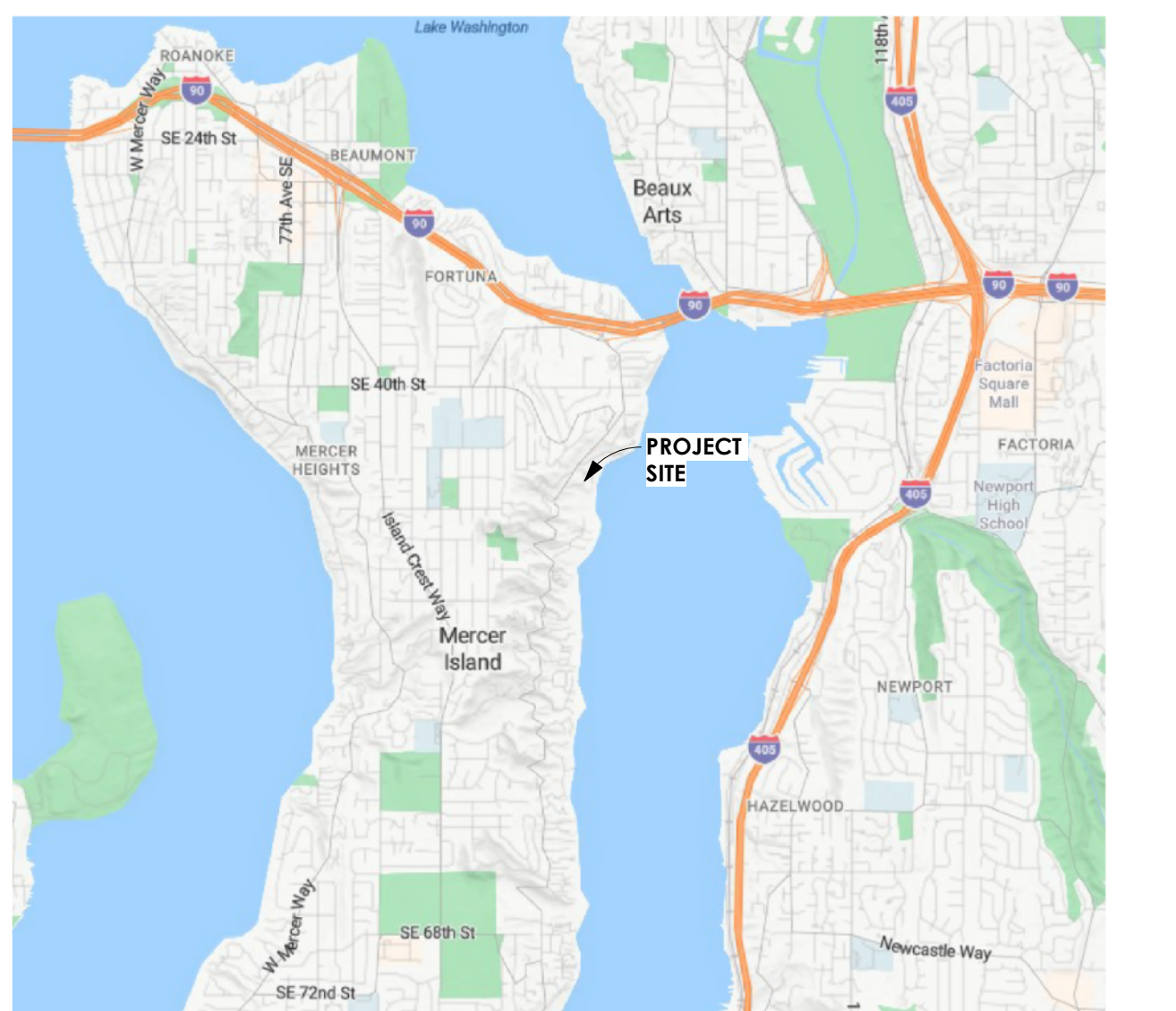
PROJECT INFO.

DESCRIPTION: PARTIAL DEMOLITION OF AN EXISTING 2-STORY HOUSE. REMODEL OF EXISTING HOUSE, NEW MECHANICAL SYSTEMS, NEW ELECTRICAL, PLUMBING AS NECESSARY FOR REMODEL SCOPE.

REFER TO SITE PLAN A1.0 FOR FLOOR AREA CALCS.

SEPARATE TI PERMITS TO BE OBTAINED FOR ANY MODIFICATION TO THE FIRE ALARM SYSTEM AND/OR FIRE SPRINKLER SYSTEM.

VICINITY MAP



ENERGY REQ'S:

NEW CONDITIONED AREAS: SEE ENERGY COMPLIANCE CALCS ON SHEET A0.2

EXISTING CONDITIONED AREAS: IF EXISTING CAVITIES ARE EXPOSED, THE FOLLOWING INSULATION IS REQUIRED.

WALLS R-21 (2x6 WALLS)
R-15 (2x4 WALLS)

FLOORS R-30
FULL DEPTH + 1" AIR GAP (VAULTED)

ROOFS/CEILINGS R-49 (FLAT)

WINDOWS AND DOORS U-FACTOR ≤ 0.30

HVAC SYSTEMS (IF REPLACED) SYSTEM MUST MEET CURRENT ENERGY CODE REQ'S AND DUCTS TESTED (R403)

HOT WATER SYSTEM NEW WATER HEATING EQUIPMENT MUST MEET CURRENT ENERGY CODE REQ'S (R403.5)

LIGHT FIXTURES 90% OF ALL LAMPS MUST BE HIGH EFFICACY (R404.1)

SCALE THIS DRAWING, IN FEET



MacPherson
Construction & Design
22605 SE 56th St Suite 140, Issaquah, WA 98029
PH. 425.391.3333 FAX 425.557.2841

MACPHERSON RESIDENCE
5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 866140-0040
COVER SHEET

DATE	REV.	BY	DESCRIPTION	SHEET NUMBER
4/1/25		DAN	PERMIT SUBMITTAL	A0.0
	△			
	△			
	△			
	△			

ABBREVIATIONS

&	AND	KIT	KITCHEN
@	ANGLE	LAM	LAMINATE
~	AT	LAV	LAVATORY
⊕	CENTERLINE	LF	LINEAR FEET
∅	DIAMETER	LT	LIGHT
⊥	PERPENDICULAR	MNFR	MANUFACTURER
#	POUND OR NUMBER	MATL	MATERIAL
(E)	EXISTING	MAX	MAXIMUM
ADD.	ADDITIONAL	MECH	MECHANICAL
A.D	AREA DRAIN	MEMB	MEMBRANE
ADJ	ADJUSTABLE/ADJACENT	MTL	METAL
ALUM	ALUMINUM	MIN	MINIMUM
APPROX	APPROXIMATE	MIR	MIRROR
ARCH	ARCHITECTURAL	MISC	MISCELLANEOUS
ASPH	ASPHALT	MO	MASONRY OPENING
AB	ANCHOR BOLT	MTD	MOUNTED
ALT	ALTERNATE	MUL	MULLION
BD	BOARD	N	NORTH
BLDG	BUILDING	NO	NUMBER
BKLG	BLOCKING	NOM	NOMINAL
BM	BEAM	NTS	NOT TO SCALE
BOT	BOTTOM	OH	OVERHEAD
BOW	BOTTOM OF WALL	OA	OVERALL
BSMT	BASEMENT	OBS	OBSCURE
CAB	CABINET	OC	ON CENTER
CB	CATCH BASIN	OPNG	OPENING
CEM	CEMENT	OPPF	OPPOSITE
CER	CERAMIC	PL	PLATE
CJ	CONSTRUCTION JOINT	PLAS	PLASTER
CL	CEILING	PLYWD	PLYWOOD
CLR	CLOSET	PR	PAIR
COL	CLEAR	PT	PAINT
COLUMN	COLUMN	PVMT	PAVEMENT
CONC	CONCRETE	PROJ	PROJECTOR, PROJECTION
CONN	CONNECTION	QT	QUARRY TILE
CT	CERAMIC TILE	RE	REFER TO
CTR	CENTER	R	RISER OR RADIUS
CMU	CONCRETE MASONRY UNIT	RD	ROOF DRAIN
DBL	DOUBLE	REF	REFRIGERATOR
DEPT	DEPARTMENT	REIN	REINFORCED
DFT	DETAIL	REQD	REQUIRED
DIA	DIAMETER	RM	ROOM
DIM	DIMENSION	RO	ROUGH OPENING
DN	DOWN	REV	REVISED OR REVISION
DR	DOOR	S	SOUTH
DRG	DRAWING	SC	SOLID CORE
DWG	DRAWING	SCHED	SCHEDULE
EA	EAST	SF	SQUARE FEET
EJ	EACH	SD	SMOKE DETECTOR
ELEC	EXPANSION JOINT	SECT	SECTION
ENCL	ELECTRICAL	SH	SHIELF
ENLV	ELEVATOR/ELEVATION	SHWR	SHOWER
EQ	EQUAL	SHT	SHEET
EQUIP	EQUIPMENT	SIM	SIMILAR
(E)	EXISTING	SPEC	SPECIFICATION
EXP	EXPANSION	SQ	SQUARE
EXT	EXTERIOR	SST	STAINLESS STEEL
FA	FIRE ALARM	SS	SERVICE SINK
FD	FLOOR DRAIN	STD	STANDARD
FNDN	FOUNDATION	STL	STEEL
FIN	FINISH	STOR	STORAGE
FLR	FLOOR	STRUCT	STRUCTURE OR STRUCTURAL
FLASH	FLASHING	SUSP	SUSPENDED
FOC	FACE OF CONCRETE	SYM	SYMMETRICAL
FOF	FACE OF FINISH	T	TREAD
FOS	FACE OF STUDS	TEL	TELEPHONE
FT	FOOT OR FEET	TER	TERRAZZO
FTG	FOOTING	T&G	TONGUE & GROOVE
FURR	FURRING	TO	TOP OF
GA	GAUGE	TOW	TOP OF WALL
GALV	GALVANIZED	TV	TELEVISION
GL	GLASS	TYP	TYPICAL
GND	GROUND	UNF	UNFINISHED
GR	GRADE	UNO	UNLESS NOTED OTHERWISE
GWB	GYPNUM WALL BOARD	VEST	VESTIBULE
GLU-LAM	GLUE LAMINATED	W	WITH
GSF	GROSS SQUARE FEET	WC	WALLCOVERING
HB	HOSE BIBB	WD	WOOD
HC	HOLLOW CORE	W/O	WITHOUT
HDWD	HARDWOOD	WP	WATERPROOF
HDW	HOLLOW METAL	WSCT	WAINSCOT
HM	HORIZONTAL	WT	WEIGHT
HORIZ	HORIZONTAL	W/D	WASHER/DRYER
HT	HEIGHT	W/H	WATER HEATER
HVAC	HEATING, VENTILATION & AIR CONDITIONING		
ID	INSIDE DIAMETER		
INSUL	INSULATION		
INT	INTERIOR		
JT	JOINT		

GENERAL NOTES

GENERAL:

THESE DRAWINGS ARE THE PROPERTY OF MacPherson Construction & Design AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF MacPherson Construction & Design. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF MacPherson Construction & Design. THESE DRAWINGS ARE FULLY PROTECTED BY FEDERAL AND STATE COPYRIGHT LAWS.

CODES:
ALL CONSTRUCTION SHALL CONFORM TO THE LATEST ADOPTED VERSION OF THE INTERNATIONAL RESIDENTIAL CODE (IRC) AS AMENDED BY THE STATE OF WASHINGTON AND ALSO IN ACCORDANCE WITH ALL WASHINGTON STATE LAWS, REGULATIONS AND VARIOUS CODES IMPOSED BY LOCAL AUTHORITIES. ENERGY CODE REQUIREMENTS SHALL CONFORM TO THE LATEST ADOPTED VERSION OF THE WASHINGTON STATE ENERGY CODE (WSEC).

DO NOT SCALE DRAWINGS OR DETAILS - USE DIMENSIONS SHOWN.
• DIMENSIONS SHOWN ON THE PLANS ARE TO FACE OF FRAMING OR CONCRETE, OR TO THE CENTERLINE OF COLUMNS UNLESS NOTED OTHERWISE.
• CHECK DETAILS FOR LOCATION OF ALL ITEMS NOT DIMENSIONED ON THE PLANS.
• DOORS AND CASED OPENINGS WITHOUT DIMENSIONS ARE TO BE 4 1/2" FROM FACE OF ADJACENT WALL OR CENTERED BETWEEN WALLS, UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH THE WORK. ANY CONFLICTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT. VERIFY FIELD CONDITIONS PRIOR TO COMMENCEMENT OF EACH PORTION OF THE WORK.

THE CONTRACTOR SHALL COORDINATE THE LOCATION OF MECHANICAL WORK, ELECTRICAL WORK, AND OTHER SUBCONTRACTOR WORK TO ENSURE COMPLIANCE WITH THE DRAWINGS, SPECIFICATIONS AND ALL CODES. CONTACT THE ARCHITECT FOR RESOLUTION OF ALL DISCREPANCIES PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL COORDINATE FRAMING LAYOUT WITH MECHANICAL, PLUMBING AND ELECTRICAL SUB-CONTRACTORS.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND STRUCTURAL MEMBER SIZES PRIOR TO CONSTRUCTION. INFORM THE ARCHITECT OF ANY DISCREPANCIES IN THE DRAWINGS OR INCONSISTENCIES WITH THE CODES PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL COORDINATE ALL CHANGES WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO FABRICATION OR CONSTRUCTION.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

ALL STRUCTURAL SYSTEMS SUCH AS WOOD TRUSSES WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERCTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

ATTICS:

• ACCESS: PROVIDE READILY ACCESSIBLE ATTIC ACCESS, MINIMUM 22" X 30" WITH MINIMUM 30" UNOBSTRUCTED HEADROOM IN ATTIC. IRC R807.1.
• DRAFT STOPS: INSTALL WHERE REQUIRED, PER IRC R302.12.

• VENTILATION: PROVIDE ATTIC VENTILATION USING CONTINUOUS RIDGE VENT AND VENTED BIRDBLOCKING, TYPICAL. AT CLOSED SOFFITS PROVIDE CONTINUOUS 21/4" VENT SLOT. (SEE DETAIL) THE NET FREE VENTILATING AREA SHALL BE NOT LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED, EXCEPT THAT THE AREA MAY BE 1/300, PROVIDED AT LEAST 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVES OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVES OR CORNICE VENTS. IRC R806.

SEE INSULATION REQUIREMENTS FOR ROOFS IN THE ENERGY SECTION.

BATHROOMS:

ALL TUB AND SHOWER STALLS SHALL HAVE FIREBLOCKING BETWEEN STUDS.

HINGED SHOWER DOORS SHALL OPEN OUTWARD.

ALL GLAZING USED FOR DOORS OR ENCLOSURES IN BATHROOMS SHALL BE SAFETY GLAZING. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING A SHOWER OR BATHTUB WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 60 INCHES ABOVE THE STANDING SURFACE AND DRAIN INLET SHALL BE SAFETY GLAZING. IRC R308.4.

SHOWER STALL WALLS SHALL BE FINISHED WITH A NONABSORBENT SURFACE TO A MINIMUM OF HEIGHT OF 72 INCHES ABOVE THE FLOOR. IRC R307.2. RUN CEMENT BACKER BOARD TO CEILING, TYPICAL.

WATERCLOSETS SHALL HAVE MIN. 30" CLEAR WIDTH AND MIN. 21" FRONT CLEARANCE. IRC R307.1.

SEE ENERGY SECTION BELOW FOR WATER FLOW REQUIREMENTS.

CEILING HEIGHTS:

HABITABLE SPACE SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-0". NOT MORE THAN 50% OF REQUIRED FLOOR AREA OF A SPACE IS PERMITTED TO HAVE A SLOPED CEILING LESS THAN 7'-0" IN HEIGHT WITH NO PORTION LOWER THAN 5'-0". BATHROOMS SHALL HAVE A MINIMUM CEILING HEIGHT OF 6'-8" OVER AND IN FRONT OF THE FIXTURES. IRC R305.

CLEARING & GRADING (I.T.E.S.C. MEASURES)

ALL CLEARING AND GRADING MUST BE IN ACCORDANCE WITH LOCAL JURISDICTION CLEARING AND GRADING EROSION CONTROL STANDARDS, DEVELOPMENT STANDARDS, LAND USE CODE, PERMIT CONDITIONS, AND ALL OTHER APPLICABLE CODES, ORDINANCES AND STANDARDS. THE DESIGN ELEMENTS WITH THESE PLANS HAVE BEEN REVIEWED TO THESE REQUIREMENTS. ANY VARIANCE FROM THE ADOPTED EROSION CONTROL STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION.

A COPY OF THE APPROVED PLANS MUST BE ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.

ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE WORK.

FINAL SITE DRAINAGE MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT A MINIMUM SLOPE OF 6 INCHES WITHIN THE FIRST 10 FEET. IRC R401.3.

CRAWL SPACES:

• ACCESS: THROUGH FLOOR ACCESS SHALL BE A MINIMUM OF 18 X 24 INCHES. PROVIDE 18" MINIMUM. IRC R408.4.

• FRAMING: ALL WOOD IN CONTACT WITH CONCRETE, CMU OR WITHIN 8" OF SOILS SHALL BE PRESSURE TREATED WOOD IN COMPLIANCE WITH IRC R317.1. ALL METAL FRAMING CONNECTORS AND FASTENERS USED WITH PRESSURE TREATED LUMBER SHALL BE CERTIFIED FOR USE WITH THE TREATED MATERIAL. IRC 317.3.

• VENTILATION: UNDER-FLOOR AREAS SHALL BE VENTILATED BY AN APPROVED MECHANICAL MEANS OR BY OPENINGS THROUGH EXTERIOR FOUNDATION WALLS. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQ. FT. FOR EACH 150 SQ. FT. OF UNDER-FLOOR SPACE AREA. THE REQUIRED AREA OF SUCH OPENINGS SHALL BE APPROXIMATELY EQUALLY DISTRIBUTED ALONG THE LENGTH OF AT LEAST TWO OPPOSITE SIDES. ONE VENTILATING OPENING SHALL BE WITHIN 3 FEET OF EACH CORNER. IRC R408.

• VAPOR BARRIER: MIN. 10 MIL. POLYETHYLENE (OR EQUIVALENT) SHALL BE INSTALLED IN ALL CRAWL SPACES. JOINTS LAPPED 12". EXTEND UP FOUNDATION WALL AND SECURE TO SILL PLATE WHEREVER PRACTICAL.

SEE INSULATION REQUIREMENTS FOR WALLS IN THE ENERGY SECTION.

DECKS & EXTERIOR STAIRWAYS:

WOODEN STRUCTURAL SUPPORTS AND MEMBERS THAT ARE EXPOSED TO WEATHER WITHOUT PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING THAT WOULD PREVENT MOISTURE OR WATER ACCUMULATION ON THE MEMBER SURFACE SHALL BE PRESSURE TREATED OR CEDAR LUMBER. IRC R317.1

ALL METAL FRAMING CONNECTORS AND FASTENERS USED WITH PRESSURE TREATED LUMBER SHALL BE CERTIFIED FOR USE WITH THE TREATED MATERIAL. IRC 317.3.

ENERGY:

ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST ADOPTED VERSION OF THE INTERNATIONAL RESIDENTIAL CODE (IRC) AND THE WASHINGTON STATE ENERGY CODE (WSEC). VERIFY ALL CONDITIONS BEFORE PROCEEDING WITH WORK.

METHOD OF COMPLIANCE - PRESCRIPTIVE METHOD FOR GROUP R OCCUPANCY, CLIMATE ZONE 4C (WSEC) TABLE R301.1

ALL INSULATING MATERIALS, INCLUDING FACING AND VAPOR BARRIERS, SHALL HAVE A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DENSITY RATING NOT TO EXCEED 450.

INSULATION VALUES BELOW PER (WSEC) TABLE R402.1.1. VALUES MAY CHANGE BASED ON PROJECT-SPECIFIC ENERGY CREDIT OPTIONS - REFER TO PLAN NOTES.

• WALLS: (R-20 + 5 CONTINUOUS OR R-13 + 10 CONTINUOUS) AT EXTERIOR WALLS

• ROOF & CEILING: (R-49) IN ATTIC AND CEILING SPACES, (R-38) FOR SINGLE RAFTER - OR JOIST-VAULTED CEILINGS, MAINTAIN A 1" MIN. AIR GAP BETWEEN TOP OF INSULATION AND BOTTOM OF SHEATHING FOR VENTING (WAC 51-50-1203). VENTING MUST OCCUR IN EACH JOIST SPACE. WHERE CONTINUOUS VENTING WITHIN A JOIST SPACE IS INTERRUPTED BY A HEADER (I.E., SKYLIGHT OR AT HIP END), PROVIDE (2) 1 1/2" VENTING HOLES AT THE TOP OF THE RAFTER AT THE HEADER TO ALLOW FOR CONTINUAL THROUGH-VENTING INTO THE NEXT JOIST SPACE. AT VENTED CEILINGS/ATTICS, INSTALL BATTLES AT EAVE AND/OR SOFFIT VENTS TO MAINTAIN 1" MIN. OF VENTILATION ABOVE INSULATION. EXTEND BATTLES 6" VERTICALLY ABOVE BATT INSULATION AND 12" VERTICALLY ABOVE LOOSE-FILL INSULATION. WEATHERSTRIP AND INSULATE ATTIC ACCESS DOORS AND PANELS TO THE R-VALUE OF THE SURROUNDING SURFACES.

• FLOORS: (R-30 MIN. OR R-38 FOR ENERGY CREDIT 1.3) WEATHERSTRIP AND INSULATE CRAWL SPACE ACCESS DOORS AND PANELS TO THE R-VALUE OF THE SURROUNDING SURFACES. WSEC R402.2.7

• SLAB ON GRADE: (R-10) AT THE PERIMETER AND UNDER ENTIRE SLAB, INCLUDING BELOW GRADE SLABS.

• SLAB BELOW GRADE: (R-10) AT THE PERIMETER AND UNDER ENTIRE SLAB, INCLUDING BELOW GRADE SLABS.

• VAPOR RETARDERS (MARINE 4 CLIMATE ZONE): SHALL BE INSTALLED ON THE INTERIOR SIDE OF FRAMED WALLS. FLOORS SEPARATING CONDITIONED SPACE FROM UNCONDITIONED SPACE SHALL HAVE MIN. 4 MIL POLYETHYLENE OR KRAFT FACED MATERIAL. ROOF/CEILING ASSEMBLIES WHERE THE VENTILATION SPACE ABOVE THE INSULATION IS LESS THAN AN AVERAGE OF 12 INCHES SHALL BE PROVIDED WITH A VAPOR RETARDER. WALLS SEPARATING CONDITIONED SPACE FROM UNCONDITIONED SPACE SHALL HAVE A VAPOR RETARDER INSTALLED. FACED BATT INSULATION SHALL BE FACE STAPLED. A GROUND COVER OF MIN. 6 MIL BLACK POLYETHYLENE SHALL BE LAID OVER THE GROUND WITHIN CRAWL SPACES W/ JOINTS LAPPED MIN. 12". IRC R702.7

• CAULKING & SEALANTS: EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES; OPENINGS BETWEEN WALLS AND FOUNDATION; OPENINGS BETWEEN ROOF AND WALL PANELS. OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH WALLS, FLOORS & ROOFS; AND ALL OTHER OPENINGS IN THE EXTERIOR BUILDING ENVELOPE SHALL BE SEALED. CAULKED, GASKETED OR WEATHERSTRIPPED. IRC R702.7 & R703

• WINDOWS AND DOORS: WINDOWS & GLAZED DOORS SHALL HAVE A MAXIMUM U-FACTOR OF .30 AND SKYLIGHTS SHALL HAVE A MAXIMUM U-FACTOR OF .50. U-FACTORS SHALL BE IN ACCORDANCE WITH WSEC TABLE R402.1.2

• DUCTWORK: INSULATE HEATING DUCTS IN UNCONDITIONED SPACES TO R-8 MINIMUM. DUCTWORK SEAMS & JOINTS SHALL BE TAPED, SEALED AND FASTENED WITH A MINIMUM NUMBER OF FASTENERS. (IRC) N1103.3.1 & M1601.3

• PIPING: INSULATE NON-CIRCULATING HOT AND COLD WATER PIPES IN UNCONDITIONED SPACES TO R-3 MINIMUM. (IRC) P2603

• WATER FLOW: FLOW RATES FOR PLUMBING FIXTURES SHALL COMPLY WITH WAC 51-56 SECTION 402. TOILETS @ 1.6 GALLONS PER FLUSH MAXIMUM; SHOWERS, TUBS AND LAVATORIES @ 2.5 GPM, MAXIMUM.

• HVAC SYSTEM SIZING: HEATING AND COOLING EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH ACCA MANUAL S BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL J OR OTHER APPROVED HEATING AND COOLING CALCULATION METHODOLOGIES. (WSEC) CHAPTER R403.6

EGRESS:

BASEMENTS, HABITABLE ATTICS, AND ALL SLEEPING ROOMS SHALL HAVE AN EMERGENCY ESCAPE OPENING WITH A MINIMUM NET CLEAR OPENING OF 5.7 sf. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 24" & MINIMUM NET CLEAR OPENING WIDTH OF 20" AND A FINISHED SILL HEIGHT NOT MORE THAN 44" ABOVE THE FLOOR. ALL EMERGENCY ESCAPE OPENINGS SHALL FULLY COMPLY WITH IRC R310 & R311.

EVERY EXTERIOR EXIT DOOR SHALL HAVE A LANDING ON EACH SIDE. MAXIMUM STEP AT THRESHOLD SHALL BE 1/2". IRC R311.3.

EXTERIOR FINISHES:

• WALLS: EXTERIOR WALLS SHALL PROVIDE THE BUILDING WITH A WEATHER-RESISTANT EXTERIOR WALL ENVELOPE. THE EXTERIOR WALL ENVELOPE SHALL INCLUDE FLASHING AS DESCRIBED IN IRC SECTION 703.8. THE EXTERIOR WALL ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER AS TO PREVENT THE ACCUMULATION OF WATER WITHIN THE WALL ASSEMBLY BY PROVIDING A WATER-RESISTIVE BARRIER BEHIND THE EXTERIOR VENEER AS REQUIRED BY IRC SECTION 703.2.

• UNDERLAYMENT: APPLY TWO (2) LAYERS OF 60 MIN. BUILDING PAPER OVER SHEATHING PRIOR TO INSTALLATION OF WINDOWS, WRAP INTO OPENINGS. AFTER THE INSTALLATION OF WINDOWS, APPLY SELF-ADHESIVE 'BLUESKIN' PER MANUFACTURER'S INSTRUCTIONS.

• FLASHING: INSTALL FLASHINGS IN ACCORDANCE WITH IRC R703.8. VERTICAL LEG OF FLASHING SHALL BE 4" MIN. 'KICK-OUT' FLASHING TO GUTTERS SHALL EXTEND 3" MIN. BEYOND WALL.

• ADHERED STONE VENEER: USE PRESSURE-TREATED SHEATHING BEHIND ADHERED STONE VENEER, TYP. APPLY ADHERED STONE VENEER OVER UNDERLAYMENT PER MANUFACTURER'S RECOMMENDATION. DO NOT BACKFILL OR POUR CONCRETE AGAINST STONE VENEER.

• CEMENT STUCCO: APPLY IN ACCORDANCE WITH IRC R703.4. OVER UNDERLAYMENT PROVIDE FOR DRAINAGE ACCORDING TO MANUFACTURER'S RECOMMENDATION. DO NOT BACKFILL OR POUR CONCRETE AGAINST STUCCO.

• EXTERIOR INSULATION & FINISH SYSTEM (EIFS): INSTALL OVER UNDERLAYMENT IN ACCORDANCE WITH IRC R703.9.

• FIBER CEMENT SIDING: INSTALL OVER UNDERLAYMENT IN ACCORDANCE WITH IRC R703.10.

• WOOD SHINGLES: INSTALL OVER UNDERLAYMENT IN ACCORDANCE WITH IRC R703.5.

• WOOD SIDING: INSTALL OVER UNDERLAYMENT IN ACCORDANCE WITH IRC R703.3.

FIRE PROTECTION:

PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM AND AT A CENTRAL LOCATION IN CORRIDOR OR AREA ACCESSING SLEEPING AREA AS WELL AS ONE ON EACH STORY. SMOKE ALARMS ARE TO RECEIVE PRIMARY POWER FROM BUILDING WIRING WITH A BATTERY BACKUP. SMOKE DETECTORS SHOULD SOUND AN ALARM AUDIBLE IN ALL SLEEPING ROOMS. IRC R314.

A HEAT DETECTOR OR HEAT ALARM SHALL BE INSTALLED IN NEW GARAGES THAT ARE ATTACHED TO OR LOCATED UNDER NEW AND EXISTING DWELLINGS. HEAT DETECTORS AND HEAT ALARMS SHALL BE INSTALLED IN A CENTRAL LOCATION AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

ALL HEAT DETECTORS, SMOKE ALARMS, AND CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH THEIR USE. SMOKE DETECTOR POWER SOURCES TO BE INTERCONNECTED PER IRC R314.4.

AUTOMATIC FIRE SPRINKLERS SHALL BE PROVIDED IN ACCORDANCE WITH NFPA AND LOCAL FIRE DEPARTMENT REQUIREMENTS.

INSTALL FIREBLOCKING PER IRC R302.11.

INSTALL DRAFTSTOPPING PER IRC R302.12.

FIREPLACES:

MASONRY FIREPLACES, BARBECUES, SMOKE CHAMBERS & FIREPLACE CHIMNEYS SHALL BE CONSTRUCTED OF MASONRY OR REINFORCED CONCRETE IN ACCORDANCE WITH IRC CHAPTER 10.

FACTORY-BUILT FIREPLACES & CHIMNEYS SHALL BE LISTED, LABELED, & INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF THE LISTING, & TESTED IN ACCORDANCE WITH UL 127. IRC R1004.

FACTORY-BUILT FIREPLACES SHALL BE VENTED IN ACCORDANCE WITH IRC G2425.

FACTORY-BUILT FIREPLACES OR WOOD STOVES SHALL BEAR THE STAMP OF THE TESTING LAB & BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER'S INSTRUCTIONS SHALL BE ON SITE AT TIME OF INSPECTION.

GARAGES:

DOORS BETWEEN GARAGE AND DWELLING SHALL SOLID WOOD DOORS NOT LESS THAN 3/8" THICK OR 20-MIN FIRE RATED, EQUIPPED WITH A SELF-CLOSING DEVICE. THERE SHALL BE NO OPENINGS BETWEEN GARAGE AND ROOMS USED FOR SLEEPING PURPOSES. IRC R302.5.1

THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2" GYPNUM BOARD APPLIED TO THE GARAGE SIDE. GARAGES BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8" TYPE X GYPNUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR/CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2" GYPNUM BOARD OR EQUIVALENT. GARAGES LOCATED LESS THAN 3 FEET FROM A DWELLING UNIT ON THE SAME LOT SHALL BE PROTECTED BY NOT LESS THAN 1/2" GYPNUM BOARD APPLIED TO THE INTERIOR SIDE OF EXTERIOR WALLS THAT ARE WITHIN THIS AREA. OPENINGS IN THESE WALLS SHALL BE REGULATED BY SECTION IRC R302.6. THIS PROVISION DOES NOT APPLY TO GARAGE WALLS THAT ARE PERPENDICULAR TO THE ADJACENT DWELLING UNIT WALL.

GARAGE FLOOR SHALL BE SMOOTH TROWLED CONCRETE AND SLOPE TOWARD THE VEHICLE DOORWAY OR A FLOOR DRAIN. GARAGE SLAB SHALL RECEIVE CONCRETE SEALER.

GAS FIRED HEATING AND/OR COOLING EQUIPMENT LOCATED IN GARAGE SHALL BE INSTALLED A MINIMUM OF 6" ABOVE THE FLOOR AND WITH PILOTS AND BURNERS AT LEAST 18" ABOVE THE FLOOR LEVEL. IRC G2408.2 & IRC G2408.3.

APPLIANCES LOCATED WITHIN A GARAGE OR CARPORT SHALL BE PROTECTED FROM IMPACT BY AUTOMOBILES. IRC M1505.4 & RCW 19.27.031

DUCT PENETRATIONS BETWEEN THE GARAGE AND OCCUPIED AREAS SHALL BE MINIMUM 26 GA. STEEL IN ACCORDANCE WITH IRC R302.5.2.

GAS APPLIANCES:

HEATING SYSTEM SHALL BE CAPABLE OF MAINTAINING 70°F AT 3 FEET ABOVE FLOOR IN HABITABLE ROOMS WHEN OUTSIDE TEMP. IS AS SHOWN IN (WSEC) SECTION 302.

FUEL BURNING EQUIPMENT LOCATED WITHIN THE BUILDING ENVELOPE SHALL OBTAIN COMBUSTION AIR FROM OUTDOORS PER (IRC) G2407.6. DO NOT USE CRAWL SPACE AIR!

EVERY APPLIANCE DESIGNED TO BE VENTED SHALL BE CONNECTED TO A VENTING SYSTEM PER (IRC) G2407.

PROVIDE READILY ACCESSIBLE AUTOMATIC OR MANUAL SHUT-OFF SWITCH & THERMOSTAT. PROVIDE AT LEAST ONE THERMOSTAT FOR REGULATING SPACE TEMPERATURES FOR EACH HEATING/COOLING UNIT.

GAS APPLIANCES CONT...

GAS APPLIANCES SHALL BE INSTALLED AND SECURELY FASTENED IN PLACE IN ACCORDANCE WITH (IRC) G2404 & (IRC) M1307.2.

PROVIDE CLEARANCE FROM COMBUSTIBLE MATERIALS PER (IRC) G2408.5.

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

SCALE THIS DRAWING, IN FEET



Permit#	Address or Lot & Block	
	5320 BUTTERWORTH RD.	
City	Mercer Island	Zip 98040

These requirements apply to all the IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Instructions: This single-family project uses the requirements of the Prescriptive Path below to incorporate the minimum values listed. Based on the conditioned floor area of the structure, the number of required additional credits must be selected by the permit applicant.

Provide all information from the following tables in building permit drawings: Table R402.1.2 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and R406.3 Energy Credits.

Authorized Representative Signature	<i>Dalton</i>	Date	3/21/2025
-------------------------------------	---------------	------	-----------

All Climate Zones Table 402.1.3		
	R-Value ^a	U-Factor ^a
Fenestration U-Factor ^{b,1}	n/a	0.30
Skylight U-Factor ^b	n/a	0.50
Ceiling ^c	60	n/a
Wood Frame Wall ^{d,1}	20+5 or 13+10	n/a
Floor	30	n/a
Below Grade Wall ^{d,2}	10/15/21 int + 5Tb	n/a
Slab ^{d,3} R-Value & Depth	10, 4 ft	n/a
^a R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the compressed R-value of the insulation from Appendix Table A101.4 shall not be less than the R-value specified in the table. ^b The fenestration U-factor column excludes skylights. ^c "10/15/21 +5Tb" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5Tb" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5Tb" means R-5 thermal break between floor slab and basement wall. ^d R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1. ^e For single rafter- or joist-raftered ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall. ^f R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics. ^g For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for climate zone 5 of ICC 400. ^h Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78 percent of the wall cavity insulated and headers insulated with a minimum of R-10 insulation. ⁱ The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, "R13+10" means R-13 cavity insulation plus R-10 continuous insulation. ^j A maximum U-factor of 0.32 shall apply to vertical fenestration products installed in buildings located above 4000 feet in elevation above sea level, or in windborne debris regions where protection of openings is required under Section R301.2.1.2 of the International Residential Code.		

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

- Small Dwelling Unit: 5.0 credits
Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building greater than 500 square feet of heated floor area but less than 1500 square feet.
- Medium Dwelling Unit: 8.0 credits
All dwelling units that are not included in #1, #3 or #4
- Large Dwelling Unit: 9.0 credits
Dwelling units exceeding 5000 square feet of conditioned floor area.
- Dwelling units serving Group R-2 occupancies: 6.5 credits
Section R401.1 and residential building Section R202 for Group R-2.
- Additions 150 square feet to 500 square feet: 2.0 credits

The drawings included with the building permit application shall identify which options have been selected and the point value of each option, regardless of whether separate mechanical, plumbing, electrical, or other permits are utilized for the project

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Table R406.2 ENERGY EQUALIZATION CREDITS		
System Type	Description of Primary Heating Source	Credits - select ONE system type
1	For combustion heating equipment meeting minimum federal efficiency standards for the equipment listed in Table C403.3.2(5) or C403.3.2(6)	0 <input type="checkbox"/>
2	For an initial heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) and supplemental heating provided by electric resistance or a combustion furnace meeting minimum standards listed in Table C403.3.2(5)b found in the 2021 WSEC - COMMERCIAL ENERGY CODE	1.5 <input type="checkbox"/>
3	For heating system based on electric resistance only (either forced air or Zonal)	0.5 <input type="checkbox"/>
4 ^f	For heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(2) or C403.3.2(9) or Air to water heat pump units that are configured to provide both heating and cooling and are rated in accordance with AHRI 550/590	3.0 <input checked="" type="checkbox"/>
5	For heating system based on electric resistance with: 1. Inverter-driven ductless mini-split heat pump system installed in the largest zone in the dwelling, or 2. With 2kW or less total installed heating capacity per dwelling	2.0 <input type="checkbox"/>

- See Section R401.1 and residential building in Section R202 for Group R-2 scope.
- The gas back-up furnace will operate as fan-only when the heat pump is operating. The heat pump shall operate at all temperatures above 38°F (3.3°C) (or lower). Below that "changeover" temperature, the heat pump would not operate to provide space heating. The gas furnace provides heating below 38°F (3.3°C) (or lower).
- Additional points for the HVAC system are included in Table R406.3.

Summary of Table R406.3			
Options	Energy Credit Option Descriptions	Credits - limited to one energy option from each category ^f	Comments:
1.1	Efficient Building Envelope	0.5 <input type="checkbox"/>	
1.2	Efficient Building Envelope	1.0 <input checked="" type="checkbox"/>	U Value 0.28
1.3	Efficient Building Envelope	1.5 <input type="checkbox"/>	
1.4	Efficient Building Envelope	2.5 <input type="checkbox"/>	
2.1	Air Leakage Control and Efficient Ventilation	1.0 <input type="checkbox"/>	
2.2	Air Leakage Control and Efficient Ventilation	1.5 <input type="checkbox"/>	
2.3	Air Leakage Control and Efficient Ventilation	2.0 <input type="checkbox"/>	
3.1 ^a	High Efficiency HVAC	1.0 <input type="checkbox"/>	
3.2 ^a	High Efficiency HVAC	0.5 <input type="checkbox"/>	
3.3 ^{a,d}	High Efficiency HVAC	0.5 <input type="checkbox"/>	
3.4 ^d	High Efficiency HVAC	1.5 <input type="checkbox"/>	
3.5 ^d	High Efficiency HVAC	1.5 <input type="checkbox"/>	
3.6 ^a	High Efficiency HVAC	1.0 <input type="checkbox"/>	Centrally ducted air source cold climate heat pump, min 10 HPSEF
3.7 ^{d,e}	High Efficiency HVAC	2.0 <input type="checkbox"/>	
3.8 ^d	High Efficiency HVAC	1.0 <input type="checkbox"/>	
3.9	High Efficiency HVAC	1.5 <input type="checkbox"/>	
3.10 ^f	High Efficiency HVAC	2.5 <input type="checkbox"/>	
3.11 ^c	High Efficiency HVAC	0.5 <input type="checkbox"/>	
4.1	High Efficiency HVAC Distribution System	0.5 <input type="checkbox"/>	
5.1	Efficient Water Heating	0.5 <input type="checkbox"/>	
5.2	Efficient Water Heating	0.5 <input type="checkbox"/>	
5.3	Efficient Water Heating	0.5 <input type="checkbox"/>	
5.4	Efficient Water Heating	1.0 <input checked="" type="checkbox"/>	Energy Star rated gas or propane water heater, min UEF 0.91
5.5	Efficient Water Heating	1.5 <input type="checkbox"/>	
5.6	Efficient Water Heating	2.0 <input type="checkbox"/>	
5.7	Efficient Water Heating	2.5 <input type="checkbox"/>	
5.8	Efficient Water Heating	2.5 <input type="checkbox"/>	
6.1	Renewable Electric Energy (4.5 credits max)	0.5-4.5 <input checked="" type="checkbox"/>	Solar panels
7.1	Appliance Package	0.5 <input type="checkbox"/>	
		Total Credits	9.0 <input type="button" value="Calculate Total"/>

- An alternative heating source sized at a maximum of 0.5 Watts/ft² (equivalent) of heated floor area or 500 Watts, whichever is bigger, may be installed in the dwelling unit.
- See Section R401.1 and residential building in Section R202 for Group R-2 scope.
- Option 3.11 can only be taken with Options 3.1 and 3.3. To qualify to claim Option 3.11 with 3.3, the system shall be a 1-2 speed heat pump system. Variable capacity heat pumps are ineligible from claiming this option.
- This option may only be claimed if serving System Type 4 or 5 from Table R406.2.
- Primary living areas include living, dining, kitchen, family rooms, and similar areas.
- Option 3.10 may only be taken with Efficient Water Heating Options 5.1 or 5.2. Equipment sizing for space heating shall be calculated as provided in Section R403.7 with increased capacity to provide a minimum of 75 percent of peak hot water demand or shall be sized in accordance with approved manufacturer's specifications or guidance. Supplementary heat for water heating system shall be in accordance with Section R403.5.7.

MacPherson
Construction & Design
22605 SE 56th St Suite 140, Issaquah, WA 98029
PH. 425.391.3333 FAX 425.557.2841

MACPHERSON RESIDENCE

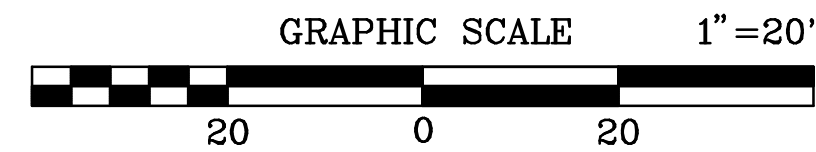
5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 866140-0040

ENERGY COMPLIANCE

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL
	△		
	△		
	△		
	△		

SHEET NUMBER

A0.2



BASIS OF BEARINGS:

THE CENTERLINE OF BUTTERWORTH ROAD, BEING NORTH 20°10'45" EAST PER THE PLAT OF TONJA ESTATES, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 77 OF PLATS, PAGE 64, IN KING COUNTY, WASHINGTON.

VERTICAL DATUM:

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

BENCHMARK:

LAKE WASHINGTON WATER SURFACE ELEVATION PER U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT, WATER MANAGEMENT, ELEVATION = 17.17 NAVD 88 ON MARCH 1, 2024 AT 10:30 A.M.

CONTOUR INTERVAL:

2 FEET

LEGAL DESCRIPTION:

(PER CHICAGO TITLE COMPANY OF WASHINGTON COMMITMENT NO. 0246999-ETU, THIRD, DATED JANUARY 11, 2024)

LOTS 3 AND 4, TONJA ESTATES, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 77 OF PLATS, PAGE 64, IN KING COUNTY, WASHINGTON.

EXCEPT THAT PORTION OF SAID LOT 3, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 3;

THENCE SOUTH 01°35'04" WEST ALONG THE EASTERLY LINE OF LOT 3 A DISTANCE OF 75.31 FEET;

THENCE NORTH 10°03'02" WEST A DISTANCE OF 74.73 FEET;

THENCE NORTH 76°21'57" WEST A DISTANCE OF 10.15 FEET, MORE OR LESS, TO THE NORTH LINE OF SAID LOT 3;

THENCE SOUTH 88°24'56" EAST ALONG SAID NORTH LINE 25.00 FEET TO THE POINT OF BEGINNING, AND THE END OF THIS EXCEPTION;

TOGETHER WITH AN UNDIVIDED 1/7TH INTEREST IN LOT 1 OF SAID PLAT; AND

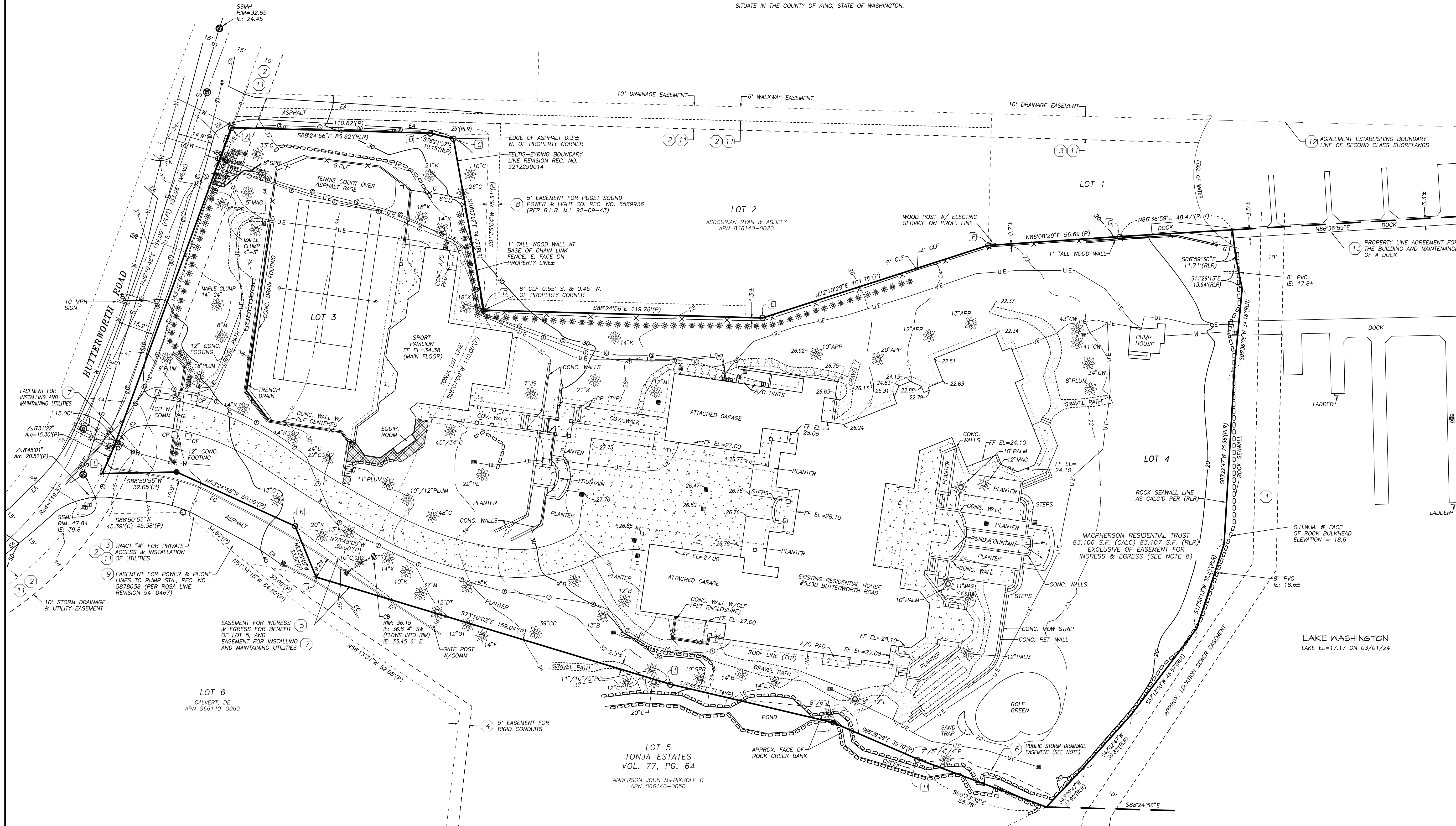
TOGETHER WITH AN UNDIVIDED 1/2 INTEREST IN TRACT A OF SAID PLAT;

(ALSO KNOWN AS THE ROSA LINE REVISION, CITY OF MERCER ISLAND FILE NO. 94-0467, RECORDED UNDER RECORDING NUMBER 9606139004).

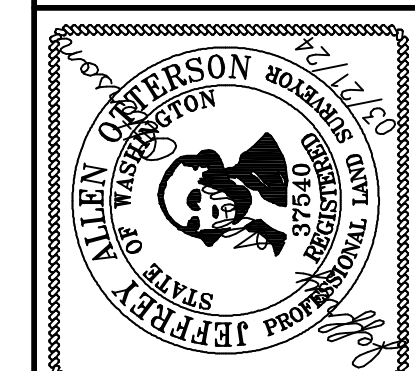
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

FOUND/SET PROPERTY CORNER LEGEND:

- (A) FOUND 3/4" IRON PIPE & CAP "LS 20764" S49°E 0.09'
- (B) FOUND 3/4" IRON PIPE & CAP W/TACK "LS 20764" S38°W 0.09'
- (C) FOUND 1/2" REBAR & CAP "TERRANE 15025 56664 52088 57176"
- (D) FOUND 3/4" IRON PIPE & CAP W/TACK "LS 20764" S26°W 0.16'
- (E) FOUND 1/2" REBAR & CAP "TERRANE 15025 56664 52088 57176"
- (F) FOUND 3/4" IRON PIPE & CAP W/TACK "LS 20764" S51°E 0.08'
- (G) FOUND 3/4" IRON PIPE & CAP W/TACK "LS 20764" S4°W 0.17'
- (H) FOUND 3/4" IRON PIPE & CAP W/TACK "LS 20764" S34°W 0.41'
- (I) FOUND 3/4" IRON PIPE & CAP W/TACK "LS 20764" S22°W 0.22'
- (J) FOUND MAG NAIL & WASHER "37427" N49°E 0.09'
- (K) FOUND 1/2" REBAR & CAP "TRIAD ASSOC 19620 22335 21402 18094"
- (L) SET MAG NAIL & I.D. WASHER "LS 37540"

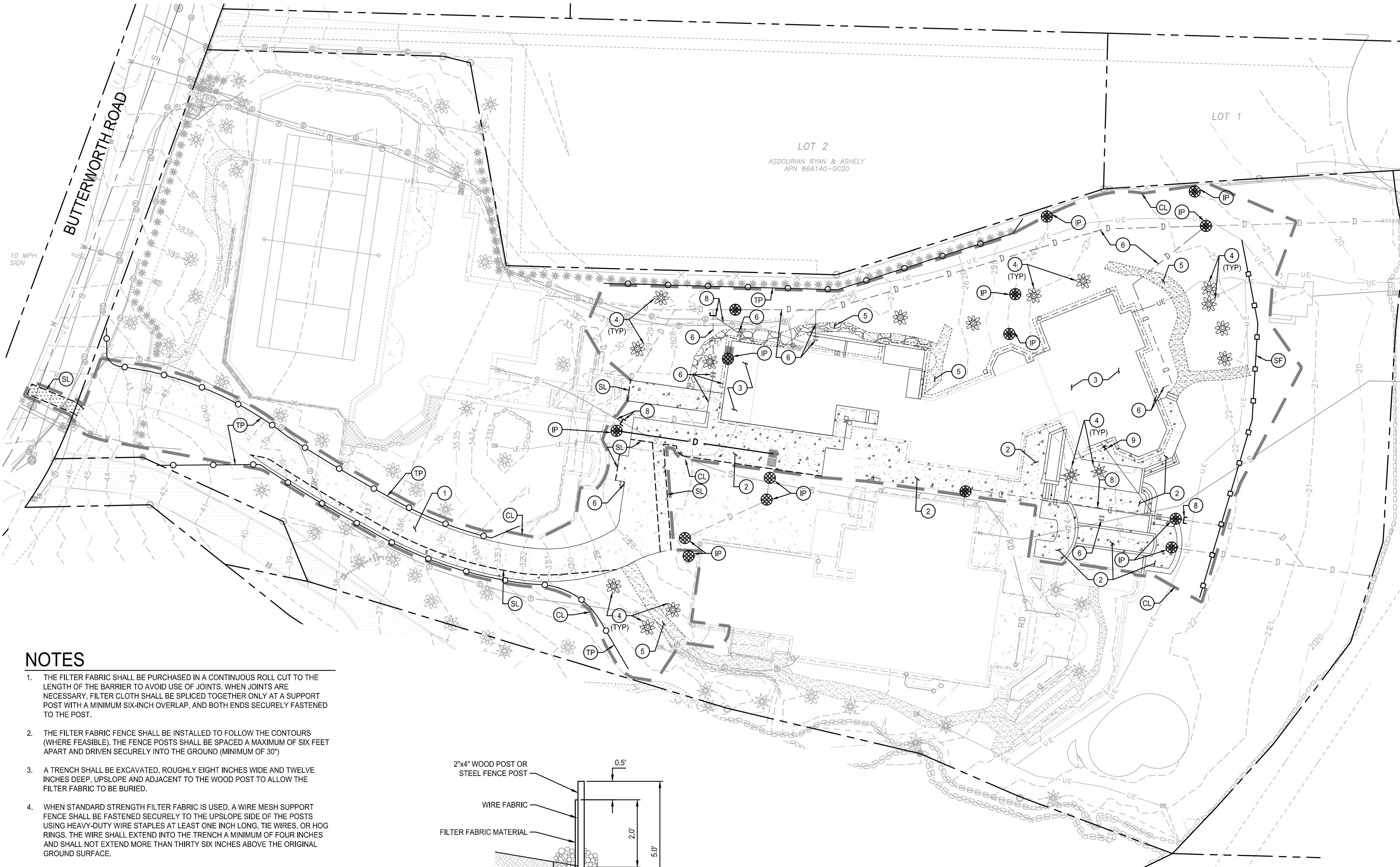


SURVEYOR'S CERTIFICATE
 THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF ROGER MACPHERSON RESIDENTIAL TRUST IN AND NANCY MACPHERSON RESIDENTIAL TRUST
 Jeffrey Allen Otterson
 P.L.S. CERTIFICATE NO. 37540



ALTA/NSPS LAND TITLE SURVEY
FOR: MACPHERSON RESIDENTIAL TRUST
5330 BUTTERWORTH ROAD
MERCER ISLAND, WA 98040

CASCADE LAND SURVEYING
 Complete Land Surveying Services
 16009 AP TUBBS RD E, BUCKLEY, WA 98321
 PHONE: (253) 820-4016
 Email: jeff@cascadelands.com
 CHECKED BY: JAO
 SCALE: 1"=20'
 DRAWN BY: JAO
 JOB NO.: 2024-003
 DATE: Thu., Mar. 21, 2024
 SHEET: 2 OF 2



LEGEND

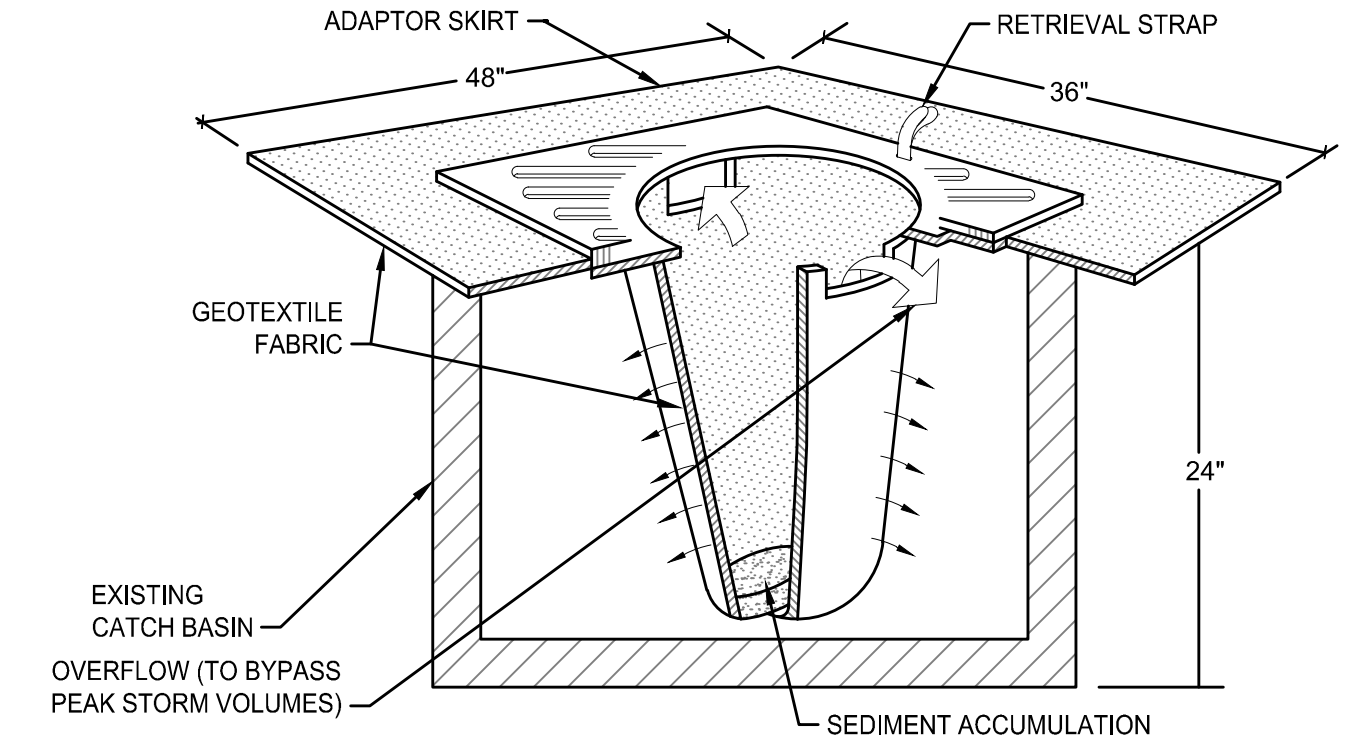
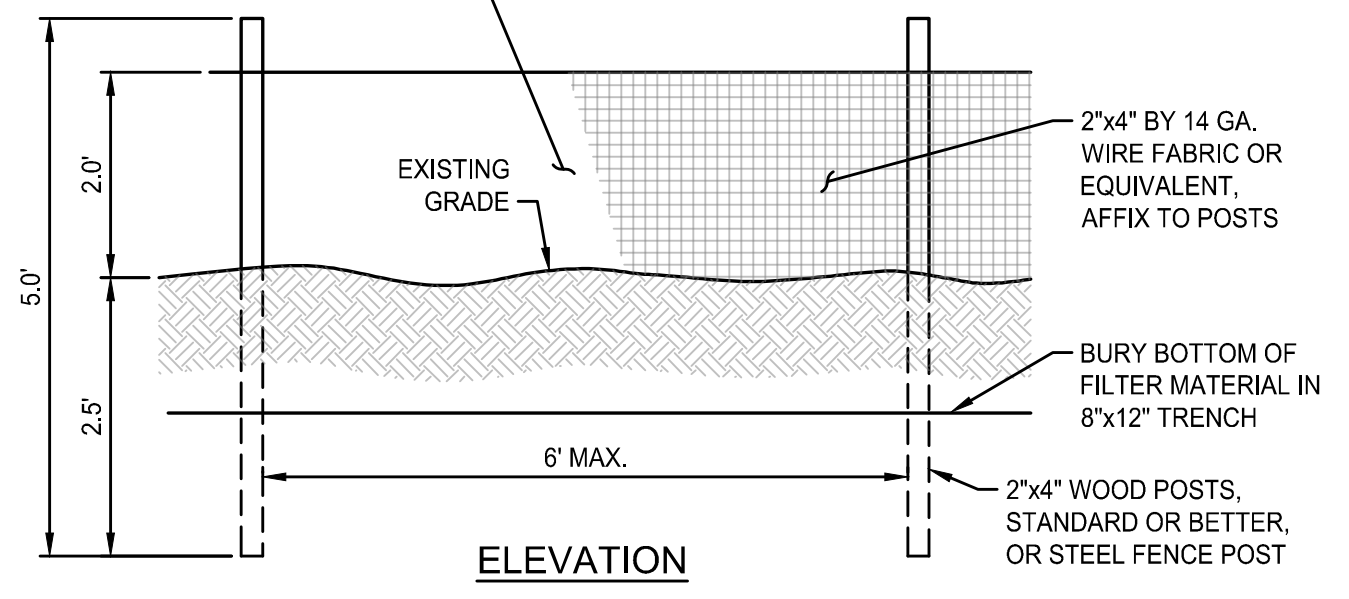
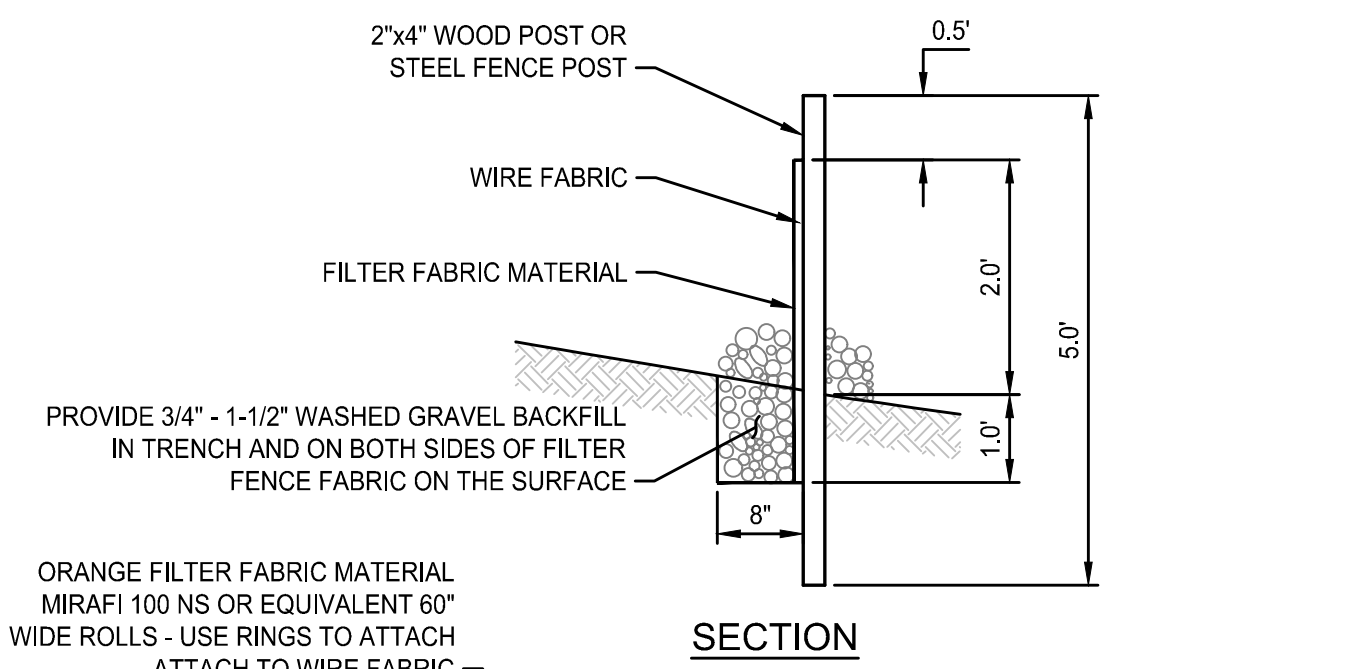
- CL ——— RIGHT-OF-WAY / PROPERTY LINE
- CL [Pattern] CLEARING / PROJECT LIMITS
- [Pattern] REMOVE EXISTING ASPHALT
- [Pattern] REMOVE EXISTING CONCRETE
- SF [Symbol] SILT FENCE 1 C1.0
- IP [Symbol] INLET PROTECTION 2 C1.0
- SL [Symbol] SAWCUT LINE
- [Symbol] TREE PROTECTION FENCE
- [Symbol] REMOVE EXISTING TREE
- [Symbol] EXISTING TREE TO REMAIN
- 100 ——— EXISTING MAJOR CONTOURS
- 101 ——— EXISTING MINOR CONTOURS
- 101 ——— PROPOSED MINOR CONTOUR
- 100 ——— PROPOSED MAJOR CONTOUR

KEYNOTES

- 1 UTILIZE EXISTING DRIVEWAY AS CONSTRUCTION ENTRANCE
- 2 REMOVE EXISTING CEMENT CONCRETE.
- 3 REMOVE EXISTING BUILDING AND OVERHANG. REFER TO ARCHITECTURAL PLANS FOR EXTENTS OF DEMOLITION.
- 4 REMOVE EXISTING TREE.
- 5 REMOVE EXISTING ROCKERY/GRAVEL PATH.
- 6 REMOVE EXISTING UTILITY.
- 7 PRESERVE AND PROTECT EXISTING BUILDING.
- 8 REMOVE PORTION OF EXISTING UTILITY AND CAP IN PLACE.
- 9 REMOVE AND RELOCATE EXISTING UTILITY CONNECTION PER PLANS.

NOTES

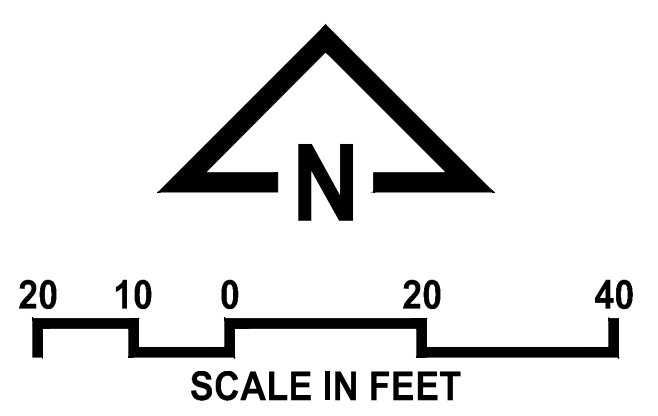
- 1. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM SIX-INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST.
- 2. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS (WHERE FEASIBLE), THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF SIX FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30")
- 3. A TRENCH SHALL BE EXCAVATED, ROUGHLY EIGHT INCHES WIDE AND TWELVE INCHES DEEP, UPSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.
- 4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST ONE INCH LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF FOUR INCHES AND SHALL NOT EXTEND MORE THAN THIRTY SIX INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- 5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND TWENTY INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN THIRTY SIX INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
- 6. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTE (S) APPLYING.
- 7. THE TRENCH SHALL BE BACKFILL WITH 3/4 INCH MINIMUM DIAMETER WASHED GRAVEL.
- 8. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
- 9. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- 10. DO NOT INSTALL BELOW AN OUTLET PIPE OR WEIR.
- 11. DO NOT DRIVE OVER OR FILL OVER FILTER FABRIC FENCE.



- NOTES:**
- 1. FILTERS SHALL BE INSPECTED AFTER EACH STORM EVENT AND CLEANED OR REPLACED WHEN 1/3 FULL.
 - 2. INSTALL INLET PROTECTION IN ALL NEW STORM STRUCTURES THAT WILL COLLECT STORMWATER AS THEY ARE INSTALLED.

CONTRACTOR SHALL FURNISH, INSTALL, ADJUST, AND MAINTAIN TEMPORARY 6 FOOT CHAINLINK SECURITY FENCE AT SITE PERIMETER FOR ENTIRE DURATION OF PROJECT. SECURITY FENCE SHALL INCLUDE, BUT IS NOT NECESSARILY LIMITED TO, CHAINLINK FABRIC, RAILS, POSTS, GATES, LOCKS, AND BRACES.

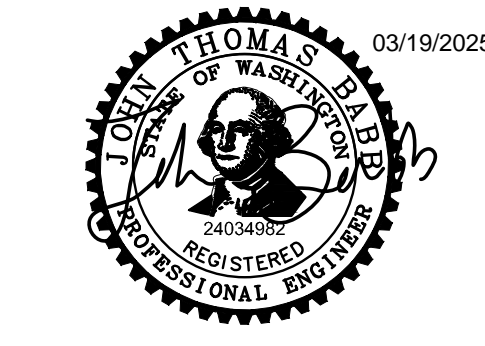
CLEARING LIMITS NOTE
THE CLEARING LIMITS SHOWN MAY NEED TO BE ADJUSTED TO PERFORM THE WORK. CONTRACTOR IS RESPONSIBLE FOR REVIEWING LIMITS AND CONFIRMING SILT FENCE LOCATION PRIOR TO WORK. ANY ADJUSTMENTS SHALL BE AT THE COST OF THE CONTRACTOR.



MACPHERSON RESIDENCE
5320 BUTTERWORTH RD
MERCER ISLAND, WA 98040

PERMIT SET

ETHOS CIVIL
Engineering | Entitlement | Project Management
ethoscivil.com info@ethoscivil.com 253.414.1989



#	DATE	DESCRIPTION
DESIGNED	AMB	
CHECKED	JTB	
DRAWN	AMB	
CHECKED	JTB	

24004
03/19/2025
TESC AND DEMOLITION

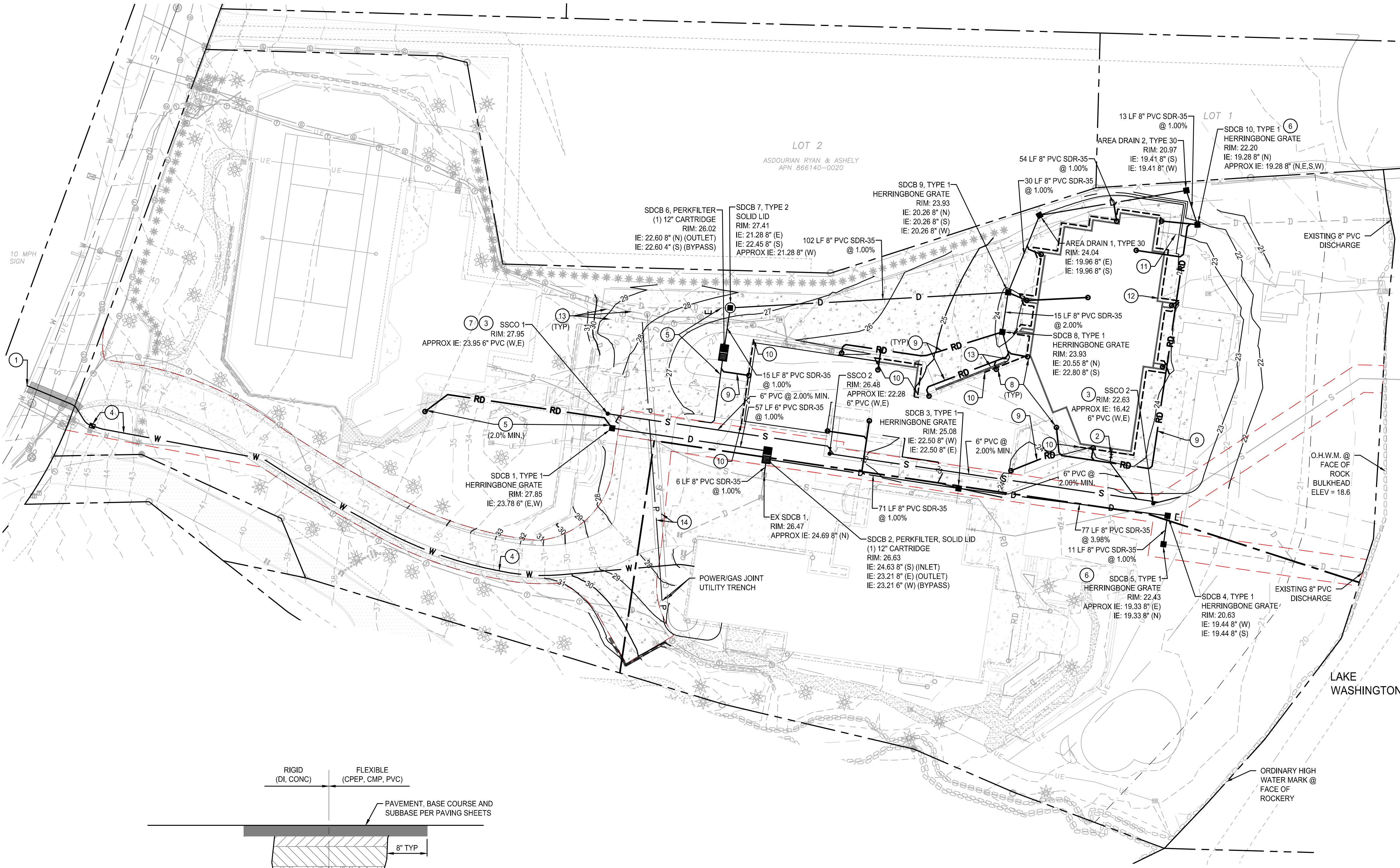
C1.0

PLOTTED: 3/19/2025 10:47:00 AM FILE: 24004-RES-DWG LAST SAVED BY: JONHAMB



1 SILT FENCE
NOT TO SCALE

2 INLET PROTECTION
NOT TO SCALE



LEGEND

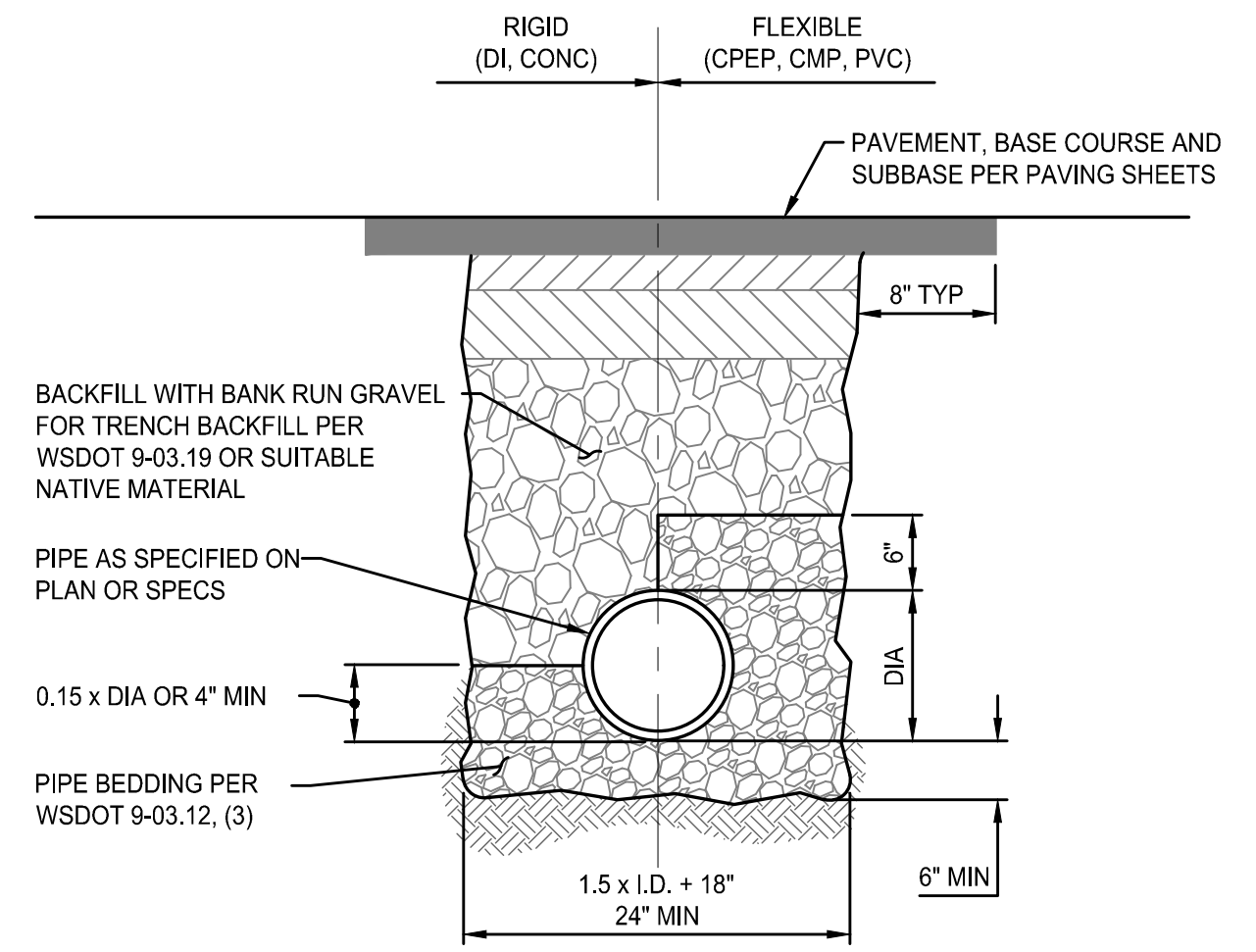
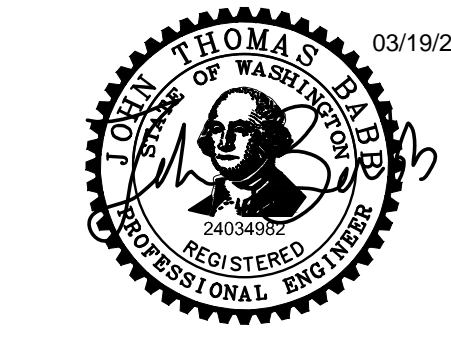
- RIGHT-OF-WAY / PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED BUILDING OUTLINE. REFER TO ARCHITECTURE PLAN
- SANITARY SIDE SEWER
- SANITARY SEWER CLEANOUT
- CATCH BASIN TYPE 1 OR AREA DRAIN TYPE 30 PER PLAN CALLOUT
- CATCH BASIN TYPE 2
- STORM DRAINAGE PIPING
- WATER PIPING
- WATER METER
- GAS LINE
- UNDERGROUND POWER LINE
- FOOTING DRAIN
- TRENCH DRAIN, ZURN Z886
- ROOF DRAIN
- PERKFILTER

- ### KEYNOTES
- 1 CONNECT TO WATER MAIN.
 - 2 RELOCATE EXISTING SEWER BACKFLOW PREVENTION VALVE.
 - 3 CONNECTION TO EXISTING SEWER SERVICE LINE. POTHOLE TO LOCATE EXACT LOCATION AND DEPTH OF EXISTING LINE.
 - 4 PROVIDE NEW DOMESTIC WATER SERVICE LINE AND METER.
 - 5 CONNECT EXISTING SPORTS PAVILION STORM DRAIN LINES TO PROPOSED STORM SYSTEM.
 - 6 LOCATE AND CONNECT TO EXISTING 8" PVC DRAINAGE PIPE.
 - 7 CONNECT TO EXISTING SEWER SERVICE LINE TO MAINTAIN SEWER SERVICE FOR SPORTS PAVILION.
 - 8 DOWNSPOUT, TYP. REFER TO ARCHITECTURAL DRAWINGS.
 - 9 ROOF DRAIN LINE, 4" PVC SDR-35 @ 2.0% MIN.
 - 10 CONNECT TO EXISTING FOOTING DRAIN, APPROX IE: 23.37.
 - 11 4" PVC FOOTING DRAIN TIGHTLINE @ 2.00% MIN.
 - 12 RECONNECT POWER LINE TO PROPOSED BUILDING EXPANSION.
 - 13 PROTECT EXISTING UTILITIES.
 - 14 PROVIDE UNDERGROUND GAS AND POWER SERVICE AND CONNECT TO EXISTING SERVICE LINES ON-SITE. TRENCHING, BEDDING, SHADING, AND BACKFILL BY CONTRACTOR PER GAS PURVEYOR STANDARDS. COORDINATE WITH PURVEYOR.
 - 15 PROVIDE 27 LF ZURN Z886 TRENCH DRAIN WITH CAST IRON GATE. 4" PVC DRAIN LINE TO PROPOSED CATCH BASIN @ 1.00% MIN.

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD
 MERCER ISLAND, WA 98040

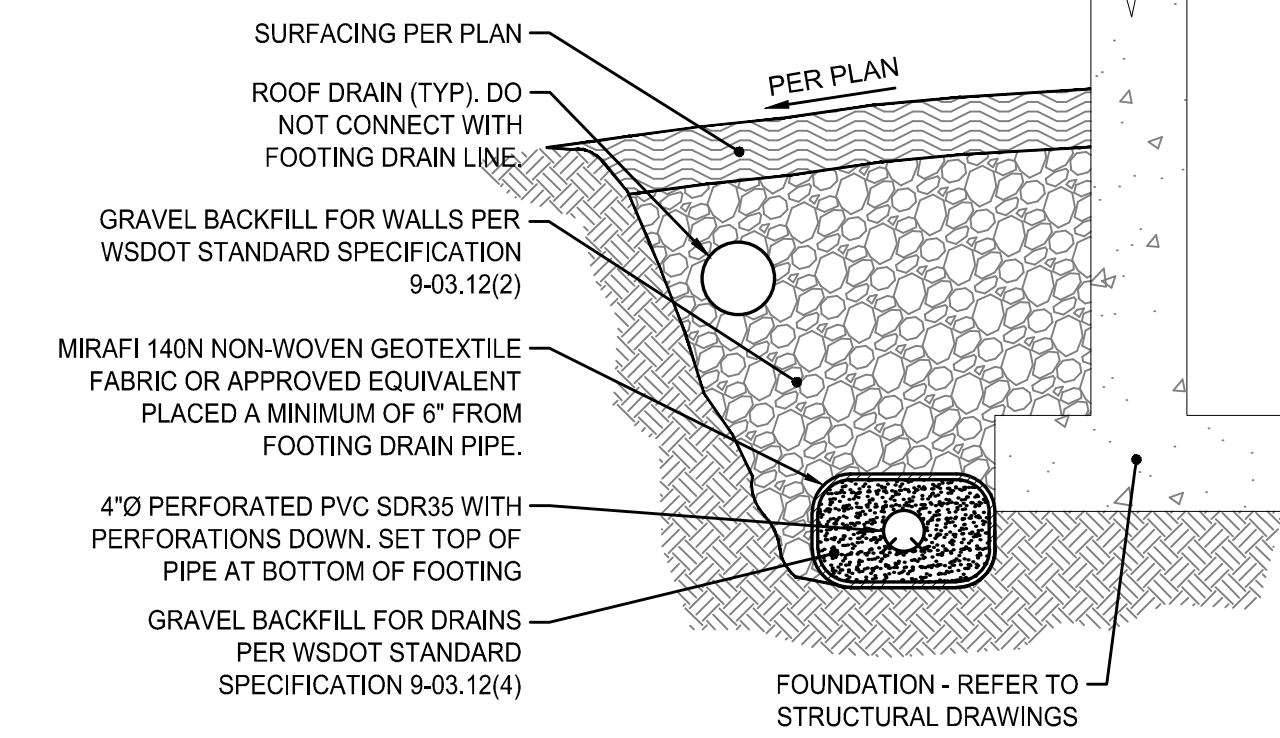
PERMIT SET

ETHOS CIVIL
 Engineering. Entitlement. Project Management.
 ethoscivil.com info@ethoscivil.com 253.414.1989

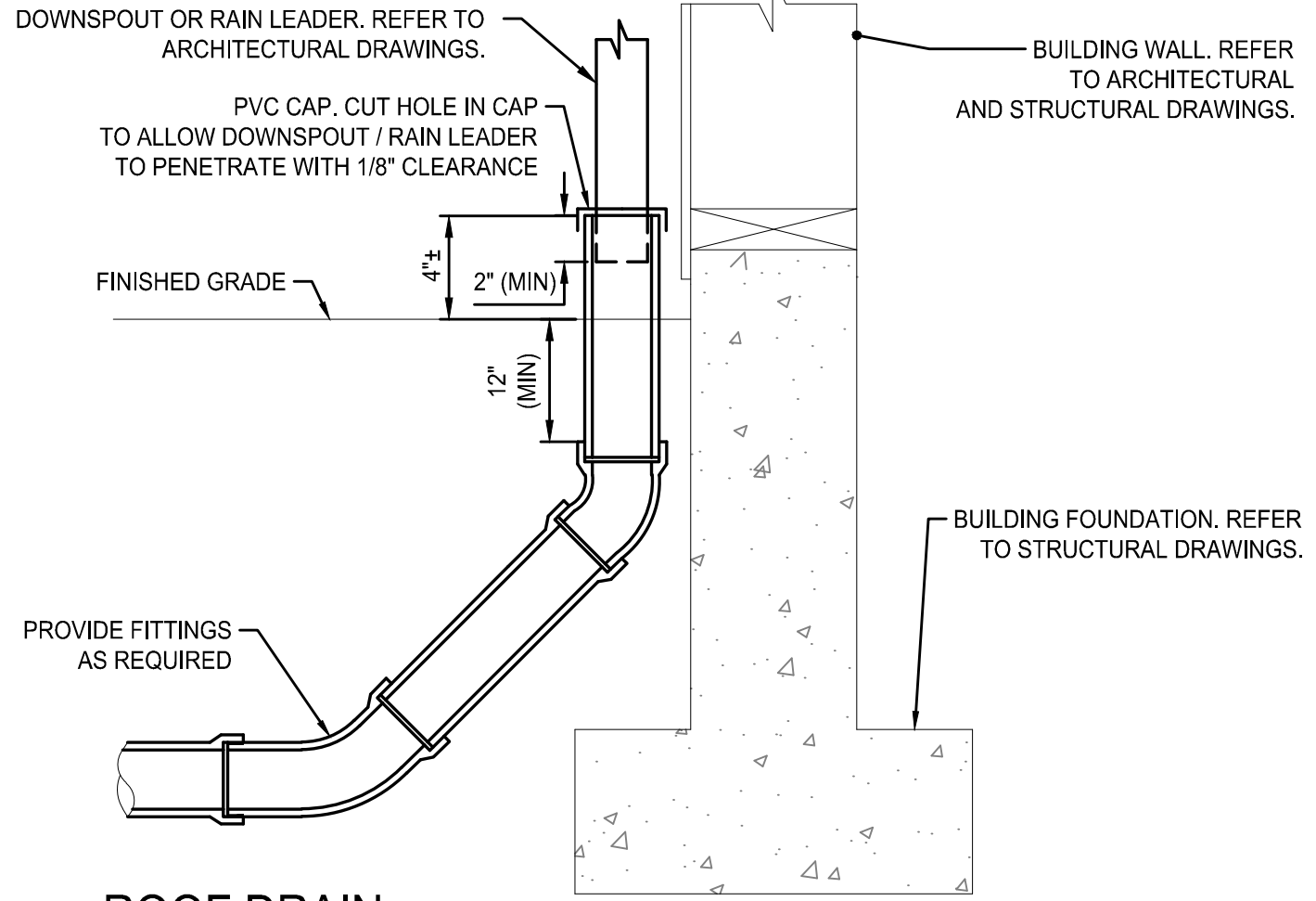


- NOTES:**
1. BACKFILL MATERIAL SHALL NOT HAVE ROCKS OR PARTICLES LARGER THAN 1" WITHIN 12" OF THE PIPE. BACKFILL MATERIAL SHALL BE PLACED IN 8" MAXIMUM LOOSE LIFTS AND COMPACTED TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D-1557).
 2. CONSTRUCT ALL STORM AND ROOF DRAINS IN CONFORMANCE WITH THIS DETAIL UNLESS NOTED OTHERWISE ON THE PLANS.
 3. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.
 4. IF ORGANIC MATERIAL IS ENCOUNTERED DURING UTILITY EXCAVATION, OVEREXCAVATE TRENCH TO INCREASE PIPE BEDDING DEPTH TO 18" OR MORE AS REQUIRED TO COMPACT BEDDING TO FIRM AND UNYIELDING CONDITION.

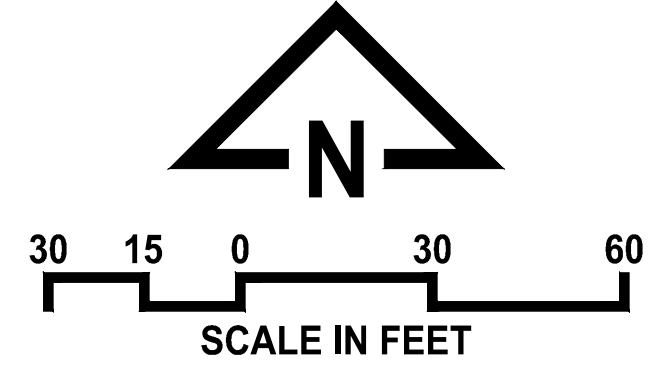
1 TRENCH SECTION
NOT TO SCALE



2 FOOTING DRAIN
NOT TO SCALE



3 ROOF DRAIN
NOT TO SCALE



24004
03/19/2025
UTILITY PLAN

C3.0

PLOTTED: 3/19/2025 10:42:38 AM FILE: 24004-UTL.DWG LAST SAVED BY: JONHARRIS



DEMOLITION NOTES

REMOVAL OF EXISTING STRUCTURES:
 ANY EXISTING STRUCTURE IDENTIFIED ON THE PLAN FOR DEMOLITION, IS TO BE COMPLETELY DEMOLISHED DOWN TO THE FOUNDATION. THIS INCLUDES, BUT IS NOT LIMITED TO, ALL WALLS, ROOFING, FLOORS, FIXTURES, AND UTILITIES WITHIN THE DESIGNATED DEMOLITION AREA.
 ALL DEBRIS, INCLUDING CONSTRUCTION MATERIALS, WASTE, AND HAZARDOUS SUBSTANCES, MUST BE PROPERLY REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS AND ENVIRONMENTAL GUIDELINES.
PROTECTION OF ADJACENT STRUCTURES AND AREAS:
 PRIOR TO DEMOLITION, ENSURE THAT ALL ADJACENT STRUCTURES AND AREAS NOT DESIGNATED FOR DEMOLITION ARE ADEQUATELY PROTECTED TO PREVENT ANY DAMAGE. ERECT TEMPORARY BARRIERS AND SAFETY FENCING AS NEEDED TO SECURE THE DEMOLITION SITE AND PROTECT WORKERS.
UTILITY DISCONNECTIONS AND SAFETY MEASURES:
 ALL UTILITIES (ELECTRICAL, GAS, WATER, SEWAGE, ETC.) MUST BE SAFELY DISCONNECTED OR CAPPED OFF BEFORE THE COMMENCEMENT OF DEMOLITION WORK. FOLLOW ALL SAFETY PROTOCOLS AND GUIDELINES AS PER OSHA AND LOCAL SAFETY STANDARDS TO ENSURE A SAFE DEMOLITION PROCESS.
SITE RESTORATION:
 UPON COMPLETION OF DEMOLITION, THE SITE MUST BE CLEARED OF ALL DEBRIS AND WASTE MATERIALS. THE SITE MUST BE GRADED AS NECESSARY AND RESTORED TO MATCH THE EXISTING SURROUNDINGS, INCLUDING ANY LANDSCAPING FEATURES. THIS INCLUDES ENSURING PROPER DRAINAGE AND PREVENTING EROSION BY STABILIZING THE SOIL.

HARDSCAPE

DESCRIPTION: THE SOLID, HARD, ELEMENTS OR STRUCTURES THAT ARE INCORPORATED INTO LANDSCAPING, THE HARDSCAPE INCLUDES, BUT IS NOT LIMITED TO, STRUCTURES, PAVED AREAS, STAIRS, WALKWAYS, DECKS, PATIOS, ROCKERIES AND RETAINING WALLS, AND SIMILAR CONSTRUCTED ELEMENTS THAT DO NOT HAVE A ROOF. BUILDINGS, ROOFS AND DRIVEWAY EXCLUDED.

NET LOT AREA	59,029 SF
UNUSED LOT COVERAGE	3,135 SF
9% OF LOT AREA	5,313 SF
ALLOWED HARDSCAPE	8,448 SF

EXISTING HARDSCAPE
 TENNIS COURT 6,171 SF
 PATIOS & DECKS (UNCOVERED) 1,023 SF
 WALKWAYS, STAIRS, WALLS 1,458 SF
TOTAL 8,652 SF

REMOVED HARDSCAPE
 1,778 SF

NEW HARDSCAPE
 PATIOS (UNCOVERED) 882 SF
 WALKWAYS, STAIRS, WALLS 880 SF
TOTAL 1,762 SF

TOTAL PROJECT HARDSCAPE 8,348 SF (14.1%)

NOTE: EXISTING HARDSCAPE IS LEGALLY NON-CONFORMING. PROJECT PROPOSES A NET DECREASE IN HARDSCAPE.

LOT COVERAGE

DESCRIPTION: TOTAL AREA OF A LOT THAT MAY BE COVERED BY A COMBINATION OF THE BUILDINGS AND VEHICULAR DRIVING SURFACES, BASED ON NET LOT AREA, DRIVEWAYS

NET LOT AREA	59,029 SF
ALLOWED LOT COVERAGE (40%)	23,612 SF

EXISTING LOT COVERAGE
 MAIN STRUCTURE (ROOF) 5,930 SF
 ACCESSORY BUILDING (ROOF) 4,684 SF
 VEHICULAR USE (DRIVEWAY, & PARKING) 3,170 SF
 COVERED PATIOS 0 SF
TOTAL 14,084 SF

REMOVED LOT COVERAGE
 MAIN STRUCTURE (ROOF) 2,806 SF
 ACCESSORY BUILDING (ROOF) 430 SF
 VEHICULAR USE (DRIVEWAY, & PARKING) 301 SF
 COVERED PATIOS 0 SF
TOTAL 3,537 SF

NEW LOT COVERAGE
 MAIN STRUCTURE (ROOF) 3,520 SF
 ACCESSORY BUILDING (ROOF) 0 SF
 VEHICULAR USE (DRIVEWAY, & PARKING) 5,960 SF
 COVERED PATIOS 750 SF
TOTAL 10,230 SF

TOTAL PROJECT LOT COVERAGE 20,477 SF (34.7%)

UNUSED LOT COVERAGE 3,135 SF

GROSS FLOOR AREA

DESCRIPTION: TOTAL SQUARE FOOTAGE OF FLOOR AREA, BOUNDED BY THE EXTERIOR FACES OF THE BUILDING.

EXISTING FLOOR AREA:
 MAIN 3,995 SF
 UPPER 1,225 SF
 GARAGE 1,130 SF
 SPORTS PAVILION (ACCY. BLDG.) 2,480 SF
 MODIFIER (12'-16" = 150%) 0 SF
 MODIFIER (12'-16" = 200%) 0 SF
TOTAL 8,830 SF

REMOVED FLOOR AREA:
 MAIN 1,905 SF
 UPPER 1,170 SF
 GARAGE 305 SF
 MODIFIER (12'-16" = 150%) 0 SF
 MODIFIER (12'-16" = 200%) 0 SF
TOTAL 2,380 SF

NEW/ADDITION FLOOR AREA:
 MAIN 3,148 SF
 UPPER 1,468 SF
 DECKS (COVERED) 250 SF
 GARAGE 0 SF
 MODIFIER (12'-16" = 150%) 514 SF
 MODIFIER (12'-16" = 200%) 65 SF
TOTAL 5,445 SF

TOTAL PROPOSED AREA: 11,895 SF (21.2%)

PROJECT NARRATIVE

GENERAL DESCRIPTION: THIS PROJECT PROPOSES TO DEMOLISH A PORTION OF EXISTING HOUSE & GARAGE, THEN REMODEL THE EXISTING HOUSE AND EXPAND TO THE NORTHWEST.

DEMOLITION: INCLUDES REMOVING A PORTION OF THE EXISTING GARAGE, AN EXISTING TRELIS, ROOF SUPPORT COLUMNS AND ROOF OVERHANGS, AND A LARGE PORTION OF THE EXISTING HOUSE.

NEW CONSTRUCTION: EXPANSION OF THE EXISTING LOWER AND UPPER FLOORS, A NEW COVERED PATIO AND DRIVEWAY.

BUILDING HEIGHT

30' MAX FROM AVERAGE BUILDING ELEVATION (ABE)
 30' MAX FROM TOP OF PLATE ON DOWNHILL SLOPE

NOTE: SEE SHEET A3.0 - EAST ELEVATION FOR HEIGHT COMPLIANCE

LOT ZONING

(MICC 19.02.020)

LOT ZONING: R-15

GROSS LOT AREA: 59,029 sf (PER SURVEY)
NET LOT AREA: 59,029 sf (ACCESS EASEMENT & DRIVEWAY IS SHARED)

MAX LOT COVERAGE: 23,612 sf MAX40% (<15% LOT SLOPE) = (IMPERVIOUS SURFACES)

GROSS FLOOR AREA: 12,000 SF OR 40% LOT AREA (WHICHEVER IS LESS)

MAX BUILDING HEIGHT: 30' (FROM AVG. BLDG. ELEV.)
 30' MAX TO PLATE ON DOWNHILL SLOPE
 5.4% (46.0' HIGH) - 19.0' (LOW) / 496' (DISTANCE)

SETBACKS/YARDS

FRONT YARD: 20'-0" MIN

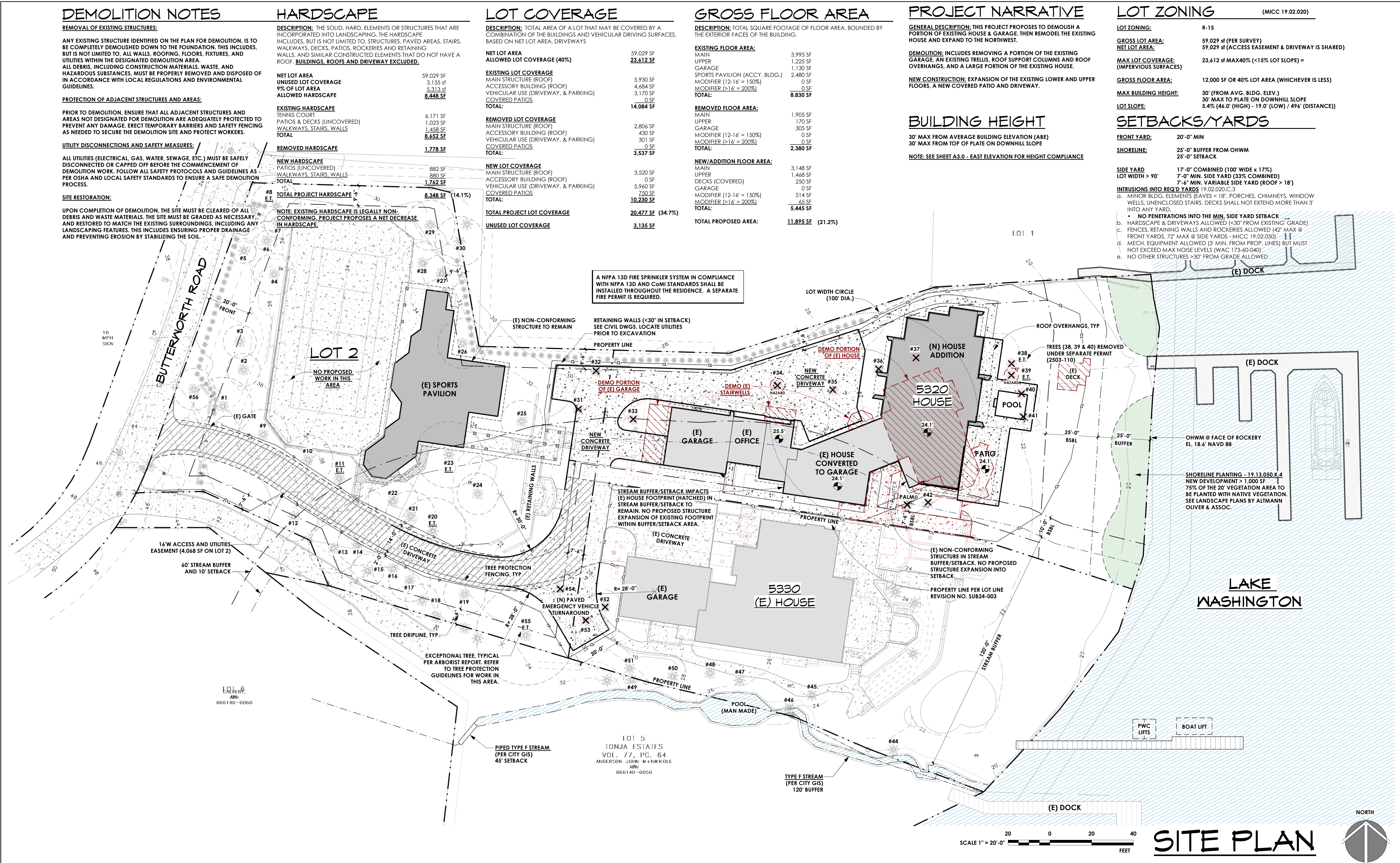
SHORELINE: 25'-0" BUFFER FROM OHWM
 25'-0" SETBACK

SIDE YARD: 17'-0" COMBINED (100' WIDE x 17%)
LOT WIDTH > 90': 7'-0" MIN. SIDE YARD (33% COMBINED)
 7'-6" MIN. VARIABLE SIDE YARD (ROOF > 18')

INTRUSIONS INTO REQ'D YARDS 19.02.020.C.3
 a. MINOR BLDG. ELEMENTS (EAVES < 18", PORCHES, CHIMNEYS, WINDOW WELLS, UNENCLOSED STAIRS, DECKS SHALL NOT EXTEND MORE THAN 3' INTO ANY YARD)
 b. NO PENETRATIONS INTO THE MIN. SIDE YARD SETBACK
 c. HARDSCAPE & DRIVEWAYS ALLOWED (<30' FROM EXISTING GRADE)
 d. FENCES, RETAINING WALLS AND ROCKERIES ALLOWED (42" MAX @ FRONT YARDS, 72" MAX @ SIDE YARDS - MICC 19.02.050)
 e. MECH. EQUIPMENT ALLOWED (3' MIN. FROM PROP. LINES) BUT MUST NOT EXCEED MAX NOISE LEVELS (WAC 173-60-040)
 f. NO OTHER STRUCTURES >30' FROM GRADE ALLOWED

SCALE THIS DRAWING, IN FEET

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48



MACPHERSON RESIDENCE

5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040

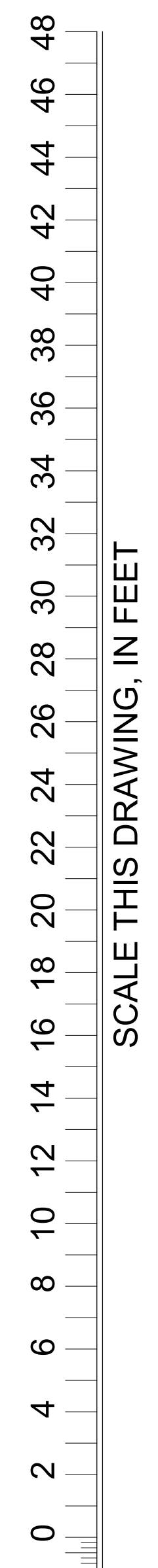
SITE PLAN

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL

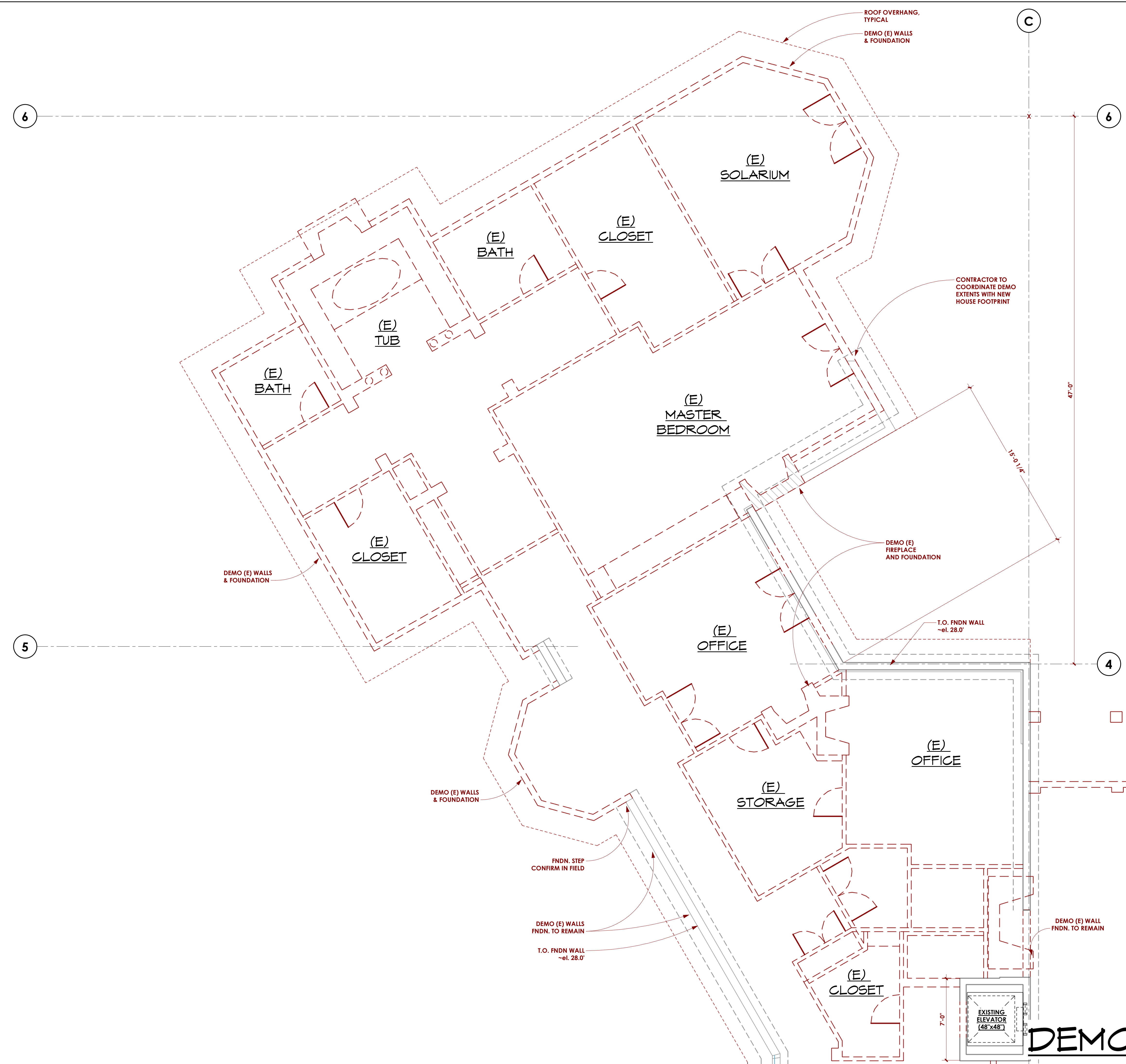
SHEET NUMBER

A1.1

MacPherson
 Construction & Design
 22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841



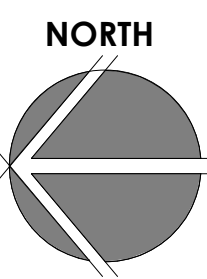
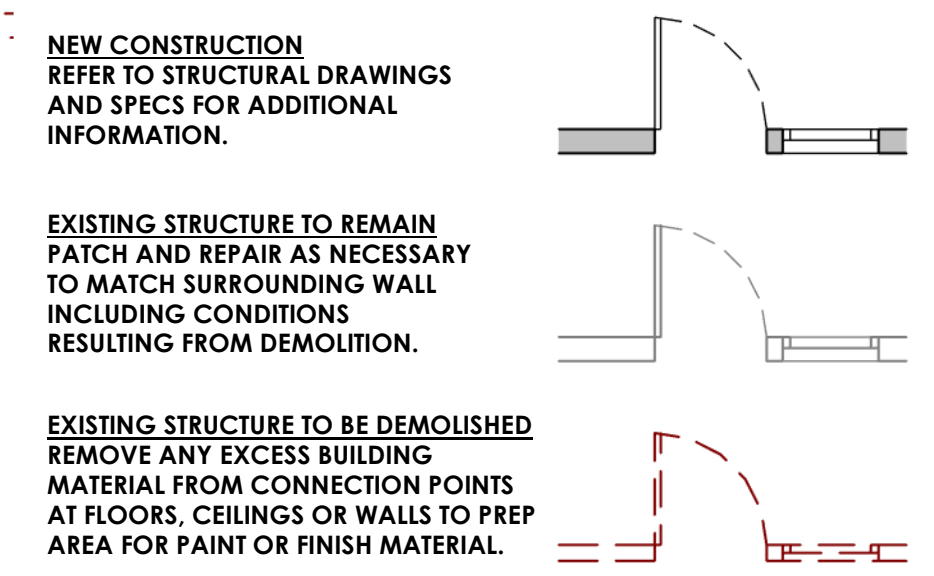
SCALE THIS DRAWING, IN FEET



GENERAL DEMO NOTES

- 1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND OWNER.
2. THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND REMOVE ALL MECHANICAL, ELECTRICAL AND MISC. EQUIPMENT AS REQUIRED TO COMPLETE THE NEW WORK.
3. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY STRUCTURAL BRACING AS REQUIRED DURING DEMOLITION AND CONSTRUCTION.
4. PRIOR TO ANY DEMOLITION, EXISTING CONSTRUCTION SCHEDULED TO REMAIN SHOULD BE PROTECTED FROM DAMAGE TO THE EXTENT FEASIBLE. ANY PORTION OF THE PROJECT TO REMAIN WHICH IS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING CONDITION.
5. DOORS, WINDOWS, CABINETS, APPLIANCES AND ANY OTHER MISC. ITEMS PART OF DEMO SCOPE ARE TO BE SALVAGED UNLESS OTHERWISE CONFIRMED BY OWNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SECURE, DRY STORAGE FOR OWNER RETAINED ITEMS.

CONSTRUCTION LEGEND



DEMO PLAN - MAIN

1/4" = 1'-0"

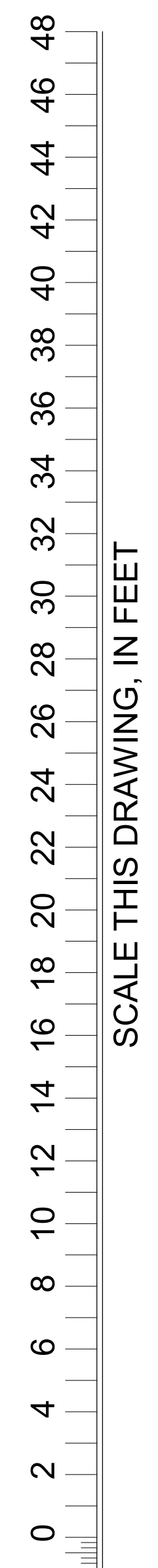
(E) MAIN FLR = 28.1'
(E) GARAGE FLR = 27.0'
(E) MASTER FLR = 24.1'

Table with columns: REV., DATE, BY, DESCRIPTION. Includes entry for 4/1/25 by DAN PERMIT SUBMITTAL.

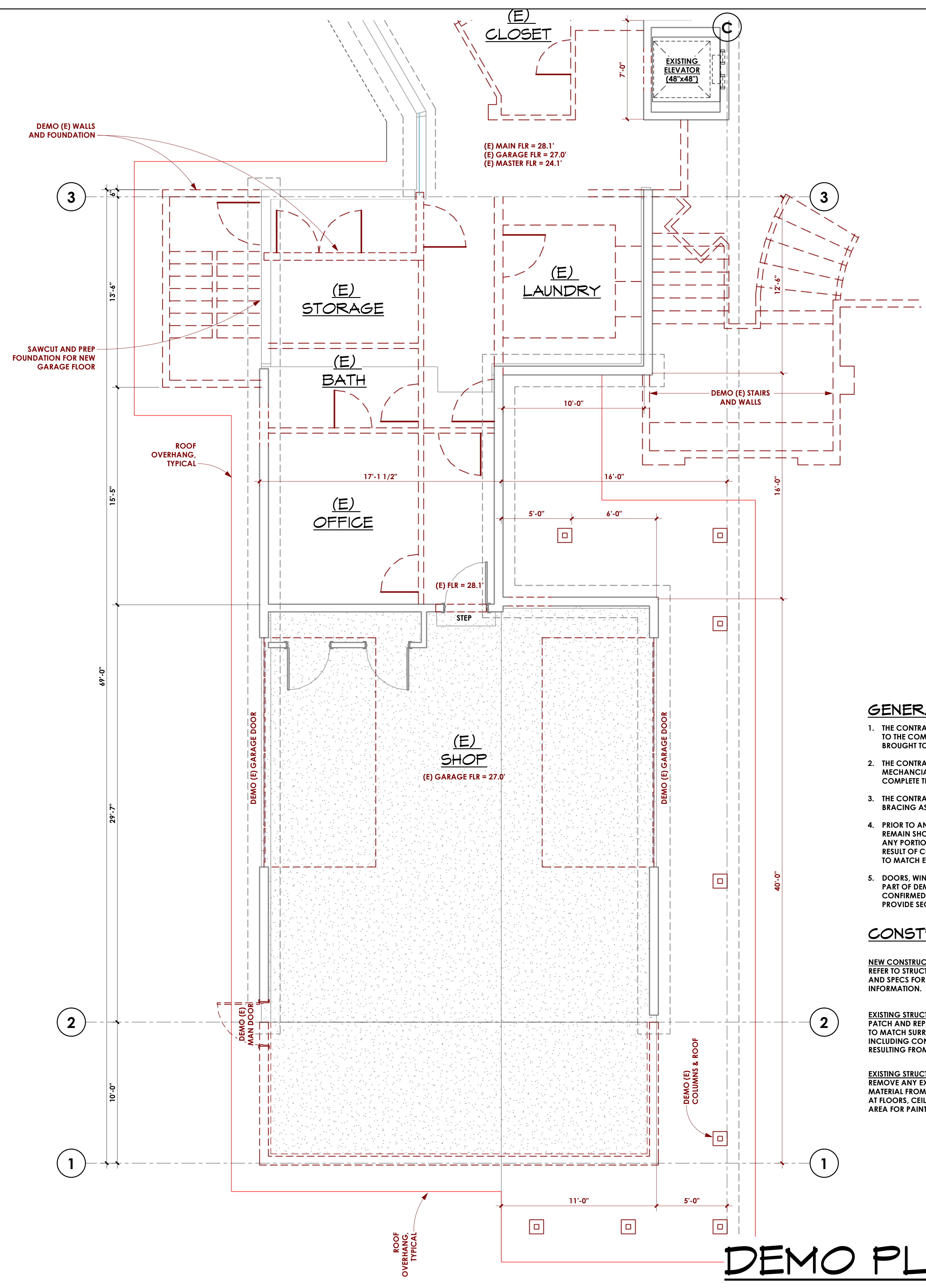
MACPHERSON RESIDENCE
5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 866140-0040
DEMO PLAN - MAIN

MacPherson Construction & Design logo and contact information: 22605 SE 54th St Suite 140, Issaquah, WA 98029. PH: 425.391.3333 FAX: 425.557.2841

SHEET NUMBER
A2.0a



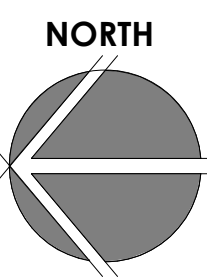
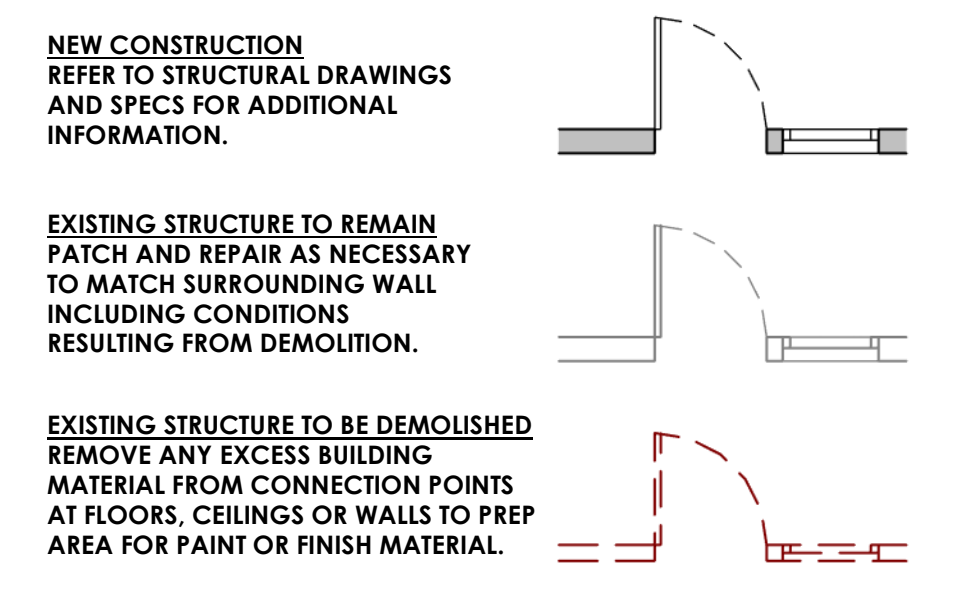
SCALE THIS DRAWING, IN FEET



GENERAL DEMO NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND OWNER.
2. THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND REMOVE ALL MECHANICAL, ELECTRICAL AND MISC. EQUIPMENT AS REQUIRED TO COMPLETE THE NEW WORK.
3. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY STRUCTURAL BRACING AS REQUIRED DURING DEMOLITION AND CONSTRUCTION.
4. PRIOR TO ANY DEMOLITION, EXISTING CONSTRUCTION SCHEDULED TO REMAIN SHOULD BE PROTECTED FROM DAMAGE TO THE EXTENT FEASIBLE. ANY PORTION OF THE PROJECT TO REMAIN WHICH IS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING CONDITION.
5. DOORS, WINDOWS, CABINETS, APPLIANCES AND ANY OTHER MISC. ITEMS PART OF DEMO SCOPE ARE TO BE SALVAGED UNLESS OTHERWISE CONFIRMED BY OWNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SECURE, DRY STORAGE FOR OWNER RETAINED ITEMS.

CONSTRUCTION LEGEND



DEMO PLAN - MAIN

1/4" = 1'-0"

DATE	REV.	BY	DESCRIPTION
4/1/25	<<<<<	DAN	PERMIT SUBMITTAL

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
DEMO PLAN - MAIN

MacPherson
 Construction & Design
 22605 SE 54th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A2.0b

MECHANICAL NOTES:

- PROVIDE 6" DIAMETER FRESH AIR INTAKE FROM OUTSIDE TO RETURN AIR PLENUM AT FURNACE WITH MOTORIZED FLOW DAMPERS.
 - PROVIDE DUCTED COMBUSTION AIR FOR GAS BURNERS AS REQ'D.
 - PROVIDE THERMAL EXPANSION TANK AT WATER HEATER, IF REQ'D.
 - STRAP WATER HEATER TO FRAMING TOP & BOTTOM PER UPC.
 - PROVIDE PRESSURE RELIEF LINE PLUMBED DIRECT TO OUTSIDE OR APPROVED DRAIN LOCATION.
 - IF RANGE HOOD IS GREATER THAN 400 CFM AN AUTOMATIC MECHANICAL DAMPER SHALL BE INTEGRATED INTO THE WHOLE HOUSE FAN SYSTEM TO PROVIDE MAKEUP AIR AT THE SAME RATE AS THE EXHAUST FAN.
- ENERGY CODE REQUIREMENTS:
 MAXIMUM HEATING OUTPUT = XXX XXX BTU/HR
 PROVIDE AIR SOURCE HEAT PUMP WITH MIN. HPSE = 11
 PROVIDE HIGH EFFICIENCY GAS HOT WATER HEATER WITH MIN. UEF = .91

WINDOW & DOOR LEGEND

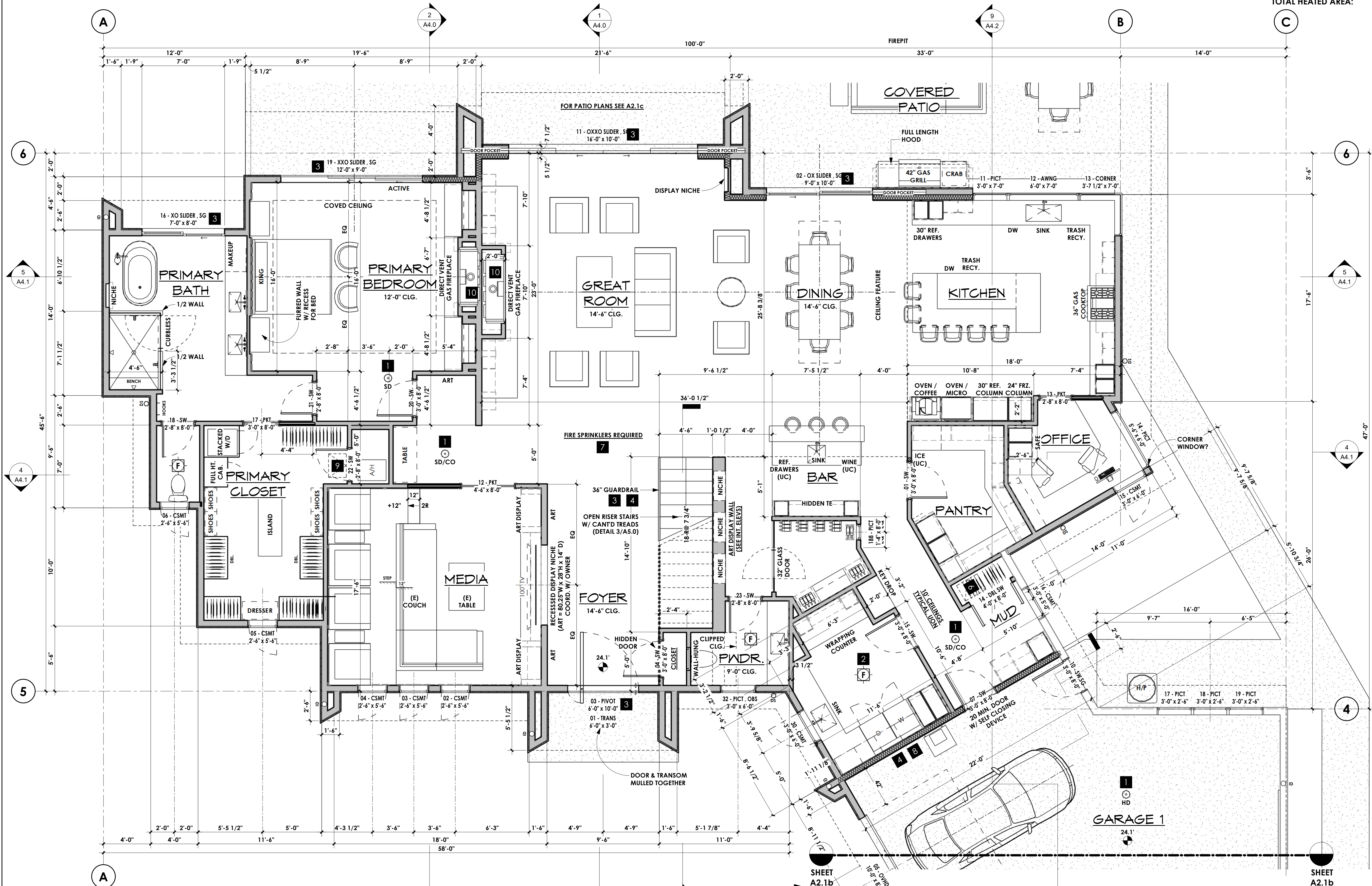
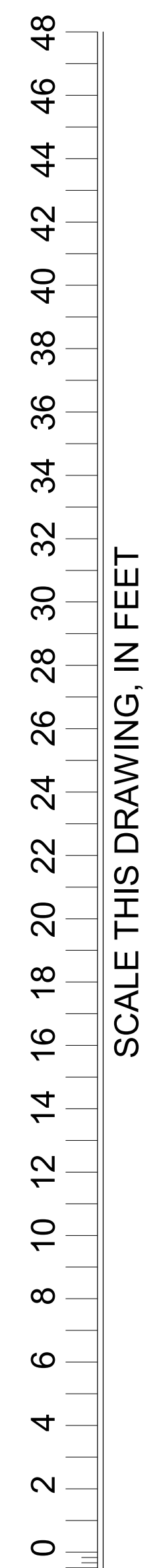
- AWN: AWNING
 CSMT: CASEMENT
 FG: FULL GLASS
 OBS: OBSCURE GLAZING
 OVDH: OVERHEAD GARAGE DOOR
 OXOX: FUNCTION ON SLIDERS (X=OPERABLE)
 PICT: PICTURE
 PKT: POKET
 PVT: PIVOT SWING
 SDLT: DOOR SIDELIGHT
 SLD: SAFETY GLAZING
 SHL: HORIZONTAL SLIDER
 TRNS: TRANSLOM ABOVE
 20 MIN: 20 MIN. FIRE RATING

- NOTES:
 1. U-VALUE: REFER TO GENERAL NOTES ENERGY SECTION FOR MIN. VALUES, AND COVER SHEET ENERGY NOTES FOR CREDIT OPTIONS.
 2. WINDOWS ARE TYPICALLY CENTERED IN EXT. WALL UNLESS DIMENSIONED OTHERWISE.
 3. DOOR HINGE JAMB TO BE 4 1/2" FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
 4. SET EXTERIOR DOORS PRIOR TO SETTING WINDOWS. ALIGN INSIDE LINERS TO MATCH FINISH CASING. WINDOW R.O. SHOULD BE 3/4" LOWER THAN DOOR R.O. (VERIFY W/ MANUFACTURER)
 5. PROVIDE SAFETY GLAZING AT ALL LOCATIONS REQUIRED BY CODE (IRC R308.4)
 6. PROVIDE SAFETY GLASS SHOWER ENCLOSURE & DOORS, TYP.

KEY NOTES:

- NOTE: ALL KEY NOTES MAY NOT APPLY
1. INSTALL HEAT, SMOKE AND CARBON MONOXIDE DETECTORS. PER GENERAL NOTES, FIRE PROTECTION.
 2. INSTALL WHOLE HOUSE FAN PER GENERAL NOTES, VENTILATION & LIGHTING.
 3. PROVIDE SAFETY GLAZING PER GENERAL NOTES, GLAZING.
 4. INSTALL GUARDRAILS & HANDRAIL PER GENERAL NOTES, STAIRS.
 5. PROVIDE FIRE SEPARATION BETWEEN HOUSE & GARAGE. PER GENERAL NOTES, GARAGES.
 6. INSTALL DECKS & STAIRS PER GENERAL NOTES DECKS & STAIRWAYS.
 7. INSTALL RESIDENTIAL FIRE SPRINKLER SYSTEM PER GENERAL NOTES, FIRE PROTECTION.
 8. PROVIDE INSULATION IN WALLS BETWEEN HEATED & UN-HEATED AREAS, PER GENERAL NOTES, ENERGY.
 9. CRAWL SPACE ACCESS: 18"x24" PER GENERAL NOTES, CRAWL SPACES.
 10. ZERO CLEARANCE DIRECT VENT GAS FIREPLACE PER GENERAL NOTES, FIREPLACES.

FLOOR AREAS			
LEVEL	DESCRIPTION	AREA	HEATED
MAIN FLOOR	FLOOR AREA	3,428 SF	YES
MAIN FLOOR	ELEV. LOBBY	202 SF	YES
MAIN FLOOR	SHOP	1,112 SF	
MAIN FLOOR	GARAGE 1	1,032 SF	
MAIN FLOOR	GARAGE 2	293 SF	
UPPER FLOOR	FLOOR AREA	2,523 SF	YES
GROSS BUILDING AREA		8,591 SF	
TOTAL HEATED AREA:		6,180 SF	



DATE	REV.	DESCRIPTION
4/1/25		BY DAN PERMIT SUBMITTAL

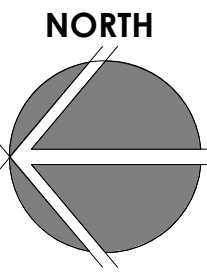
MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
FLOOR PLAN - MAIN

MacPherson
 Construction & Design
 22605 SE 54th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A2.1a

FLOOR PLAN - MAIN

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



0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

SCALE THIS DRAWING, IN FEET

MECHANICAL NOTES:

- PROVIDE 6" DIAMETER FRESH AIR INTAKE FROM OUTSIDE TO RETURN AIR PLENUM AT FURNACE WITH MOTORIZED FLOW DAMPERS.
 - PROVIDE DUCTED COMBUSTION AIR FOR GAS BURNERS AS REQ'D.
 - PROVIDE THERMAL EXPANSION TANK AT WATER HEATER, IF REQ'D.
 - STRAP WATER HEATER TO FRAMING TOP & BOTTOM PER UPC.
 - PROVIDE PRESSURE RELIEF LINE PLUMBED DIRECT TO OUTSIDE OR APPROVED DRAIN LOCATION.
 - IF RANGE HOOD IS GREATER THAN 400 CFM AN AUTOMATIC MECHANICAL DAMPER SHALL BE INTEGRATED INTO THE WHOLE HOUSE FAN SYSTEM TO PROVIDE MAKEUP AIR AT THE SAME RATE AS THE EXHAUST FAN.
- ENERGY CODE REQUIREMENTS:**
 MAXIMUM HEATING OUTPUT = XX,XXX BTU/HR
 PROVIDE AIR SOURCE HEAT PUMP WITH MIN. HSPF = 11
 PROVIDE HIGH EFFICIENCY GAS HOT WATER HEATER WITH MIN. UEF = .91

KEY NOTES: NOTE: ALL KEY NOTES MAY NOT APPLY

- | | |
|---|---|
| 1 INSTALL HEAT, SMOKE AND CARBON MONOXIDE DETECTORS. PER GENERAL NOTES, FIRE PROTECTION. | 6 INSTALL DECKS & STAIRS PER GENERAL NOTES DECKS & STAIRWAYS. |
| 2 INSTALL WHOLE HOUSE FAN PER GENERAL NOTES, VENTILATION & LIGHTING. | 7 INSTALL RESIDENTIAL FIRE SPRINKLER SYSTEM PER GENERAL NOTES, FIRE PROTECTION. |
| 3 PROVIDE SAFETY GLAZING PER GENERAL NOTES, GLAZING. | 8 PROVIDE INSULATION IN WALLS BETWEEN HEATED & UN-HEATED AREAS, PER GENERAL NOTES, ENERGY. |
| 4 INSTALL GUARDRAILS & HANDRAIL PER GENERAL NOTES, STAIRS. | 9 CRAWL SPACE ACCESS: 18"x24" PER GENERAL NOTES, CRAWL SPACES. |
| 5 PROVIDE FIRE SEPARATION BETWEEN HOUSE & GARAGE. PER GENERAL NOTES, GARAGES. | 10 ZERO CLEARANCE DIRECT VENT GAS FIREPLACE PER GENERAL NOTES, FIREPLACES. |

FLOOR AREAS			
LEVEL	DESCRIPTION	AREA	HEATED
MAIN FLOOR	FLOOR AREA	3,428 SF	YES
MAIN FLOOR	ELEV. LOBBY	202 SF	YES
MAIN FLOOR	SHOP	1,112 SF	
MAIN FLOOR	GARAGE 1	1,032 SF	
MAIN FLOOR	GARAGE 2	293 SF	
UPPER FLOOR	FLOOR AREA	2,523 SF	YES
GROSS BUILDING AREA		8,591 SF	
TOTAL HEATED AREA:		6,180 SF	

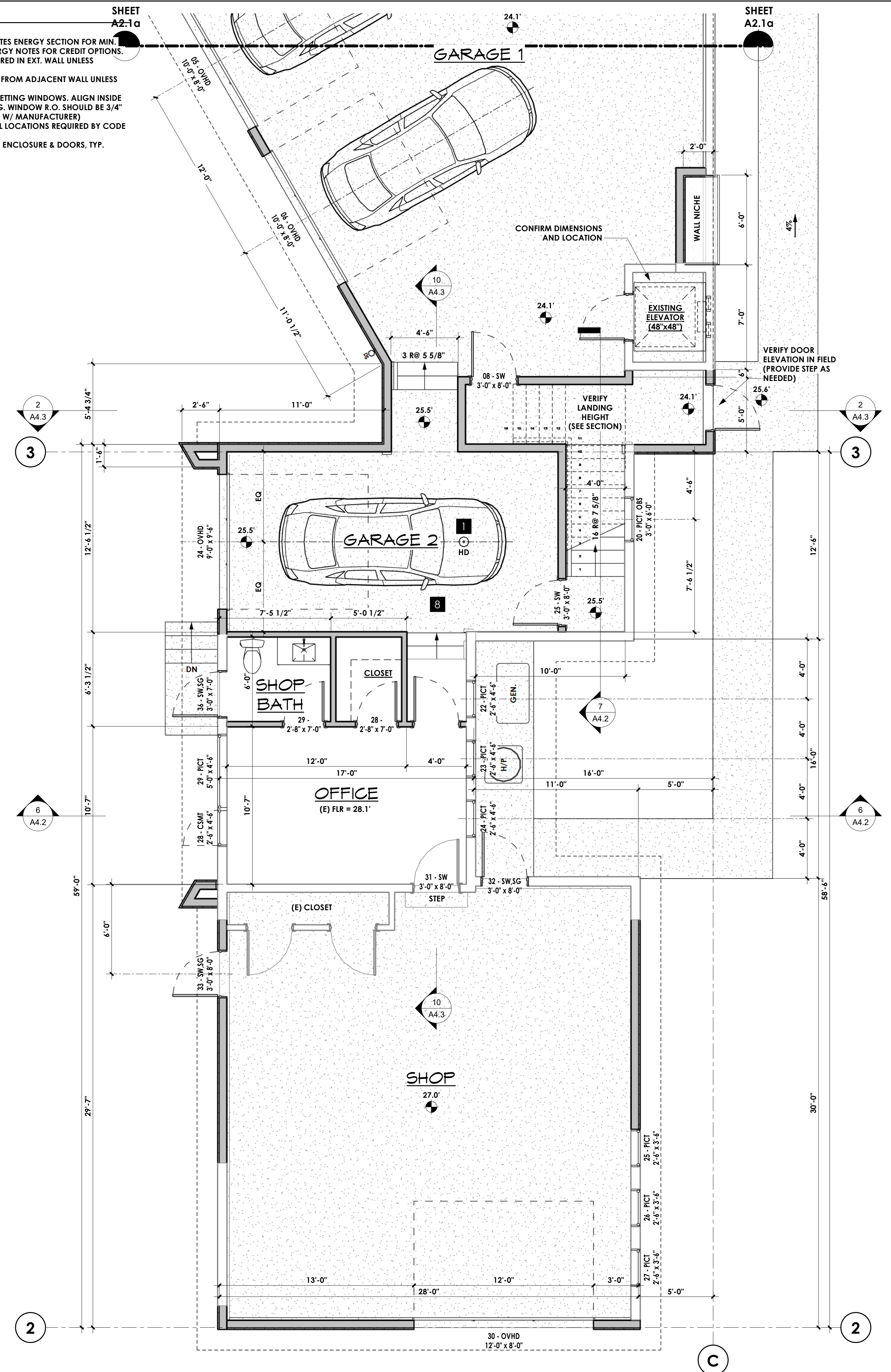
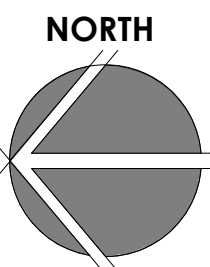
WINDOW & DOOR LEGEND

- AWN:** AWNING
CSMT: CASEMENT
FG: FULL GLASS
OBS: OBSCURE GLAZING
OVHD: OVERHEAD GARAGE DOOR
OXXO: FUNCTION ON SLIDERS (X=OPERABLE)
PICT: PICTURE
PKT: POCKET
PVT: PIVOT SWING
SDLT: DOOR SIDELIGHT
SG: SAFETY GLAZING
SLD: HORIZONTAL SLIDER
TRANS: TRANSOM ABOVE
20 MIN: 20 MIN. FIRE RATING

- NOTES:**
1. U-VALUE: REFER TO GENERAL NOTES ENERGY SECTION FOR MIN. VALUES, AND COVER SHEET ENERGY NOTES FOR CREDIT OPTIONS.
 2. WINDOWS ARE TYPICALLY CENTERED IN EXT. WALL UNLESS DIMENSIONED OTHERWISE.
 3. DOOR HINGE JAMB TO BE 4 1/2" FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
 4. SET EXTERIOR DOORS PRIOR TO SETTING WINDOWS. ALIGN INSIDE LINERS TO MATCH FINISH CASING. WINDOW R.O. SHOULD BE 3/4" LOWER THAN DOOR R.O. (VERIFY W/ MANUFACTURER)
 5. PROVIDE SAFETY GLAZING AT ALL LOCATIONS REQUIRED BY CODE (IRC R308.4)
 6. PROVIDE SAFETY GLASS SHOWER ENCLOSURE & DOORS, TYP.

FLOOR PLAN - MAIN

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



2" @ FULL SCALE

DATE	REV.	BY	DESCRIPTION
4/1/25	1	DAN	PERMIT SUBMITTAL

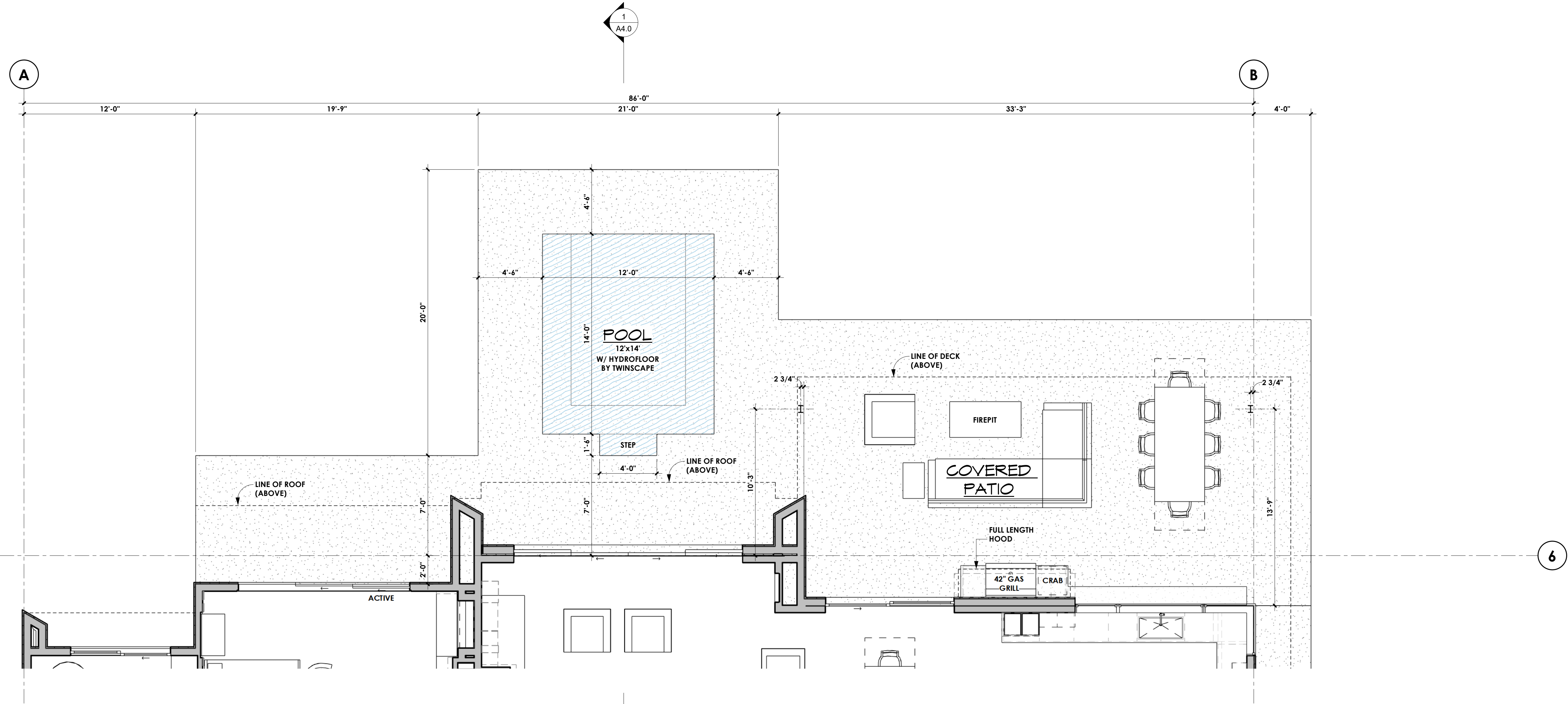
MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
FLOOR PLAN - MAIN

MacPherson
 Construction & Design
 22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A2.1b

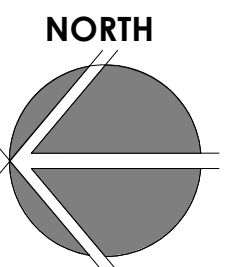
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

SCALE THIS DRAWING, IN FEET



OUTDOOR PATIO PLAN

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



2" @ FULL SCALE

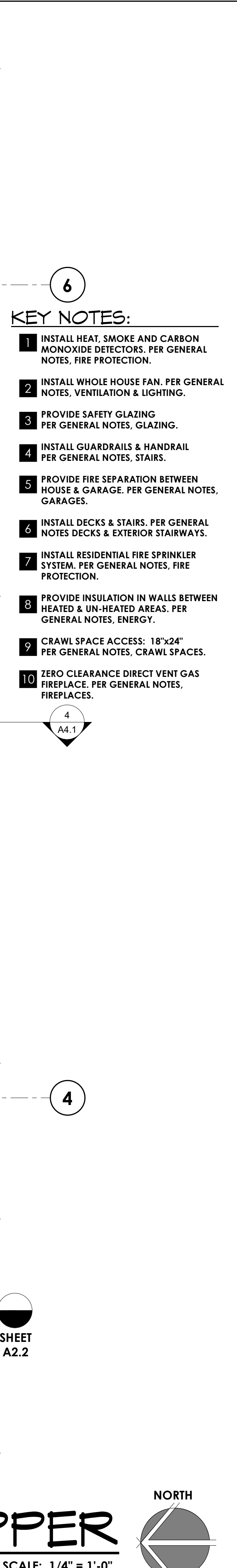
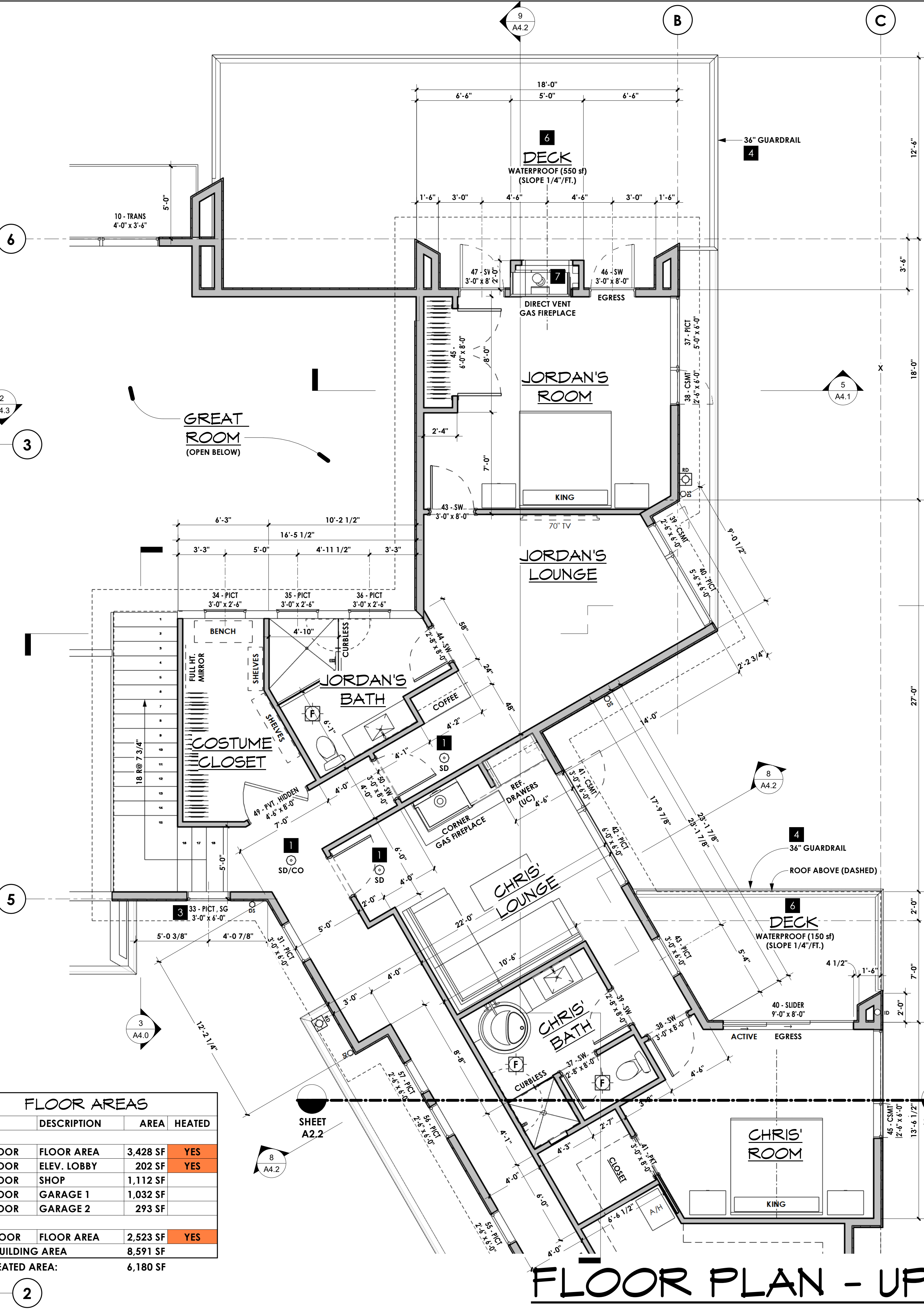
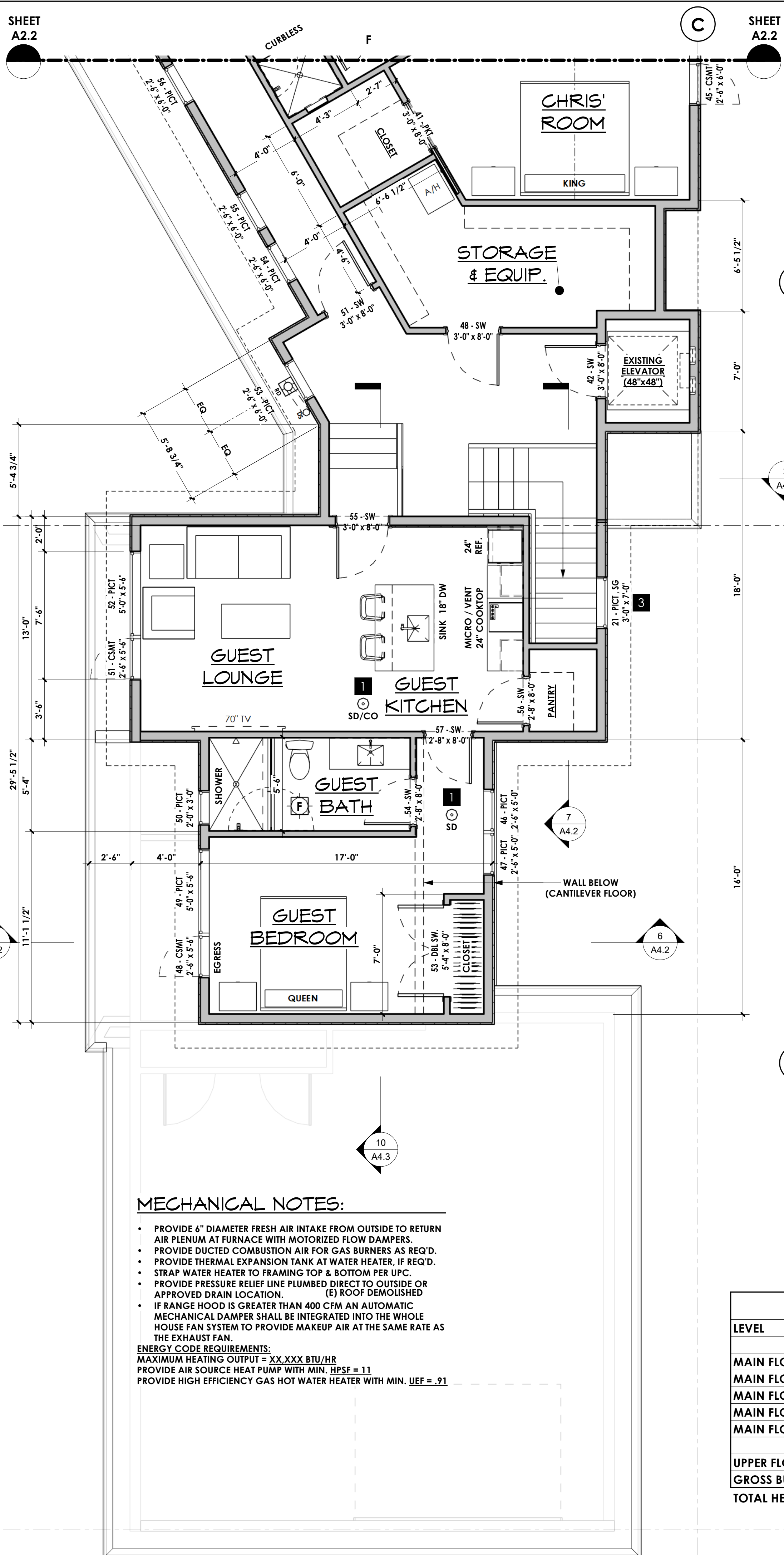
DATE	REV.	BY	DESCRIPTION
4/1/25	<<<<<<	DAN	PERMIT SUBMITTAL

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
OUTDOOR PATIO PLAN

MacPherson
 Construction & Design
 22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A2.1c

SCALE THIS DRAWING, IN FEET



MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
FLOOR PLAN - UPPER

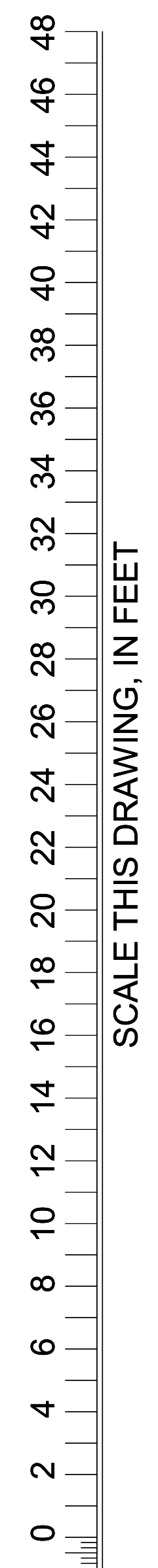
MacPherson
 Construction & Design
 22605 SE 54th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

BY: DAN PERMIT SUBMITTAL
 REV. DATE: 4/1/25

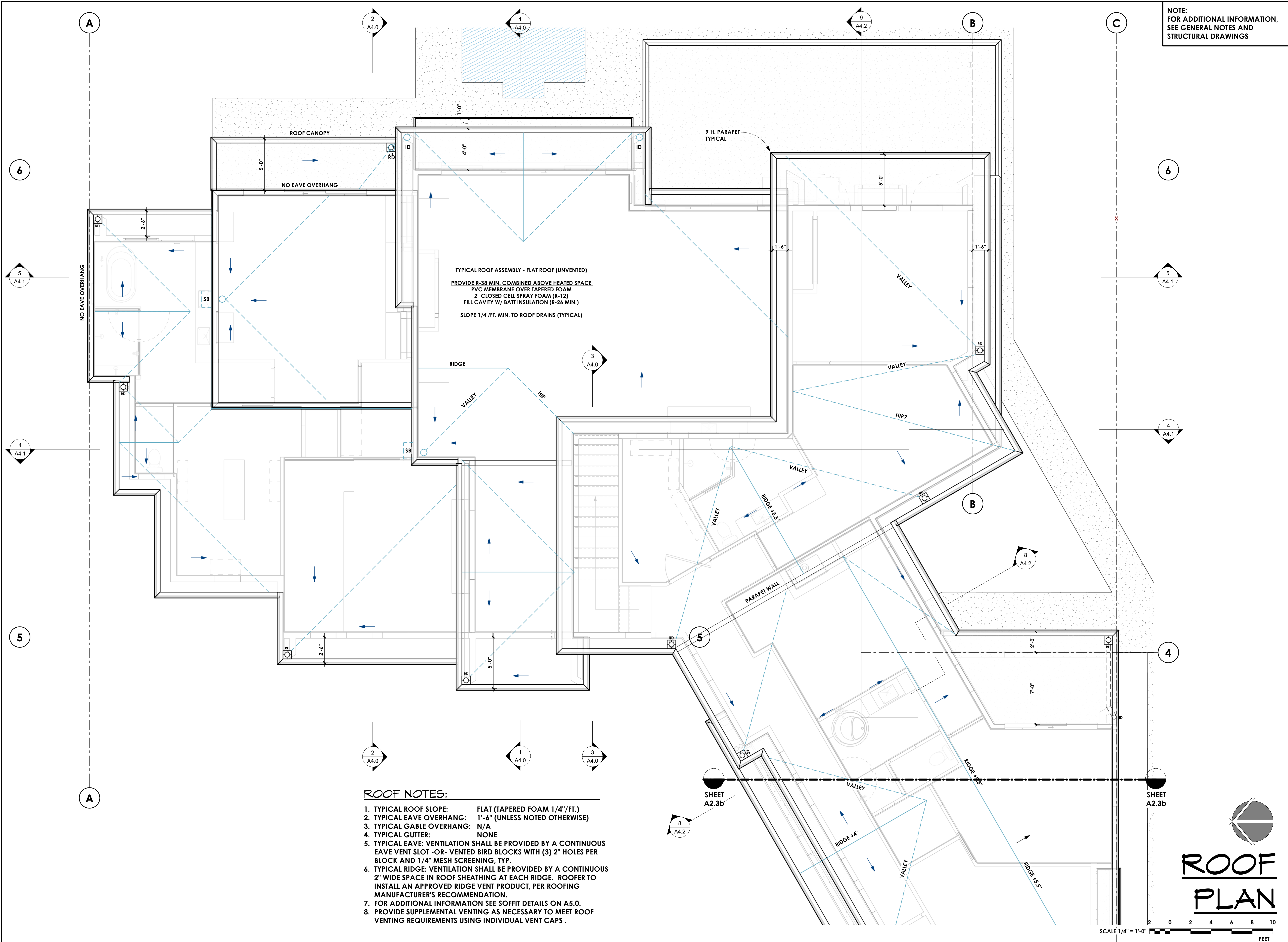
SHEET NUMBER
A2.2

4/7/2025 9:59:25 AM

NOTE:
FOR ADDITIONAL INFORMATION,
SEE GENERAL NOTES AND
STRUCTURAL DRAWINGS

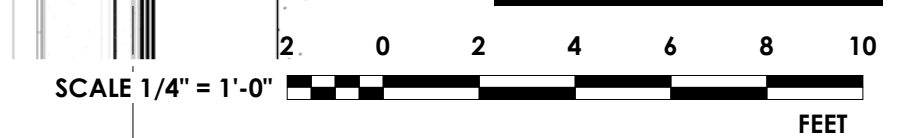


SCALE THIS DRAWING, IN FEET



- ROOF NOTES:**
1. TYPICAL ROOF SLOPE: FLAT (TAPERED FOAM 1/4"/FT.)
 2. TYPICAL EAVE OVERHANG: 1'-6" (UNLESS NOTED OTHERWISE)
 3. TYPICAL GABLE OVERHANG: N/A
 4. TYPICAL GUTTER: NONE
 5. TYPICAL EAVE: VENTILATION SHALL BE PROVIDED BY A CONTINUOUS EAVE VENT SLOT -OR- VENTED BIRD BLOCKS WITH (3) 2" HOLES PER BLOCK AND 1/4" MESH SCREENING, TYP.
 6. TYPICAL RIDGE: VENTILATION SHALL BE PROVIDED BY A CONTINUOUS 2" WIDE SPACE IN ROOF SHEATHING AT EACH RIDGE. ROOFER TO INSTALL AN APPROVED RIDGE VENT PRODUCT, PER ROOFING MANUFACTURER'S RECOMMENDATION.
 7. FOR ADDITIONAL INFORMATION SEE SOFFIT DETAILS ON A5.0.
 8. PROVIDE SUPPLEMENTAL VENTING AS NECESSARY TO MEET ROOF VENTING REQUIREMENTS USING INDIVIDUAL VENT CAPS.

ROOF PLAN



REV.	DATE	DESCRIPTION
1	4/1/25	PERMIT SUBMITTAL

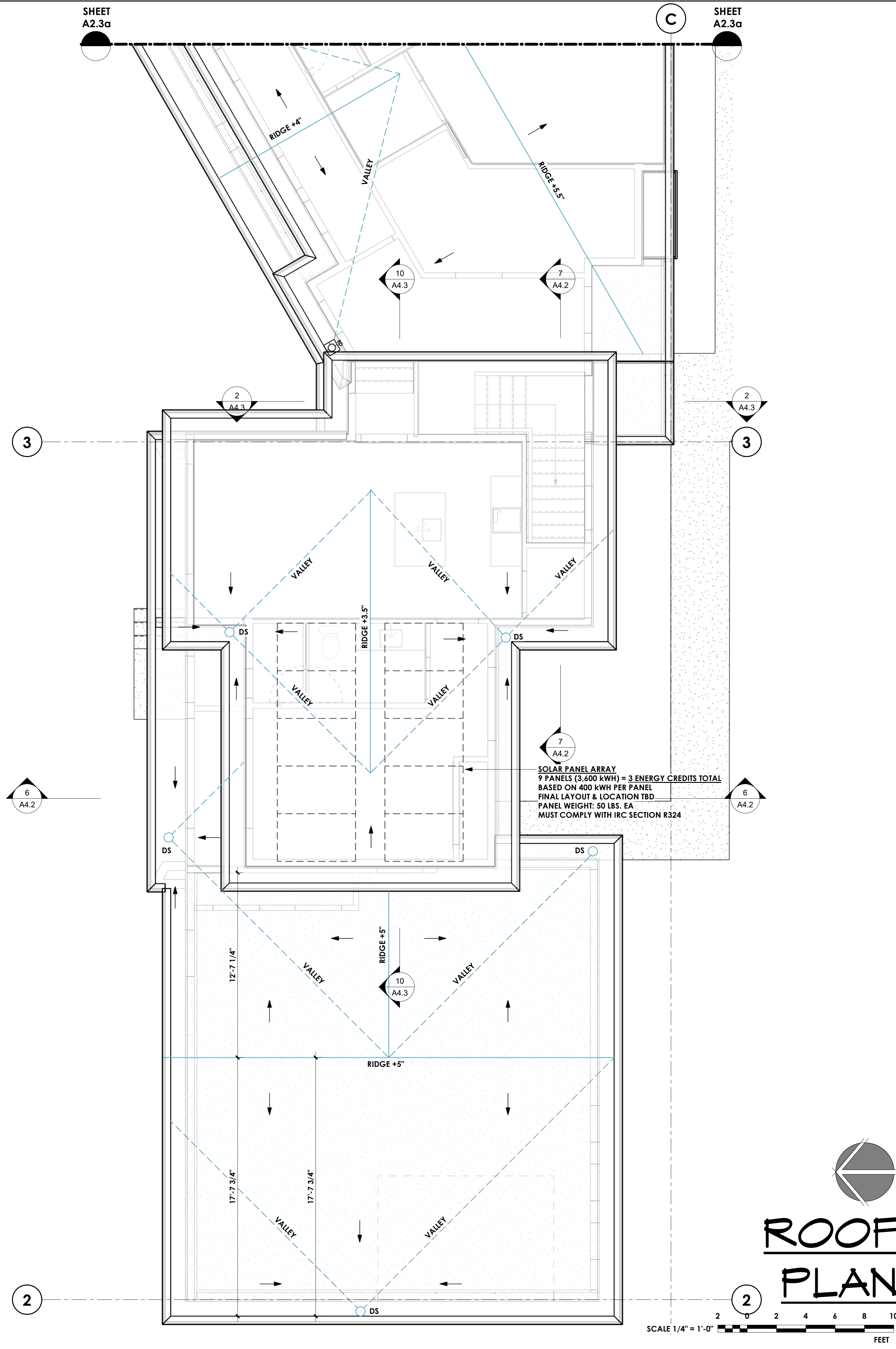
MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
ROOF PLAN

MacPherson
 Construction & Design
 22605 SE 54th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A2.3a

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

SCALE THIS DRAWING, IN FEET



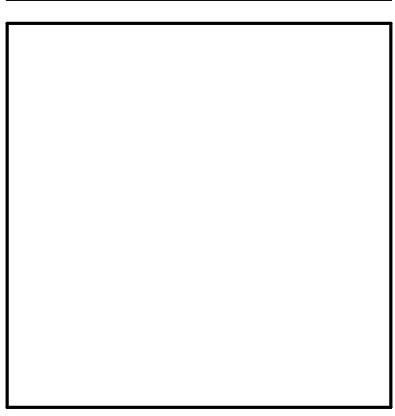
ROOF PLAN

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

2" @ FULL SCALE

DATE	REV.	BY	DESCRIPTION
4/17/25	1	DAN	PERMIT SUBMITTAL
	2		
	3		
	4		
	5		

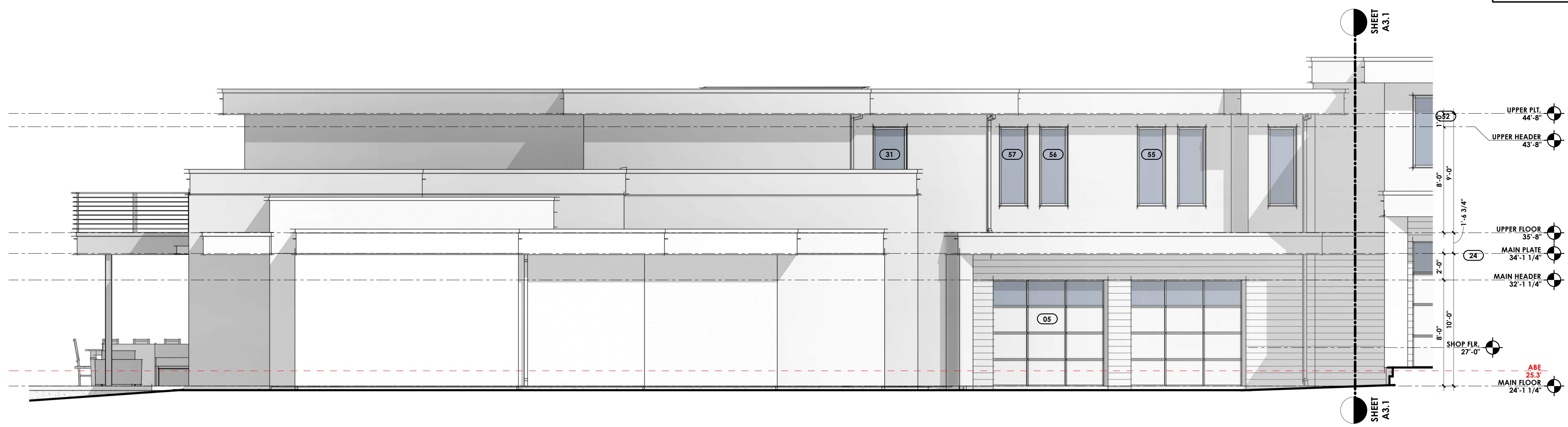
MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
ROOF PLAN



MacPherson
 Construction & Design
 22605 SE 54th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A2.3b

NOTE:
FOR ADDITIONAL INFORMATION,
SEE GENERAL NOTES AND
STRUCTURAL DRAWINGS



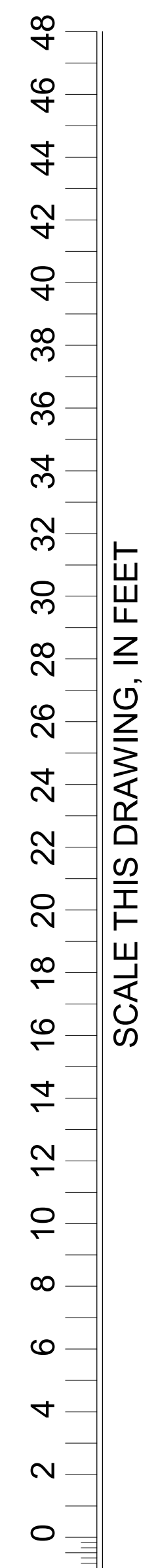
NORTH ELEVATION

1/4" = 1'-0"



NORTH ELEVATION

1/4" = 1'-0"



REV.	DATE	BY	DESCRIPTION
1	4/1/25	DAN	PERMIT SUBMITTAL

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
EXTERIOR ELEVATIONS

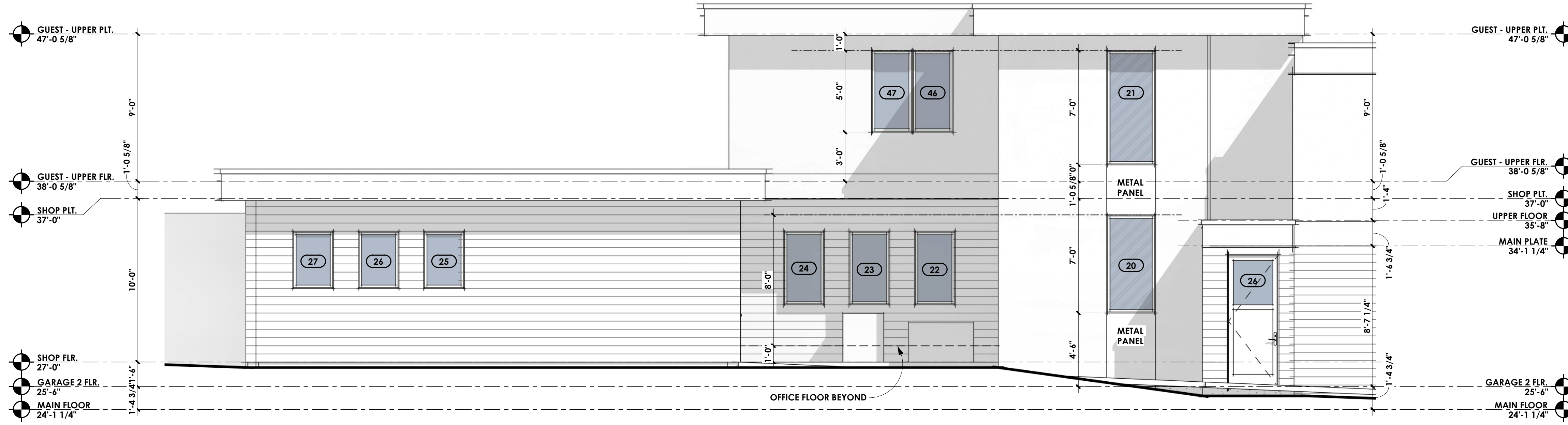
MacPherson
 Construction & Design
 22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A3.1



SOUTH ELEVATION

1/4" = 1'-0"



SOUTH ELEVATION

1/4" = 1'-0"

SCALE THIS DRAWING, IN FEET

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

REV.	DATE	DESCRIPTION
1	4/1/25	PERMIT SUBMITTAL

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
EXTERIOR ELEVATIONS

MacPherson
 Construction & Design
 22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A3.2

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

SCALE THIS DRAWING, IN FEET

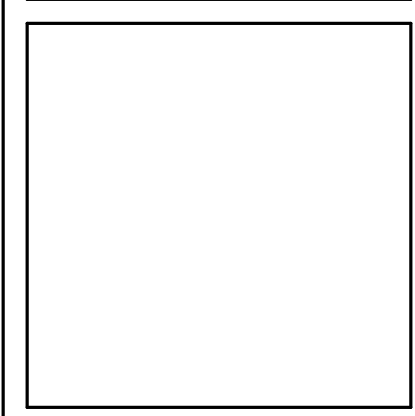


2" @ FULL SCALE

DATE	REV.	BY	DESCRIPTION
4/1/25	<<	DAN	PERMIT SUBMITTAL
	<<		
	<<		
	<<		

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040

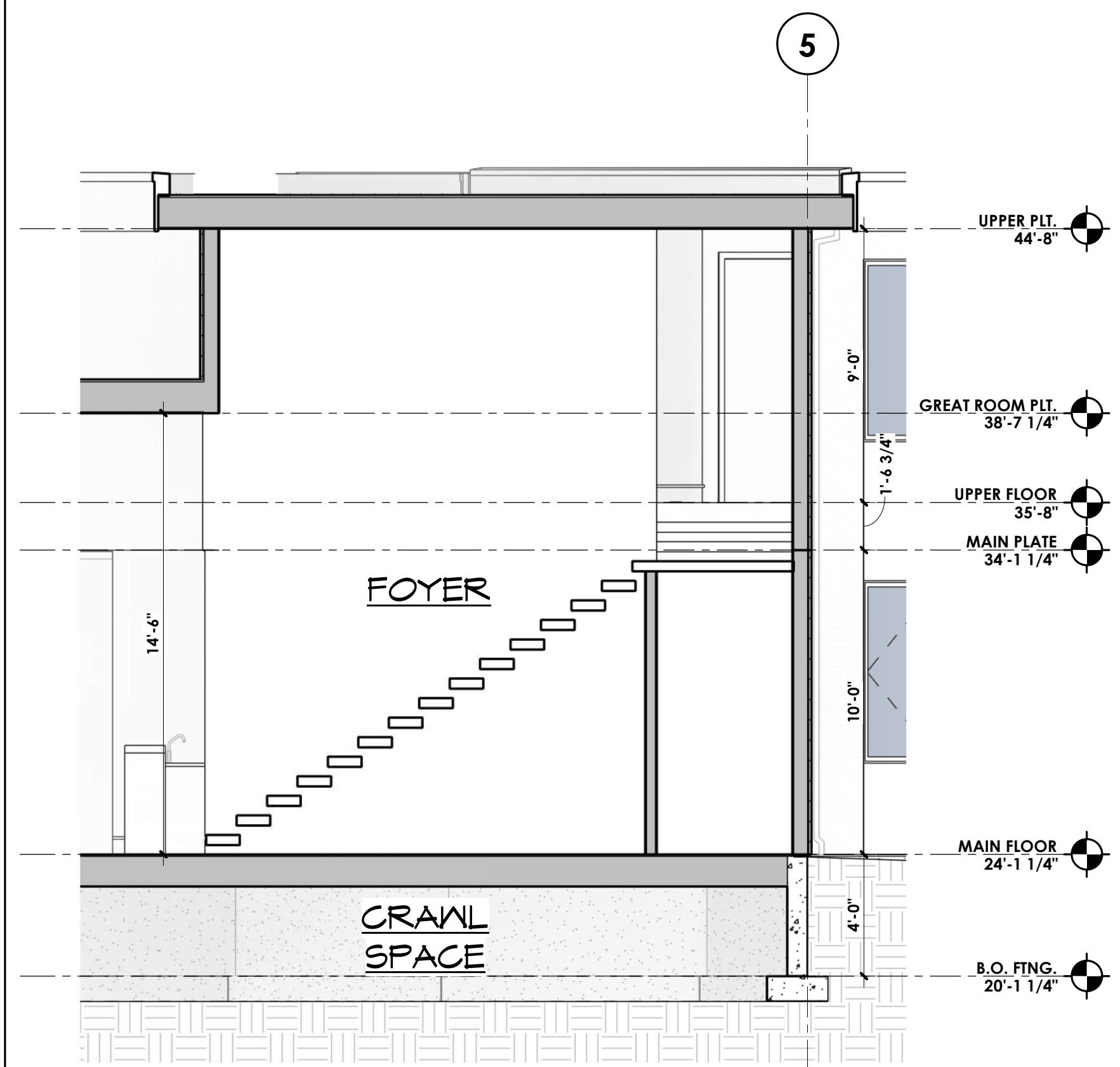
EXTERIOR ELEVATIONS



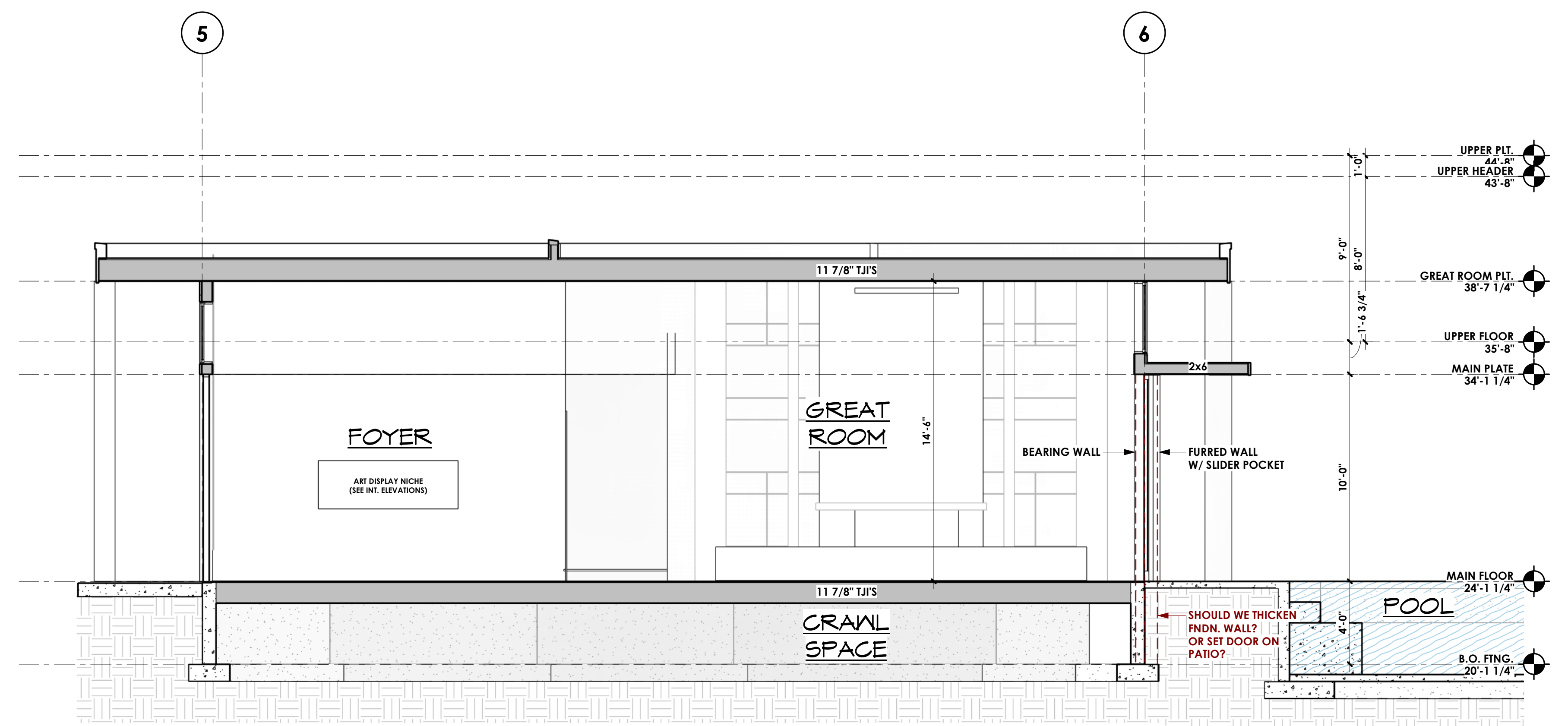
MacPherson
 Construction & Design

22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

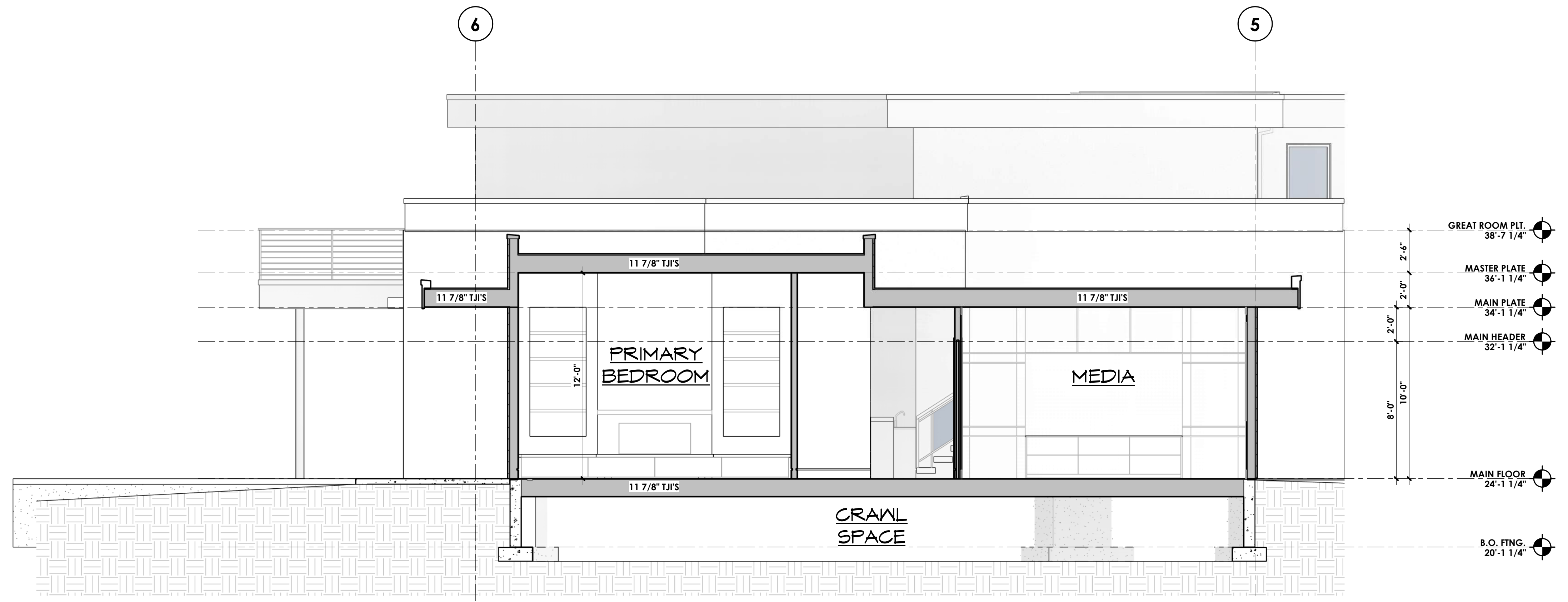
SHEET NUMBER
A3.3



SECTION 3
1/4" = 1'-0"



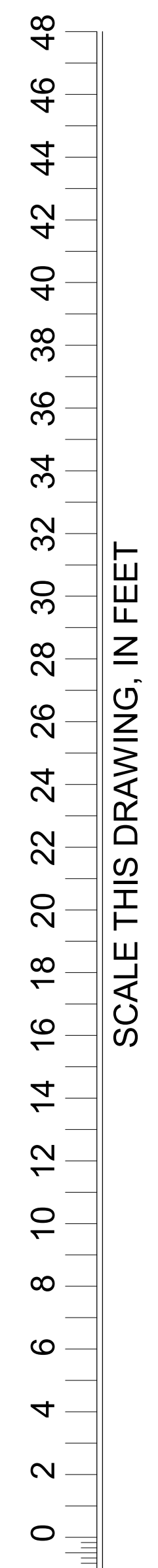
SECTION 1
1/4" = 1'-0"



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

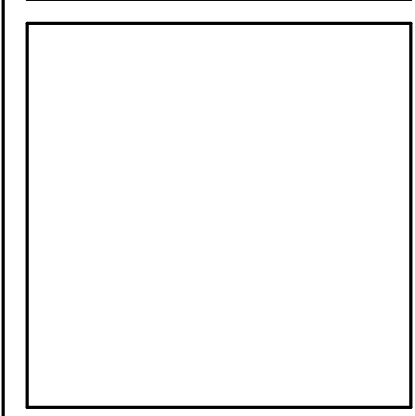
SECTION NOTES

- DIMENSIONS
 1. FLOOR/HEADER/PLATE LEVELS
 2. CEILING HEIGHTS
 3. ARCHITECTURAL ELEMENTS
 - 4.
 - LABEL
 1. EXISTING & FINAL GRADE (EXISTING GRADE DASHED)
 2. UNUSUAL SOFFITS/CEILINGS
 3. HVAC CHASES
- PLACE THE FOLLOWING NOTES ON SECTION DRAWINGS (MODIFY PER PROJECT)**
- R-49 INSULATION @ ATTIC SPACE, TYP.
 - R-38 INSULATION @ VAULTED CEILINGS, TYP.
 - R-21 INSULATION AT WALLS, TYP.
 - R-10 INSULATION AT HEADERS, TYP.
 - 3/4" PLYWOOD OVER 11 7/8" TJ'S
W/ R-38 INSULATION AT CRAWL SPACE
 - 1-1/2" LW CONCRETE TOPPING OVER 3/4" PLYWOOD OVER 11 7/8" TJ'S → @ TOPPING SLABS
 - 4" CONCRETE SLAB ON GRADE, SLOPE TO DRAIN. → @ GARAGE
 - 4" CONCRETE SLAB ON GRADE, OVER R-10 RIDGID INSULATION, VAPOR BARRIER AND GRAVEL BASE → @ HEATED SLABS
 - MIN. 18" OF HEADROOM IN CRAWL SPACE
 - MODIFY PER PROJECT



REV.	DESCRIPTION
4/1/25	PERMIT SUBMITTAL

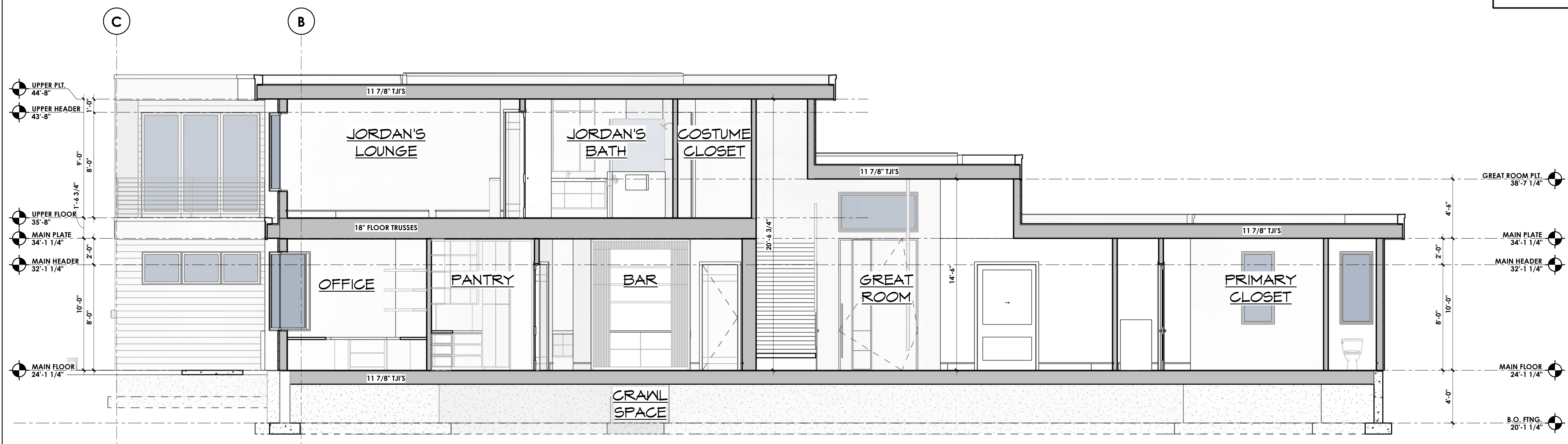
MACPHERSON RESIDENCE
5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 866140-0040
BUILDING SECTIONS



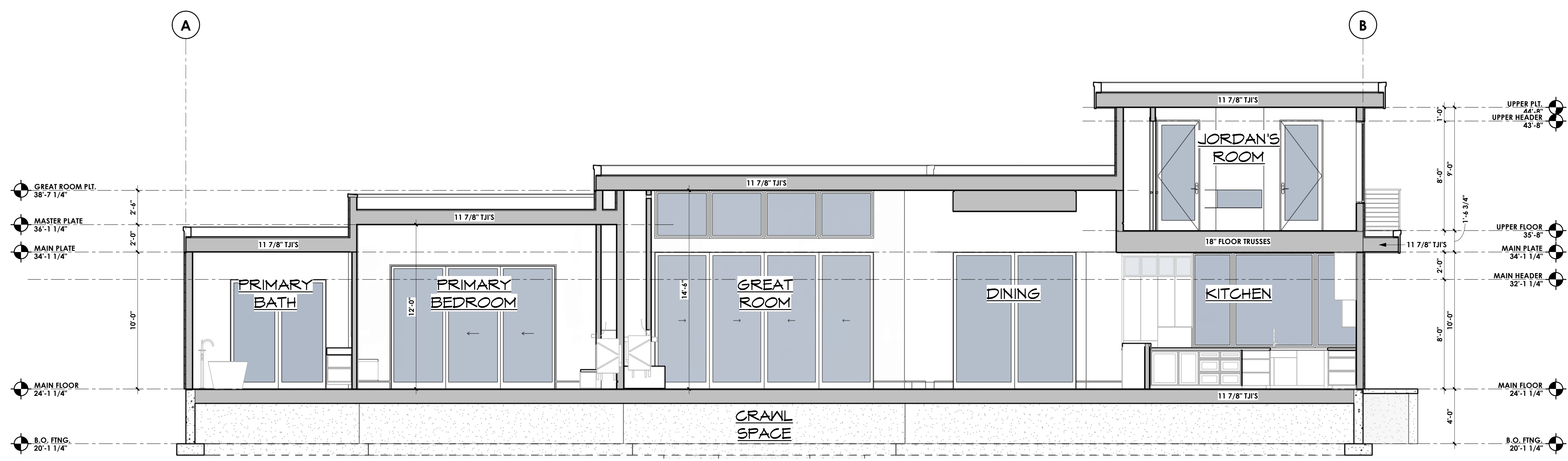
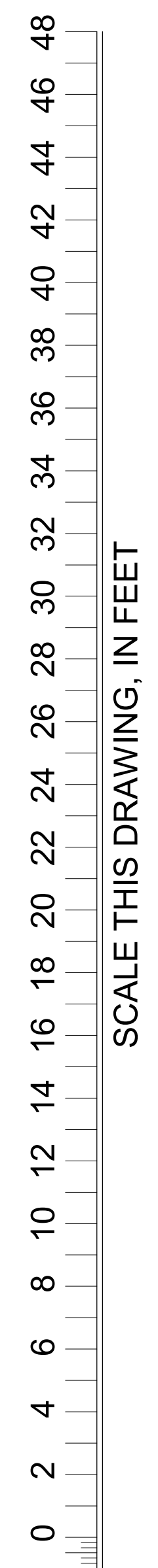
22605 SE 56th St Suite 140, Issaquah, WA 98029
PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A4.0

NOTE:
FOR ADDITIONAL INFORMATION,
SEE GENERAL NOTES AND
STRUCTURAL DRAWINGS



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



SECTION 5
1/4" = 1'-0"

REV.	DATE	DESCRIPTION
1	4/1/25	PERMIT SUBMITTAL

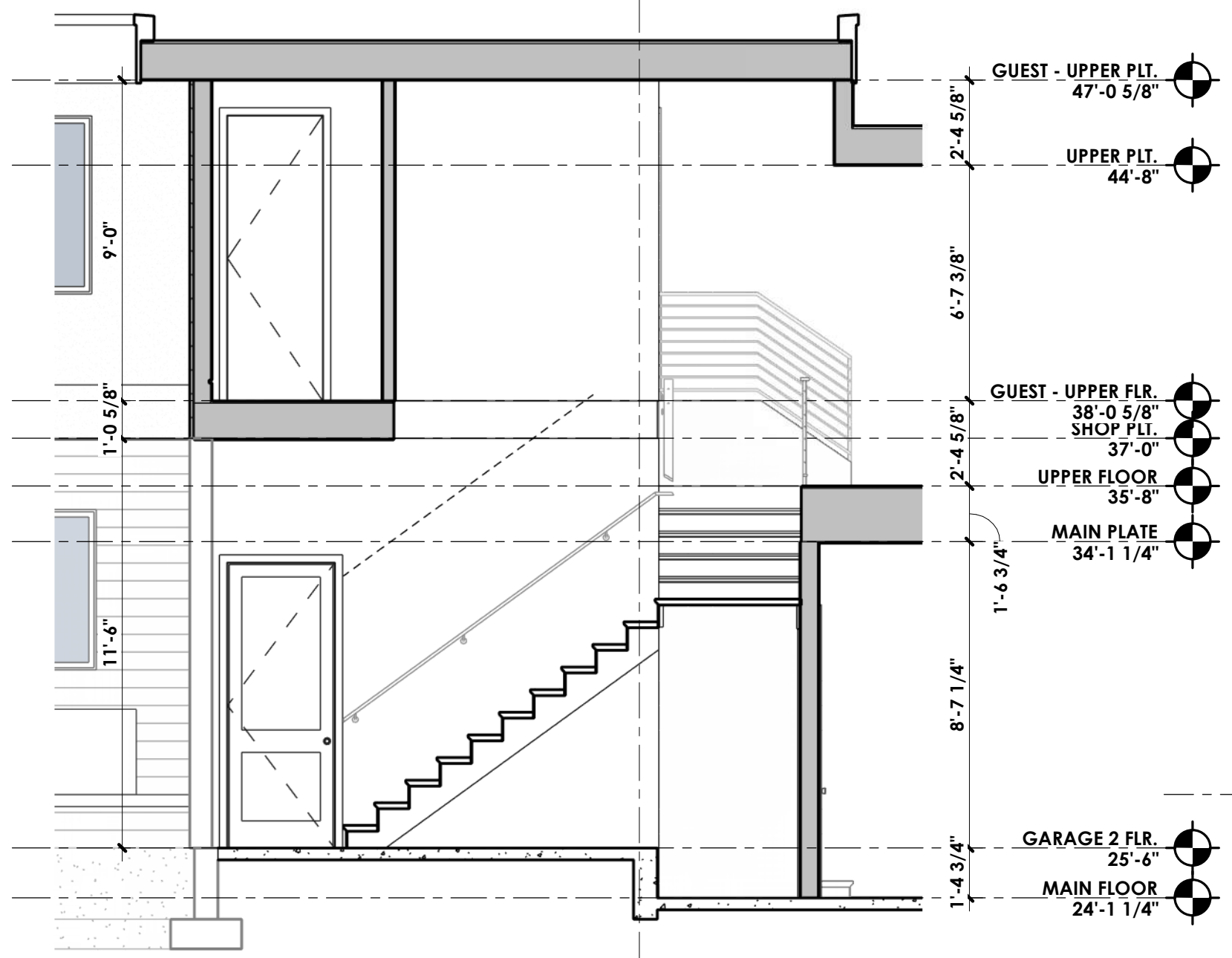
MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
BUILDING SECTIONS

MacPherson
 Construction & Design
 22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

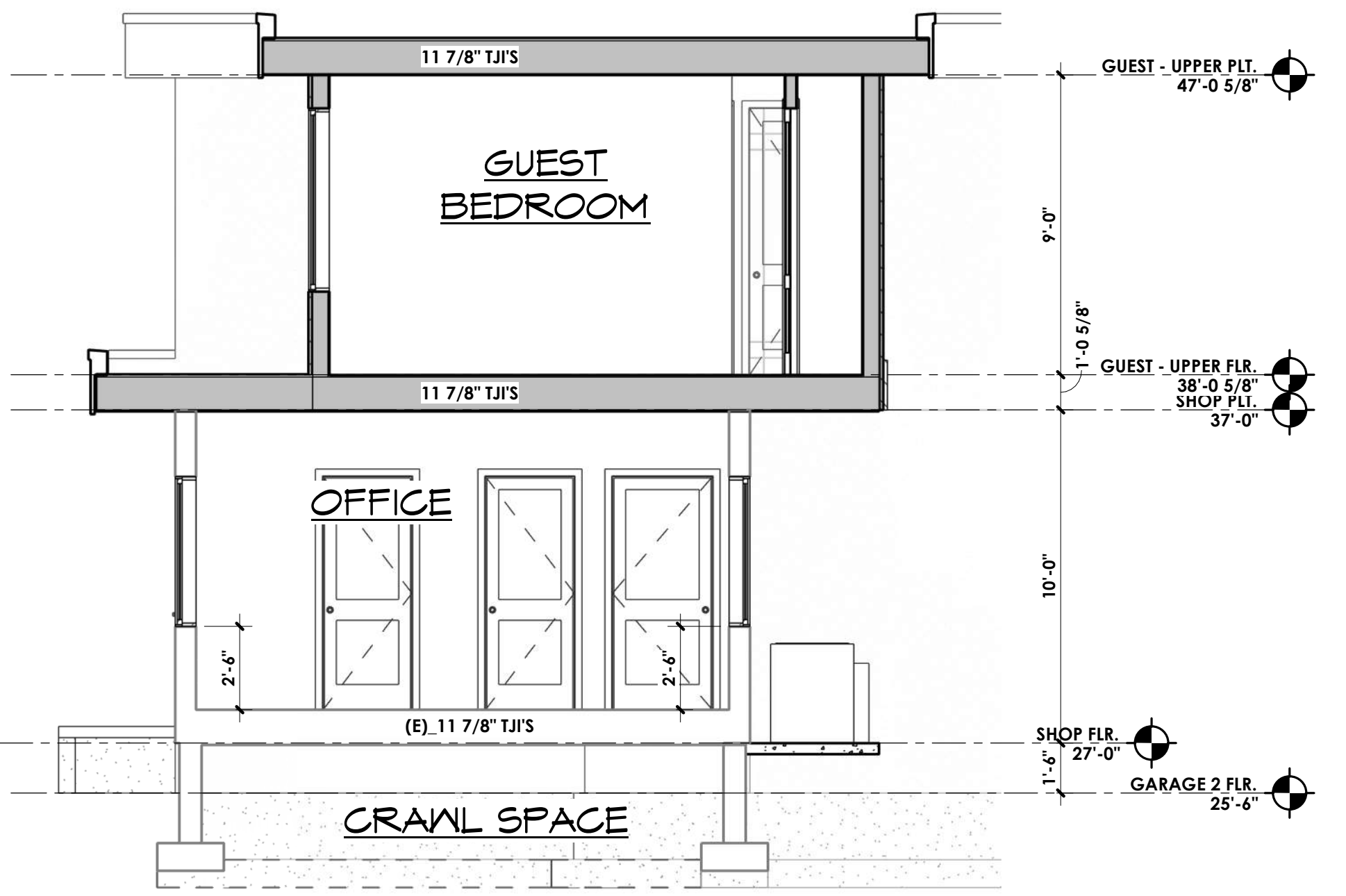
SHEET NUMBER
A4.1



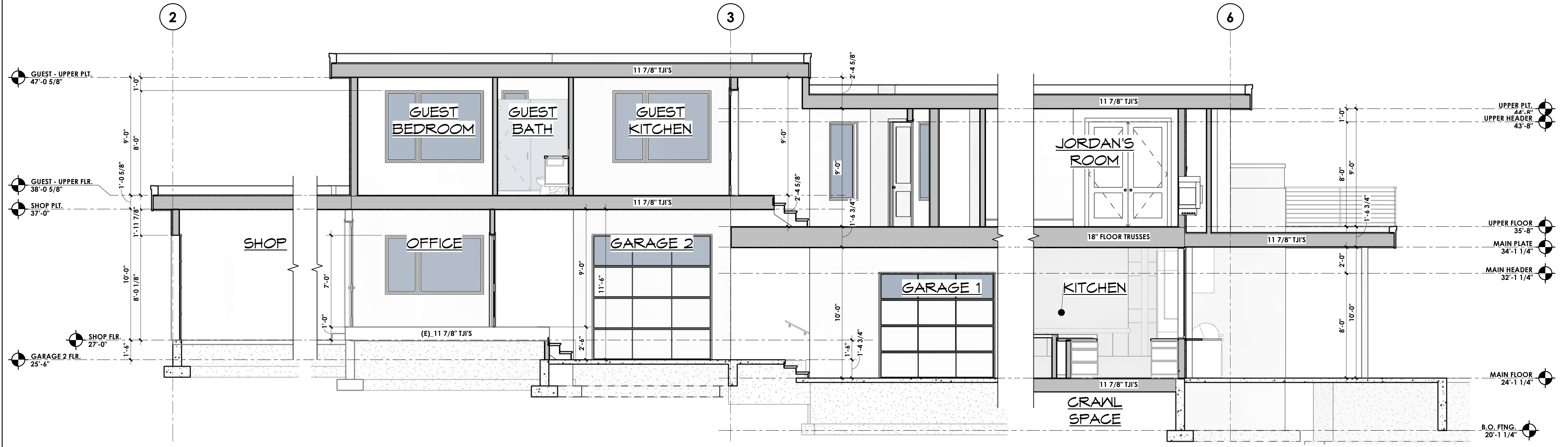
SECTION 8
1/4" = 1'-0"



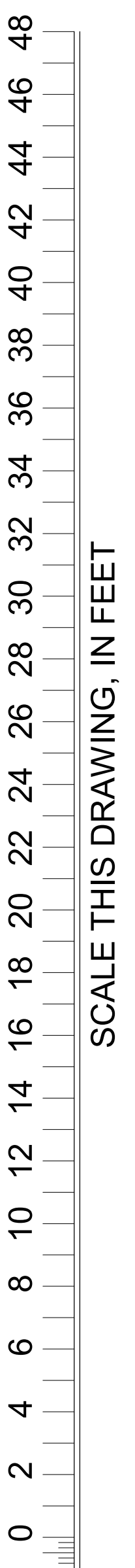
SECTION 7
1/4" = 1'-0"



SECTION 6
1/4" = 1'-0"



SECTION 9
1/4" = 1'-0"



REV.	DATE	DESCRIPTION
1	4/1/25	PERMIT SUBMITTAL

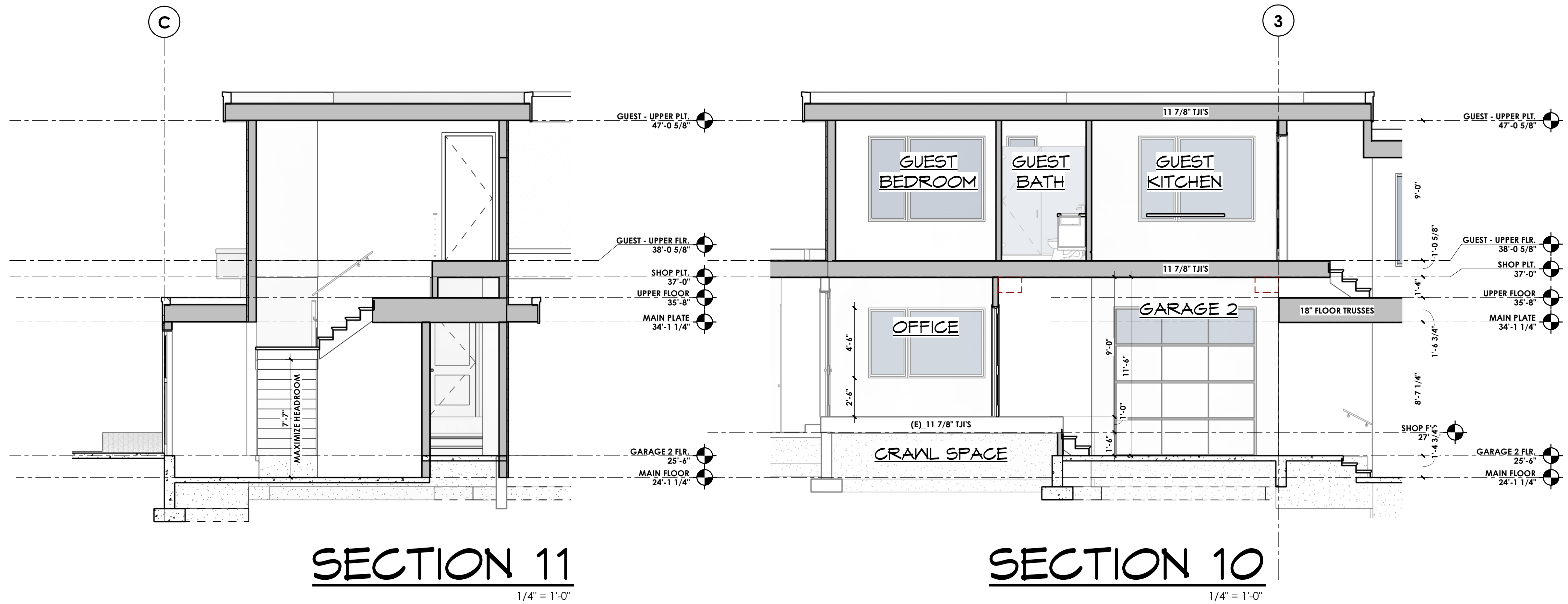
MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
BUILDING SECTIONS

MacPherson
 Construction & Design
 22605 SE 54th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A4.2

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

SCALE THIS DRAWING, IN FEET

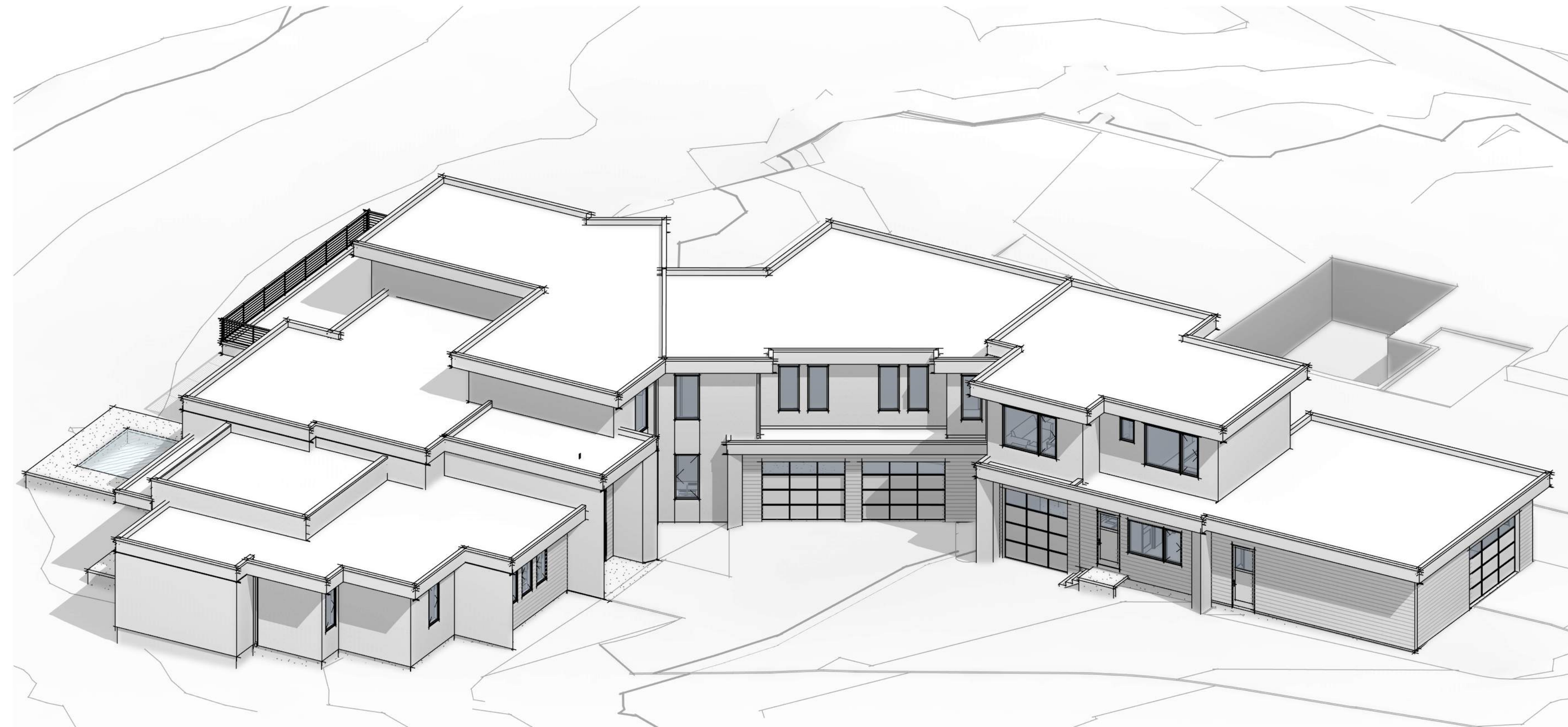


DATE	REV.	BY	DESCRIPTION
4/1/25	<<<<<<	DAN	PERMIT SUBMITTAL

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
BUILDING SECTIONS

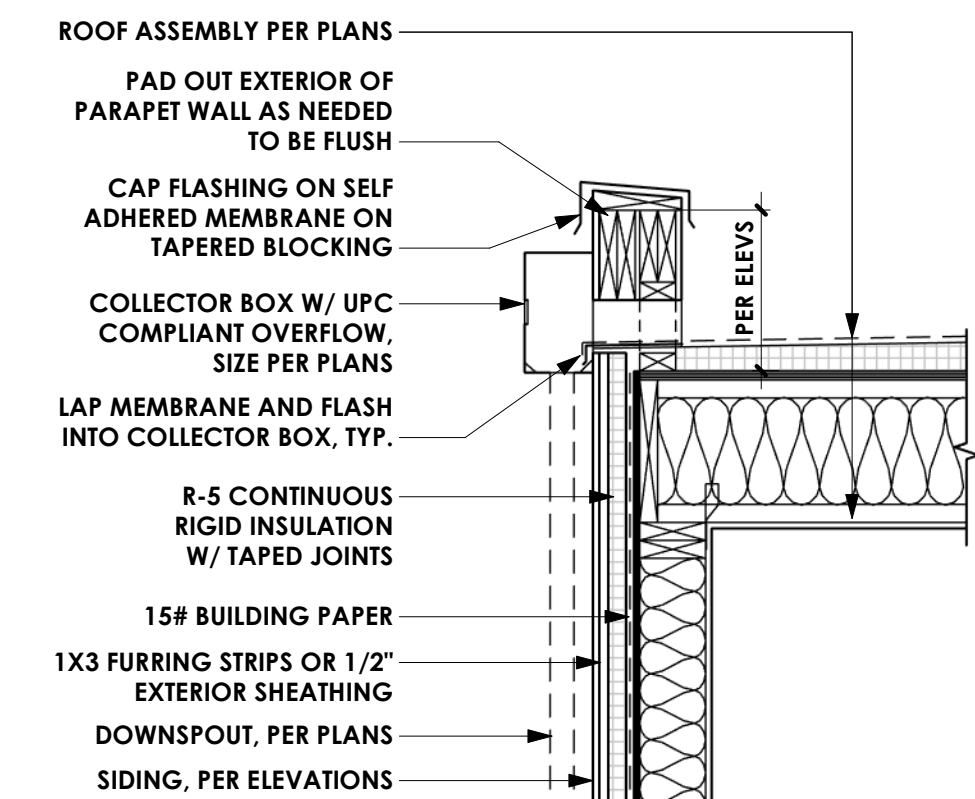
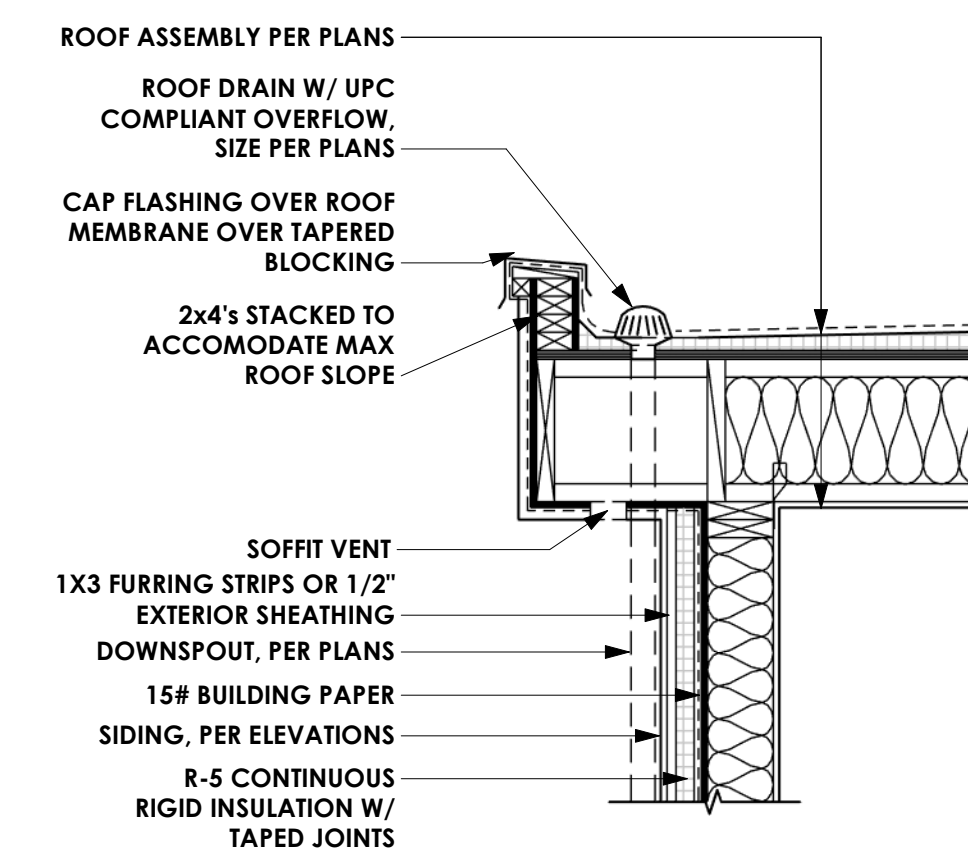
MacPherson
 Construction & Design
 22605 SE 54th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A4.3



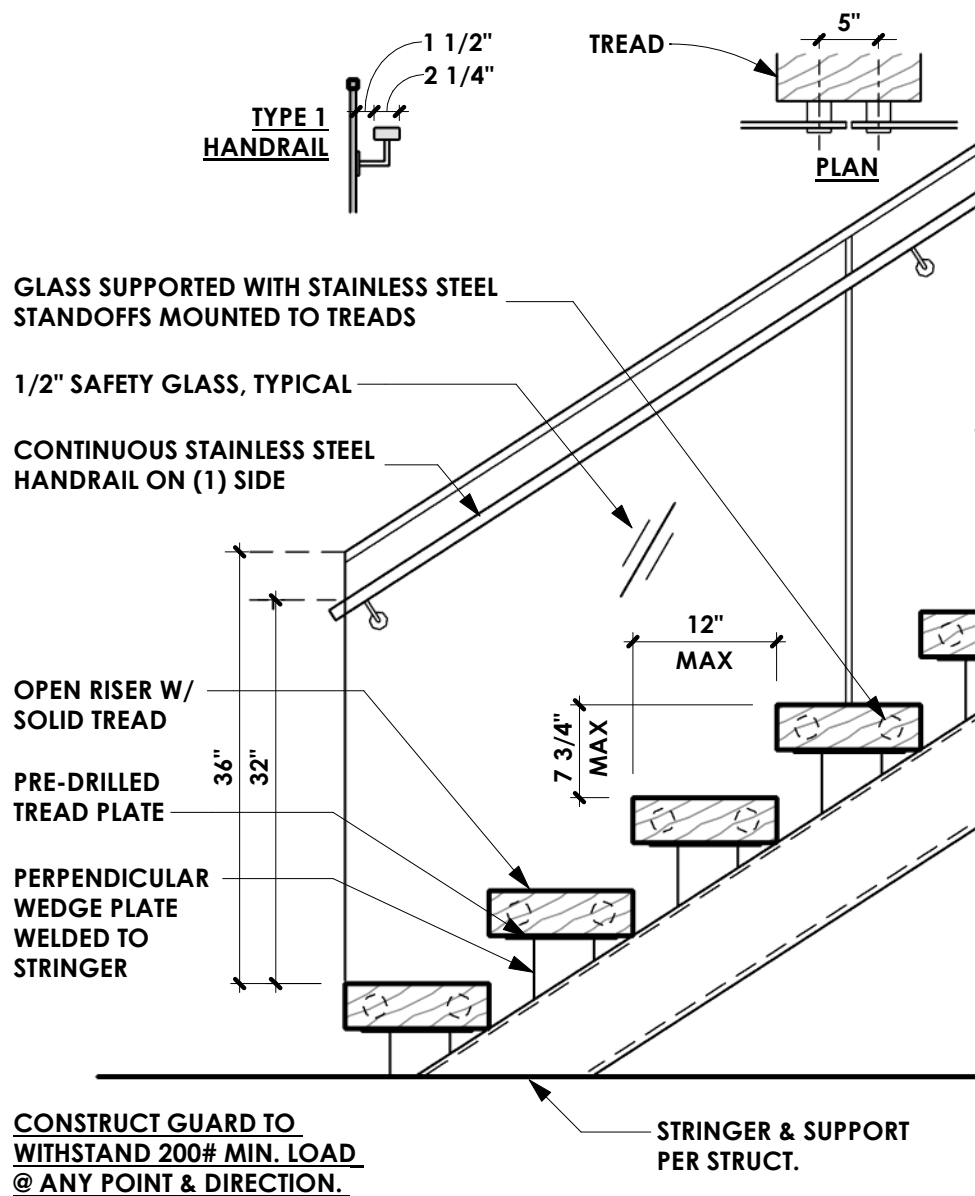
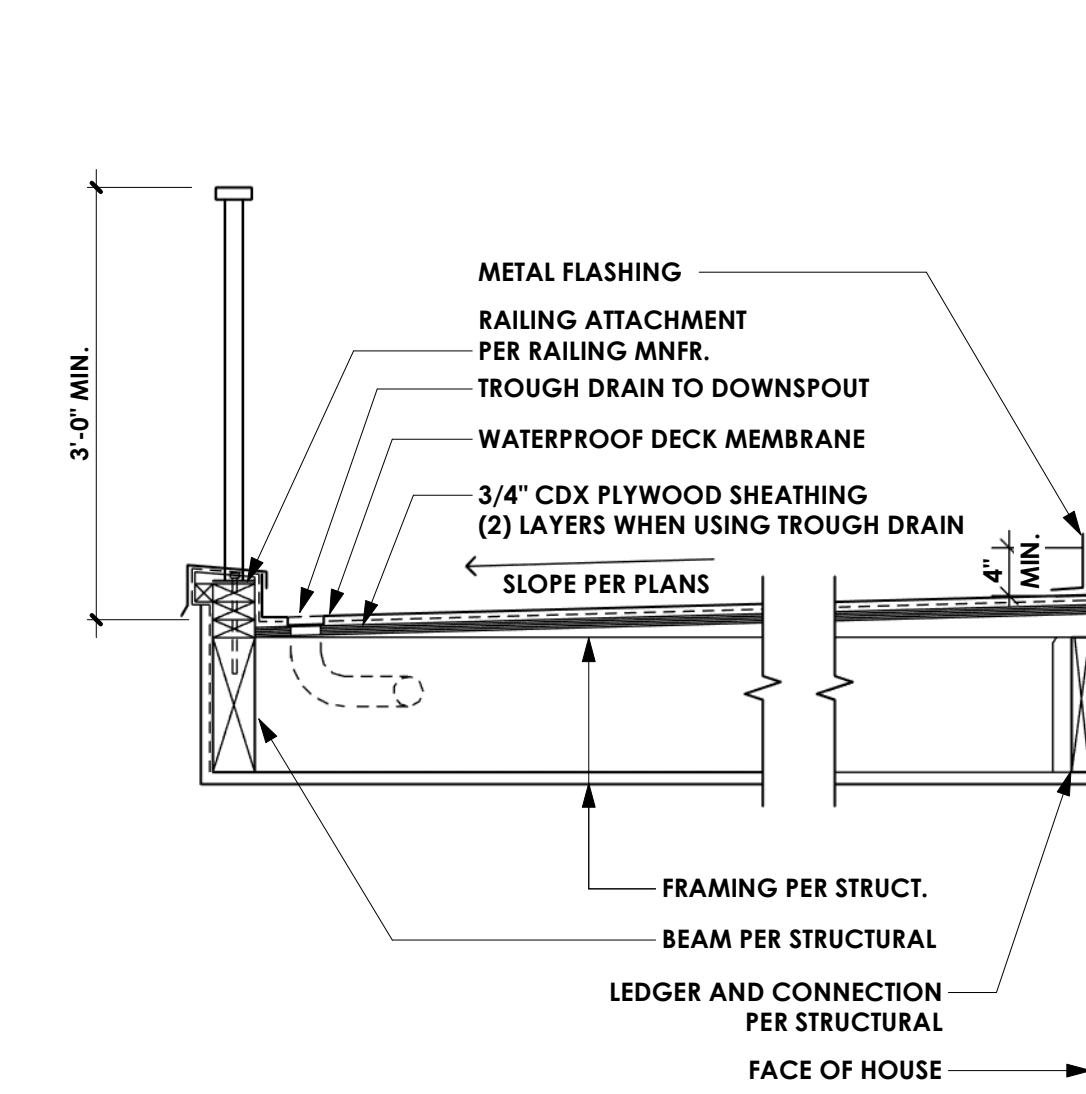
SCALE THIS DRAWING, IN FEET

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48



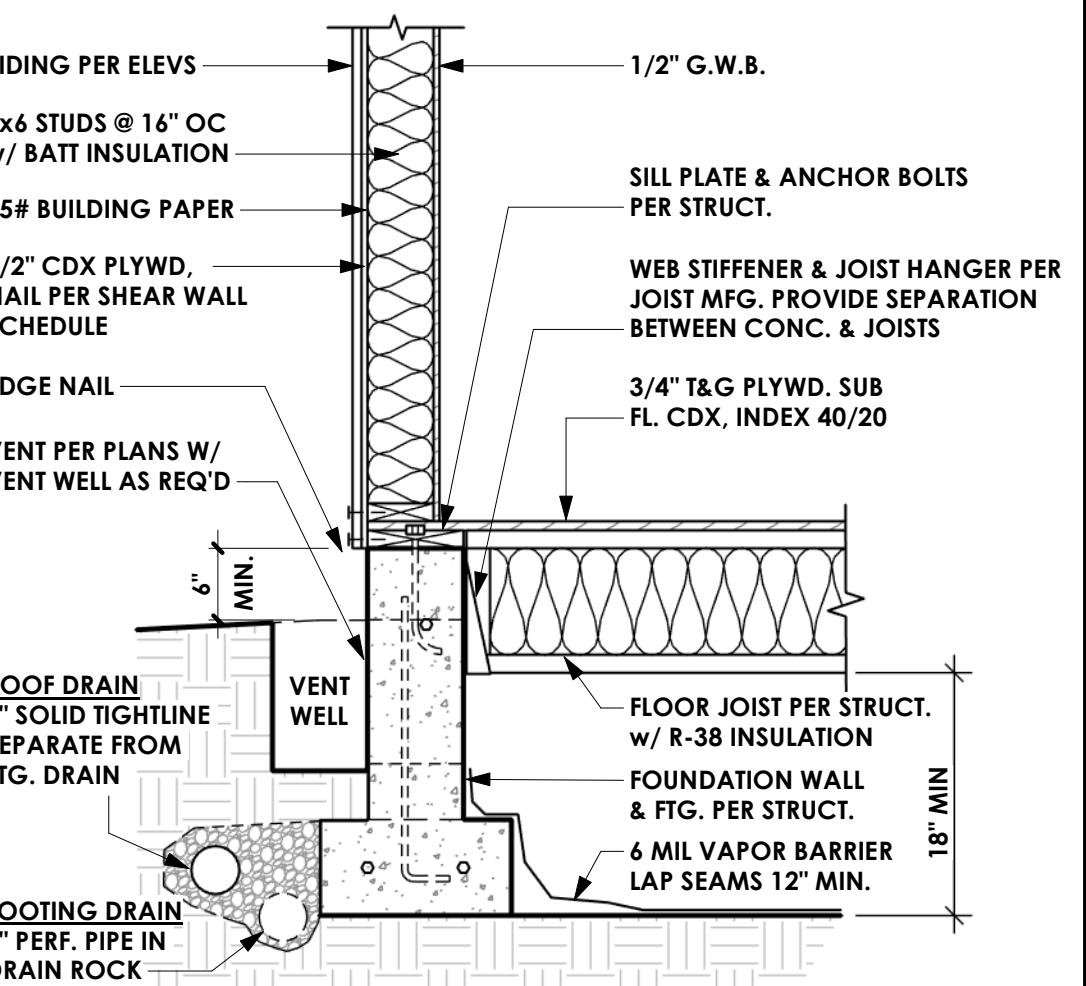
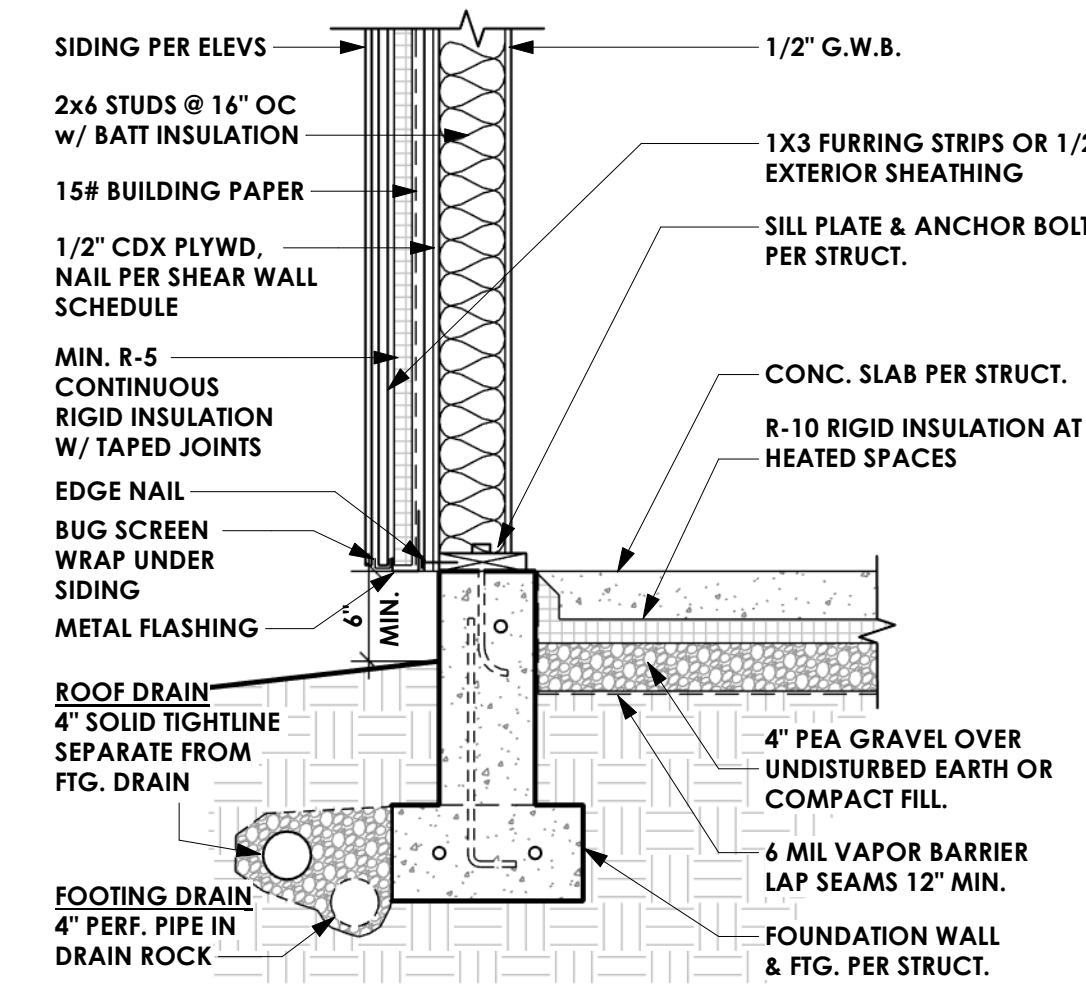
6 FLAT ROOF - OVERHANG UNVENTED SCALE: 3/4" = 1'-0"

5 FLAT ROOF - NO OVERHANG UNVENTED SCALE: 3/4" = 1'-0"



4 TYP WATERPROOF DECK (w/ CURB) SCALE: 3/4" = 1'-0"

3 TYP OPEN RISER STAIR SCALE: 3/4" = 1'-0"



2 TYP FOUNDATION @ SLAB ON GRADE SCALE: 3/4" = 1'-0"

1 TYP FOUNDATION @ CRAWL SPACE SCALE: 3/4" = 1'-0"

MacPherson
 Construction & Design
 22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
ARCHITECTURAL DETAILS

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL

SHEET NUMBER
A5.0

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

SCALE THIS DRAWING, IN FEET

WINDOW SCHEDULE

LEVEL	ROOM	MARK	OPERATION	WIDTH	HEIGHT	AREA	SILL HT.	HEAD HT.	COMMENTS
MAIN FLOOR	FOYER	01	TRANS	6'-0"	3'-0"	18 SF	10'-6"	13'-6"	
MAIN FLOOR	GARAGE 1	18	PICT	3'-0"	2'-6"	8 SF	6'-6"	9'-0"	
MAIN FLOOR	GARAGE 1	19	PICT	3'-0"	2'-6"	8 SF	6'-6"	9'-0"	
MAIN FLOOR	GARAGE 1	17	PICT	3'-0"	2'-6"	8 SF	6'-6"	9'-0"	
MAIN FLOOR	GREAT ROOM	08	TRANS	4'-0"	3'-6"	14 SF	11'-0"	14'-6"	
MAIN FLOOR	GREAT ROOM	07	TRANS	4'-0"	3'-6"	14 SF	11'-0"	14'-6"	
MAIN FLOOR	GREAT ROOM	10	TRANS	4'-0"	3'-6"	14 SF	11'-0"	14'-6"	
MAIN FLOOR	GREAT ROOM	09	TRANS	4'-0"	3'-6"	14 SF	11'-0"	14'-6"	
MAIN FLOOR	KITCHEN	12	AWNG	6'-0"	7'-0"	42 SF	3'-0"	10'-0"	
MAIN FLOOR	KITCHEN	13	CORNER	3'-7 1/2"	7'-0"	25 SF	3'-0"	10'-0"	
MAIN FLOOR	KITCHEN	11	PICT	3'-0"	7'-0"	21 SF	3'-0"	10'-0"	
MAIN FLOOR	LAUNDRY	30	CSMT	3'-0"	6'-0"	18 SF	3'-0"	9'-0"	
MAIN FLOOR	MEDIA	04	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	MEDIA	03	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	MEDIA	02	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	MUD	16	CSMT	3'-0"	5'-0"	15 SF	3'-0"	8'-0"	
MAIN FLOOR	MUD	188	PICT	1'-4"	8'-0"	11 SF	0"	8'-0"	
MAIN FLOOR	OFFICE	14	PICT	5'-6"	6'-0"	33 SF	3'-0"	9'-0"	
MAIN FLOOR	OFFICE	15	CSMT	3'-0"	6'-0"	18 SF	3'-0"	9'-0"	
MAIN FLOOR	PRIMARY BATH	06	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	PRIMARY CLOSET	05	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	PWDR.	32	PICT	3'-0"	6'-0"	18 SF	3'-0"	9'-0"	OBS
GARAGE 2 FLR.									
GARAGE 2 FLR.	STAIR 2	20	PICT	3'-0"	6'-0"	18 SF	4'-6"	10'-6"	OBS
SHOP FLR.									
SHOP FLR.	GARAGE 2	22	PICT	2'-6"	4'-6"	11 SF	3'-6"	8'-0"	
SHOP FLR.	OFFICE	29	PICT	5'-0"	4'-6"	23 SF	3'-6"	8'-0"	
SHOP FLR.	OFFICE	28	CSMT	2'-6"	4'-6"	11 SF	3'-6"	8'-0"	
SHOP FLR.	OFFICE	24	PICT	2'-6"	4'-6"	11 SF	3'-6"	8'-0"	
SHOP FLR.	OFFICE	23	PICT	2'-6"	4'-6"	11 SF	3'-6"	8'-0"	
SHOP FLR.	SHOP	27	PICT	2'-6"	3'-6"	9 SF	4'-6"	8'-0"	
SHOP FLR.	SHOP	26	PICT	2'-6"	3'-6"	9 SF	4'-6"	8'-0"	
SHOP FLR.	SHOP	25	PICT	2'-6"	3'-6"	9 SF	4'-6"	8'-0"	
UPPER FLOOR									
UPPER FLOOR	CHRIS' LOUNGE	42	PICT	6'-0"	6'-0"	36 SF	2'-0"	8'-0"	
UPPER FLOOR	CHRIS' LOUNGE	43	PICT	3'-0"	6'-0"	18 SF	2'-0"	8'-0"	
UPPER FLOOR	CHRIS' LOUNGE	41	CSMT	3'-0"	6'-0"	18 SF	2'-0"	8'-0"	
UPPER FLOOR	CHRIS' ROOM	44	PICT	5'-0"	6'-0"	30 SF	2'-0"	8'-0"	
UPPER FLOOR	CHRIS' ROOM	45	CSMT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	COSTUME CLOSET	34	PICT	3'-0"	2'-6"	8 SF	5'-6"	8'-0"	
UPPER FLOOR	GUEST FOYER	53	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	JORDAN'S BATH	35	PICT	3'-0"	2'-6"	8 SF	5'-6"	8'-0"	
UPPER FLOOR	JORDAN'S BATH	36	PICT	3'-0"	2'-6"	8 SF	5'-6"	8'-0"	
UPPER FLOOR	JORDAN'S LOUNGE	40	PICT	5'-6"	6'-0"	33 SF	2'-0"	8'-0"	
UPPER FLOOR	JORDAN'S LOUNGE	39	CSMT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	JORDAN'S ROOM	37	PICT	5'-0"	6'-0"	30 SF	2'-0"	8'-0"	
UPPER FLOOR	JORDAN'S ROOM	38	CSMT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	33	PICT	3'-0"	6'-0"	18 SF	2'-0"	8'-0"	SG
UPPER FLOOR	UPPER HALL	31	PICT	3'-0"	6'-0"	18 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	56	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	57	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	55	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	54	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
GUEST - UPPER FLR.									
GUEST - UPPER FLR.	GUEST BATH	50	PICT	2'-0"	3'-0"	6 SF	5'-0"	8'-0"	
GUEST - UPPER FLR.	GUEST BEDROOM	49	PICT	5'-0"	5'-6"	28 SF	2'-6"	8'-0"	
GUEST - UPPER FLR.	GUEST BEDROOM	48	CSMT	2'-6"	5'-6"	14 SF	2'-6"	8'-0"	
GUEST - UPPER FLR.	GUEST BEDROOM	46	PICT	2'-6"	5'-0"	13 SF	3'-0"	8'-0"	
GUEST - UPPER FLR.	GUEST BEDROOM	47	PICT	2'-6"	5'-0"	13 SF	3'-0"	8'-0"	
GUEST - UPPER FLR.	STAIR 2	52	PICT	5'-0"	5'-6"	28 SF	2'-6"	8'-0"	
GUEST - UPPER FLR.	STAIR 2	21	PICT	3'-0"	7'-0"	21 SF	1'-0"	8'-0"	SG
GUEST - UPPER FLR.	STAIR 2	51	CSMT	2'-6"	5'-6"	14 SF	2'-6"	8'-0"	
TOTAL WINDOWS: 58						956 SF			

DOOR SCHEDULE

LEVEL	ROOM	MARK	OPERATION	WIDTH	HEIGHT	AREA	FIRE RATING	COMMENTS	
MAIN FLOOR	BAR	01	SW	3'-0"	8'-0"	24 SF			
MAIN FLOOR	DINING	02	OX SLIDER	9'-0"	10'-0"	90 SF	SG		
MAIN FLOOR	FOYER	03	PIVOT	6'-0"	10'-0"	60 SF			
MAIN FLOOR	FOYER	04	SW	3'-0"	8'-0"	24 SF			
MAIN FLOOR	GARAGE 1	05	OVHD	10'-0"	8'-0"	80 SF			
MAIN FLOOR	GARAGE 1	06	OVHD	10'-0"	8'-0"	80 SF			
MAIN FLOOR	GARAGE 1	07	SW	3'-0"	8'-0"	24 SF			
MAIN FLOOR	GARAGE 1	08	SW	3'-0"	8'-0"	24 SF			
MAIN FLOOR	GARAGE 1	09	SW	3'-0"	8'-0"	24 SF			
MAIN FLOOR	GARAGE 1	10	SW,SG	3'-0"	8'-0"	24 SF			
MAIN FLOOR	GREAT ROOM	11	OXXO SLIDER	16'-0"	10'-0"	160 SF	SG		
MAIN FLOOR	GREAT ROOM	12	PKT	4'-6"	8'-0"	36 SF			
MAIN FLOOR	KITCHEN	13	PKT	2'-8"	8'-0"	21 SF			
MAIN FLOOR	MUD	14	DBL SW	4'-0"	8'-0"	32 SF			
MAIN FLOOR	MUD	15	SW	3'-0"	8'-0"	24 SF			
MAIN FLOOR	PRIMARY BATH	16	XO SLIDER	7'-0"	8'-0"	56 SF	SG		
MAIN FLOOR	PRIMARY BATH	17	PKT	3'-0"	8'-0"	24 SF			
MAIN FLOOR	PRIMARY BATH	18	SW	2'-8"	8'-0"	21 SF			
MAIN FLOOR	PRIMARY BEDROOM	19	XOXO SLIDER	12'-0"	9'-0"	108 SF	SG		
MAIN FLOOR	PRIMARY BEDROOM	20	SW	3'-0"	8'-0"	24 SF			
MAIN FLOOR	PRIMARY BEDROOM	21	SW	2'-8"	8'-0"	21 SF			
MAIN FLOOR	PRIMARY CLOSET	22	SW	2'-8"	8'-0"	21 SF			
MAIN FLOOR	PWDR.	23	SW	2'-8"	8'-0"	21 SF			
GARAGE 2 FLR.									
GARAGE 2 FLR.	STAIR 2	24	OVHD	9'-0"	9'-6"	86 SF			
GARAGE 2 FLR.	STAIR 2	25	SW	3'-0"	8'-0"	24 SF			
GARAGE 2 FLR.	STAIR 2	26	SW,SG	3'-0"	8'-0"	24 SF			
SHOP FLR.									
SHOP FLR.	GARAGE 2	27		3'-0"	8'-0"	24 SF			
SHOP FLR.	OFFICE	28		2'-8"	8'-0"	21 SF			
SHOP FLR.	OFFICE	29		2'-8"	8'-0"	21 SF			
SHOP FLR.	SHOP	30	OVHD	12'-0"	8'-0 1/8"	96 SF			
SHOP FLR.	SHOP	31	SW	3'-0"	9'-0"	27 SF			
SHOP FLR.	SHOP	32	SW,SG	3'-0"	8'-0"	24 SF			
SHOP FLR.	SHOP	33	SW,SG	3'-0"	8'-0"	24 SF			
SHOP FLR.	SHOP	34	SW	3'-0"	8'-0"	24 SF			
SHOP FLR.	SHOP	35	SW	3'-0"	8'-0"	24 SF			
SHOP FLR.	SHOP BATH	36	SW,SG	3'-0"	8'-0"	24 SF			
UPPER FLOOR									
UPPER FLOOR	CHRIS' BATH	37	SW	2'-8"	8'-0"	21 SF			
UPPER FLOOR	CHRIS' LOUNGE	38	SW	3'-0"	8'-0"	24 SF			
UPPER FLOOR	CHRIS' LOUNGE	39	SW	2'-8"	8'-0"	21 SF			
UPPER FLOOR	CHRIS' ROOM	40	SLIDER	9'-0"	8'-0"	72 SF			
UPPER FLOOR	CHRIS' ROOM	41	PKT	3'-0"	8'-0"	24 SF			
UPPER FLOOR	GUEST FOYER	42	SW	3'-0"	8'-0"	24 SF			
UPPER FLOOR	JORDAN'S LOUNGE	43	SW	3'-0"	8'-0"	24 SF			
UPPER FLOOR	JORDAN'S LOUNGE	44	SW	2'-8"	8'-0"	21 SF			
UPPER FLOOR	JORDAN'S ROOM	45	SW	6'-0"	8'-0"	48 SF			
UPPER FLOOR	JORDAN'S ROOM	46	SW	3'-0"	8'-0"	24 SF			
UPPER FLOOR	JORDAN'S ROOM	47	SW	3'-0"	8'-0"	24 SF			
UPPER FLOOR	STORAGE & EQUIP.	48	SW	3'-0"	8'-0"	24 SF			
UPPER FLOOR	UPPER HALL	49	PVT	4'-6"	8'-0"	36 SF	HIDDEN		
UPPER FLOOR	UPPER HALL	50	SW	3'-0"	8'-0"	24 SF			
UPPER FLOOR	UPPER HALL	51	SW	3'-0"	8'-0"	24 SF			
UPPER FLOOR	UPPER HALL	52	SW	3'-0"	8'-0"	24 SF			
GUEST - UPPER FLR.									
GUEST - UPPER FLR.	GUEST BEDROOM	53	DBL SW.	5'-4"	8'-0"	43 SF			
GUEST - UPPER FLR.	GUEST BEDROOM	54	SW	2'-8"	8'-0"	21 SF			
GUEST - UPPER FLR.	STAIR 2	55	SW	3'-0"	8'-0"	24 SF			
GUEST - UPPER FLR.	STAIR 2	56	SW	2'-8"	8'-0"	21 SF			
GUEST - UPPER FLR.	STAIR 2	57	SW	2'-8"	8'-0"	21 SF			
GRAND TOTAL: 57						2,059 SF			

WINDOW & DOOR LEGEND

AWN:	AWNING	OXXO:	FUNCTION ON SLIDERS (X=OPERABLE)
BARN:	BARN DOOR	PICT:	PICTURE
C-P-C:	CASEMENT, PICTURE, CASEMENT	PKT:	POCKET
CSMT:	CASEMENT	PVT:	PIVOT SWING
DUTCH:	2-PANEL DUTCH DOOR	SDLT:	DOOR SIDELIGHT
FLD:	FOLDING DOOR	SG:	SAFETY GLAZING
FG:	FULL GLASS	SLD:	HORIZONTAL SLIDER
OBS:	OBSCURE GLAZING	TRANS:	TRANSOM ABOVE
OVHD:	OVERHEAD GARAGE DOOR	20 MIN:	20 MIN. FIRE RATING

NOTES:

- U-VALUE: REFER TO ENERGY SECTION ON GENERAL NOTES SHEET FOR MIN. VALUES, AND ENERGY NOTES FOR ENERGY CREDIT OPTIONS.
- WINDOWS ARE TYPICALLY CENTERED IN EXT. WALL UNLESS DIMENSIONED OTHERWISE.
- DOOR HINGE JAMB TO BE 4 1/2" FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
- SET EXTERIOR DOORS PRIOR TO SETTING WINDOWS. ALIGN INSIDE LINERS TO MATCH FINISH CASING. WINDOW R.O. SHOULD BE 3/4" LOWER THAN DOOR R.O. (VERIFY W/ MANUFACTURER)
- PROVIDE SAFETY GLAZING AT ALL LOCATIONS REQUIRED BY CODE (IRC R308.4)
- PROVIDE SAFETY GLASS SHOWER ENCLOSURE & DOORS, TYP.

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL

MACPHERSON RESIDENCE
 5320 BUTTERWORTH RD.
 MERCER ISLAND, WA 98040
 PARCEL #: 866140-0040
DOOR & WINDOW SCHEDULES

MacPherson
 Construction & Design
 22605 SE 56th St Suite 140, Issaquah, WA 98029
 PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A6.0

PILE STRUCTURAL NOTES

GRADE BEAM ON PIPE PILING:

- PILES SHALL BE INSTALLED TO SUPPORT DESIGN LOAD OF 10- TONS/PILE MINIMUM (SAFE LOAD). - 4" MIN. DIA. SCHEDULE 40, GALVANIZED, ASTM A-53 GRADE "A" PIPE PILES
- PIILING CONTRACTOR SHALL CONFIRM THE PILES, ARE ADEQUATE BY TESTING A MINIMUM 3% OF PILES (3 MINIMUM). TEST PILES MUST BE TESTED TO 200% OF THE DESIGN CAPACITY IN ACCORDANCE WITH ASTM STANDARD D 1143-21 FOR PILES UNDER STATIC AXIAL COMPRESSIVE LOAD. USE OF THE QUICK LOAD TEST METHOD IN THE STANDARD IS THE MINIMUM REQUIRED.
- PILES SHALL BE DRIVEN TO REFUSAL (25-50" ANTICIPATED) WITH A MINIMUM 850-LB HYDRAULIC HAMMER AND REFUSAL OF 16 SECONDS PER INCH FOR 3 CONSECUTIVE INCHES. FOR A 2000-LB HYDRAULIC HAMMER REFUSAL IS 4 SECONDS PER INCH FOR 3 CONSECUTIVE INCHES. GEOTECH TO COORDINATE THE DRIVING CRITERIA BASED ON THE ACTUAL HAMMER SIZE SELECTED BY THE CONTRACTOR.
- PILES SHALL BE DRIVEN IN NOMINAL SECTIONS AND CONNECTED WITH COMPRESSION FITTED COUPLERS. DO NOT WELD PIPE JOINTS TOGETHER.
- PILES SHALL BE DRIVEN IN NOMINAL SECTIONS AND CONNECTED WITH COMPRESSION FITTED COUPLERS. DO NOT WELD PIPE JOINTS TOGETHER.
- GEOTECH OF RECORD OR HIS/HER REPRESENTATIVE SHALL BE PRESENT TO OBSERVE PIN PILE INSTALLATION & LOAD TEST.

BASEMENT SLAB

4" CONC. SLAB ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 45% COMPACTED FILL/VIRGIN SOIL

GARAGE SLAB

4" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 45% COMPACTED FILL/VIRGIN SOIL

PORCH SLAB

4" CONC. SLAB ON GRADE ON 4" MIN. GRANULAR FILL ON 45% COMPACTED FILL/VIRGIN SOIL

GENERAL STRUCTURAL NOTES

FOUNDATION

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL EXISTING BUILDING CODE
- DESIGN LOADS: SOIL - CONSULT REPORT BY COBALT GEOSCIENCES, LLC DATED 5/21/24
- CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN 28 DAYS (UNO.):
 - 2500 psi - FOUNDATION WALLS*
 - 2500 psi - FOOTINGS*
 - 3000 psi - GRADE BEAMS
 - 2500 psi - INTERIOR SLABS ON GRADE
 - 3500 psi - GARAGE & EXT. SLABS ON GRADE
- UTILIZE 5% SACK 2500 PSI CONCRETE MIXES THAT ARE EQUIVALENT TO 3000 PSI CONCRETE FOR WEATHERING POTENTIAL
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 1% AIR ENTRAINMENT.
- FOUNDATION WALL DESIGN IS BASED ON BACKFILL SOIL PRESSURE OF 55 PCF AT REST, 35 PCF ACTIVE & 1% SEISMIC SURCHARGE.
- TYPICAL REINFORCEMENT DETAILS: LAP ALL REBAR 24" MIN, BEND BARS AND LAP AT CORNERS PROVIDE 6" HOOK INTO SUPPORTING FOOTINGS WHEN FOOTINGS INTERSECT; PROVIDE 3" MINIMUM COVER AT THE BOTTOM BARS AND 1 1/2" COVER AT THE SIDES.
- FOUNDATION WALLS SHALL BE BRACED PRIOR TO BACKFILLING, BY EITHER ADEQUATE TEMPORARY BRACING OR INSTALLATION OF FIRST FLOOR DECK.
- ALL FOOTINGS SHALL BEAR BELOW FROST LINE. CONSULT SOILS REPORT/LOCAL MUNICIPALITY FOR MINIMUM DEPTH BELOW GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 45% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP. (15'-0" O.C.)
- FASTEN SILL PLATES TO FOUNDATION WALLS WITH 3/8" DIA. ANCHOR BOLTS W/ MIN. 3"x3"x1/4" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN 1/2" OF EXTERIOR EDGE OF SILL PLATE) PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS, UNO. (SEE END DETAILS).
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR MASONRY FOUNDATION SHALL BE PRESERVATIVE TREATED HEM FIR #2.
- ARCH/BUILDER TO VERIFY ALL DIMENSIONS

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON 5THD14 (R.J.) HOLD-DOWN
HD-2	SIMPSON HTTS HOLD-DOWN (SEE DETAIL B FOR SPECIFICATIONS)
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM UNO.)

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACINGS, GUTS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO, FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.

ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER

ROOF TRUSS, FLOOR TRUSS AND ENGINEERED JOISTS SHALL BE DESIGNED TO MEET THE DIFFERENTIAL DEFLECTION CRITERIA BELOW, UNLESS NOTED OTHERWISE ON PLAN. MULHERN & KULP CANNOT BE HELD RESPONSIBLE FOR ANY STRUCTURAL ISSUES RELATED TO ANY BUILDING COMPONENT IF COMPONENT SHOP DRAWINGS ARE NOT SUBMITTED TO MKF FOR REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.

TRUSSES SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES OR GIRDER TRUSSES DOES NOT EXCEED THE FOLLOWING:

- ROOF TRUSSES:
 - 1/4" DEAD LOAD
- FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS:
 - 1/8" DEAD LOAD
- FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS:
 - LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD, (NOT DIFFERENTIAL DEFLECTION)

LOADING AND DESIGN PARAMETERS

GRAVITY DESIGN LOADS:	
DEAD LOAD (PSF):	
ROOF:	
ROOF RAFTERS/JOISTS:	10
FLOOR TRUSSES:	15
FLOOR JOISTS:	10
DECK JOISTS:	10
TILE FLOORS:	10
LIVE LOAD (PSF):	
RESIDENTIAL LIVING AREAS:	20
RESIDENTIAL SLEEPING AREAS:	40
RESIDENTIAL WOOD DECKS:	30
GARAGE:	60
	50
SNOW LOAD:	
GROUND SNOW LOAD (P) (PSF):	25
ROOF SNOW LOAD (P) (PSF):	25
SNOW EXPOSURE FACTOR (Ce):	0.4
SNOW LOAD IMPORTANCE FACTOR (I):	1.0
THERMAL FACTOR (Ct):	1.2
LATERAL DESIGN LOADS:	
WIND LOAD: (BC 1609)	
SPEED (V) (MPH):	100
WIND RISK CATEGORY:	II
IMPORTANCE FACTOR (I):	1.0
EXPOSURE CATEGORY:	C
INTERNAL PRESSURE COEFF. (GCp):	±0.18
TOPOGRAPHIC FACTOR (Kzt):	1.0
SEISMIC LOAD: (BC 1615)	
SEISMIC RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR (I):	1.0
MAPPED SPECTRAL RESPONSE:	
Sm L1/81	Sm: 0.4991
SITE CLASS:	F
SPECTRAL RESPONSE COEFF.:	
Sm L2/8	Sm: 0.4991
SEISMIC DESIGN CATEGORY:	D
BASIC SEISMIC-FORCE-RESISTING SYS:	
LIGHT FRAMED WALLS	
W/ WOOD STRUCTURAL PANELS	
ULTIMATE BASE SHEAR:	
TRANS: 30k	LONG: 30k
SEISMIC RESPONSE COEFF. (Ca):	
TRANS: 0.191	LONG: 0.191
RESPONSE MODIFICATION FACTOR (R):	
WOOD STRUCTURAL PANELS:	
TRANS: 6.5	LONG: 6.5
PROCEDURE USED:	
EQUIVALENT LATERAL FORCE	

DEMOLITION/RENOVATION NOTES

- FRAMING AND FOUNDATION PLANS HAVE BEEN DESIGNED TO BE STRUCTURALLY SOUND UPON COMPLETION OF THE WORK. THE MEANS AND METHODS OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE BUILDER/CONTRACTOR (UNLESS SPECIFICALLY NOTED ON PLANS).
- DURING DEMOLITION AND CONSTRUCTION IT IS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE TEMPORARY SHORING/BRACING OF EXISTING ELEMENTS INTENDED TO REMAIN.
- THE STRUCTURAL PLANS HAVE BEEN PREPARED WITH EXISTING FRAMING/FOUNDATION ASSUMPTIONS AS NOTED ON THE PLANS. IT IS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO CONTACT MKF STRUCTURAL ENGINEERING IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS DEPICTED ON THE CONSTRUCTION DOCUMENTS.

LATERAL BRACING NOTES

THIS HOME HAS BEEN ENGINEERED TO RESIST LATERAL FORCES RESULTING FROM: 100 MPH WIND SPEED, EXP. C (ASCE 7-16 WIND MAP, PER IRC R301.2.1.1) RISK CAT. 2 & SEISMIC CAT. D2.

100 MPH WIND IN 2021 IRC MAP

ENGINEERED DESIGN WAS COMPLETED PER 2021 IBC (SECTION 1609 & 1613) & ASCE 7-16, AS PERMITTED BY R301.3 OF THE 2021 IRC. ACCORDINGLY, THIS HOME, AS DOCUMENTED AND DETAILED HEREWITH, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES, AND DOES NOT NEED TO CONFORM TO THE PRESCRIPTIVE PROVISIONS OF R602.10.

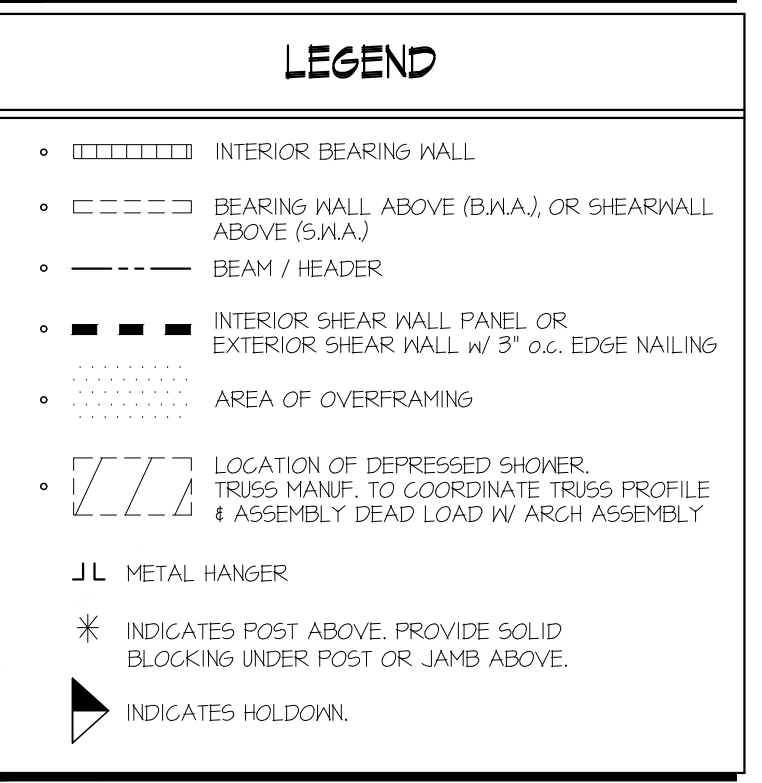
STANDARD EXTERIOR WALL SHEATHING SPECIFICATIONS (INTERIOR WALL SPECIFICATION WHERE NOTED ON PLANS)

- 1/8" OSB OR 1/2" PLYWOOD:
 - FASTEN SHEATHING W/ 2 1/2"x0.131" NAILS @ 6" O.C. AT ALL SUPPORTED PANEL EDGES AND 12" O.C. IN THE PANEL FIELD. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THIS SPECIFICATION UNO. ON PLANS.

3" O.C. EDGE NAILING (WHERE NOTED ON PLANS)

- 1/8" OSB OR 1/2" PLYWOOD:
 - ONLY AT LOCATIONS INDICATED ON PLANS - SHEATHING SHALL SHOWN WITH 1/8" OSB. FASTEN SHEATHING W/ 2 1/2"x0.131" NAILS @ 3" O.C. AT EDGES AND 12" O.C. AT CENTER. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE AND 3" O.C. FASTENING.

- NOTES:**
- LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" O.C.
 - ALL SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES FASTENED TOGETHER W/ 3"x0.131" NAILS @ 8" O.C. USE (1025)X0.131" NAILS AT EACH LAP SPlice, (6) EACH SIDE OF JOINT (TYP. UNO.)
 - ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
 - ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.



GENERAL STRUCTURAL NOTES

DESIGN PARAMETERS

- DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE & 2021 INTERNATIONAL EXISTING BUILDING CODE
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.

GENERAL FRAMING

- EXTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (W/ DOUBLE TOP PLATE) HEM FIR (HF) STUD GRADE LUMBER, OR BETTER, UNO.
- INTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (W/ DOUBLE TOP PLATE) HEM FIR (HF) STUD GRADE LUMBER, OR BETTER, UNO.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x STUD GRADE MEMBERS SPACED @ 24" O.C. (MAX.)
- ALL WALLS TALLER THEN TYP. PLATE HEIGHT SHALL BE CONSIDERED BALLOON FRAMED & SHALL BE CONSTRUCTED FROM FLOOR TO UNDERSIDE OF FRAMING AT NEXT LEVEL. B.F. WALLS SHALL BE 2x6 HEM FIR (HF) #2 GRADE LUMBER, OR BETTER, UNO.
- ALL SHEATHING AND LEDGERS ARE TO BE DIRECTLY APPLIED AND FASTENED TO FRAMING. DO NOT PROVIDE CONTINUOUS INSULATION BETWEEN FRAMING AND SHEATHING/LEDGERS.
- ALL HEADERS SHALL BE SUPPORTED BY (1)2x JACK STUD & (1)2x KING STUD, MINIMUM.
 - THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, UNO.
- BUILT-UP POSTS SHALL BE 2x4 OR 2x6 HEM FIR (HF) STUD GRADE LUMBER, OR BETTER, UNO. A SOLID WOOD COLLING SHALL BE SPRUCE PINE FIR (SPF) #2 GRADE LUMBER, OR BETTER, UNO.
- ALL 2x6 AND LARGER SOLID SAWN BEAMS/HEADERS SHALL BE HEM FIR #2 (HF #2) OR BETTER. ALL 4x6 AND LARGER SOLID SAWN LUMBER SHALL BE DOUG FIR #2 (DF #2) OR BETTER.
- ALL FRAMING LUMBER SHALL BE KILN DRIED TO 15% MC (KD-15).
- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN GENERAL NOTES, IN DETAILS, OR ON PLANS. ALL NAILS SPECIFIED ARE MIN DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGERS NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. SHEET HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- FASTEN ALL BEAMS TO COLUMNS, OR FLUSH BEAMS TO SUPPORTING BEAMS, W/ (4) 3"x0.131" TOENAILS (MIN), TYP. UNO.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS & HOLD-DOWNS CONTINUOUS TO FOUNDATION/BEARING, BLOCKING TO MATCH POST ABOVE.
- ENGINEERED LUMBER TO MEET OR EXCEED THE FOLLOWING:
 - LVL MEMBERS - Fb=2325 Psl; Fv=310 Psl; E=1.5x10⁶ Psl
 - LVL MEMBERS - Fb=2600 Psl; Fv=285 Psl; E=2.0x10⁶ Psl
 - GLB MEMBERS - Fb=12400 Psl; Fv=11850 Psl; Fv=265 Psl; E=1.8x10⁶ Psl; DF/DF; 24F-V4 (UNO.)
- ENGINEERED LUMBER POSTS TO MEET OR EXCEED THE FOLLOWING:
 - LVL MEMBERS - Fb=2400 Psl; Fc1=2500 Psl; E=1.8x10⁶ Psl
- FACE NAIL MULTI-PLY 2x BEAMS & HEADERS W/ 3-ROWS OF 3"x0.131" NAILS (MIN) @ 12" O.C. STAGGERED. APPLY NAILING FROM BOTH FACES @ 3-PLY OR MORE CONDITIONS. UTILIZE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- TRUSS SHOP DWGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PROPOSED CONSTRUCTION SHALL BE SUBMITTED TO BUILDING DESIGNER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY IN ACCORDANCE WITH TP1-1.2.3.2.3 & 2.3.4.3.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. UNO.
- BUILDER RESPONSIBLE TO DETERMINE CORROSION-RESISTANCE REQUIREMENTS AND COMPATIBILITY OF HARDWARE, FASTENERS AND CONNECTORS FOR ENVIRONMENTAL EXPOSURE AND IN CONTACT W/ PRESERVATIVE-TREATED WOOD OF ACTUAL FINAL CONDITIONS AND SOURCE MATERIALS. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, NOT LESS THAN ASTM A653, TYPE 6025 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.

FLOOR FRAMING

- I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANIF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA AND SHALL RUN CONTINUOUS OVER SUPPORTS WHEREVER POSSIBLE. ALL LOADS SHOWN ON PLAN FOR MANIF. DESIGNS ARE ASD LEVEL LOADS UNO. EXCLUDES STONE/MARBLE OR NET BED CONSTRUCTED FLOORS - CONTACT MKF FOR EXCLUDED DESIGN(S).
- ALL METAL I-JOIST/TRUSS HANGERS SHALL BE SPECIFIED BY I-JOIST/TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- 2x FLOOR JOISTS HAVE BEEN DESIGNED TO MEET OR EXCEED L/360 LIVE LOAD DEFLECTION CRITERIA.
- TYPICAL 2x JOIST HANGERS (UNO. ON PLANS):
 - SINGLE PLY: SIMPSON LUS28
 - DOUBLE: SIMPSON LUS28-2
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED STURD-I-FLOOR® 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND 2 1/2" x 0.131" NAILS @ 6" O.C. @ PANEL EDGES @ 12" O.C. FIELD.
- ALL FLUSH CONNECTIONS SHALL BE CONNECTED WITH HANGER APPROPRIATE FOR MEMBER SIZE UNO.
- FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS W/ 1/2" LONG NAILS.

ROOF FRAMING

- FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) SIMPSON H25T CLIP. PROVIDE (2) SIMPSON H25T CLIPS AT FLUSH BEAMS IN THE ROOF - AT ALL BEARING POINTS.
- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS W/ 2 1/2" x 0.131" NAILS @ 6" O.C. AT PANEL EDGES @ 12" O.C. AT INTERMEDIATE SUPPORTS. ROOF SHEATHING SHALL EXTEND BELOW ALL INSTANCES OF OVERFRAMING. BLOCKING SHALL BE INSTALLED AS REQUIRED TO LIMIT ROOF SHEATHING SPANS TO 24" MAX.
- ALL METAL HANGERS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- ROOF TRUSS SHOP DRAWINGS & CALCULATIONS SHALL BE DESIGNED FOR UNBALANCED SNOW LOADING PER ASCE 7-16, SECTION 7.6.
- ERECT AND INSTALL ROOF TRUSSES PER NTCA & TP15 BC51 1-08 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
- FASTEN OVER-FRAMED TRUSS SETS TO TRUSSES BELOW W/ (2) 3"x0.131" TOENAILS AT EA. TRUSS.
- FASTEN ALL INTERIOR NON-BEARING PARTITION WALLS TO TRUSS BOTTOM CHORD ABOVE WITH SIMPSON STC CLIPS AT 24" O.C. MAX. PROVIDE BLOCKING BETWEEN THE TRUSS BOTTOM CHORDS AS REQUIRED FOR THE PARALLEL CONDITIONS.



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhern+kulp.com

M&K project number: 306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

REVISIONS:
date: initial:

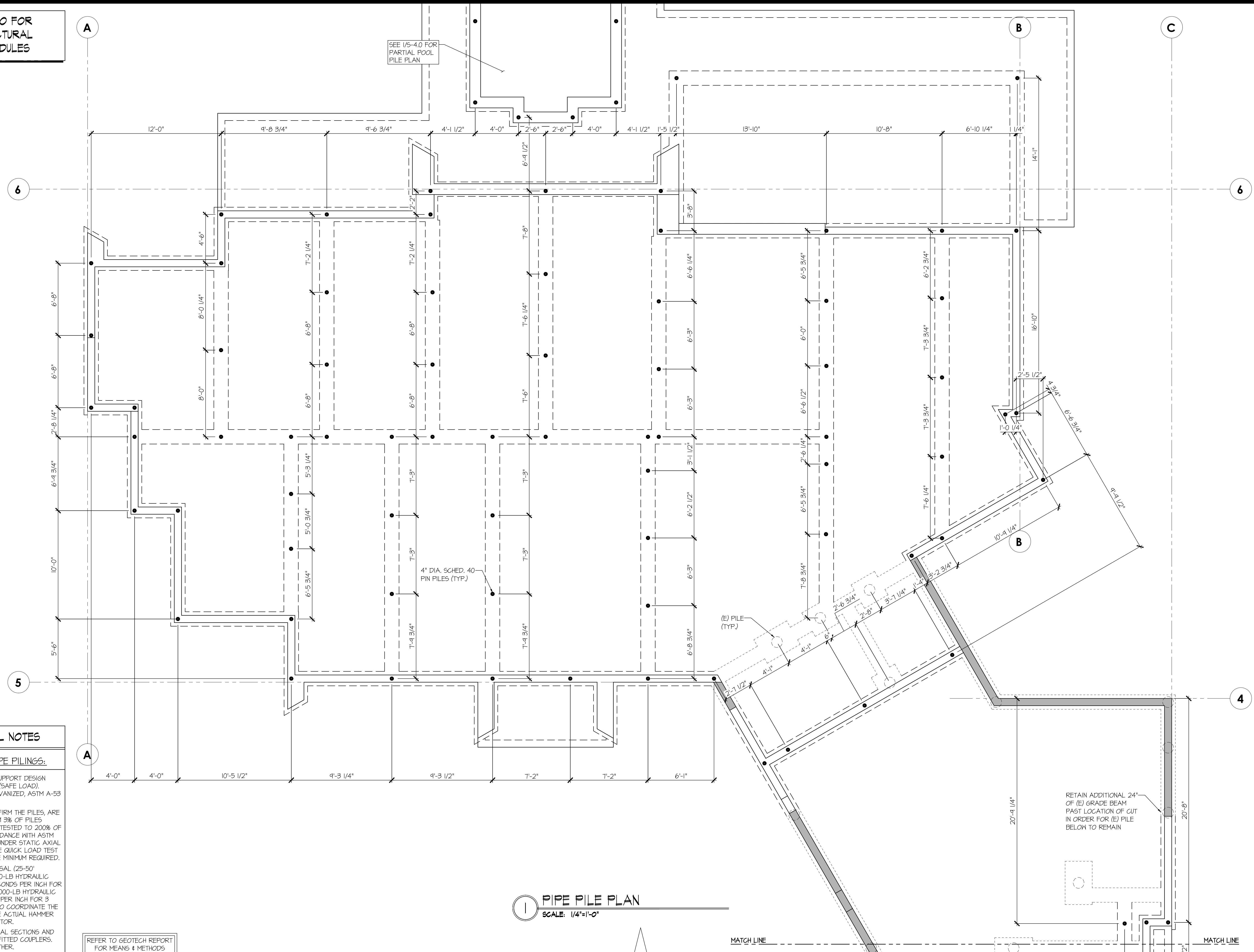
MACPHERSON CONSTRUCTION

STRUCTURAL NOTES

5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet: **S-O-O**

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES



PIPE PILE PLAN
SCALE: 1/4"=1'-0"

PILE STRUCTURAL NOTES

GRADE BEAM ON PIPE PILING:

- PILES SHALL BE INSTALLED TO SUPPORT DESIGN LOAD OF 10- TONS/PILE MINIMUM (SAFE LOAD). - 4" MIN. DIA. SCHEDULE 40, GALVANIZED, ASTM A-53 GRADE "A" PIPE PILES
- PILING CONTRACTOR SHALL CONFIRM THE PILES, ARE ADEQUATE BY TESTING A MINIMUM 3% OF PILES (3 MINIMUM). TEST PILES MUST BE TESTED TO 200% OF THE DESIGN CAPACITY IN ACCORDANCE WITH ASTM STANDARD D 1143-01 FOR PILES UNDER STATIC AXIAL COMPRESSIVE LOAD. USE OF THE QUICK LOAD TEST METHOD IN THE STANDARD IS THE MINIMUM REQUIRED.
- PILES SHALL BE DRIVEN TO REFUSAL (25-50' ANTICIPATED) WITH A MINIMUM 850-LB HYDRAULIC HAMMER AND REFUSAL OF 16 SECONDS PER INCH FOR 3 CONSECUTIVE INCHES. FOR A 2000-LB HYDRAULIC HAMMER REFUSAL IS 4 SECONDS PER INCH FOR 3 CONSECUTIVE INCHES. GEOTECH TO COORDINATE THE DRIVING CRITERIA BASED ON THE ACTUAL HAMMER SIZE SELECTED BY THE CONTRACTOR.
- PILES SHALL BE DRIVEN IN NOMINAL SECTIONS AND CONNECTED WITH COMPRESSION FITTED COUPLERS. DO NOT WELD PIPE JOINTS TOGETHER.
- GEOTECH OF RECORD OR HIS/HER REPRESENTATIVE SHALL BE PRESENT TO OBSERVE PIN PILE INSTALLATION & LOAD TEST.

REFER TO GEOTECH REPORT FOR MEANS & METHODS INSTRUCTIONS AS WELL AS ADJACENT SITE MONITORING REQUIREMENTS



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

M&K project number:
306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

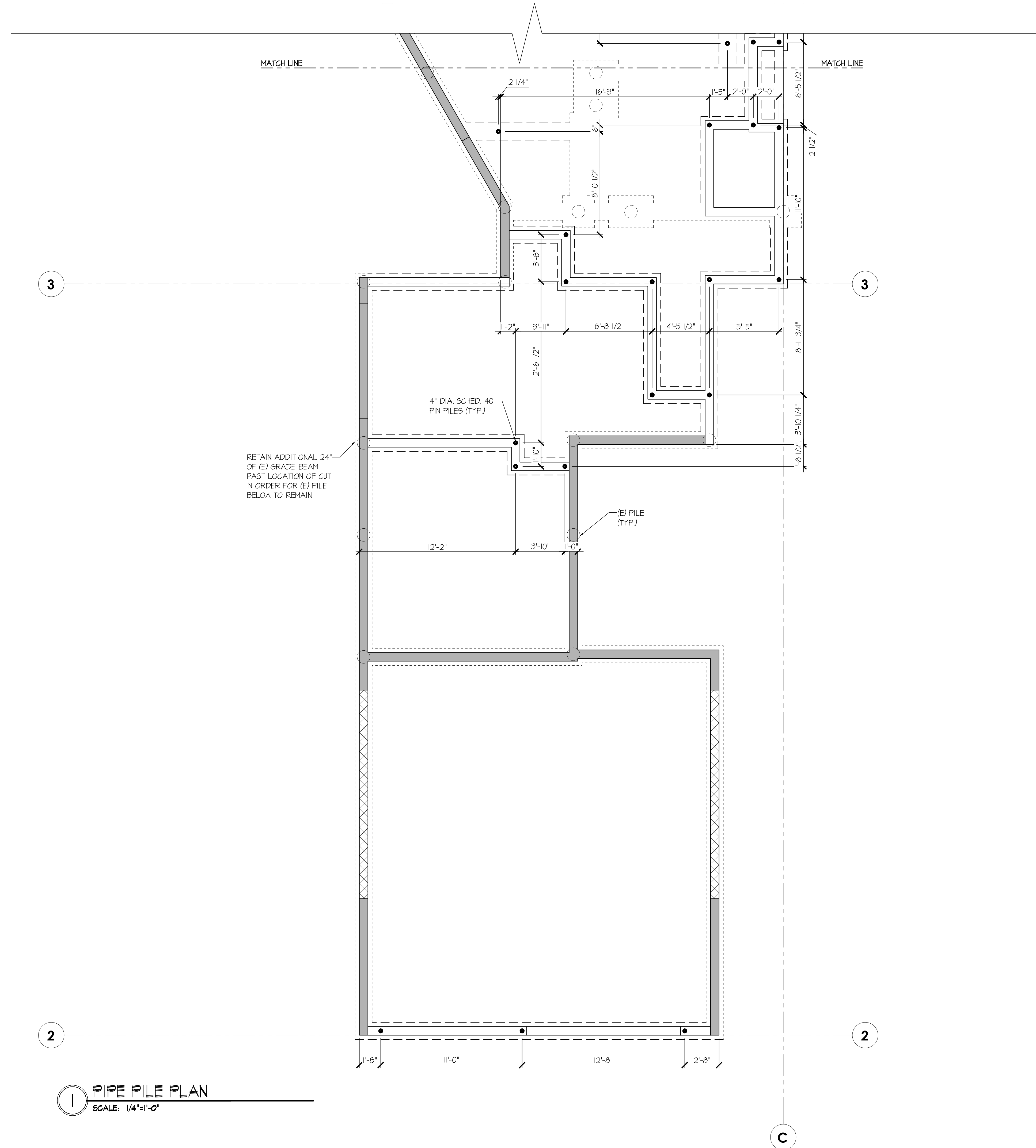
REVISIONS:	
date:	initial:

**MACPHERSON
CONSTRUCTION**

PIPE PILE PLAN
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet:
S-0.1A

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES



RETAIN ADDITIONAL 24"
OF (E) GRADE BEAM
PAST LOCATION OF CUT
IN ORDER FOR (E) PILE
BELOW TO REMAIN

4" DIA. SCHED. 40
PIN PILES (TYP.)

(E) PILE
(TYP.)

1 PIPE PILE PLAN
SCALE: 1/4"=1'-0"

PILE STRUCTURAL NOTES

GRADE BEAM ON PIPE PILING:

- PILES SHALL BE INSTALLED TO SUPPORT DESIGN LOAD OF 10- TONS/PILE MINIMUM (SAFE LOAD).
- 4" MIN. DIA. SCHEDULE 40, GALVANIZED, ASTM A-53 GRADE "A" PIPE PILES
- PILING CONTRACTOR SHALL CONFIRM THE PILES, ARE ADEQUATE BY TESTING A MINIMUM 3% OF PILES (3 MINIMUM). TEST PILES MUST BE TESTED TO 200% OF THE DESIGN CAPACITY IN ACCORDANCE WITH ASTM STANDARD D 1143-01 FOR PILES UNDER STATIC AXIAL COMPRESSIVE LOAD. USE OF THE QUICK LOAD TEST METHOD IN THE STANDARD IS THE MINIMUM REQUIRED.
- PILES SHALL BE DRIVEN TO REFUSAL (25-50' ANTICIPATED) WITH A MINIMUM 850-LB HYDRAULIC HAMMER AND REFUSAL OF 16 SECONDS PER INCH FOR 3 CONSECUTIVE INCHES. FOR A 2000-LB HYDRAULIC HAMMER REFUSAL IS 4 SECONDS PER INCH FOR 3 CONSECUTIVE INCHES. GEOTECH TO COORDINATE THE DRIVING CRITERIA BASED ON THE ACTUAL HAMMER SIZE SELECTED BY THE CONTRACTOR.
- PILES SHALL BE DRIVEN IN NOMINAL SECTIONS AND CONNECTED WITH COMPRESSION FITTED COUPLERS. DO NOT WELD PIPE JOINTS TOGETHER.
- GEOTECH OF RECORD OR HIS/HER REPRESENTATIVE SHALL BE PRESENT TO OBSERVE PIN PILE INSTALLATION & LOAD TEST.

REFER TO GEOTECH REPORT
FOR MEANS & METHODS
INSTRUCTIONS AS WELL AS
ADJACENT SITE MONITORING
REQUIREMENTS



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

M&K project number:
306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

REVISIONS:

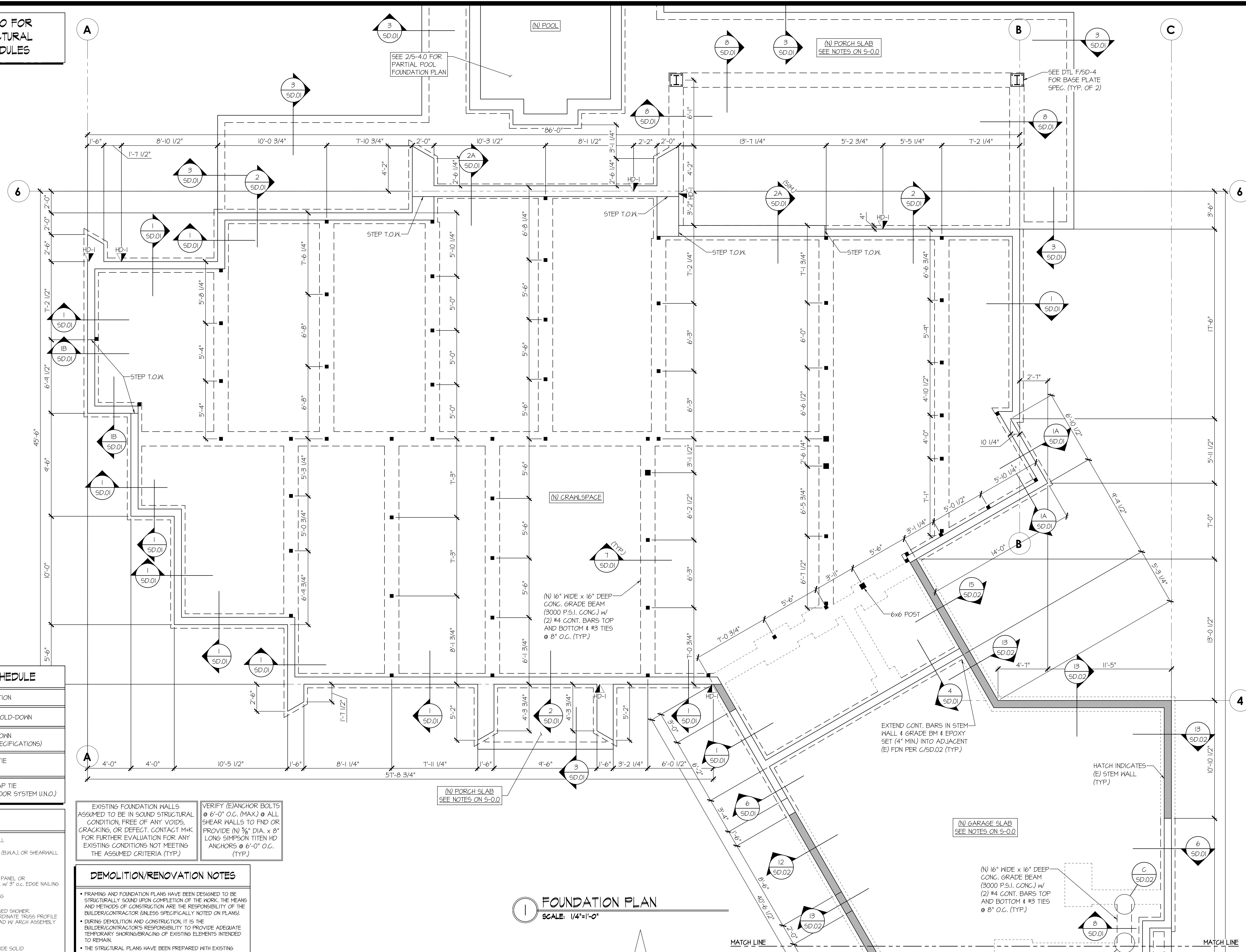
date:	initial:

MACPHERSON
CONSTRUCTION

PIPE PILE PLAN
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet:
S-0.1B

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES



HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
▶ HD-1	SIMPSON STDH14 (RJ) HOLD-DOWN
▶ HD-2	SIMPSON HTT5 HOLD-DOWN (SEE DETAIL B FOR SPECIFICATIONS)
▶ HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
▶ HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND

- ▬ INTERIOR BEARING WALL
- ▬ BEARING WALL ABOVE (B.W.A.) OR SHEARWALL ABOVE (S.W.A.)
- ▬ BEAM / HEADER
- ▬ INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- ▬ AREA OF OVERFRAMING
- ▬ LOCATION OF DEPRESSED SHOWER, TRUSS MANIF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD BY ARCH ASSEMBLY
- JL METAL HANGER
- * INDICATES POST ABOVE, PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- ▶ INDICATES HOLD-DOWN

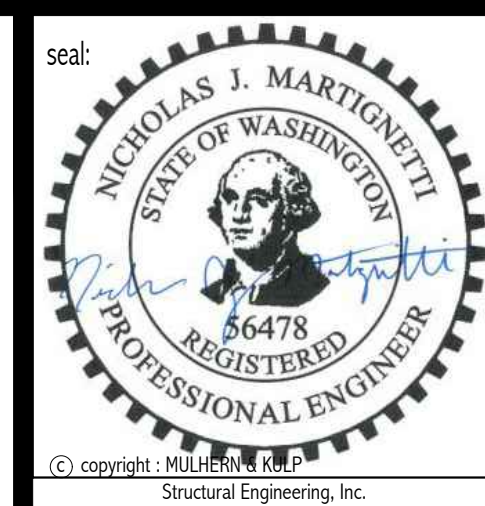
EXISTING FOUNDATION WALLS ASSUMED TO BE IN SOUND STRUCTURAL CONDITION, FREE OF ANY VOIDS, CRACKING, OR DEFECT. CONTACT MKK FOR FURTHER EVALUATION FOR ANY EXISTING CONDITIONS NOT MEETING THE ASSUMED CRITERIA (TYP.)

VERIFY (E)ANCHOR BOLTS @ 6'-0" O.C. (MAX.) @ ALL SHEAR WALLS TO FND OR PROVIDE (N) 3/8" DIA. x 8" LONG SIMPSON TITEN HD ANCHORS @ 6'-0" O.C. (TYP.)

DEMOLITION/RENOVATION NOTES

- FRAMING AND FOUNDATION PLANS HAVE BEEN DESIGNED TO BE STRUCTURALLY SOUND UPON COMPLETION OF THE WORK. THE MEANS AND METHODS OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE BUILDER/CONTRACTOR (UNLESS SPECIFICALLY NOTED ON PLANS).
- DURING DEMOLITION AND CONSTRUCTION, IT IS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE TEMPORARY SHORING/BRACING OF EXISTING ELEMENTS INTENDED TO REMAIN.
- THE STRUCTURAL PLANS HAVE BEEN PREPARED WITH EXISTING FRAMING/FOUNDATION ASSUMPTIONS AS NOTED ON THE PLANS. IT IS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO CONTACT MKK STRUCTURAL ENGINEERING IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS DEPICTED ON THE CONSTRUCTION DOCUMENTS.

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



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 205, San Diego, CA 92121
p 619-650-0010 • mulhernkulp.com

M&K project number:
306-25001

project mgr: NJM
drawn by: BFD
issue date: 03-27-25

REVISIONS:

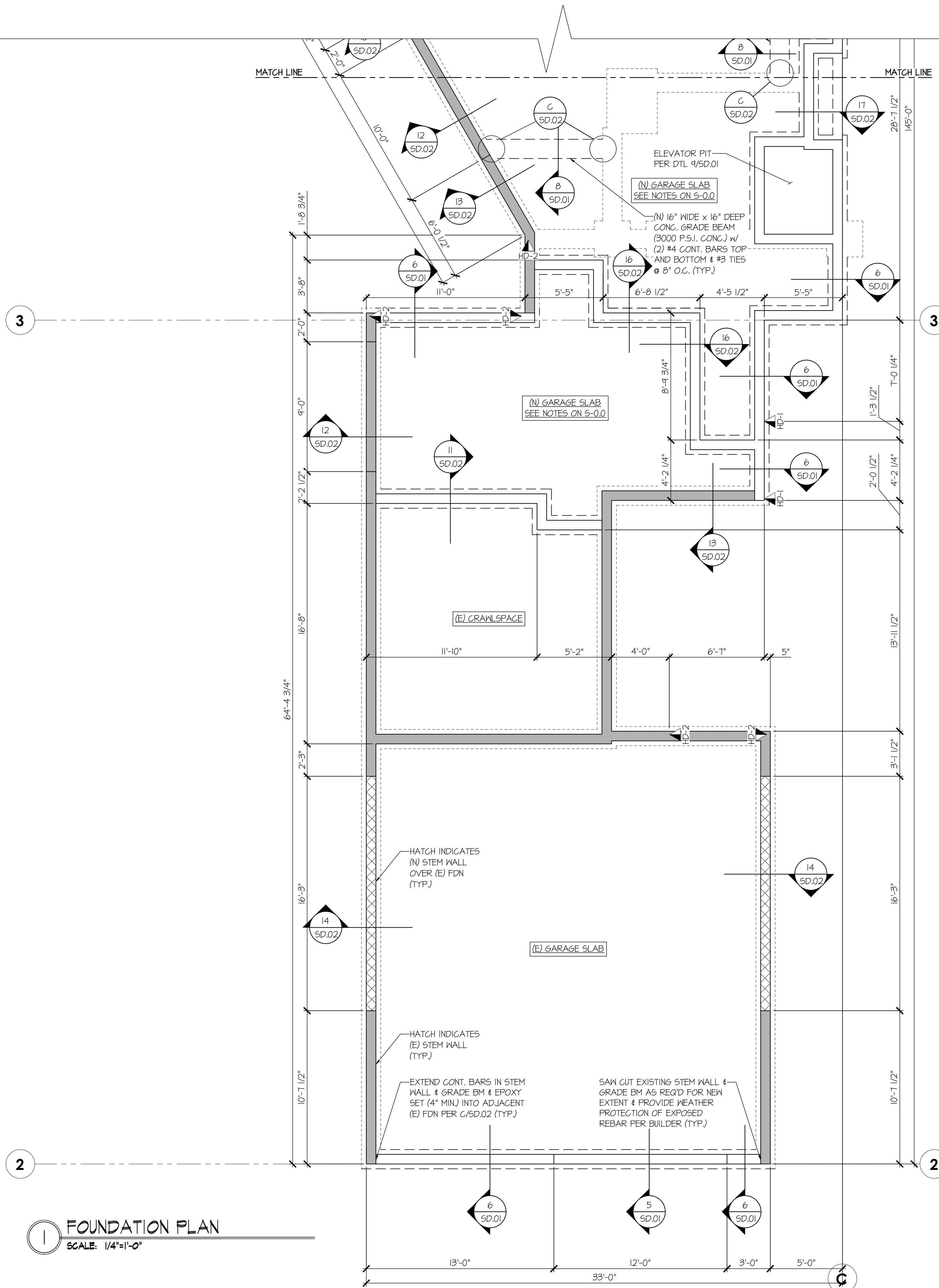
date:	initial:

**MACPHERSON
CONSTRUCTION**

FOUNDATION PLAN
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet:
S-1.0A

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES



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

HOLD-DOWN SCHEDULE	
SYMBOL	SPECIFICATION
	SIMPSON STD1/4 (RJ) HOLD-DOWN
	SIMPSON HTT5 HOLD-DOWN (SEE DETAIL B FOR SPECIFICATIONS)
	SIMPSON CS16 STRAP TIE (14" END LENGTH)
	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND	
	INTERIOR BEARING WALL
	BEARING WALL ABOVE (B.W.A.) OR SHEAR WALL ABOVE (S.W.A.)
	BEAM / HEADER
	INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" O.C. EDGE NAILING
	AREA OF OVERFRAMING
	LOCATION OF DEPRESSED SHOWER, TRUSS MANUF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD W/ ARCH ASSEMBLY
	J.L. METAL HANGER
	* INDICATES POST ABOVE, PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
	INDICATES HOLD-DOWN.

EXISTING FOUNDATION WALLS ASSUMED TO BE IN SOUND STRUCTURAL CONDITION, FREE OF ANY VOIDS, CRACKING, OR DEFECT. CONTACT M&K FOR FURTHER EVALUATION FOR ANY EXISTING CONDITIONS NOT MEETING THE ASSUMED CRITERIA (TYP.)

VERIFY (E) ANCHOR BOLTS @ 6'-0" O.C. (MAX) @ ALL SHEAR WALLS TO FIND OR PROVIDE (N) 3/8" DIA. x 8" LONG SIMPSON TITEN HD ANCHORS @ 6'-0" O.C. (TYP.)

DEMOLITION/RENOVATION NOTES

- FRAMING AND FOUNDATION PLANS HAVE BEEN DESIGNED TO BE STRUCTURALLY SOUND UPON COMPLETION OF THE WORK. THE MEANS AND METHODS OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE BUILDER/CONTRACTOR (UNLESS SPECIFICALLY NOTED ON PLANS).
- DURING DEMOLITION AND CONSTRUCTION, IT IS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE TEMPORARY SHORING/BRACING OF EXISTING ELEMENTS INTENDED TO REMAIN.
- THE STRUCTURAL PLANS HAVE BEEN PREPARED WITH EXISTING FRAMING/FOUNDATION ASSUMPTIONS AS NOTED ON THE PLANS. IT IS THE BUILDER/CONTRACTOR'S RESPONSIBILITY TO CONTACT M&K STRUCTURAL ENGINEERING IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS DEPICTED ON THE CONSTRUCTION DOCUMENTS.



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

M&K project number:
306-25001

project mgr: NJM
drawn by: BFD
issue date: 03-27-25

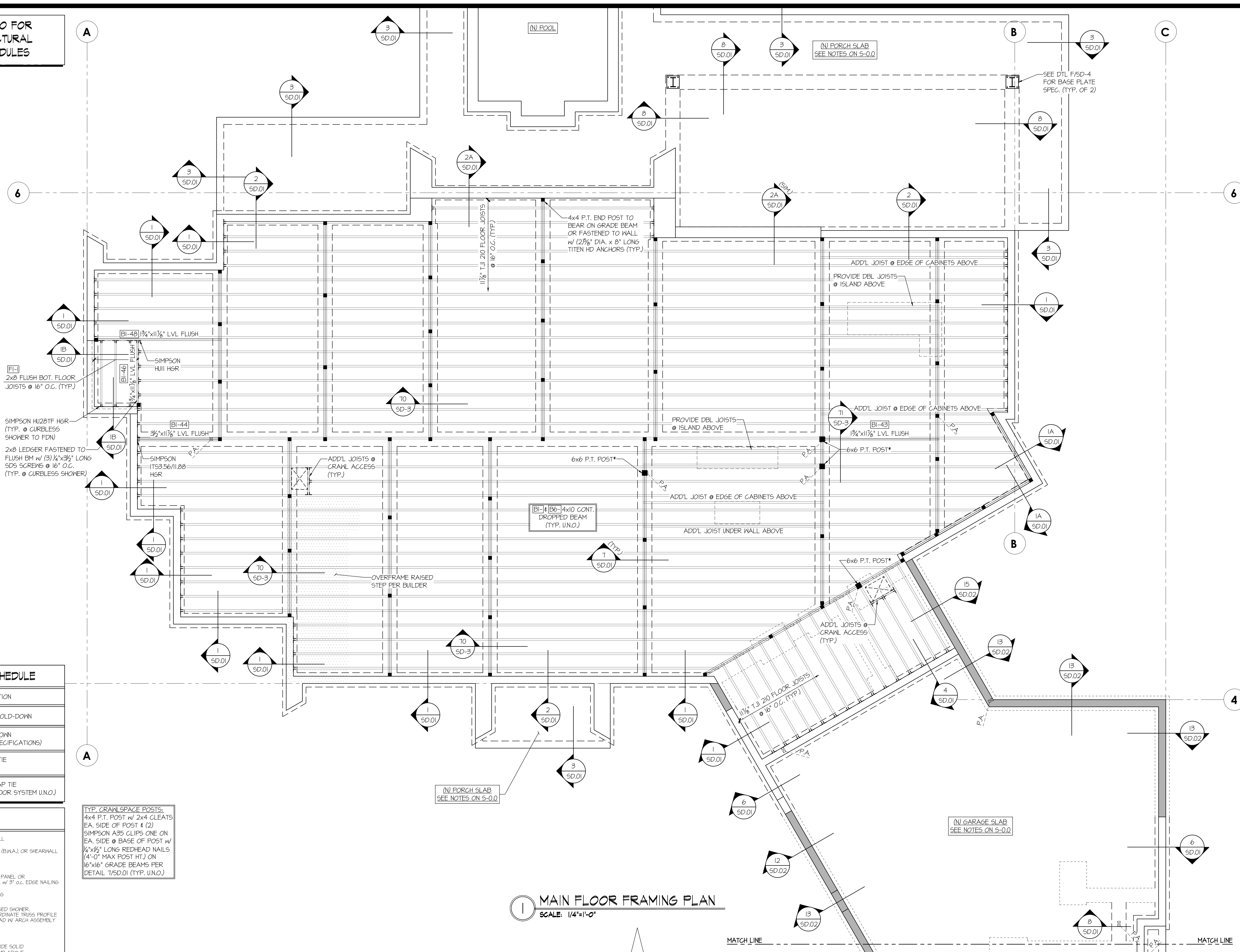
REVISIONS:	
date:	initial:

**MACPHERSON
CONSTRUCTION**

FOUNDATION PLAN
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet:
S-1.0B

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES

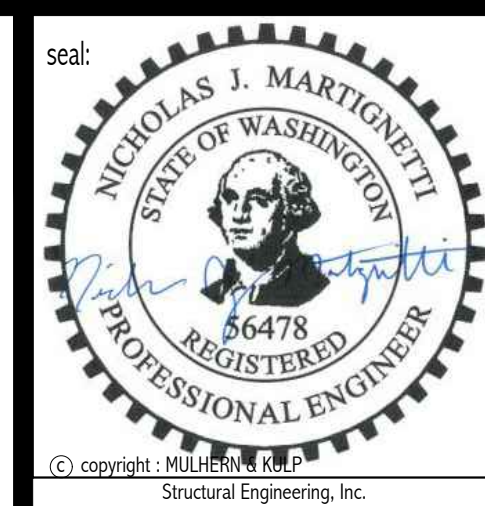


HOLD-DOWN SCHEDULE	
SYMBOL	SPECIFICATION
▶	HD-1 SIMPSON STDH14 (RJ) HOLD-DOWN
▶	HD-2 SIMPSON HTT5 HOLD-DOWN (SEE DETAIL B FOR SPECIFICATIONS)
▶	HD-5 SIMPSON CS16 STRAP TIE (14" END LENGTH)
▶	HD-7 SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND	
▬	INTERIOR BEARING WALL
▬	BEARING WALL ABOVE (B.W.A.) OR SHEARWALL ABOVE (S.W.A.)
▬	BEAM / HEADER
▬	INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
▬	AREA OF OVERFRAMING
▬	LOCATION OF DEPRESSIONED SHOWER, TRUSS MANIF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD w/ ARCH ASSEMBLY
JL	METAL HANGER
*	INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
▶	INDICATES HOLD-DOWN

TYP. CRAWLSPACE POSTS:
4x4 P.T. POST w/ 2x4 CLEATS
EA. SIDE OF POST & (2)
SIMPSON A35 CLIPS ONE ON
EA. SIDE @ BASE OF POST w/
1/4"x1/2" LONG REDHEAD NAILS
(4'-0" MAX POST HT.) ON
16"x16" GRADE BEAMS PER
DETAIL T/SD.01 (TYP. U.N.O.)

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



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

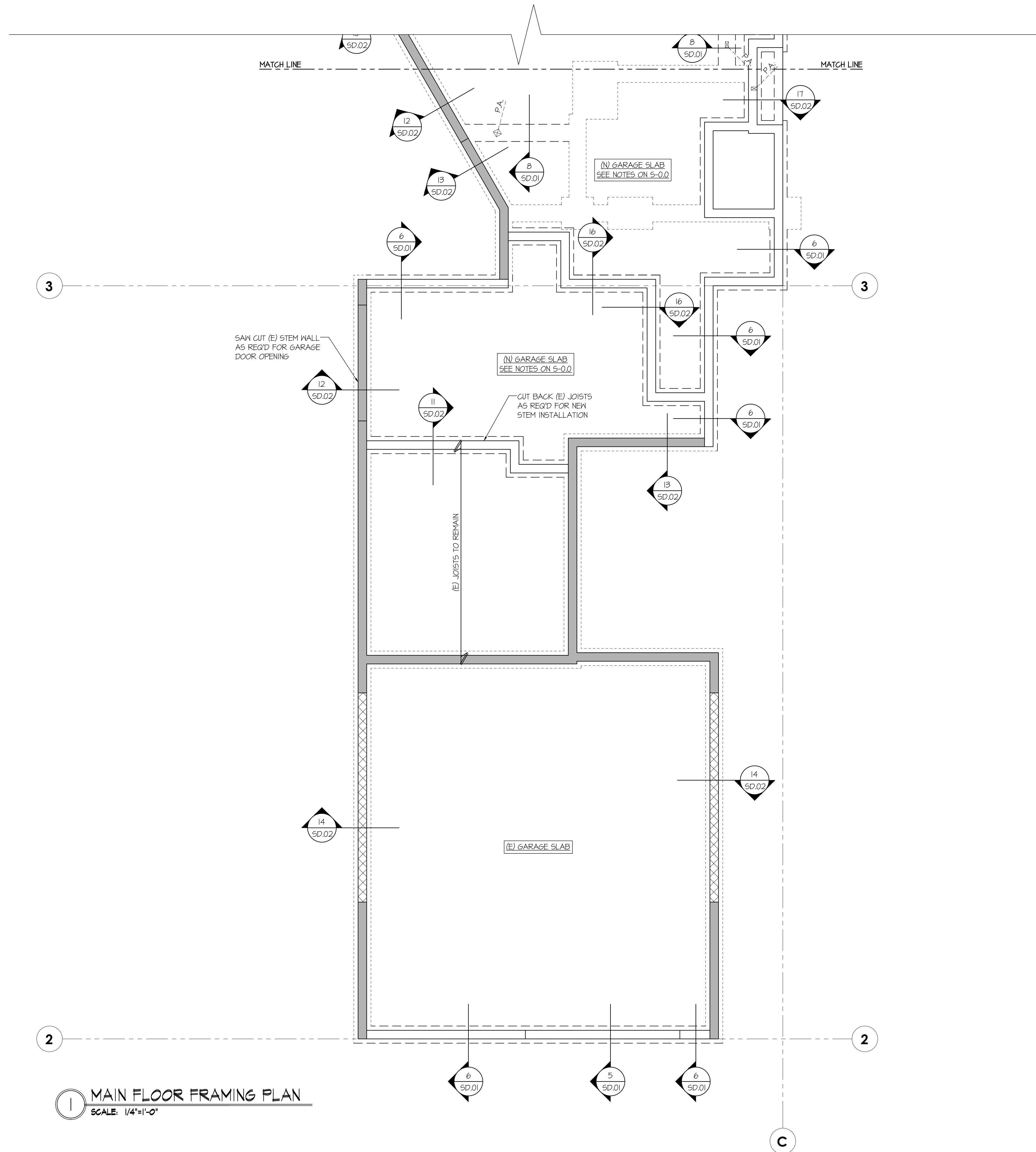
M&K project number:
306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25
REVISIONS:
date: initial:

MACPHERSON
CONSTRUCTION

MAIN FLR FRAMING PLAN
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet:
S-1.1A

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES



HOLD-DOWN SCHEDULE	
SYMBOL	SPECIFICATION
	SIMPSON STD1/4 (R/J) HOLD-DOWN
	SIMPSON HT15 HOLD-DOWN (SEE DETAIL B FOR SPECIFICATIONS)
	SIMPSON CS16 STRAP TIE (14" END LENGTH)
	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND	
	INTERIOR BEARING WALL
	BEARING WALL ABOVE (B/W.A.) OR SHEARWALL ABOVE (S/W.A.)
	BEAM / HEADER
	INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
	AREA OF OVERFRAMING
	LOCATION OF DEPRESSED SHOWER, TRUSS MANIF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD w/ ARCH ASSEMBLY
	J.L. METAL HANGER
	* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
	INDICATES HOLD-DOWN

TYP. CRANKSPACE POSTS:
4x4 P.T. POST w/ 2x4 CLEATS
EA. SIDE OF POST # (2)
SIMPSON A35 CLIPS ONE ON
EA. SIDE @ BASE OF POST w/
1/4"x1/2" LONG REDHEAD NAILS
(4'-0" MAX POST HT.) ON
16'x16" GRADE BEAMS PER
DETAIL T/SD.01 (TYP. U.N.O.)

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



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

M&K project number:
306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

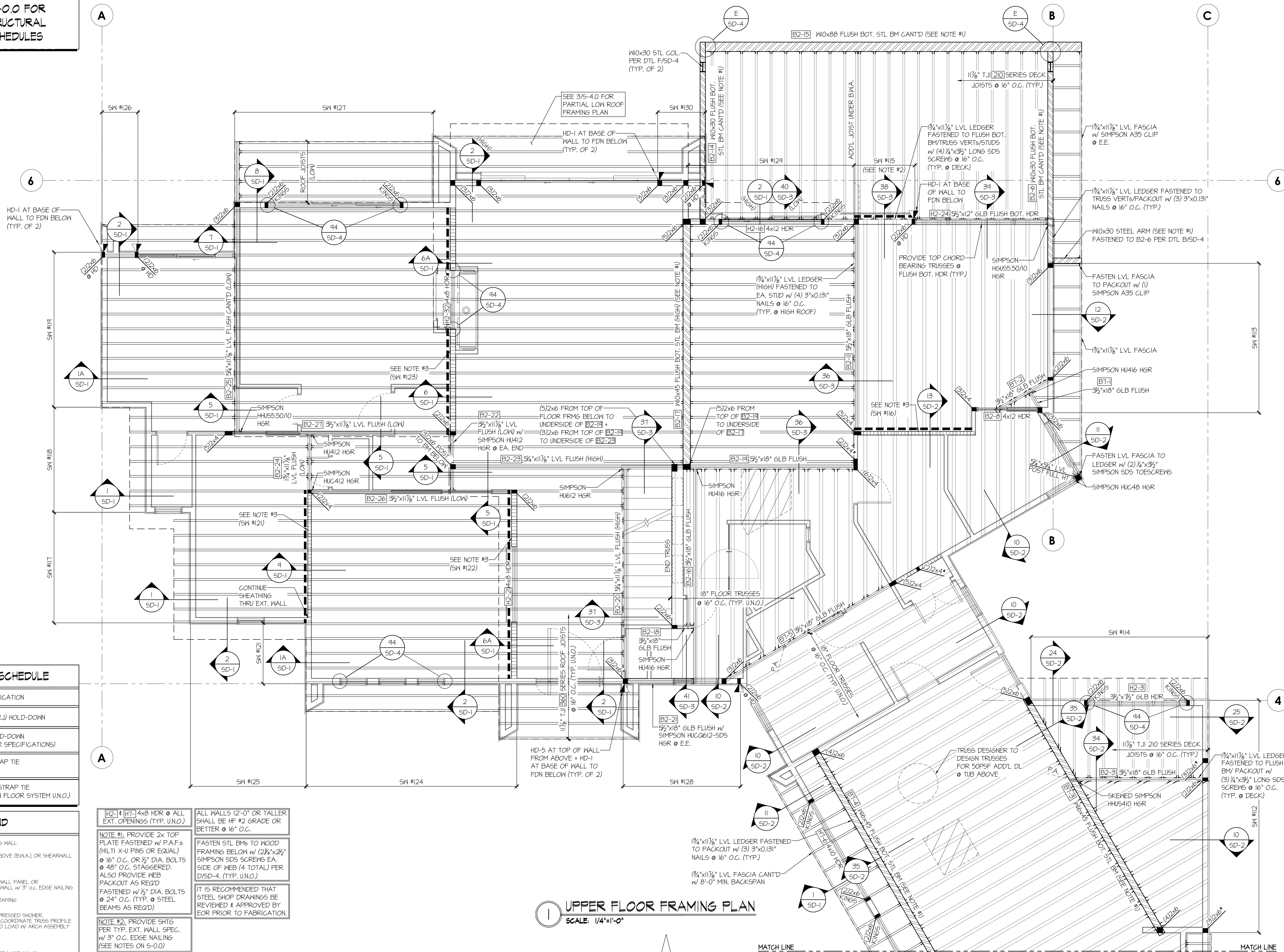
REVISIONS:	
date:	initial:

MACPHERSON
CONSTRUCTION

MAIN FLR FRAMING PLAN
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet:
S-1.1B

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES

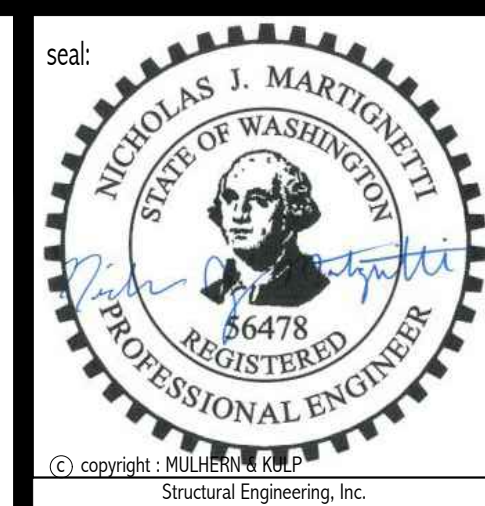


1 UPPER FLOOR FRAMING PLAN
SCALE: 1/4"=1'-0"

HOLD-DOWN SCHEDULE	
SYMBOL	SPECIFICATION
	SIMPSON STD1/4 (R/J) HOLD-DOWN
	SIMPSON HT15 HOLD-DOWN (SEE DETAIL B FOR SPECIFICATIONS)
	SIMPSON CS16 STRAP TIE (14" END LENGTH)
	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND	
	INTERIOR BEARING WALL
	BEARING WALL ABOVE (B.W.A.) OR SHEARWALL ABOVE (S.W.A.)
	BEAM / HEADER
	INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
	AREA OF OVERFRAMING
	LOCATION OF DEPRESSED SHOWER, TRUSS MANIF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD W/ ARCH ASSEMBLY
	J/L METAL HANGER
	* INDICATES POST ABOVE, PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
	INDICATES HOLD-DOWN

[H2-4] [HT-4] 4x8 HDR @ ALL EXT. OPENINGS (TYP. U.N.O.)
 NOTE #1: PROVIDE 2x TOP PLATE FASTENED w/ P.A.F.s (HILTI X-U PINS OR EQUAL) @ 16" O.C. OR 1/2" DIA. BOLTS @ 48" O.C. STAGGERED. ALSO PROVIDE WEB PACKOUT AS REQ'D FASTENED w/ 1/2" DIA. BOLTS @ 24" O.C. (TYP. @ STEEL BEAMS AS REQ'D)
 NOTE #2: PROVIDE SHTG PER TYP. EXT. WALL SPEC. w/ 3" O.C. EDGE NAILING (SEE NOTES ON S-0.0)
 NOTE #3: PROVIDE SHTG PER TYP. EXT. WALL SPEC. (SEE NOTES ON S-0.0)
 ALL WALLS 12'-0" OR TALLER SHALL BE HF #2 GRADE OR BETTER @ 16" O.C.
 FASTEN STL BMS TO WOOD FRAMING BELOW w/ (2) 1/4"x2 1/2" SIMPSON SDS SCREENS EA. SIDE OF WEB (4 TOTAL) PER D/SD-4. (TYP. U.N.O.)
 IT IS RECOMMENDED THAT STEEL SHOP DRAWINGS BE REVIEWED & APPROVED BY EOR PRIOR TO FABRICATION.



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

M&K project number: 306-25001
 project mgr: NJM
 drawn by: BFD
 issue date: 03-27-25

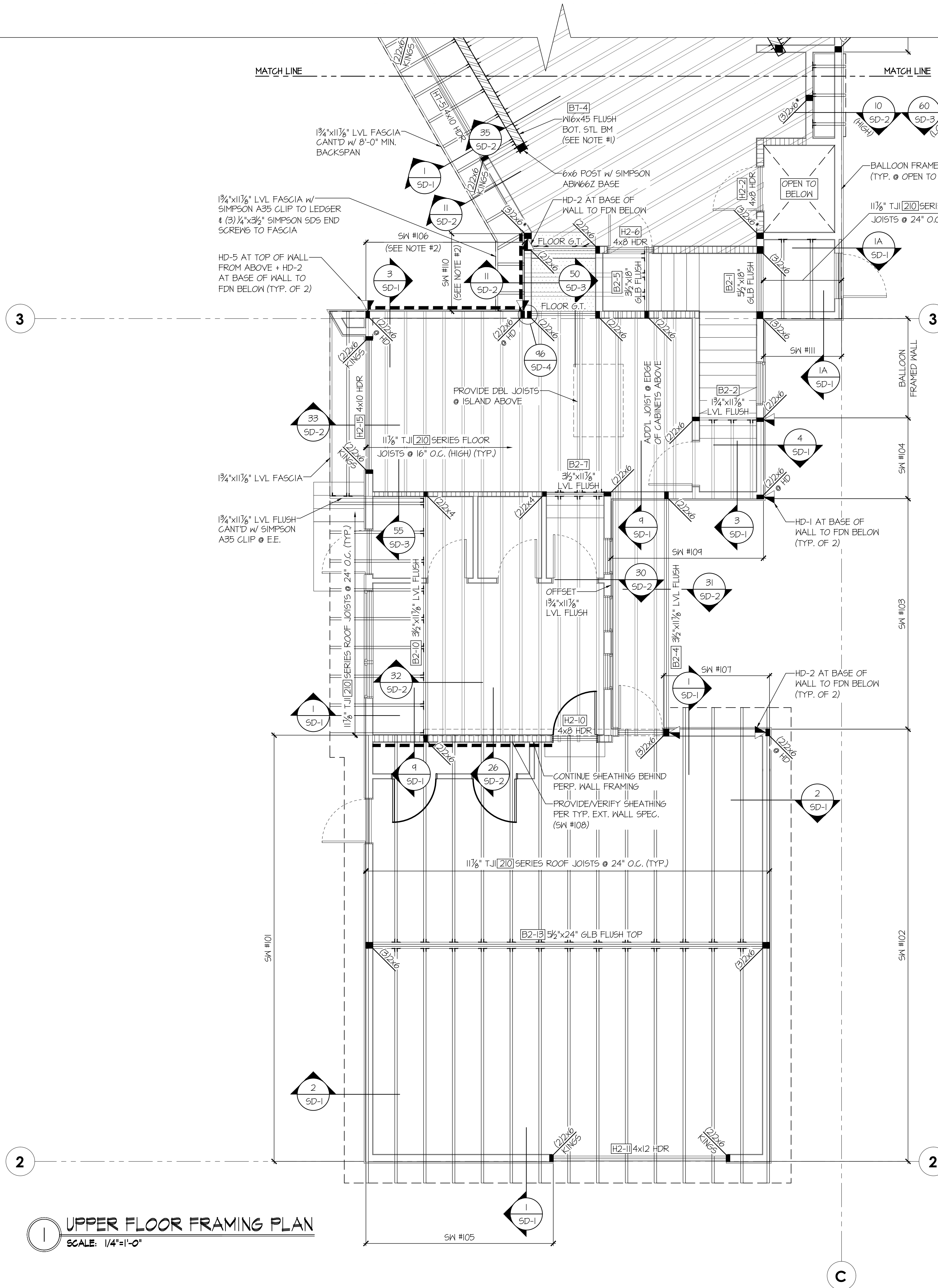
REVISIONS:
 date: initial:

MACPHERSON
CONSTRUCTION

UPPER FLR FRAMING PLAN
 5330 BUTTERWORTH RD
 NORTH LOT
 MERCER ISLAND, WASHINGTON

sheet:
S-2.0A

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES



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

HOLD-DOWN SCHEDULE	
SYMBOL	SPECIFICATION
	SIMPSON STD14 (R/J) HOLD-DOWN
	SIMPSON HT15 HOLD-DOWN (SEE DETAIL B FOR SPECIFICATIONS)
	SIMPSON CS16 STRAP TIE (14" END LENGTH)
	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND	
	INTERIOR BEARING WALL
	BEARING WALL ABOVE (B.W.A.) OR SHEARWALL ABOVE (S.W.A.)
	BEAM / HEADER
	INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
	AREA OF OVERFRAMING
	LOCATION OF DEPRESSIONED SHOWER, TRUSS MANIF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD W/ ARCH ASSEMBLY
	JL METAL HANGER
	* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
	INDICATES HOLD-DOWN.

[H2]-4 [HT]-4x8 HDR @ ALL EXT. OPENINGS (TYP. U.N.O.)
ALL WALLS 12'-0" OR TALLER SHALL BE HF #2 GRADE OR BETTER @ 16" O.C.
FASTEN STL BMS TO WOOD FRAMING BELOW w/ (2 1/4"x2 1/2" SIMPSON SDS SCREWS EA. SIDE OF WEB (4 TOTAL) PER D/SD-4. (TYP. U.N.O.)
IT IS RECOMMENDED THAT STEEL SHOP DRAWINGS BE REVIEWED & APPROVED BY EOR PRIOR TO FABRICATION.

NOTE #1: PROVIDE 2x TOP PLATE FASTENED w/ P.A.F.s (HILTI X-U PINS OR EQUAL) @ 16" O.C. OR 1/2" DIA. BOLTS @ 48" O.C. STAGGERED. ALSO PROVIDE WEB PACKOUT AS REQ'D FASTENED w/ 1/2" DIA. BOLTS @ 24" O.C. (TYP. @ STEEL BEAMS AS REQ'D)

NOTE #2: PROVIDE SHTG PER TYP. EXT. WALL SPEC. w/ 3" O.C. EDGE NAILING (SEE NOTES ON S-0.0)

NOTE #3: PROVIDE SHTG PER TYP. EXT. WALL SPEC. (SEE NOTES ON S-0.0)



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

M&K project number:
306-25001

project mgr: NJM
drawn by: BFD
issue date: 03-27-25

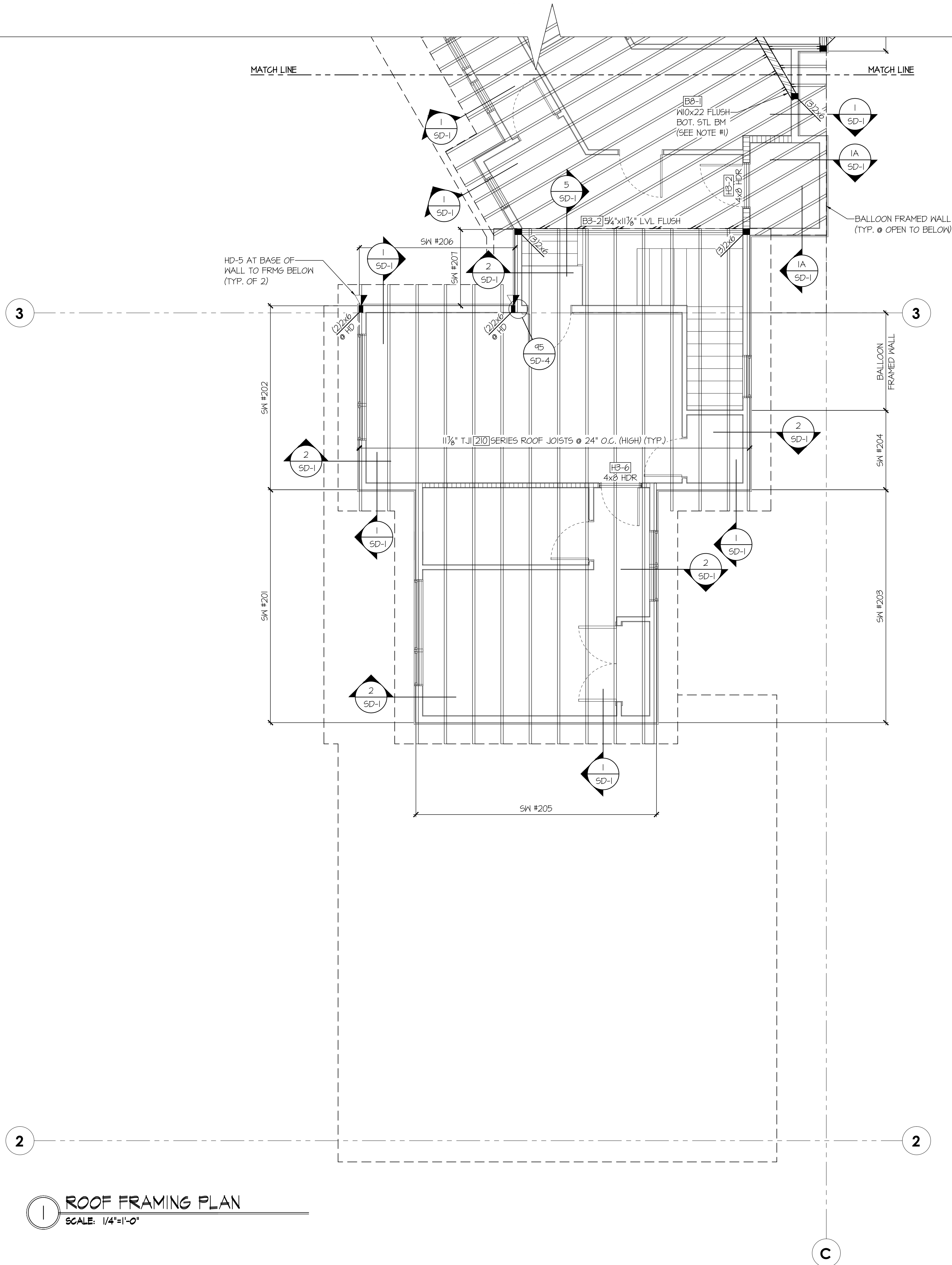
REVISIONS:
date: initial:

MACPHERSON
CONSTRUCTION

UPPER FLR FRAMING PLAN
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet:
S-2.0B

REFER TO S-0.0 FOR
TYPICAL STRUCTURAL
NOTES & SCHEDULES



1 ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

HOLD-DOWN SCHEDULE	
SYMBOL	SPECIFICATION
	SIMPSON STD1/4 (R/J) HOLD-DOWN
	SIMPSON HTT5 HOLD-DOWN (SEE DETAIL B FOR SPECIFICATIONS)
	SIMPSON CS16 STRAP TIE (14" END LENGTH)
	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND	
	INTERIOR BEARING WALL
	BEARING WALL ABOVE (B.W.A.) OR SHEARWALL ABOVE (S.W.A.)
	BEAM / HEADER
	INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
	AREA OF OVERFRAMING
	LOCATION OF DEPRESSED SHOWER, TRUSS MANUF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD w/ ARCH ASSEMBLY
	JL METAL HANGER
	* INDICATES POST ABOVE, PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
	INDICATES HOLD-DOWN

[H3-1] [H3-4] [H3-4x8 HDR @ ALL EXT. OPENINGS (TYP. U.N.O.)
NOTE #1: PROVIDE 2x TOP PLATE FASTENED w/ P.A.F.s (HILTI X-U PINS OR EQUAL) @ 16" O.C. OR 1/2" DIA. BOLTS @ 48" O.C. STAGGERED. ALSO PROVIDE WEB PACKOUT AS REQ'D FASTENED w/ 1/2" DIA. BOLTS @ 24" O.C. (TYP. @ STEEL BEAMS AS REQ'D)

NOTE #2: PROVIDE SHTG PER TYP. EXT. WALL SPEC. w/ 3" O.C. EDGE NAILING (SEE NOTES ON S-0.0)

ALL WALLS 12'-0" OR TALLER SHALL BE HF #2 GRADE OR BETTER @ 16" O.C.

FASTEN STL BMs TO WOOD FRAMING BELOW w/ (2 1/4"x2 1/2" SIMPSON SDS SCREWS EA. SIDE OF WEB (4 TOTAL) PER D/SD-4. (TYP. U.N.O.)

IT IS RECOMMENDED THAT STEEL SHOP DRAWINGS BE REVIEWED & APPROVED BY EOR PRIOR TO FABRICATION.



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

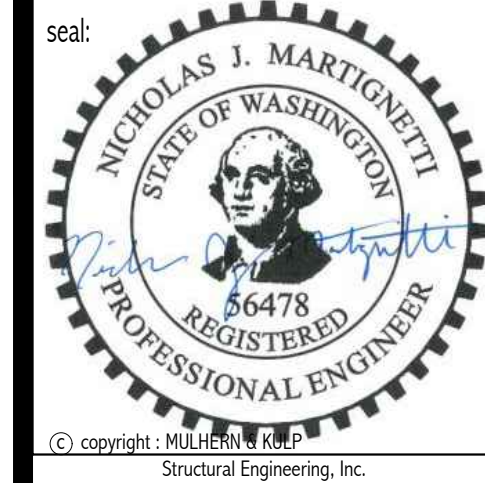
M&K project number: 306-25001
 project mgr: NJM
 drawn by: BFD
 issue date: 03-27-25

REVISIONS:
 date: initial:

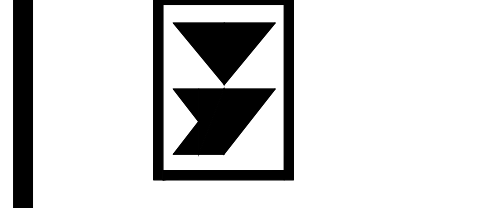
MACPHERSON
CONSTRUCTION

ROOF FRAMING PLAN
 5330 BUTTERWORTH RD
 NORTH LOT
 MERCER ISLAND, WASHINGTON

sheet:
S-3.0B



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhern+kulp.com



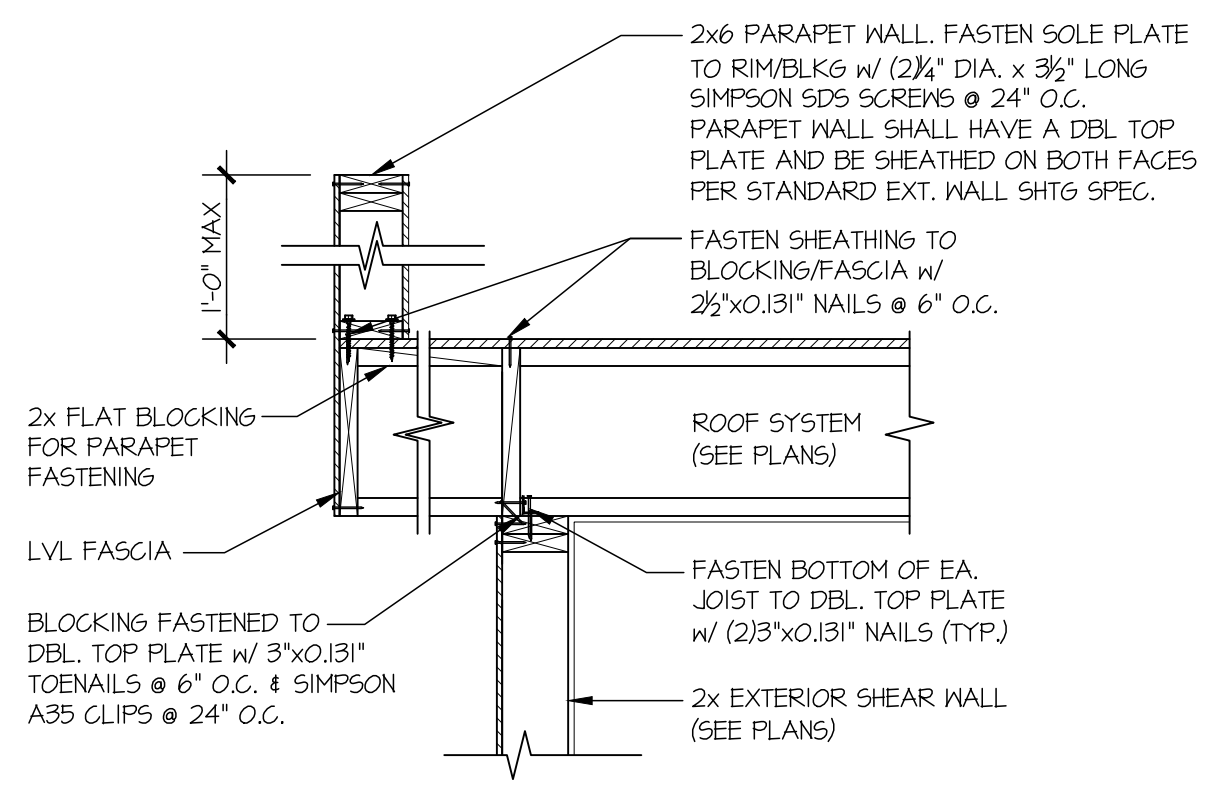
M&K project number: 306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

REVISIONS:
date: initial:

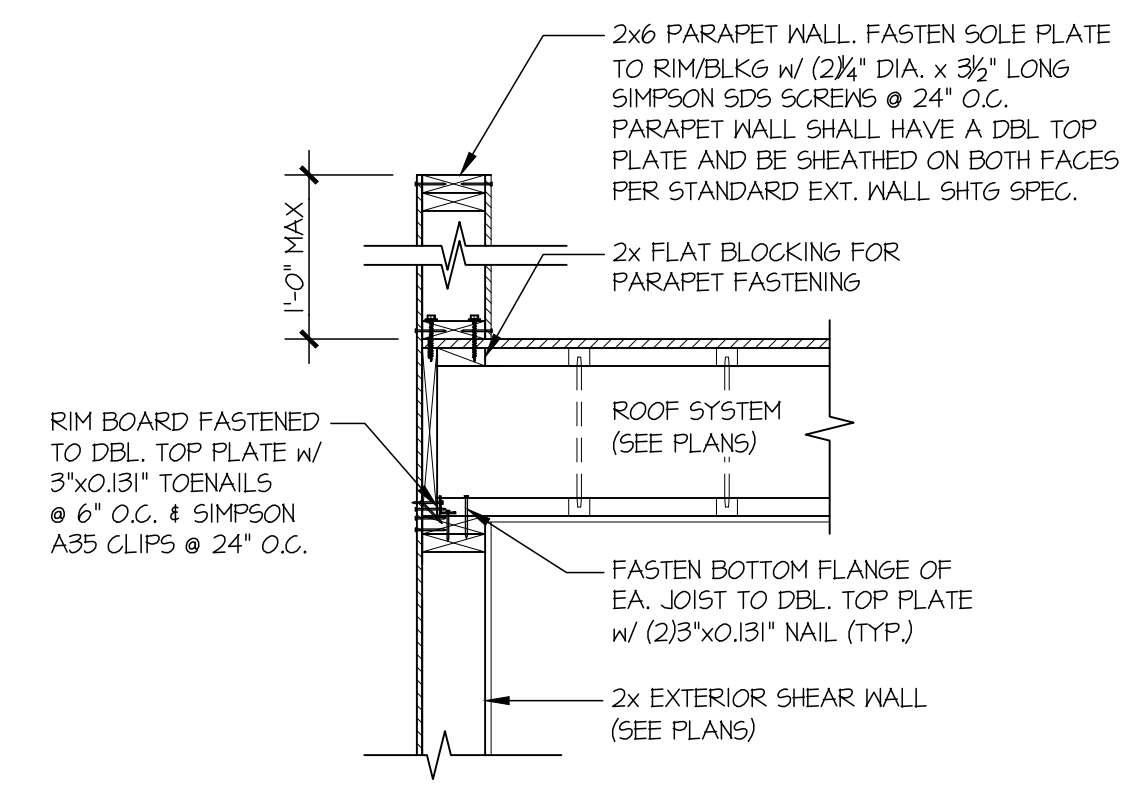
MACPHERSON CONSTRUCTION

STRUCTURAL DETAILS
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

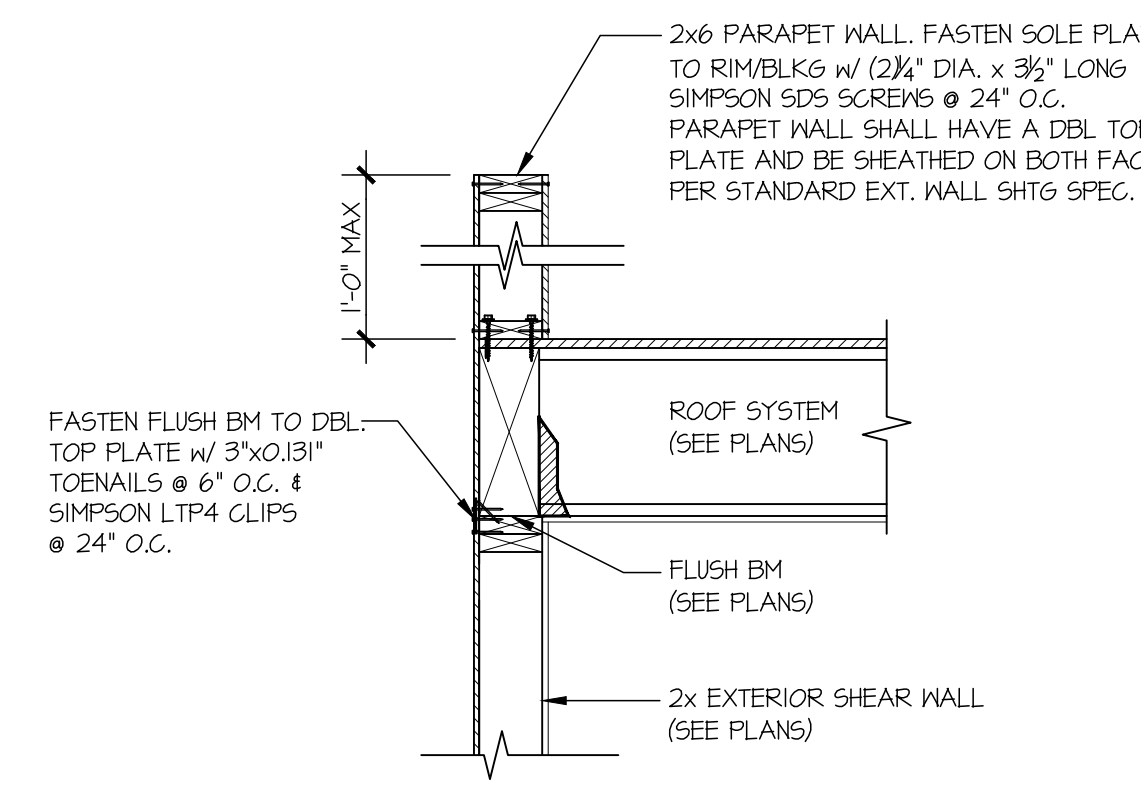
sheet: **SD-1**



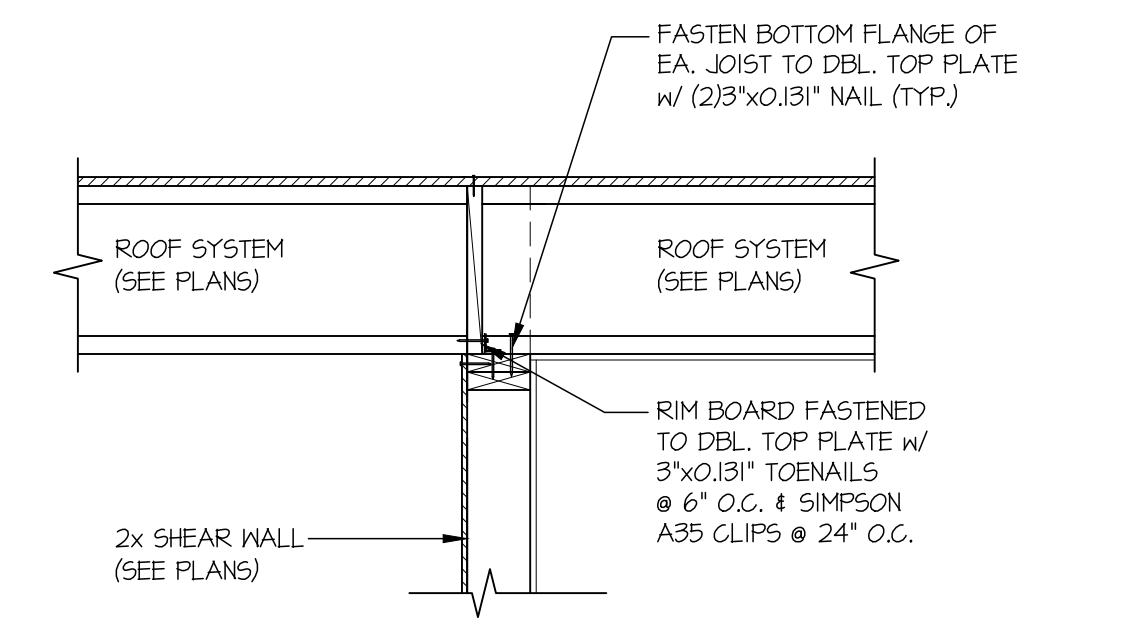
1 SECTION
SCALE: 3/4"=1'-0"



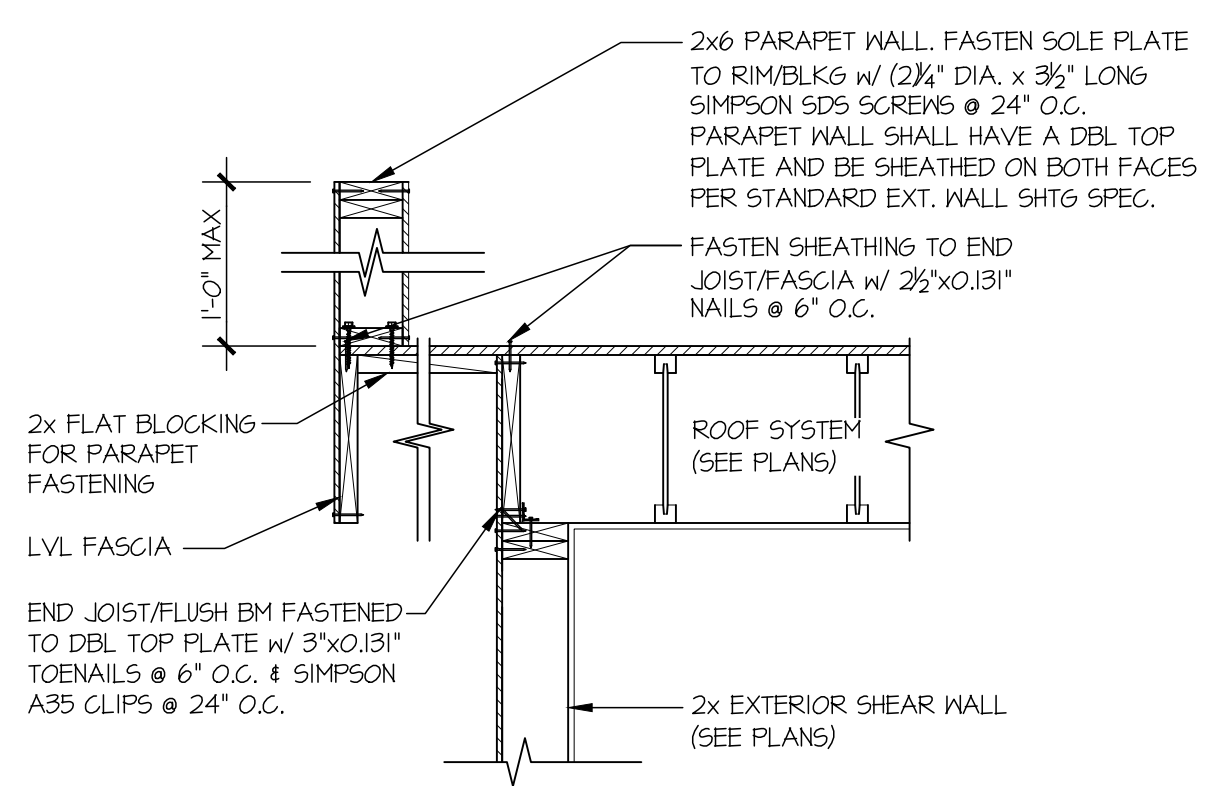
1A SECTION
SCALE: 3/4"=1'-0"



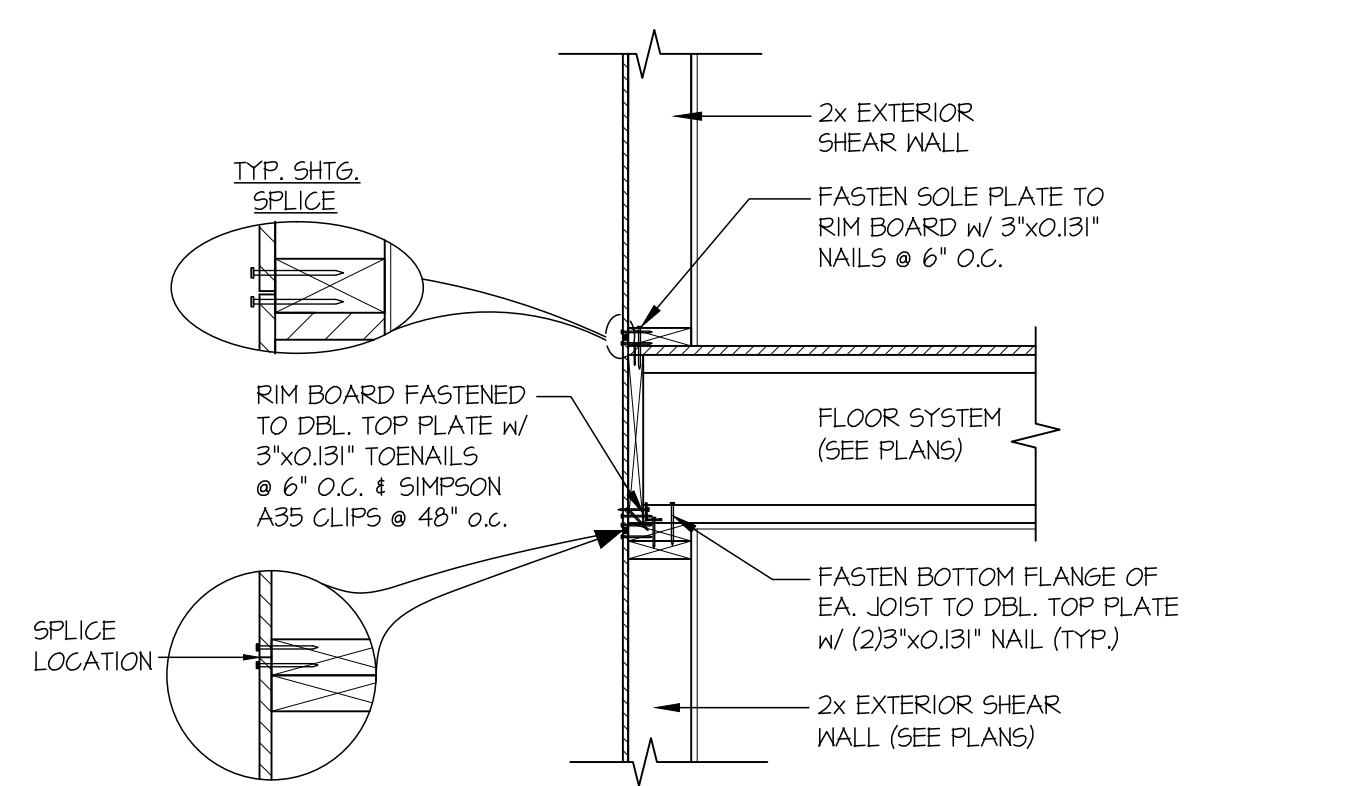
1B SECTION
SCALE: 3/4"=1'-0"



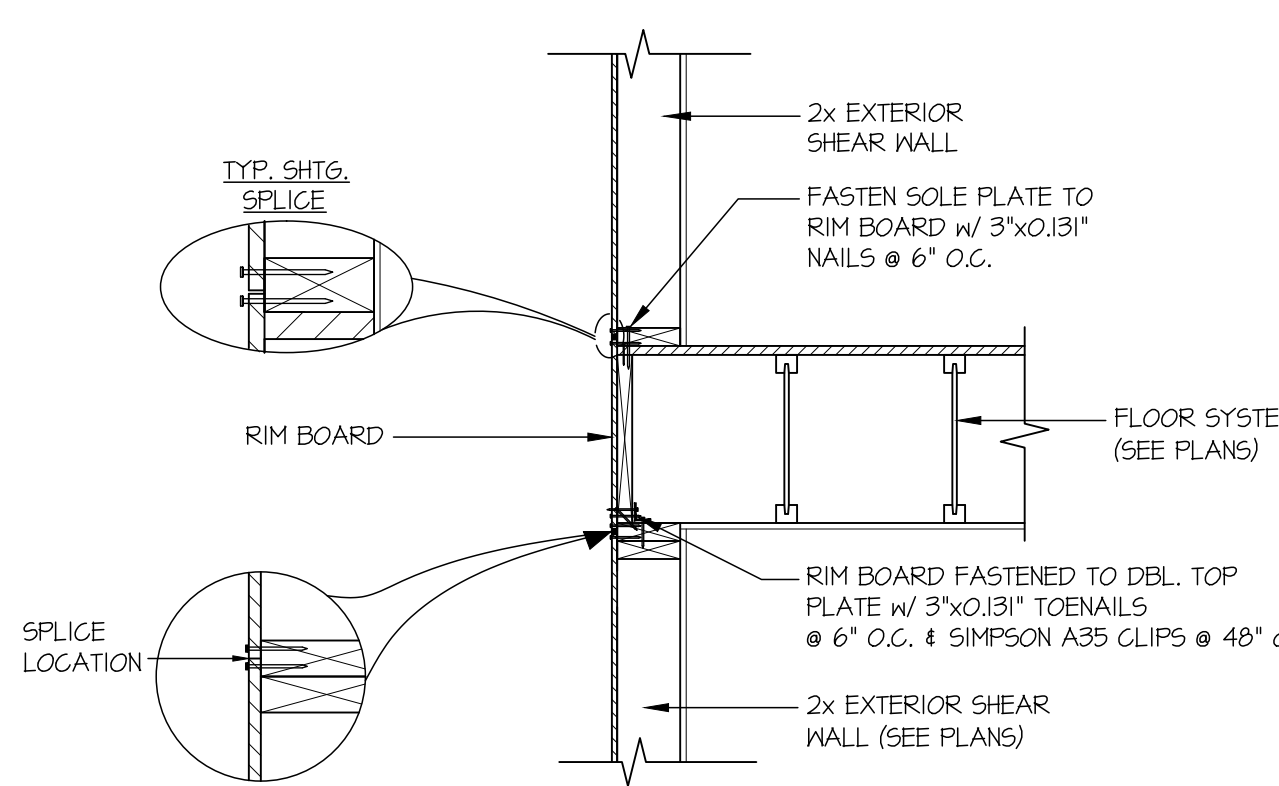
1C SECTION
SCALE: 3/4"=1'-0"



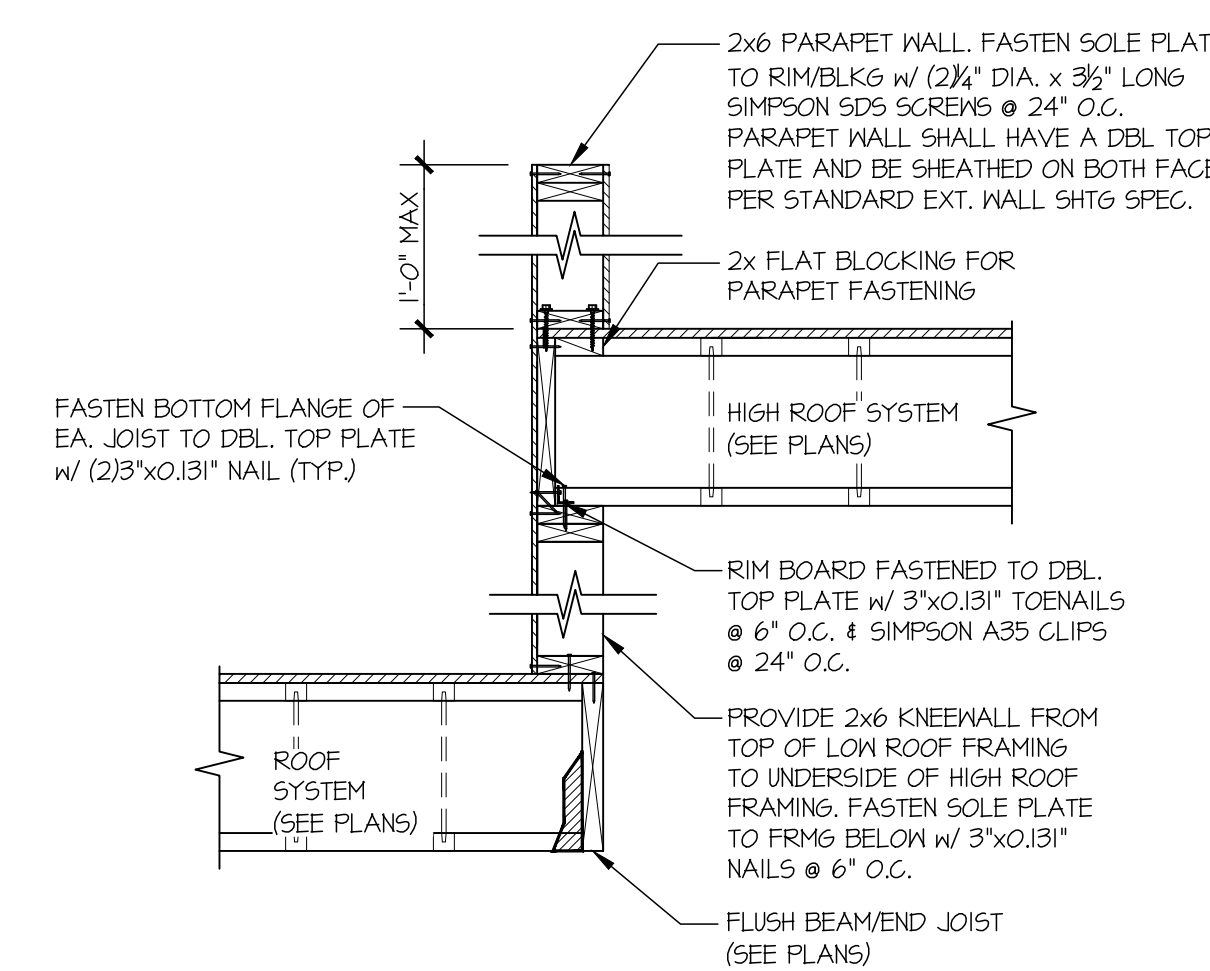
2 SECTION
SCALE: 3/4"=1'-0"



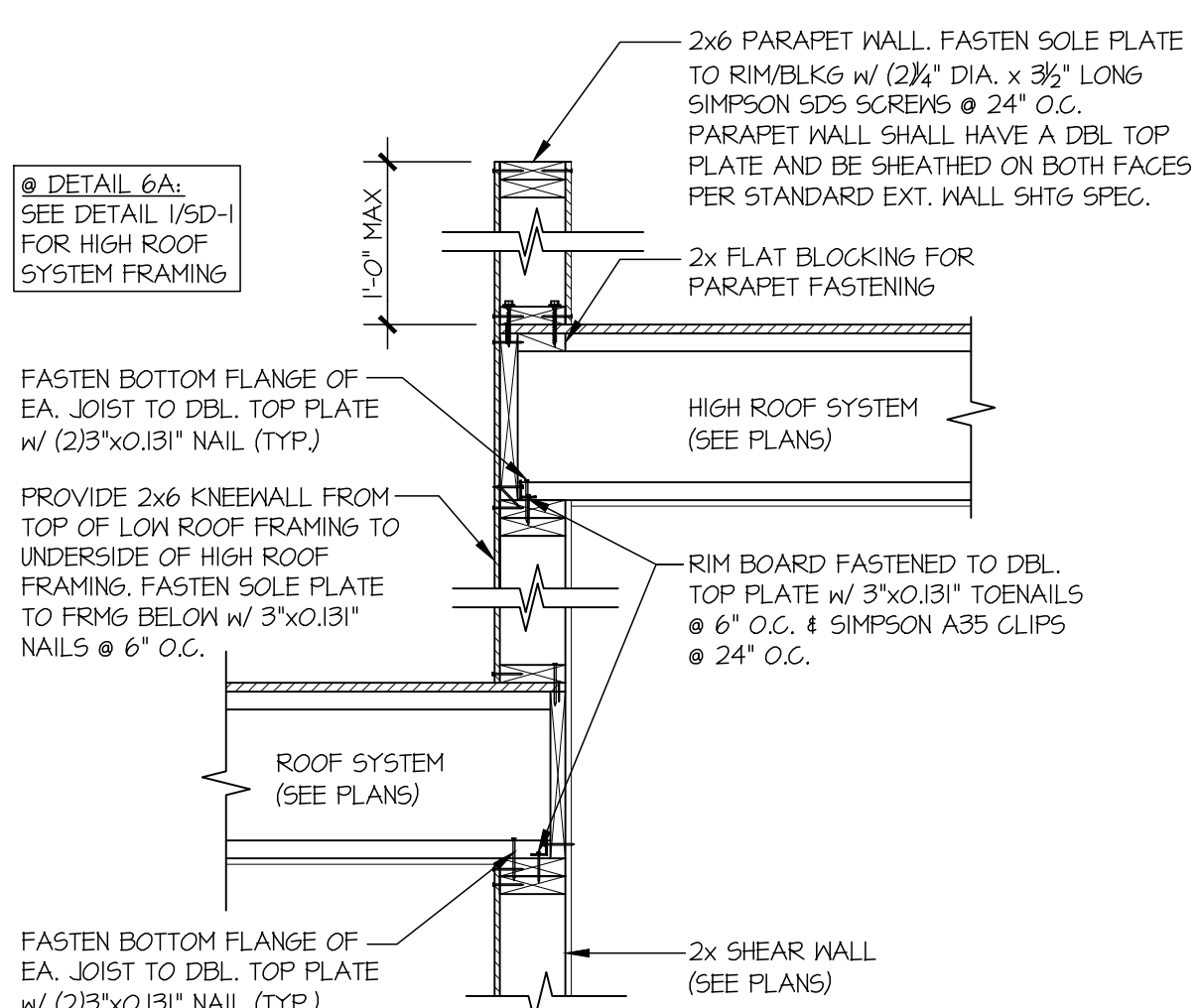
3 SECTION
SCALE: 3/4"=1'-0"



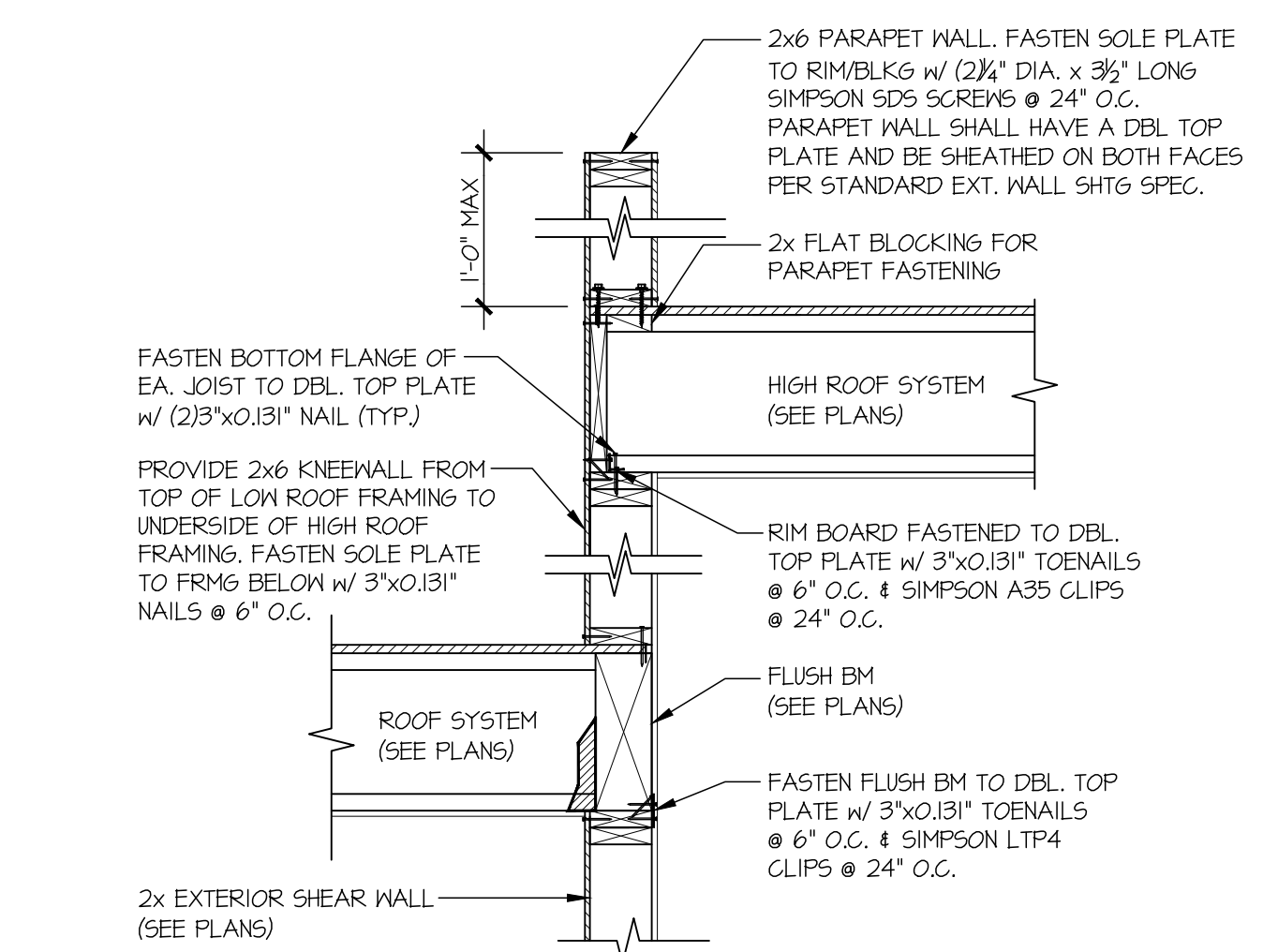
4 SECTION
SCALE: 3/4"=1'-0"



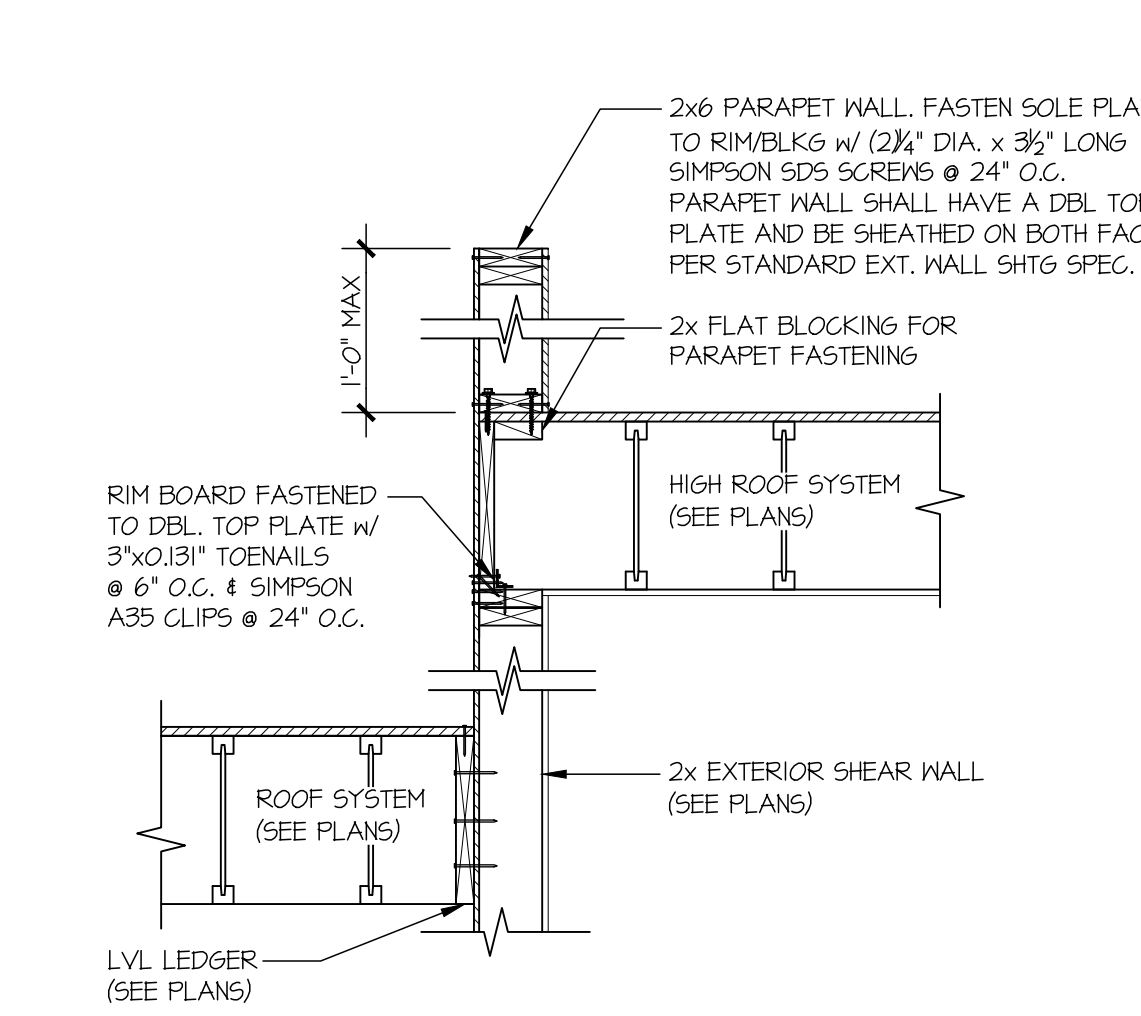
5 SECTION
SCALE: 3/4"=1'-0"



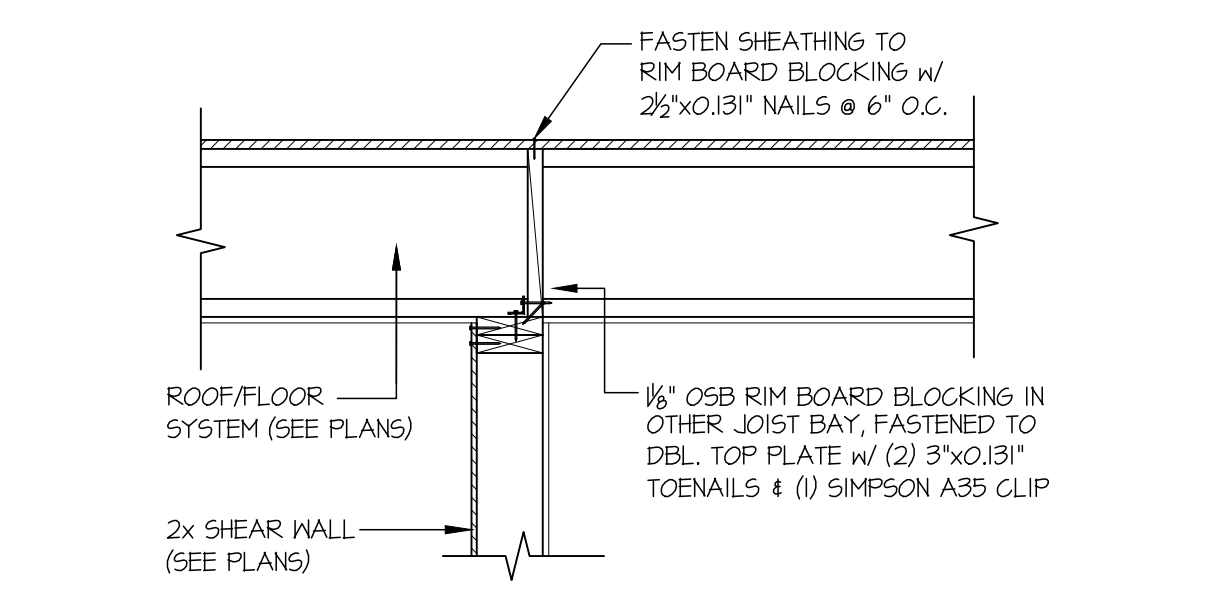
6 SECTION
SCALE: 3/4"=1'-0"



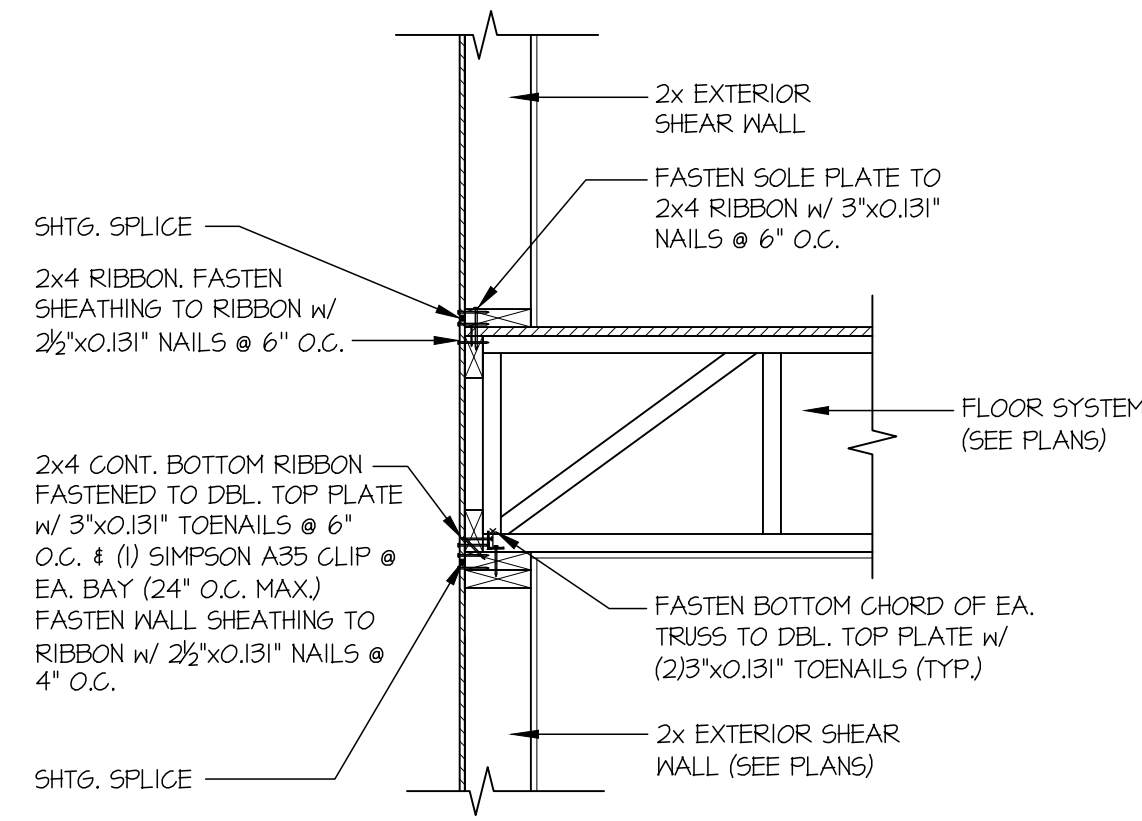
7 SECTION
SCALE: 3/4"=1'-0"



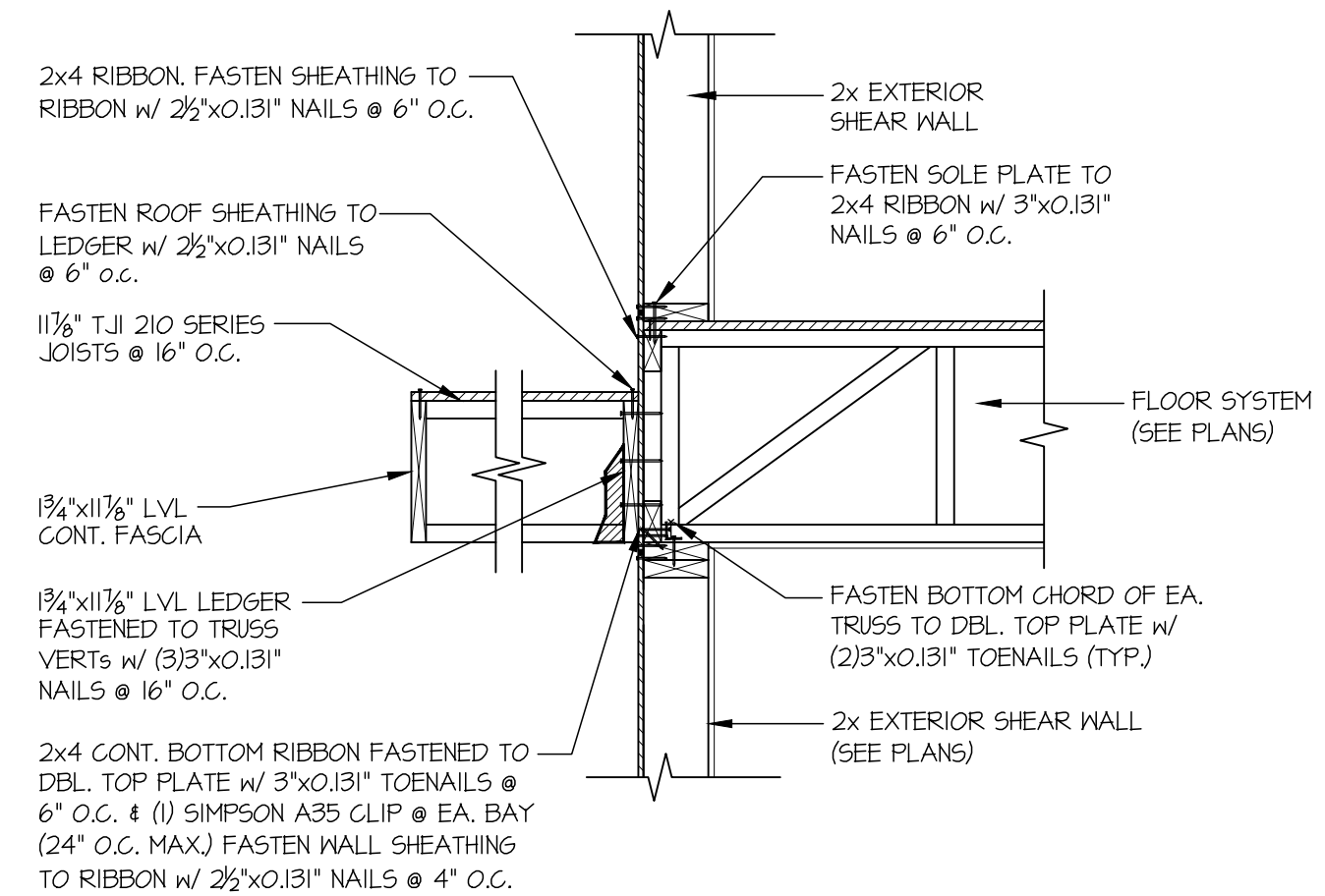
8 SECTION
SCALE: 3/4"=1'-0"



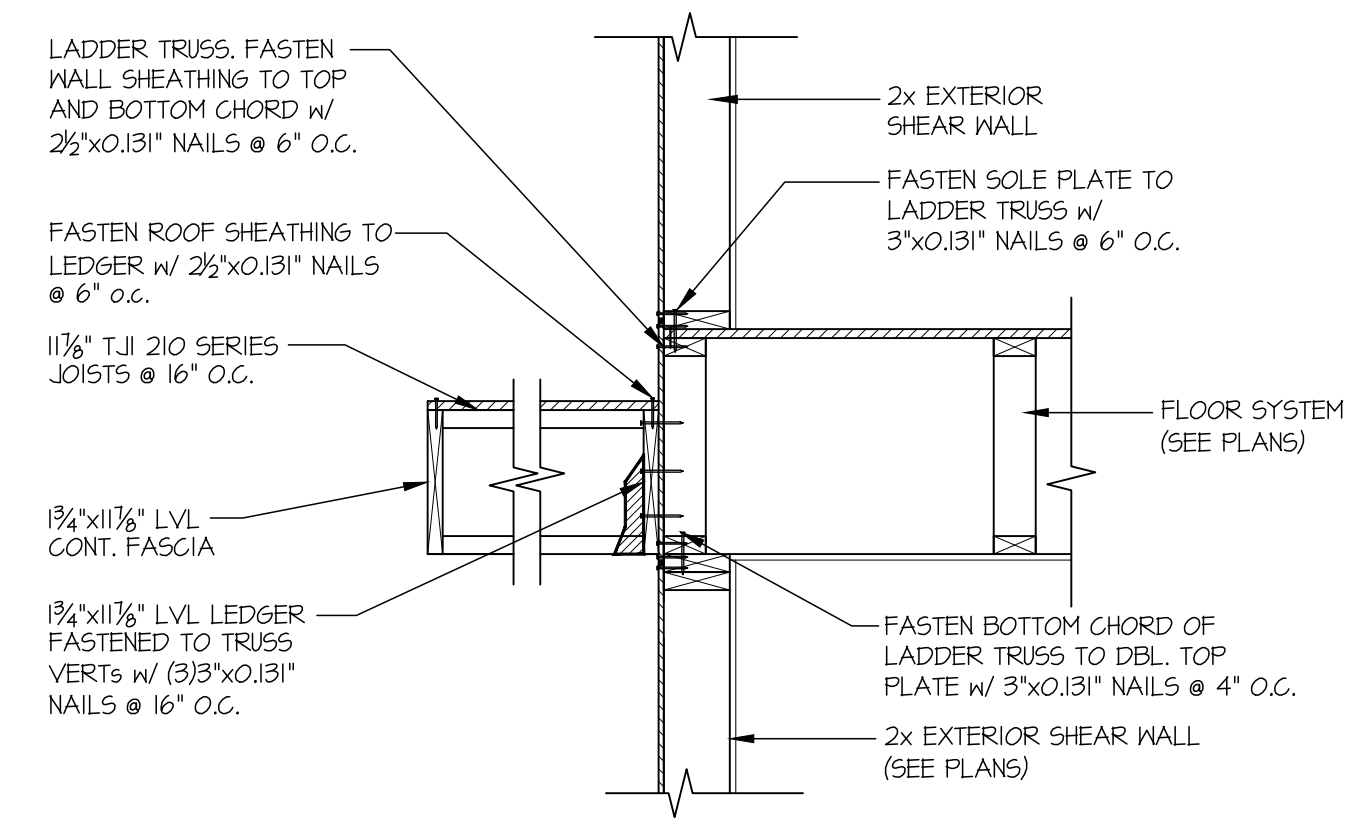
9 SECTION
SCALE: 3/4"=1'-0"



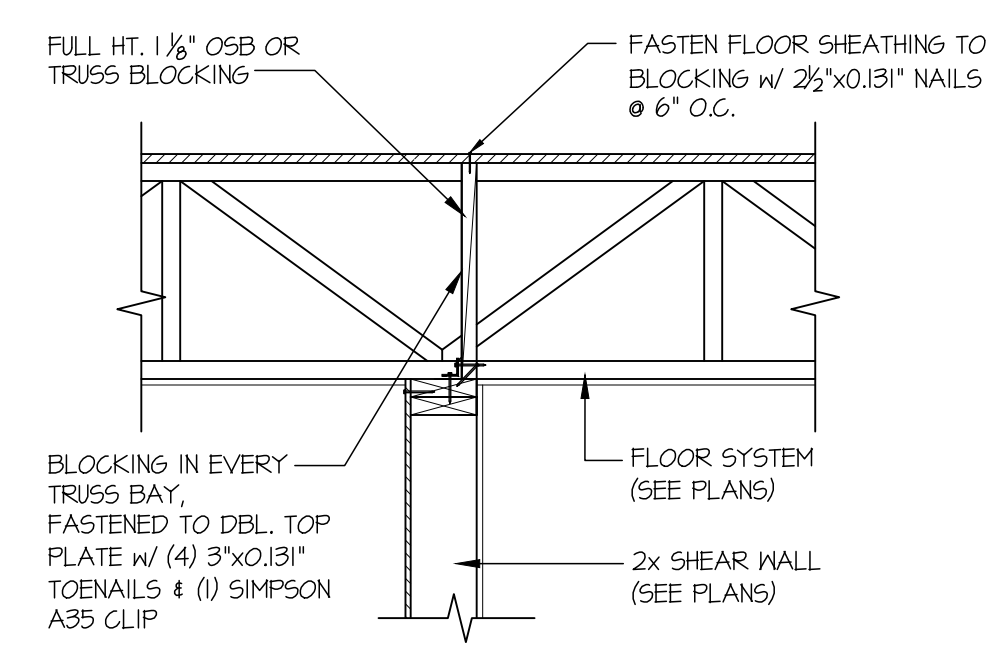
10 SECTION
SCALE: 3/4"=1'-0"



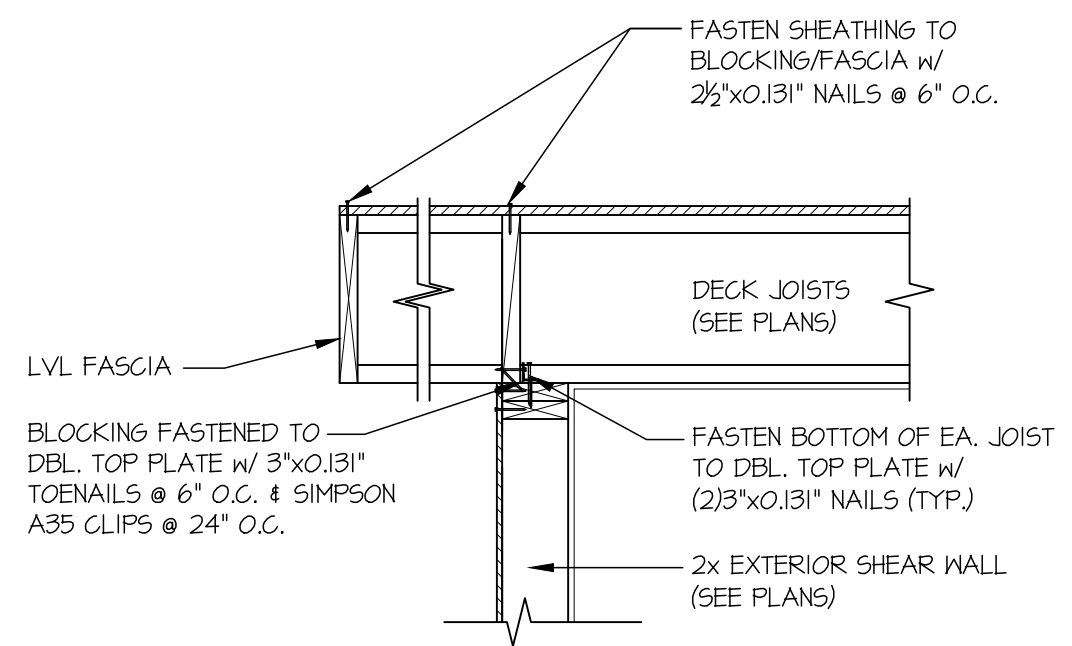
11 SECTION
SCALE: 3/4"=1'-0"



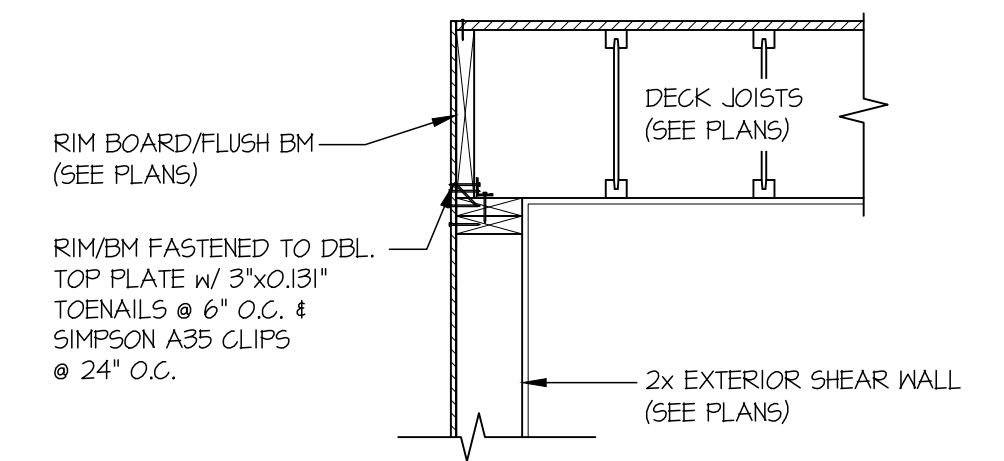
12 SECTION
SCALE: 3/4"=1'-0"



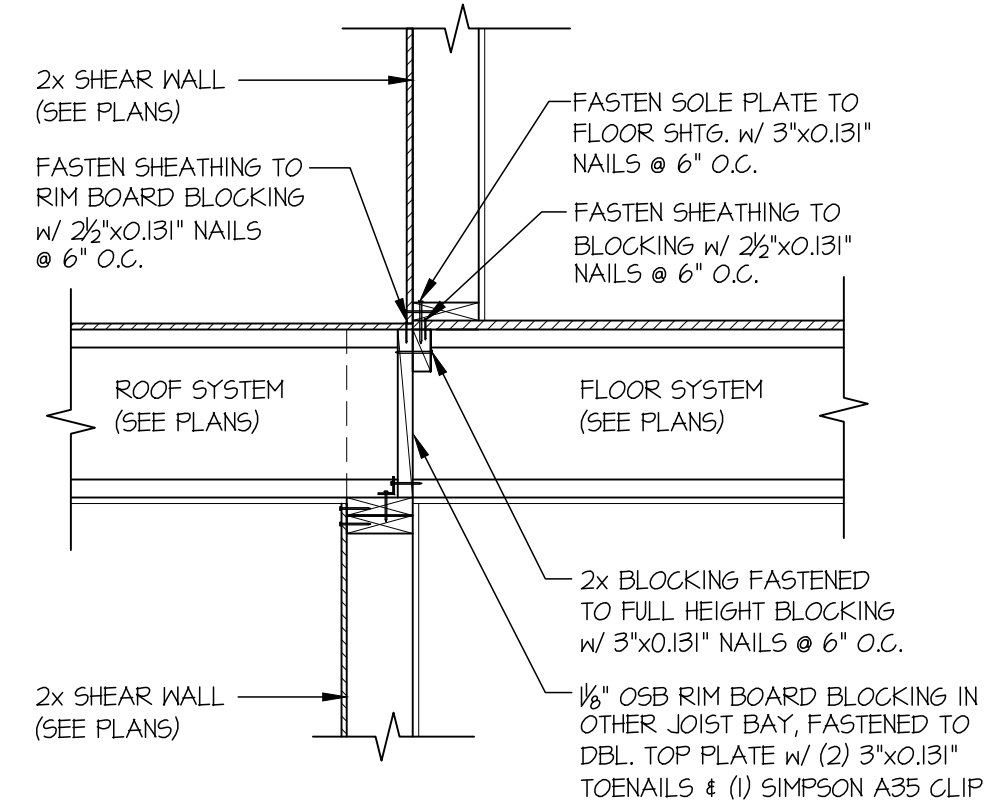
13 SECTION
SCALE: 3/4"=1'-0"



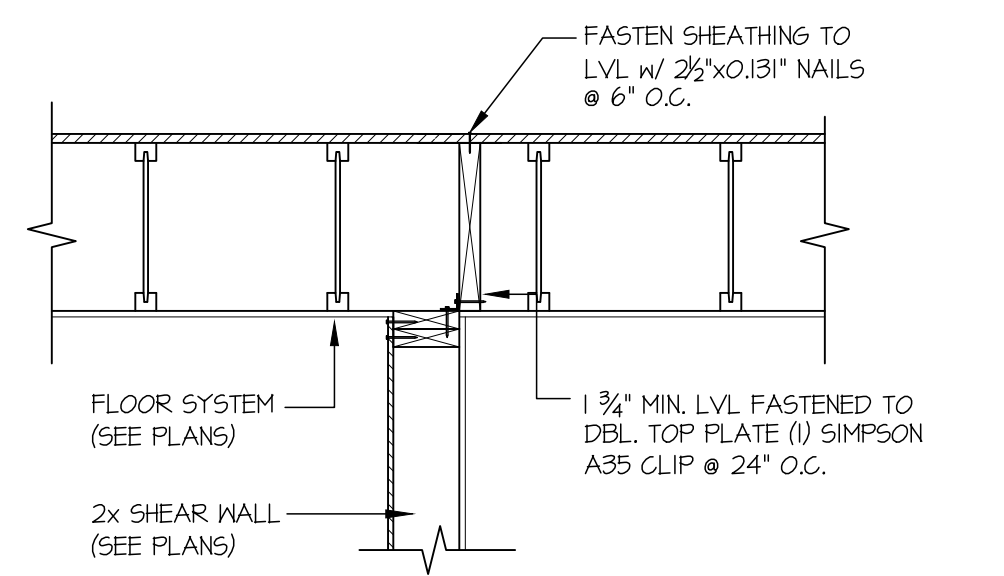
24 SECTION
SCALE: 3/4"=1'-0"



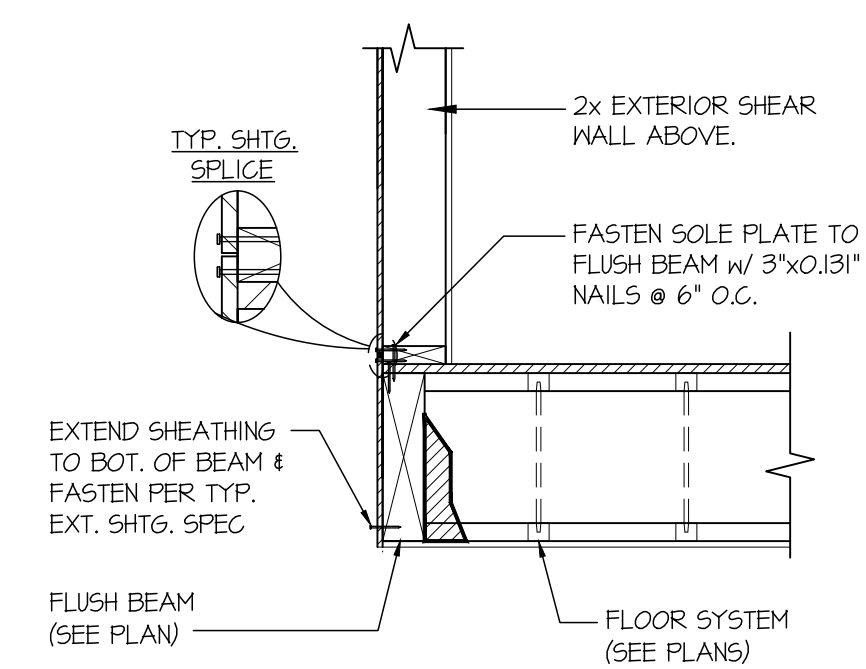
25 SECTION
SCALE: 3/4"=1'-0"



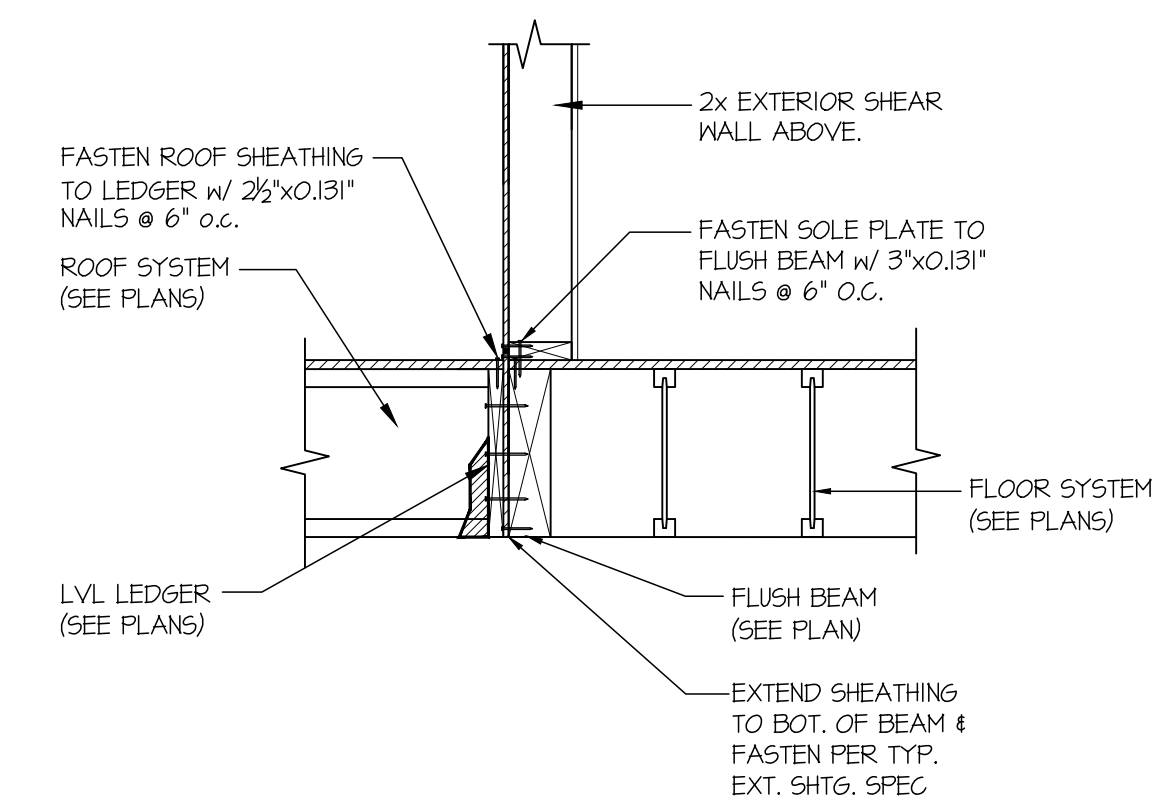
26 SECTION
SCALE: 3/4"=1'-0"



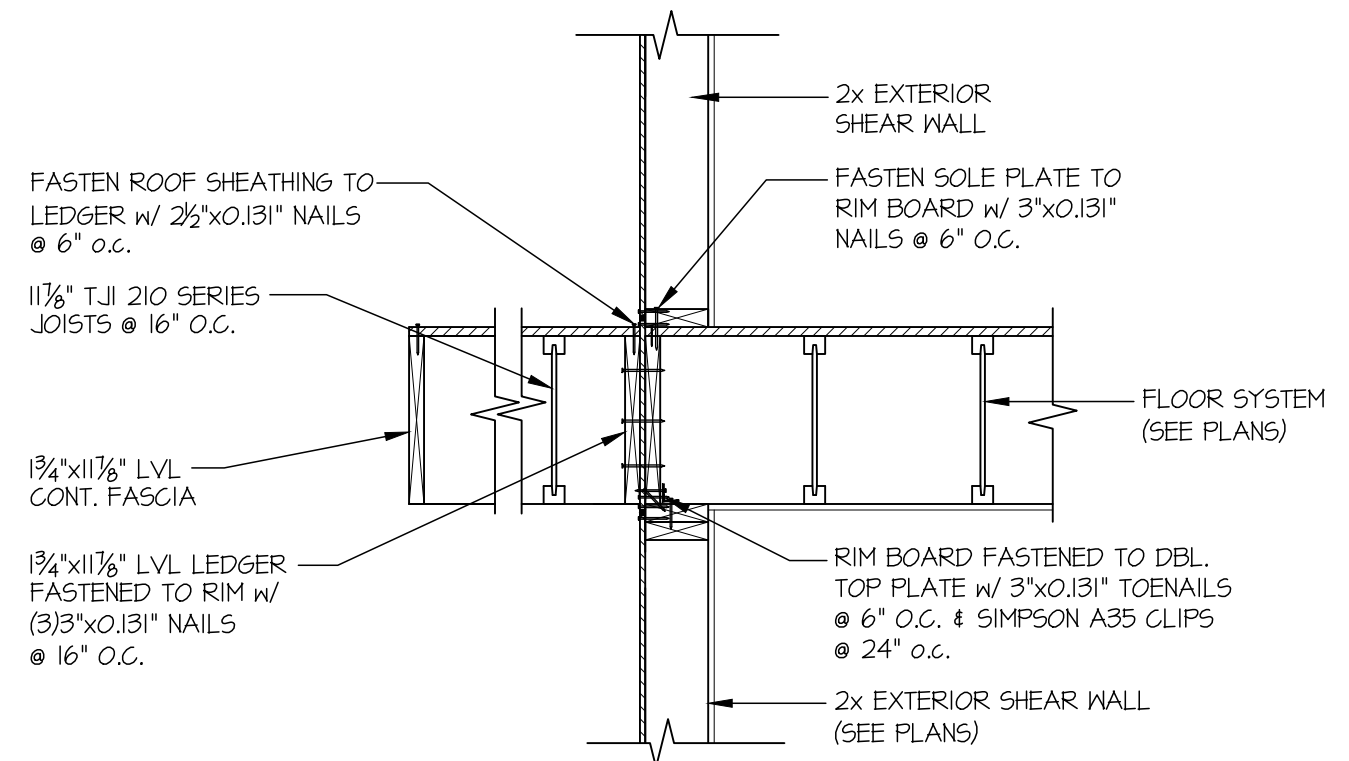
30 SECTION
SCALE: 3/4"=1'-0"



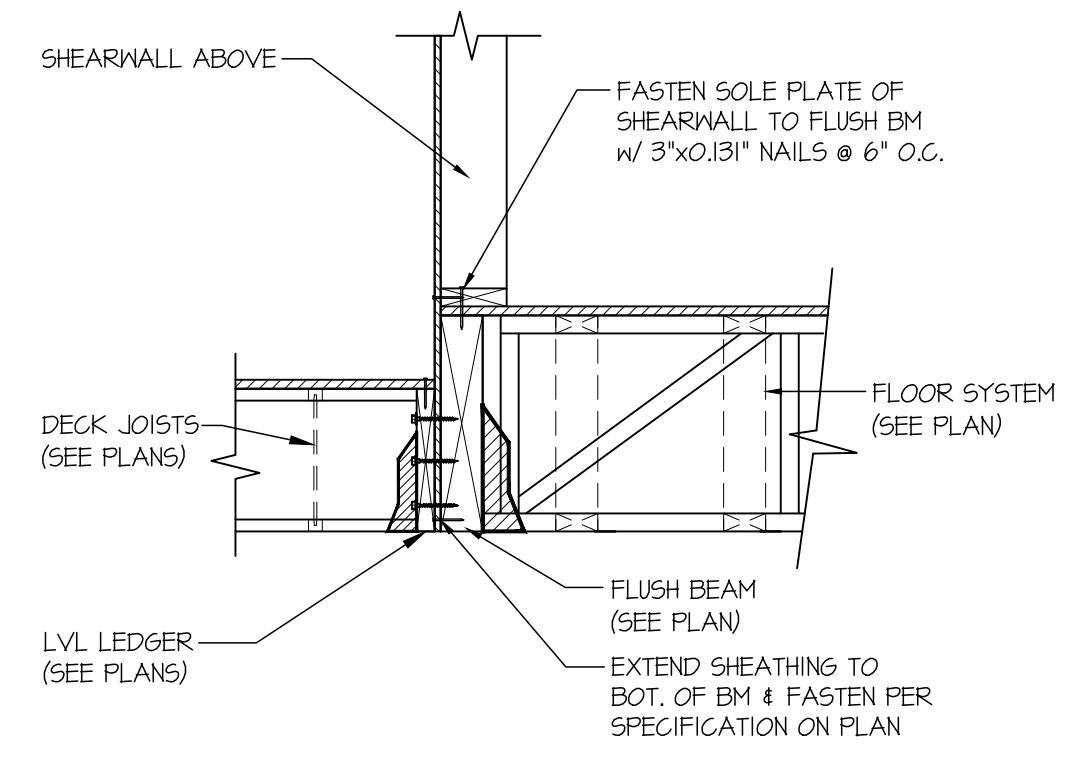
31 SECTION
SCALE: 3/4"=1'-0"



32 SECTION
SCALE: 3/4"=1'-0"



33 SECTION
SCALE: 3/4"=1'-0"



34 SECTION
SCALE: 3/4"=1'-0"



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

M&K project number:
306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

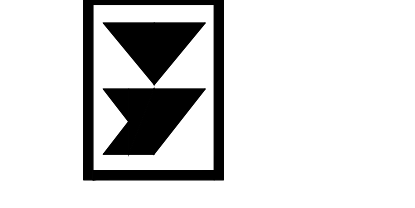
REVISIONS:	
date:	initial:

**MACPHERSON
CONSTRUCTION**

STRUCTURAL DETAILS
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhern+kulp.com



M&K project number:
306-25001

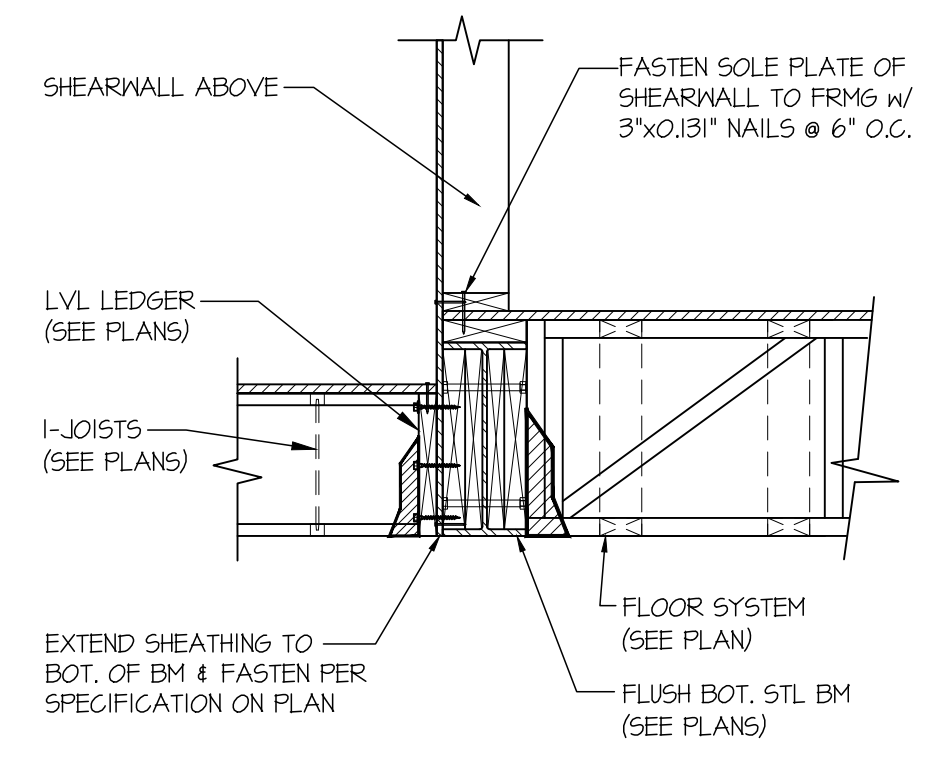
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

REVISIONS:
date: initial:

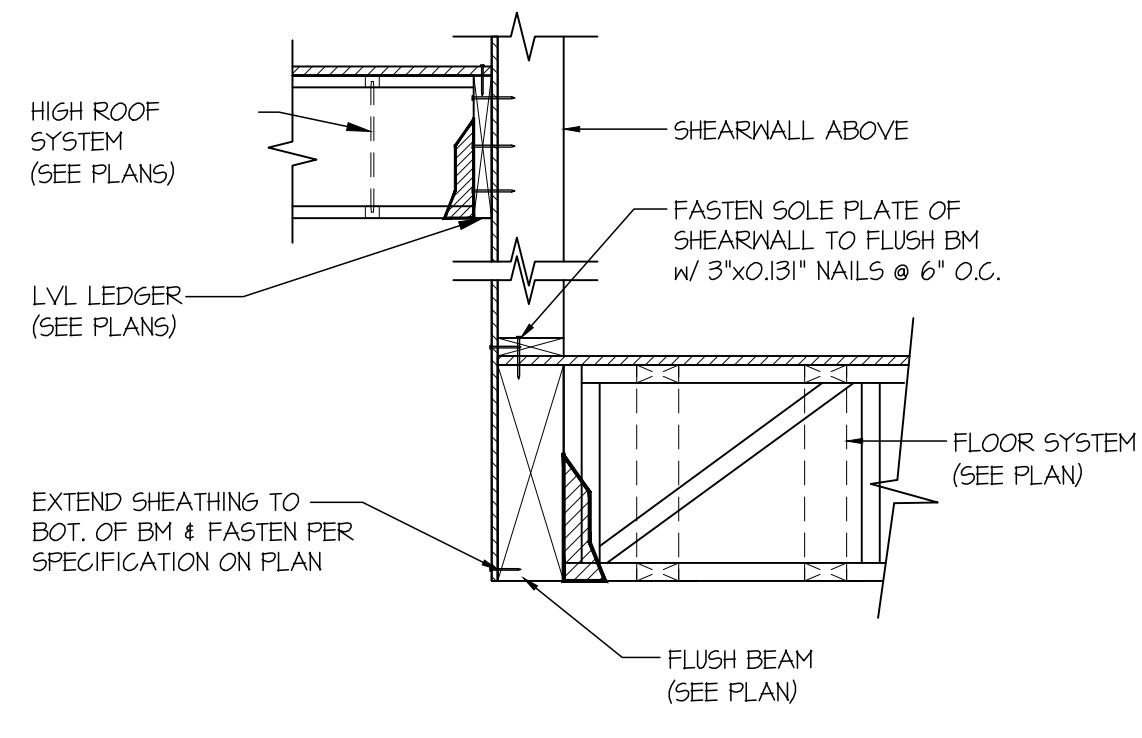
**MACPHERSON
CONSTRUCTION**

STRUCTURAL DETAILS
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

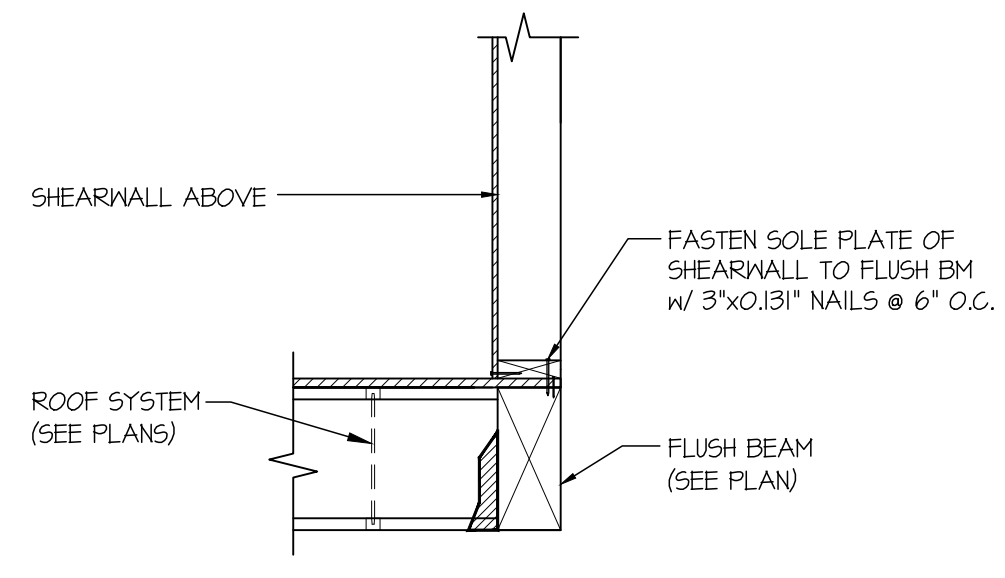
sheet:
SD-3



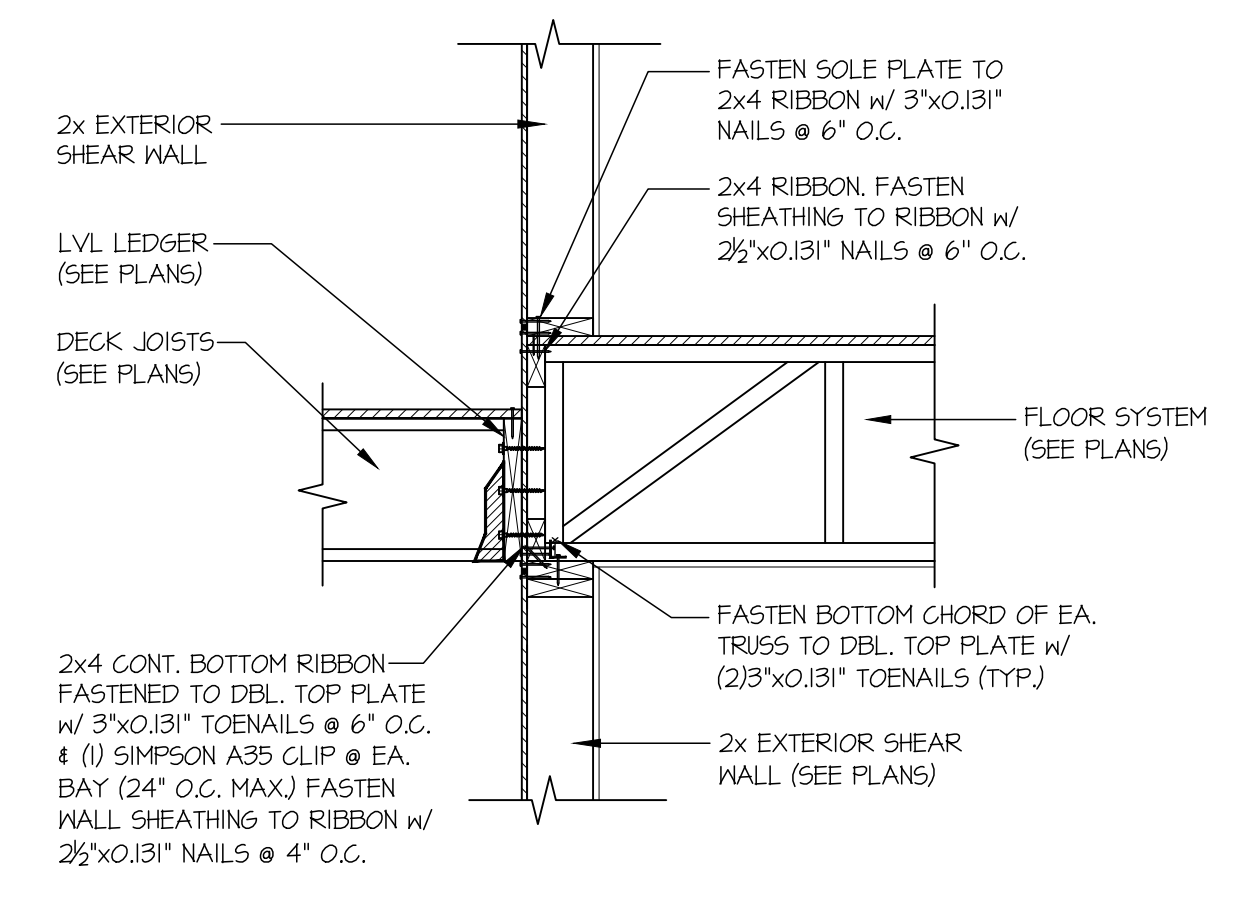
35 SECTION
SCALE: 3/4"=1'-0"



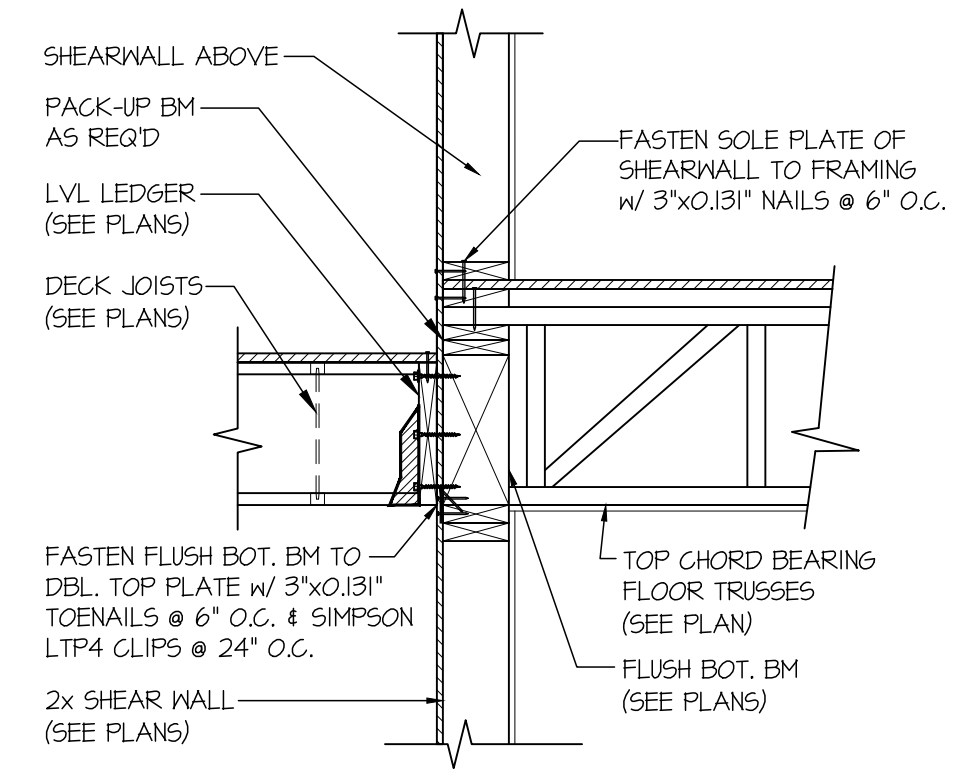
36 SECTION
SCALE: 3/4"=1'-0"



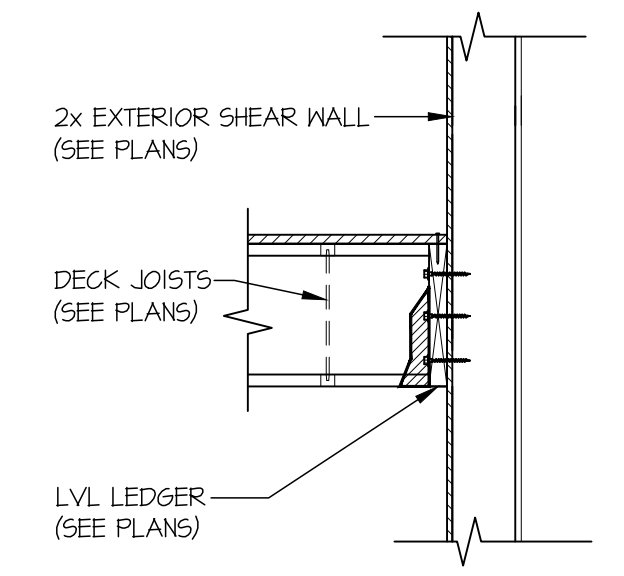
37 SECTION
SCALE: 3/4"=1'-0"



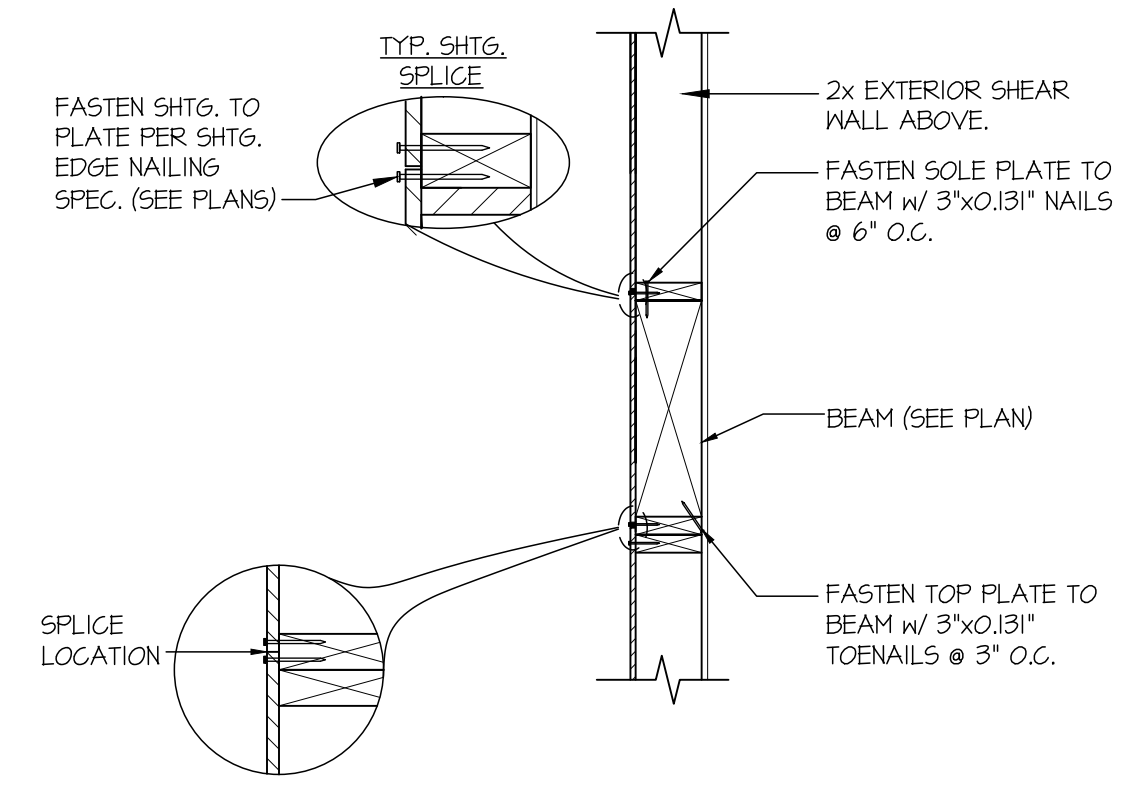
38 SECTION
SCALE: 3/4"=1'-0"



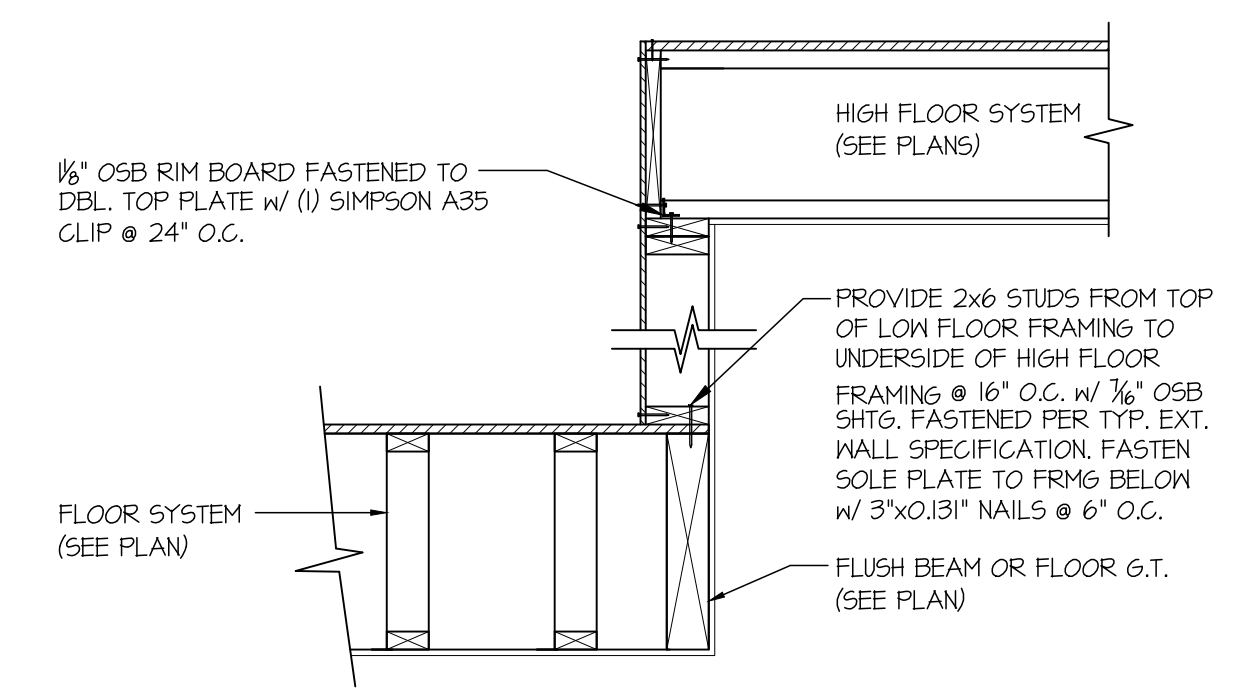
39 SECTION
SCALE: 3/4"=1'-0"



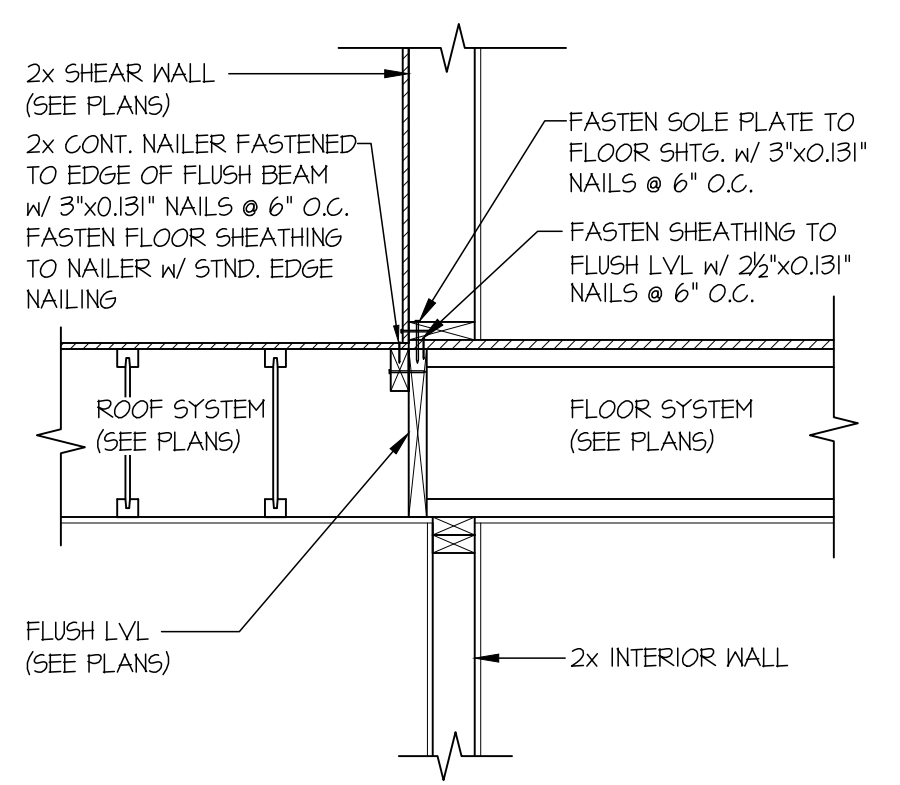
40 SECTION
SCALE: 3/4"=1'-0"



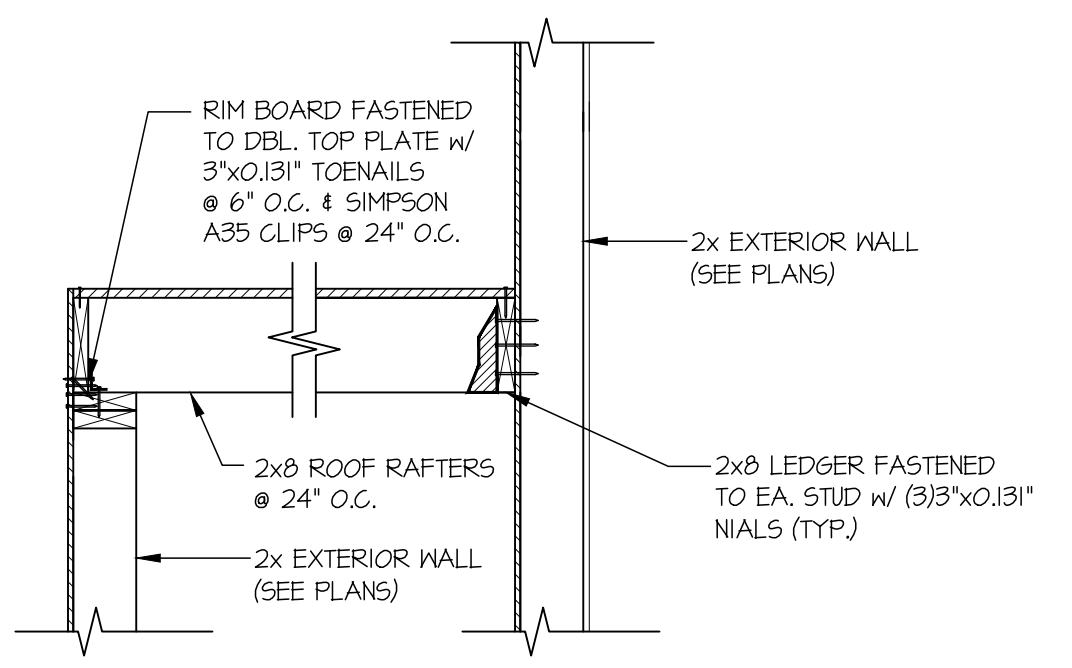
41 SECTION
SCALE: 3/4"=1'-0"



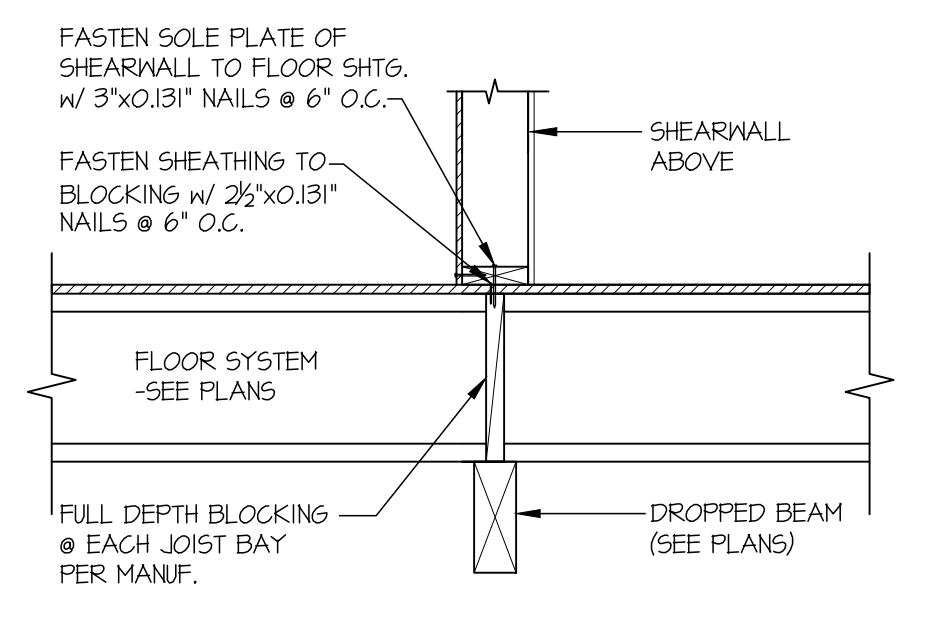
50 SECTION
SCALE: 3/4"=1'-0"



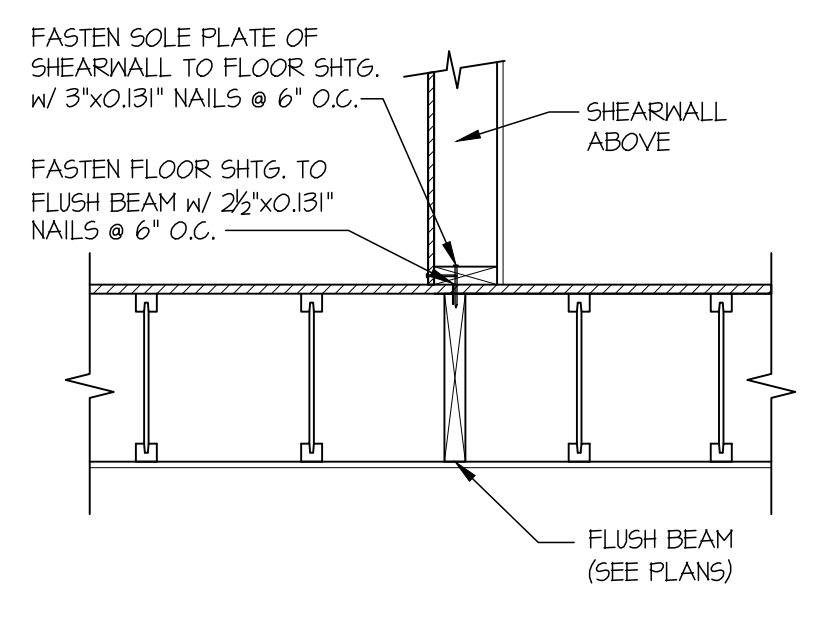
55 SECTION
SCALE: 3/4"=1'-0"



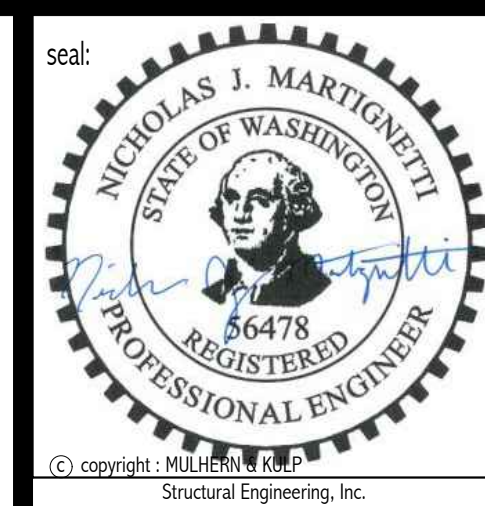
60 SECTION
SCALE: 3/4"=1'-0"



70 SECTION
SCALE: 3/4"=1'-0"



71 SECTION
SCALE: 3/4"=1'-0"



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhernkulp.com

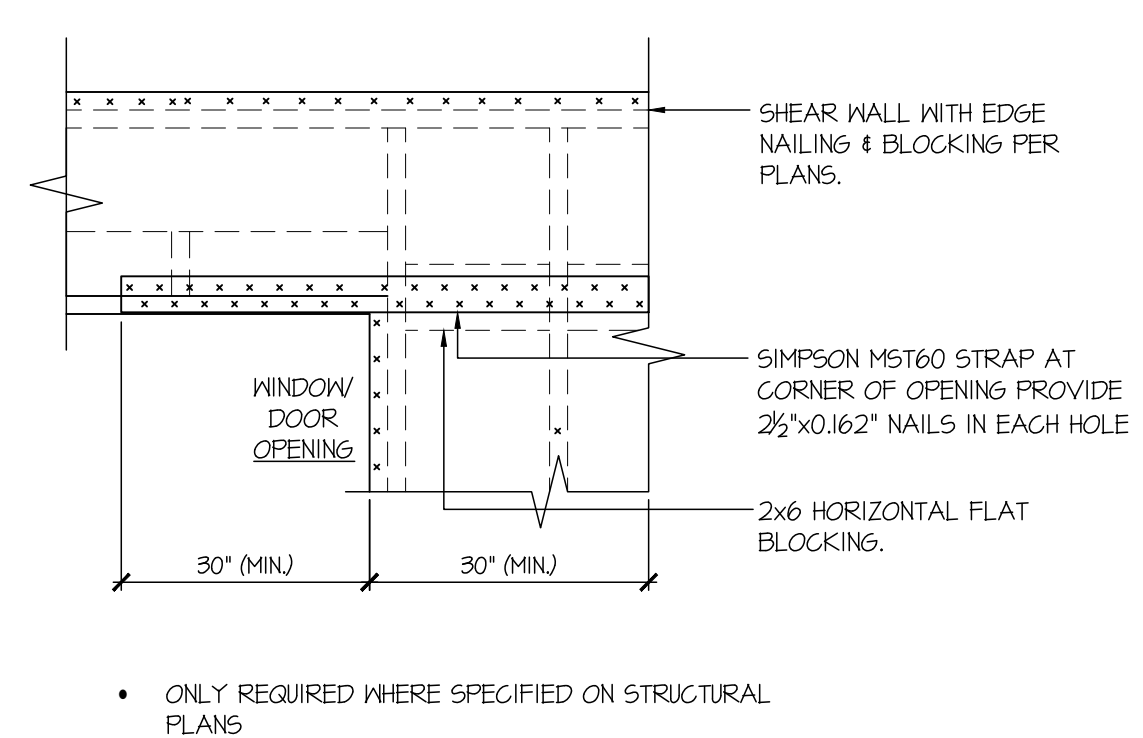
M&K project number:
306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

REVISIONS:
date: initial:

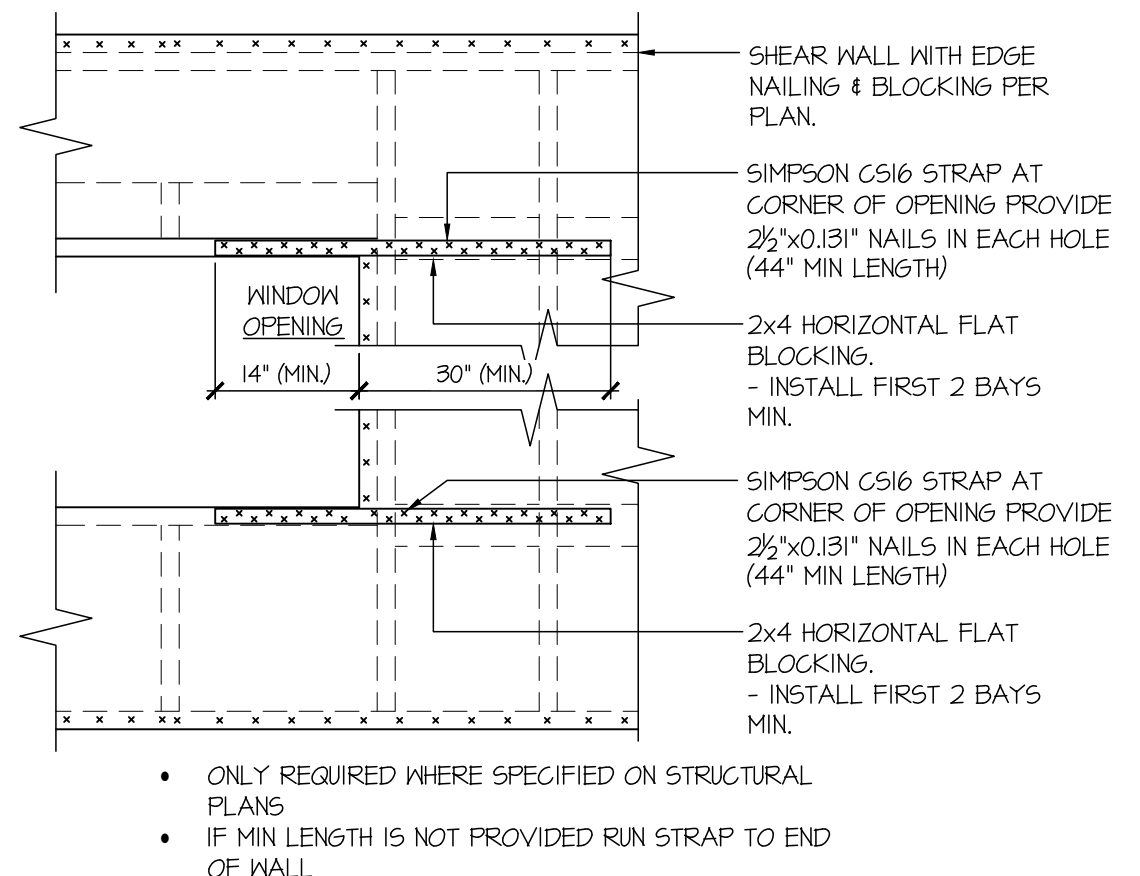
MACPHERSON CONSTRUCTION

STRUCTURAL DETAILS
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

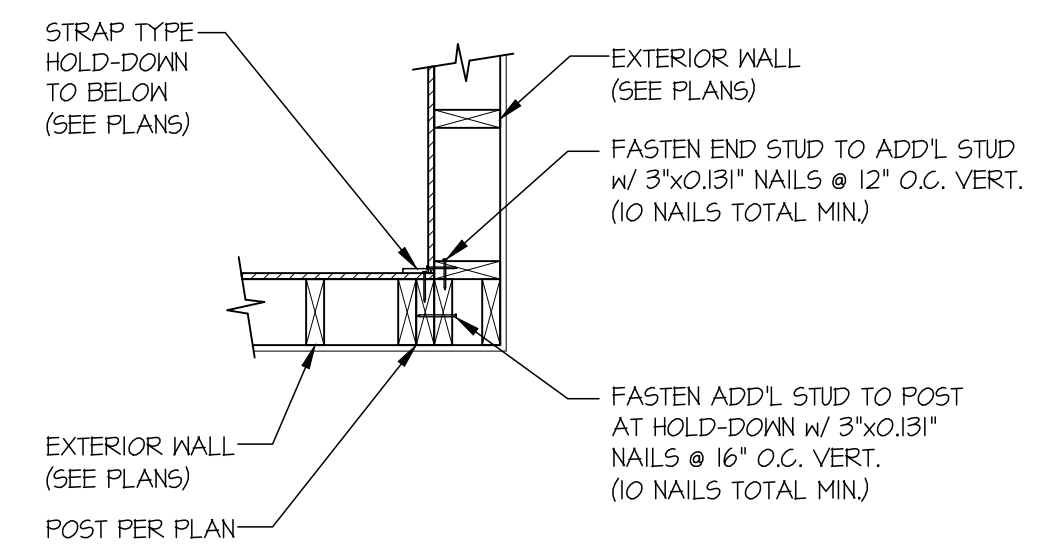
sheet:
SD-4



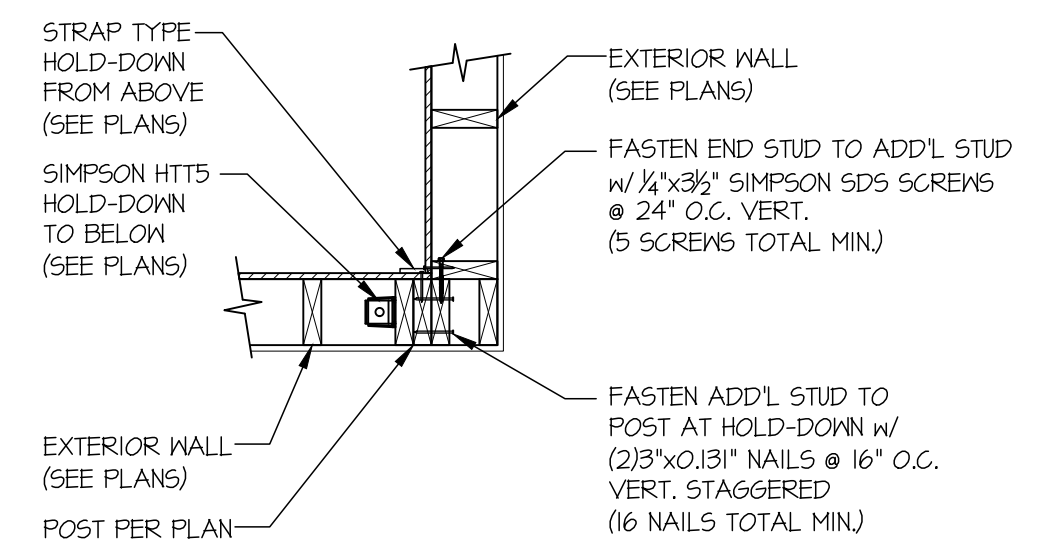
92 SECTION
SCALE: 3/4"=1'-0"



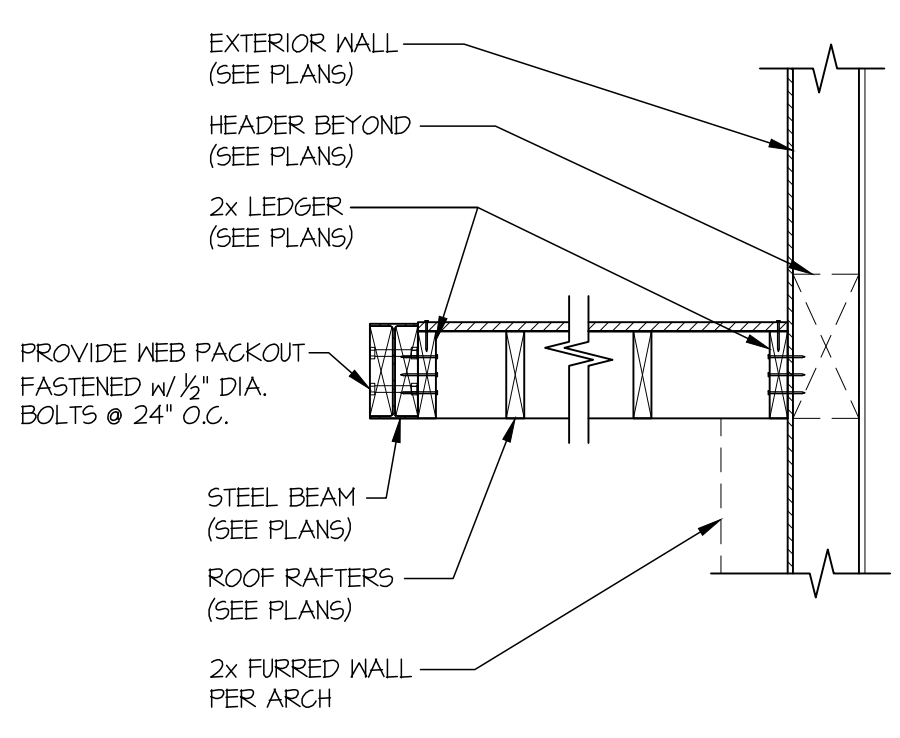
94 SECTION
SCALE: 3/4"=1'-0"



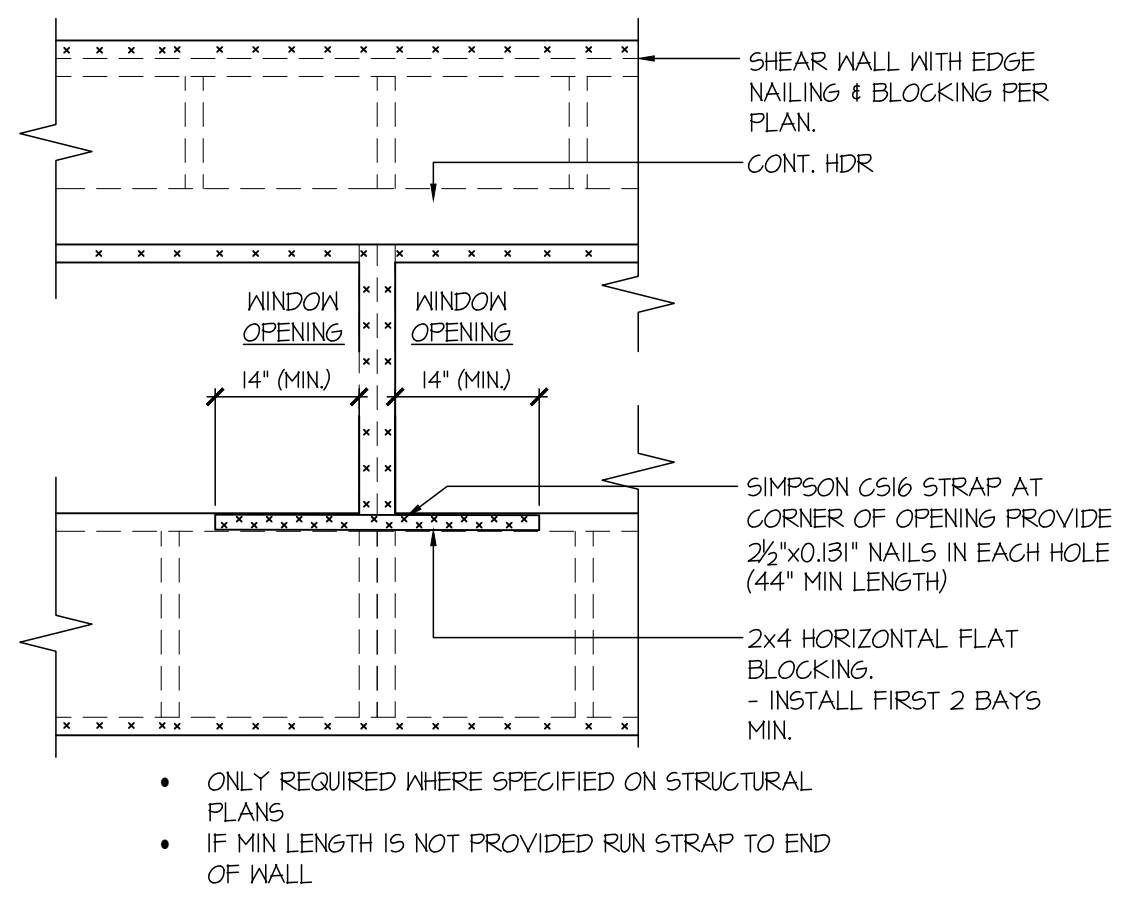
95 SECTION
SCALE: 3/4"=1'-0"



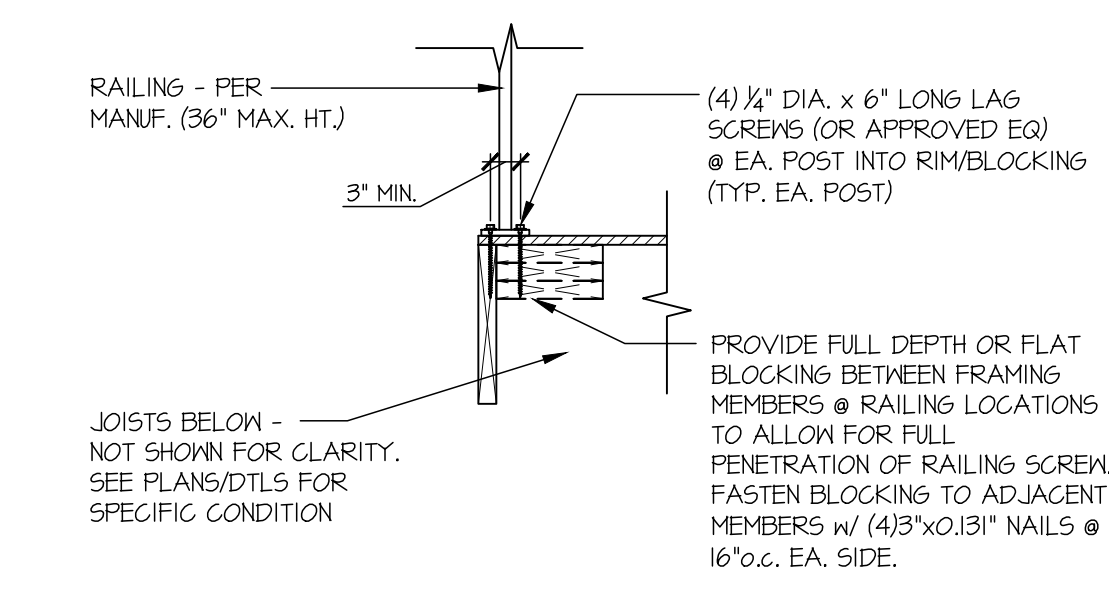
96 SECTION
SCALE: 3/4"=1'-0"



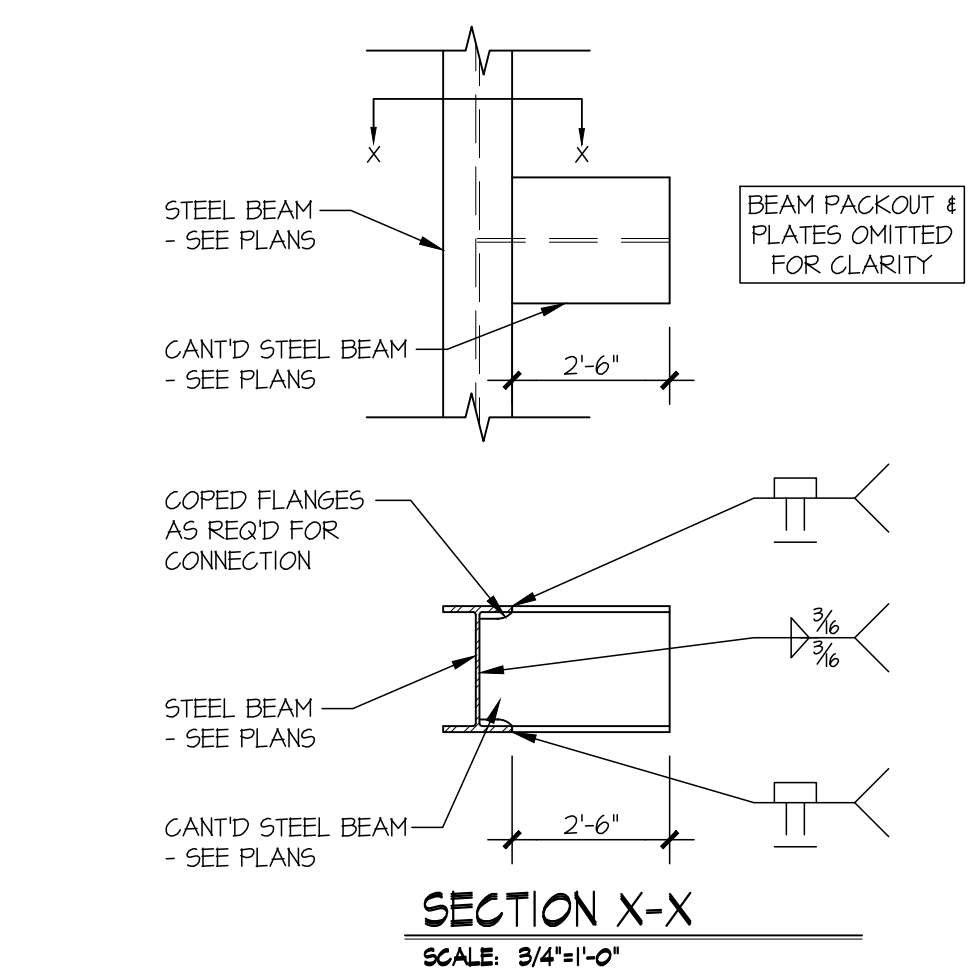
98 SECTION
SCALE: 3/4"=1'-0"



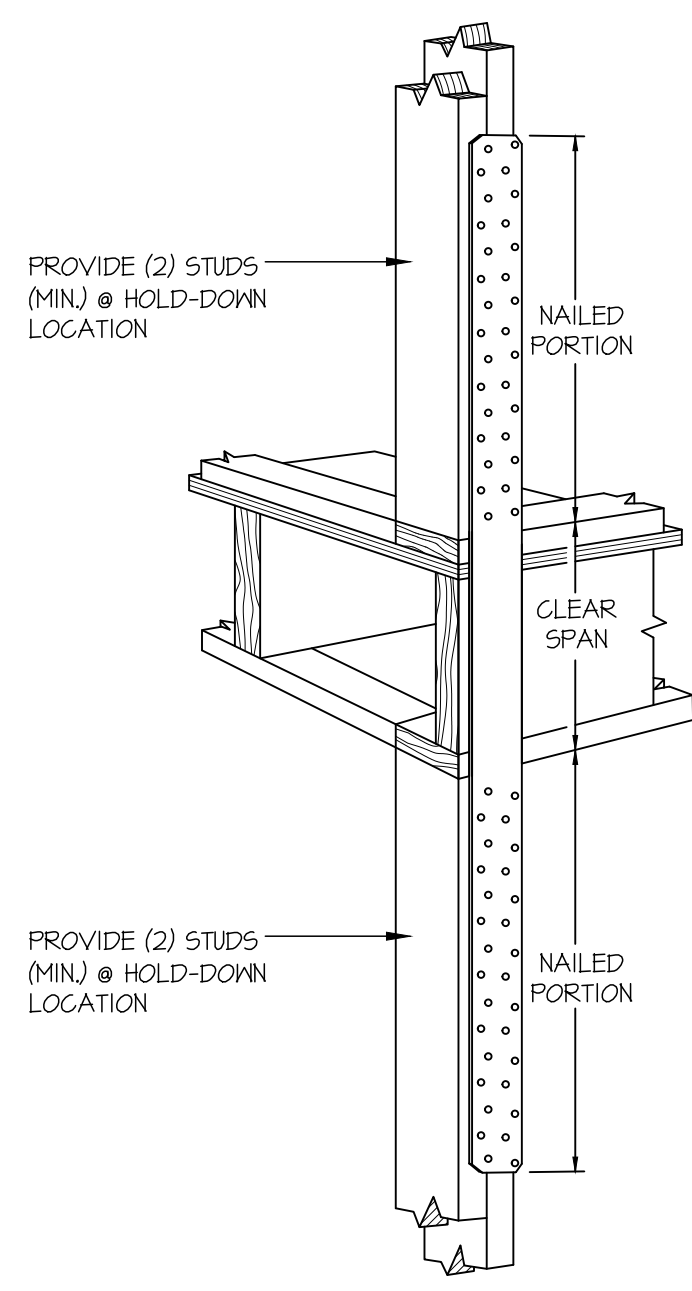
94 SECTION
SCALE: 3/4"=1'-0"



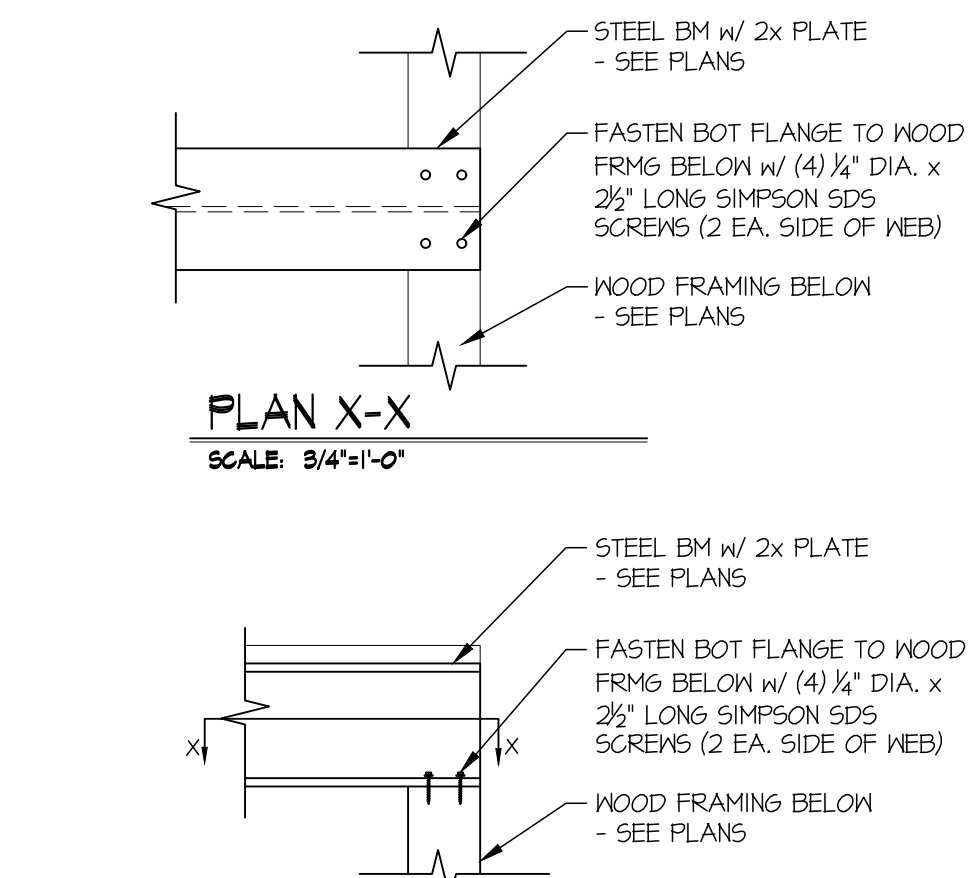
95 SECTION
SCALE: 3/4"=1'-0"



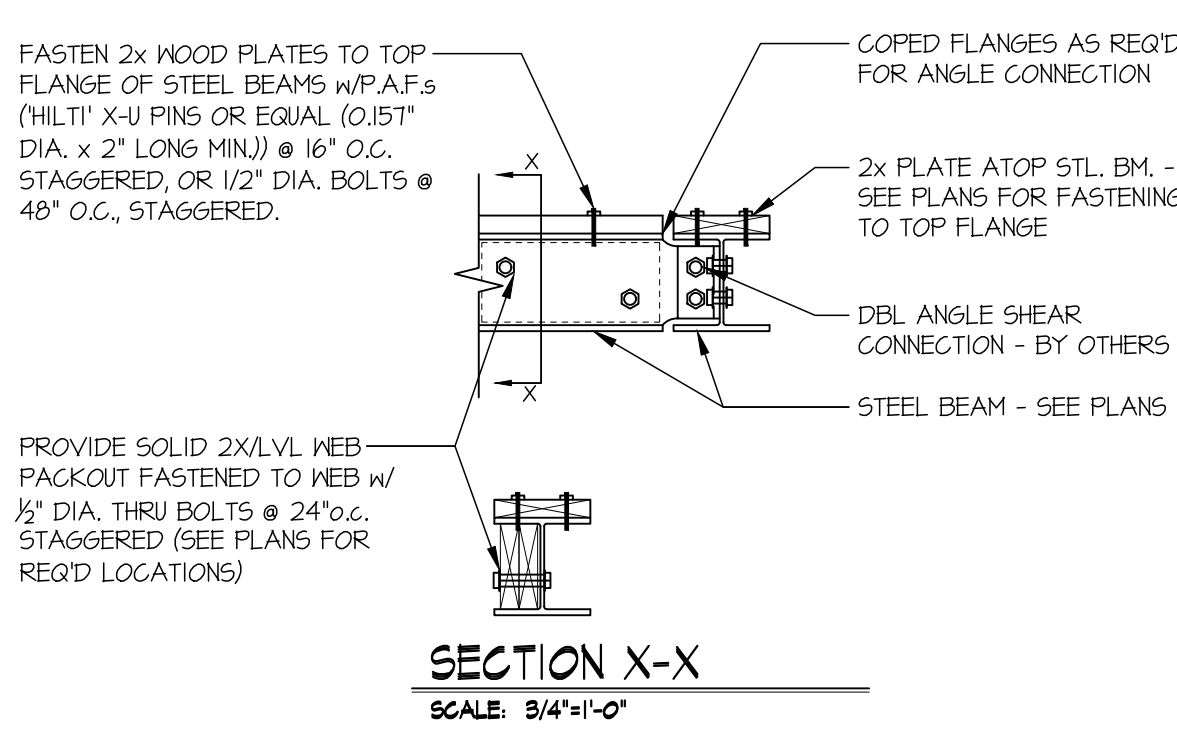
SECTION X-X
SCALE: 3/4"=1'-0"



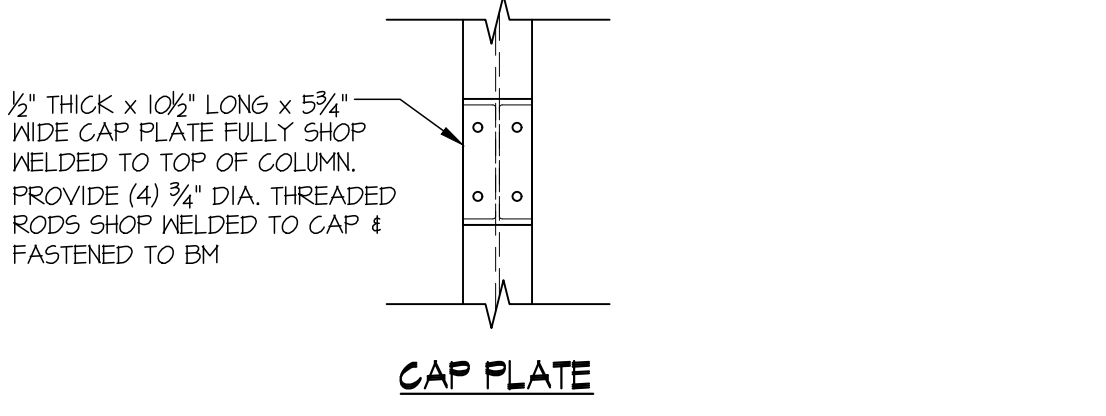
99 SECTION
SCALE: NOT TO SCALE
TYPICAL HOLD-DOWN INSTALLATION
SIMPSON STRAP HD @ FLOOR FRAMING



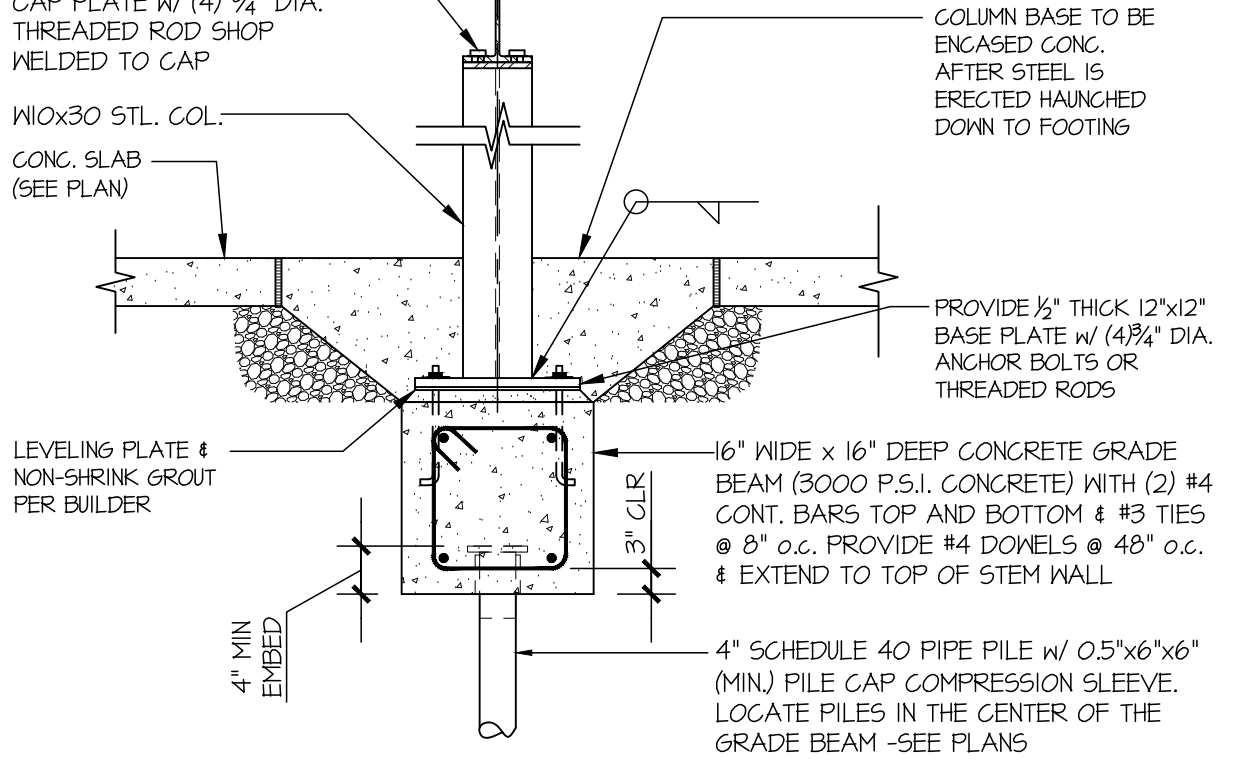
PLAN X-X
SCALE: 3/4"=1'-0"



SECTION X-X
SCALE: 3/4"=1'-0"

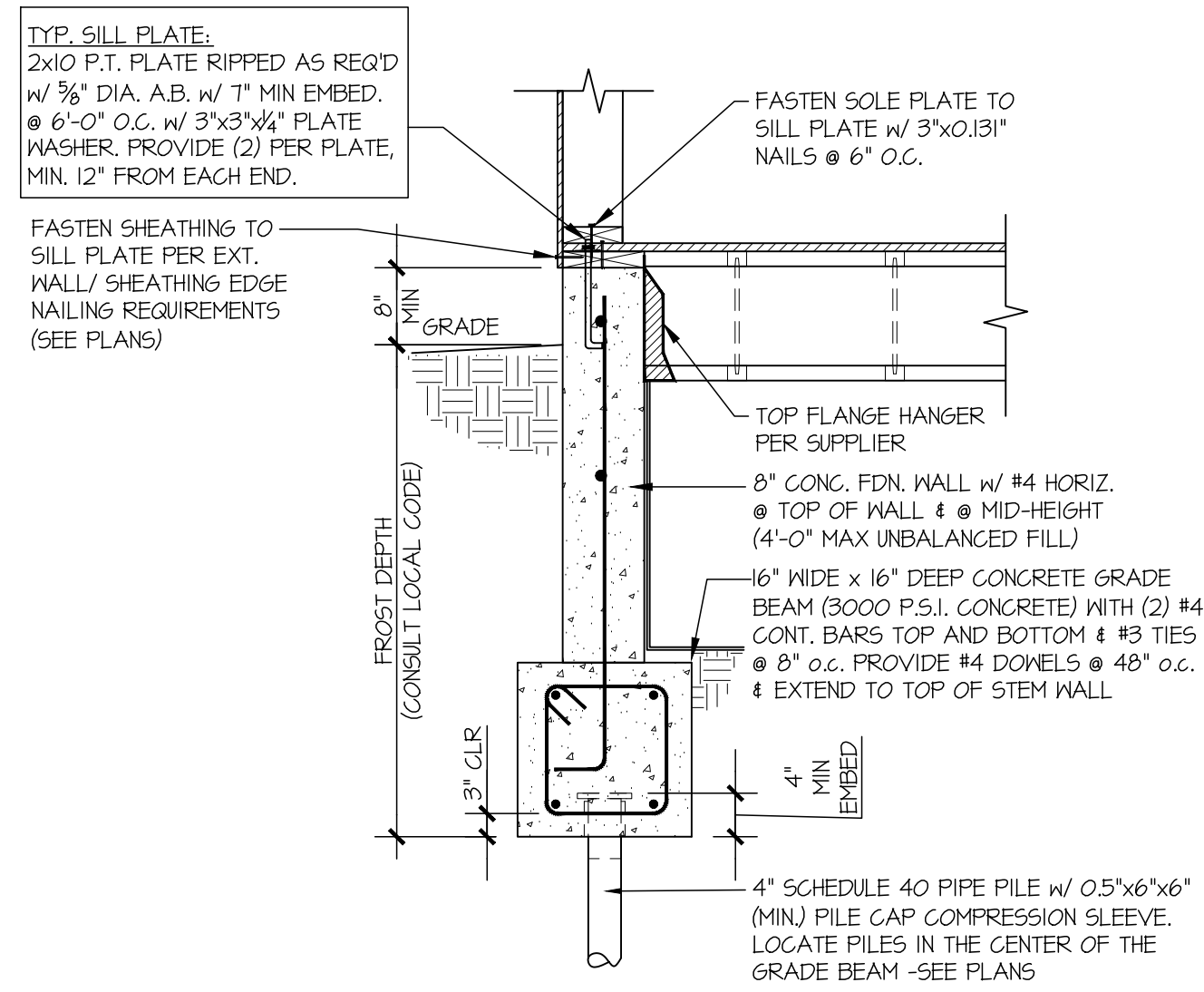


SECTION B
SCALE: 3/4"=1'-0"

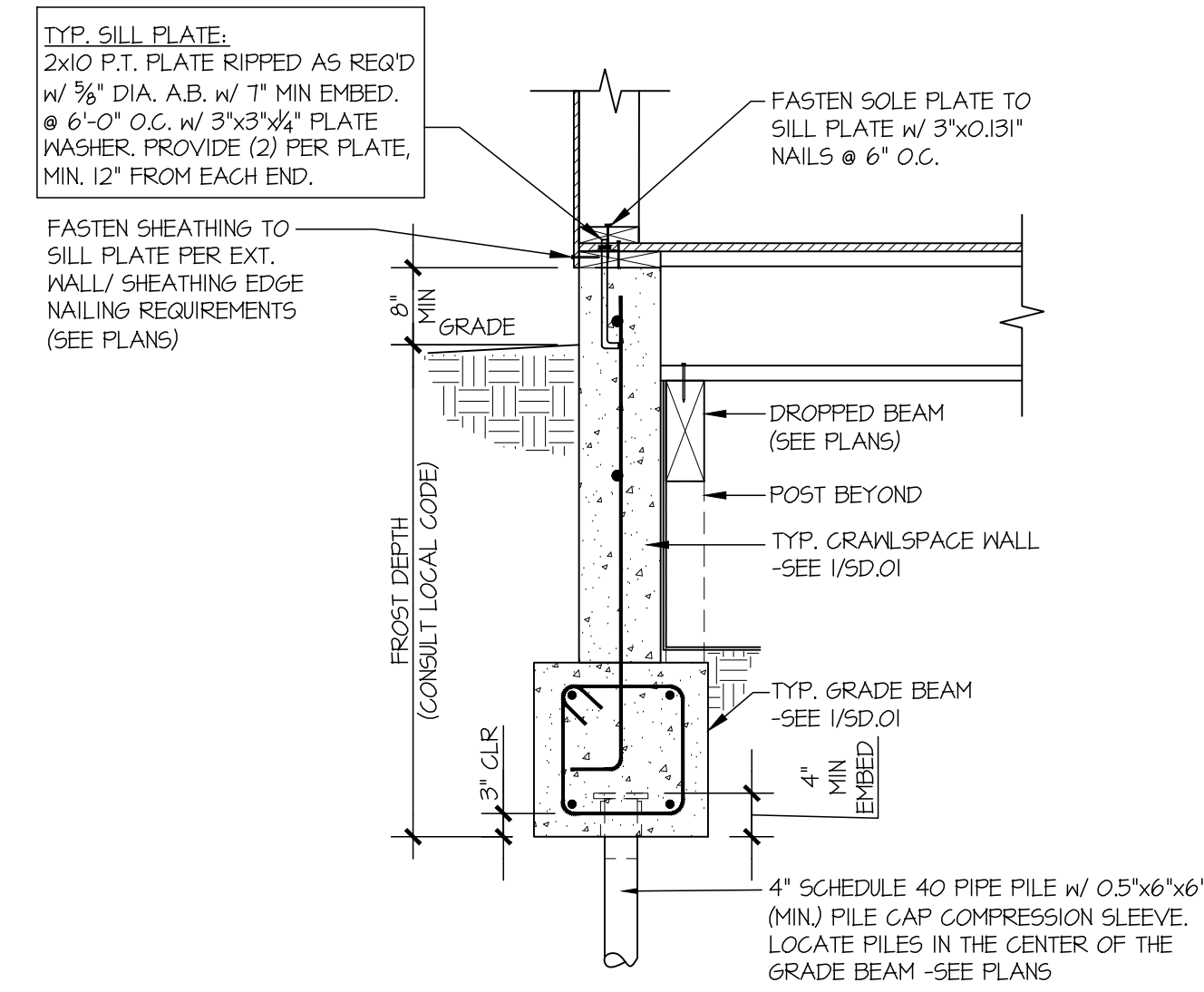


SECTION F
SCALE: 3/4"=1'-0"

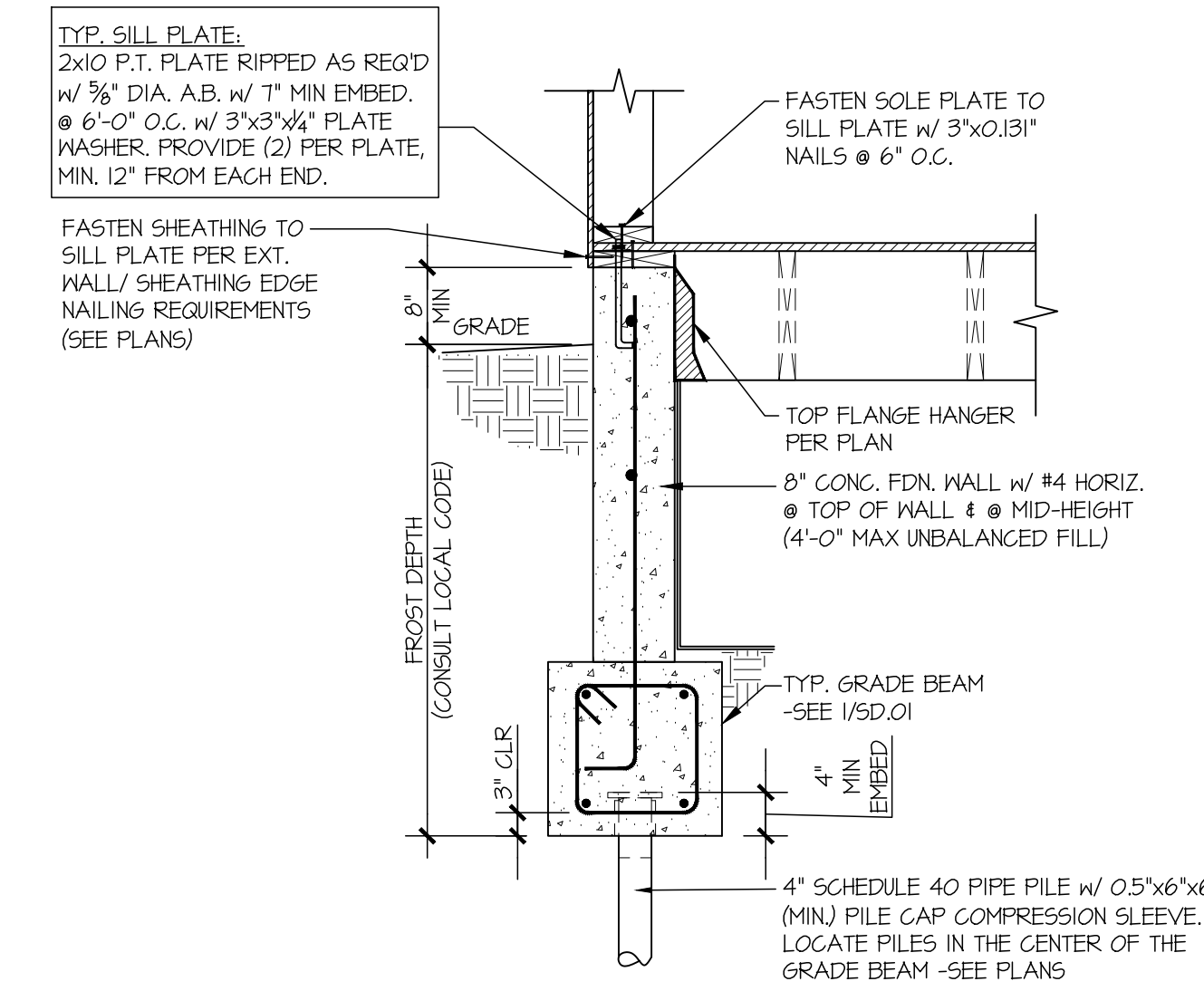
sheet:
SD-4



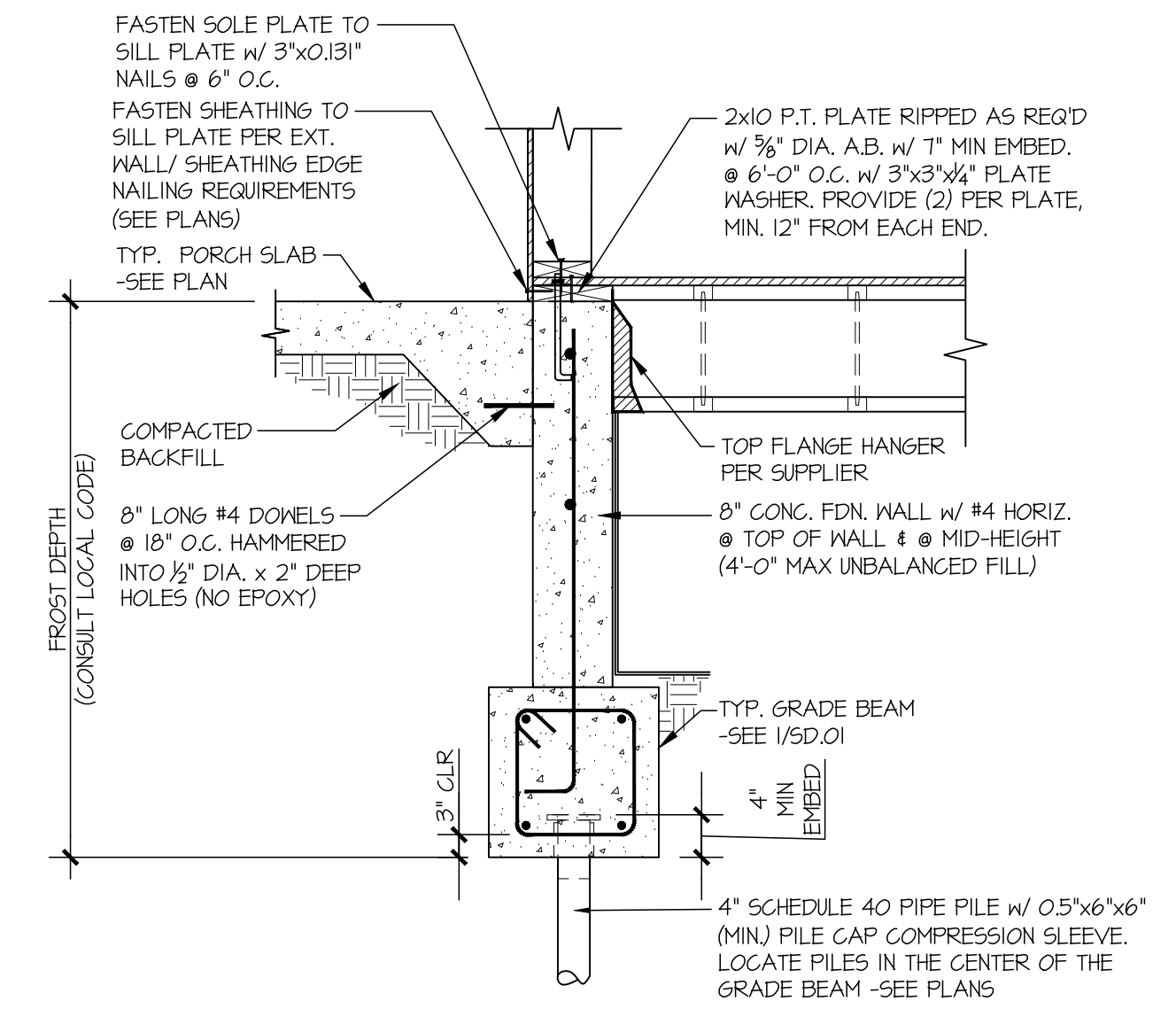
SECTION 1
SCALE: 3/4"=1'-0"



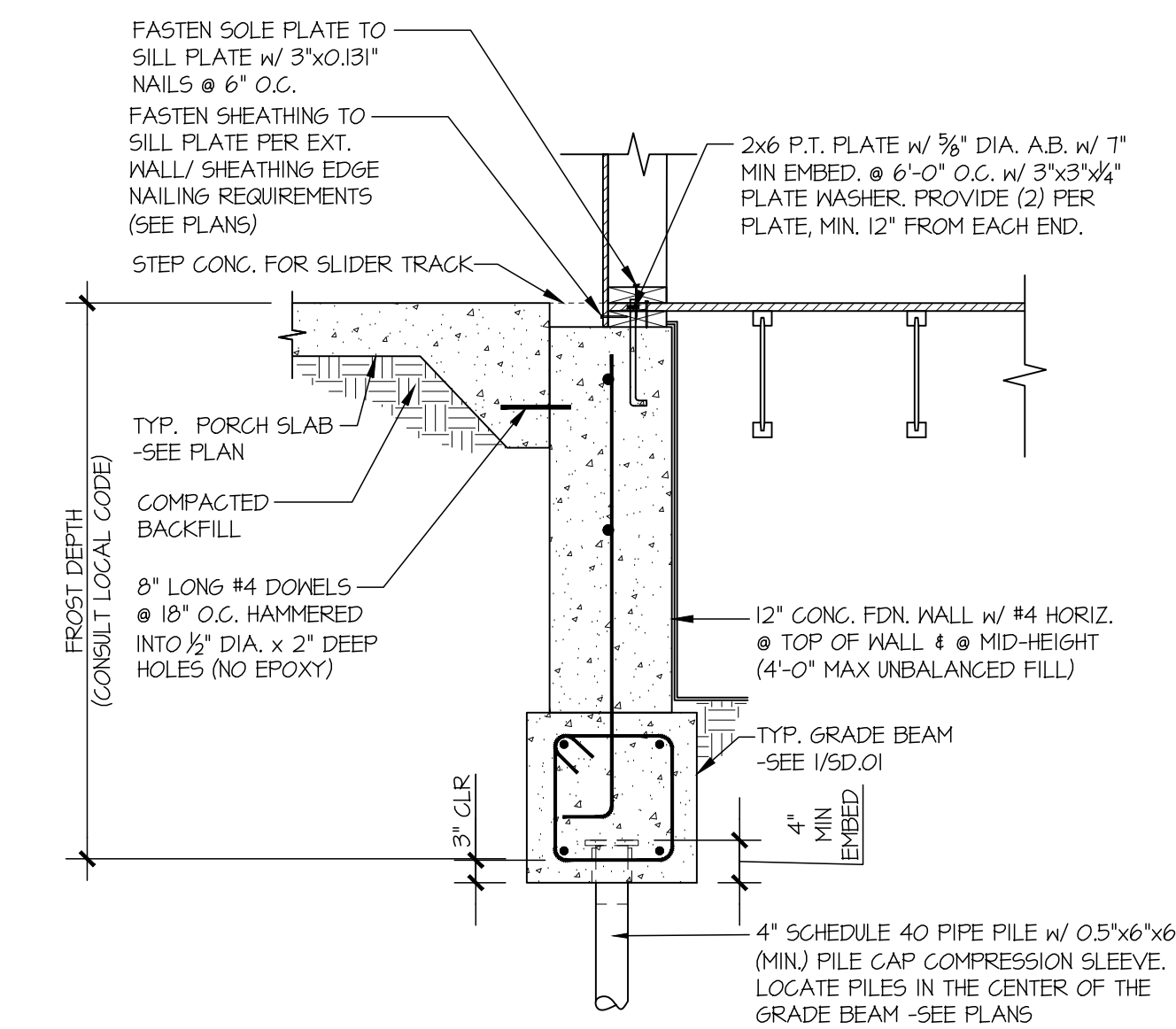
SECTION 1A
SCALE: 3/4"=1'-0"



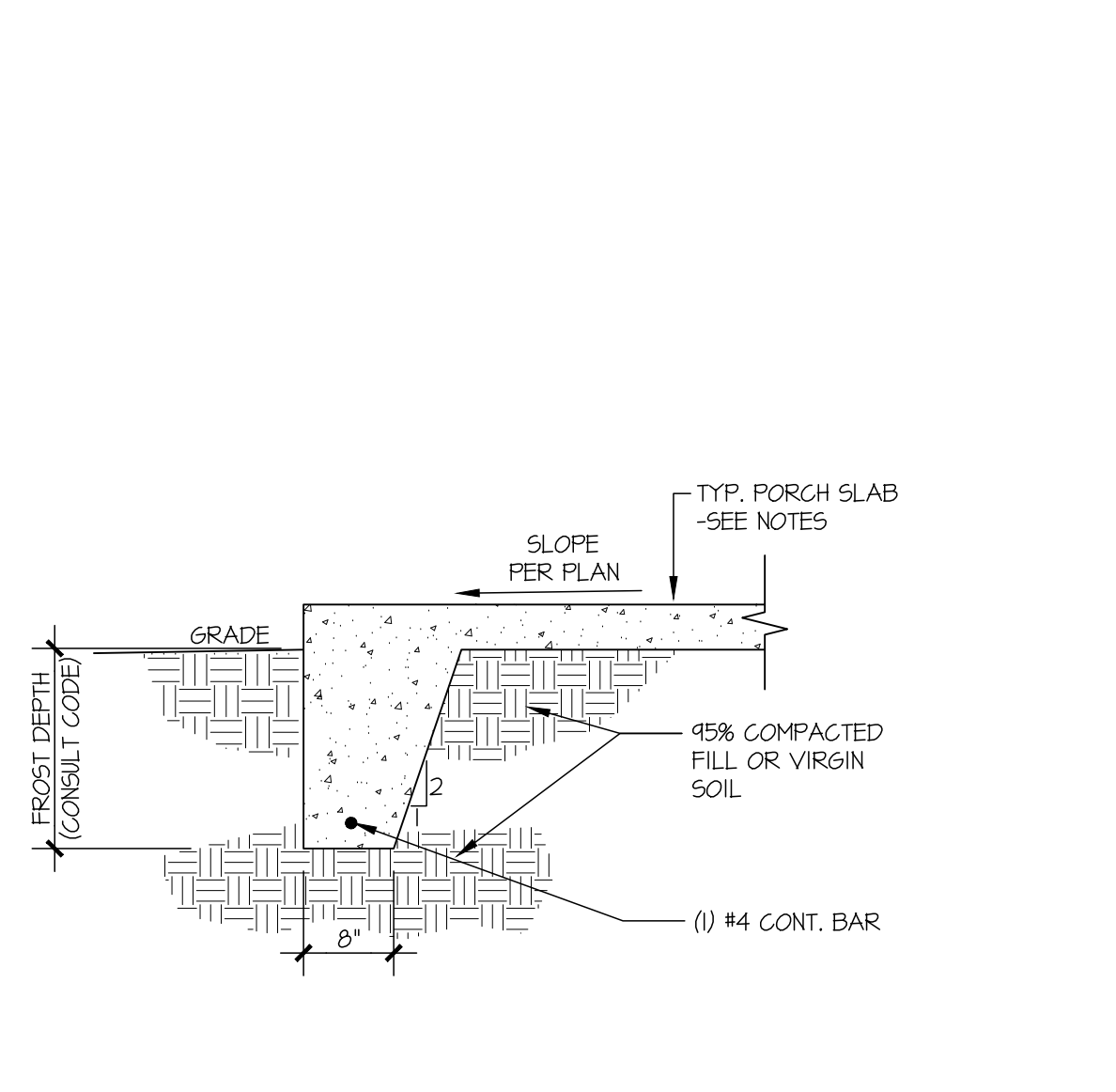
SECTION 1B
SCALE: 3/4"=1'-0"



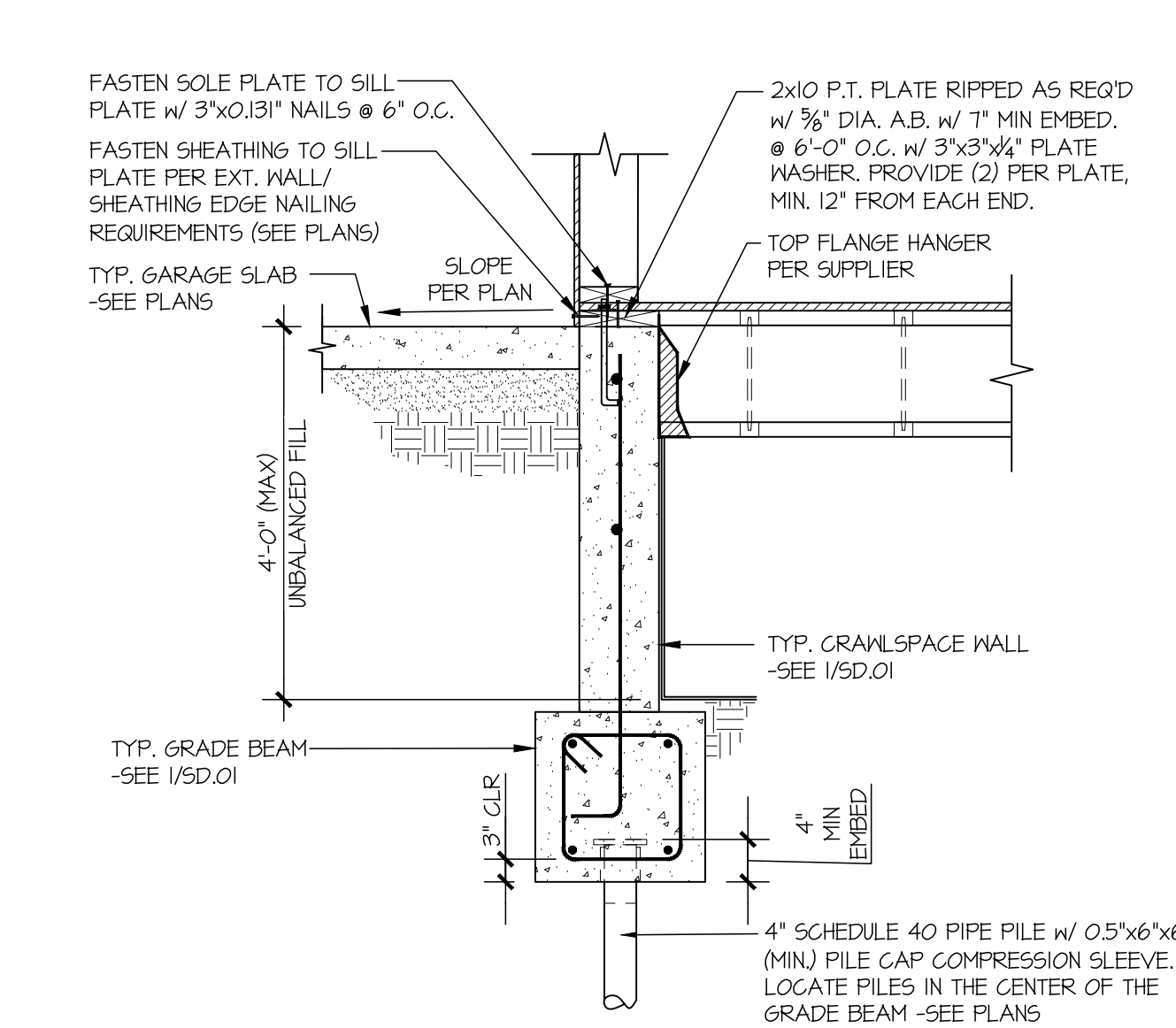
SECTION 2
SCALE: 3/4"=1'-0"



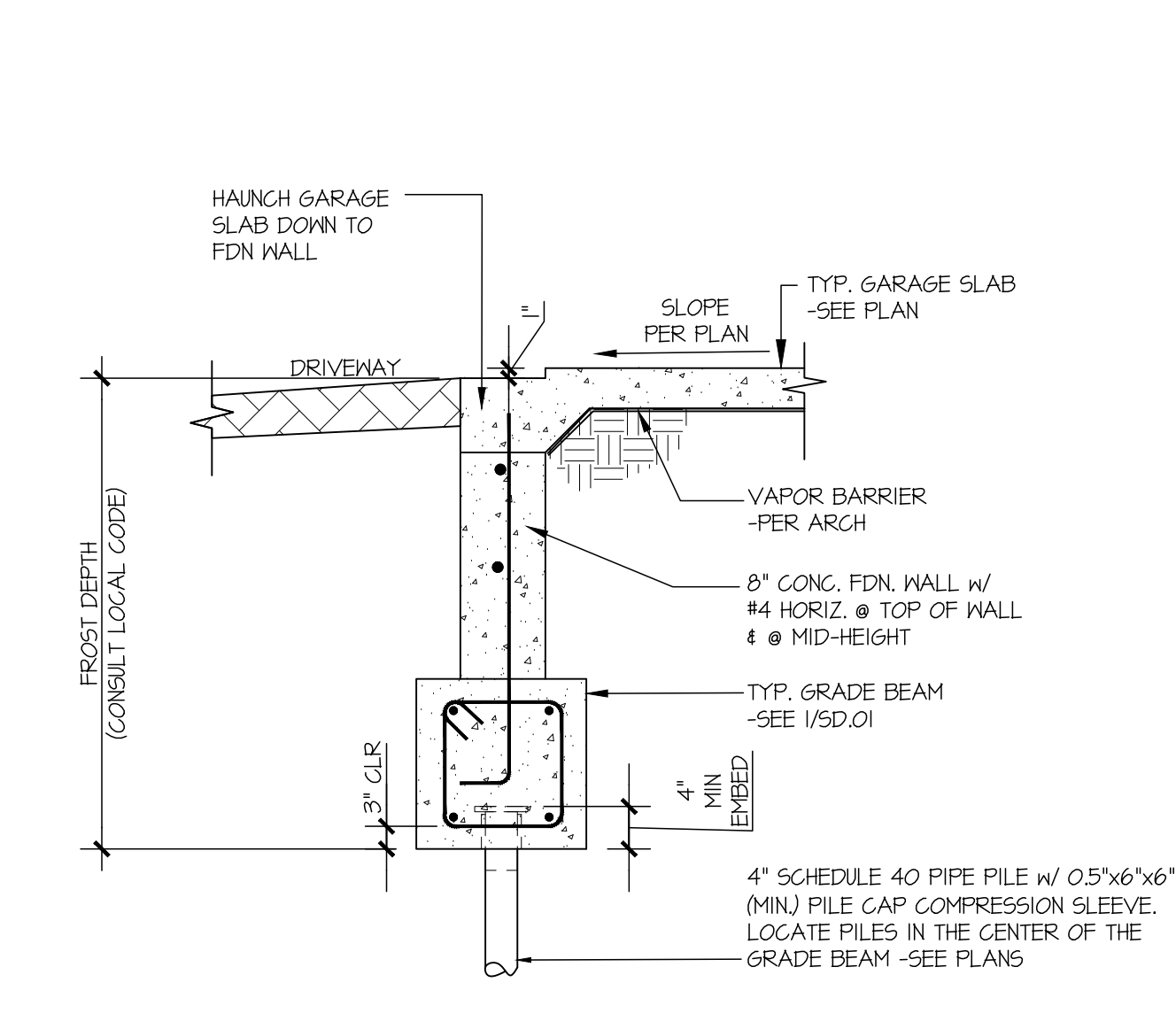
SECTION 2A
SCALE: 3/4"=1'-0"



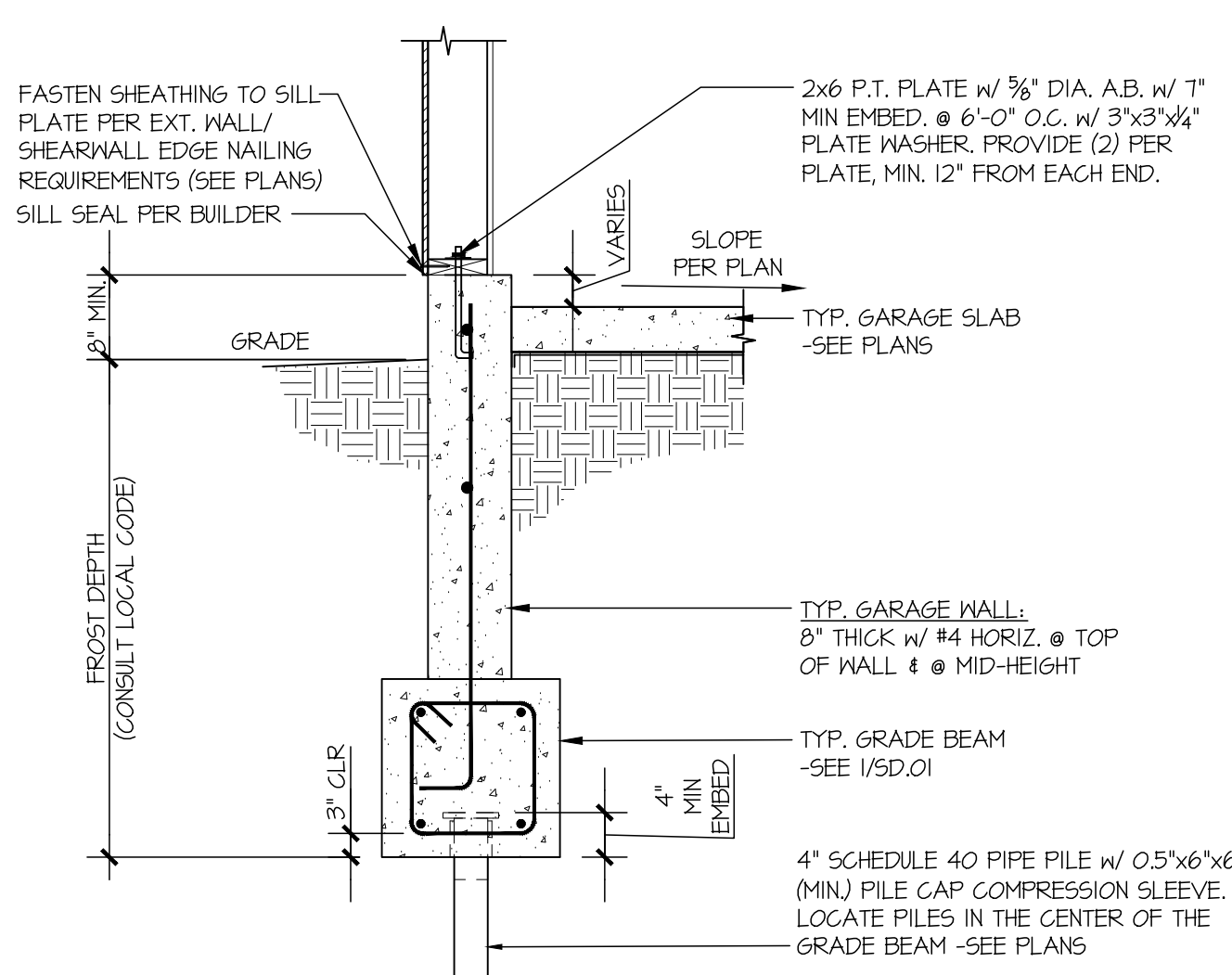
SECTION 3
SCALE: 3/4"=1'-0"



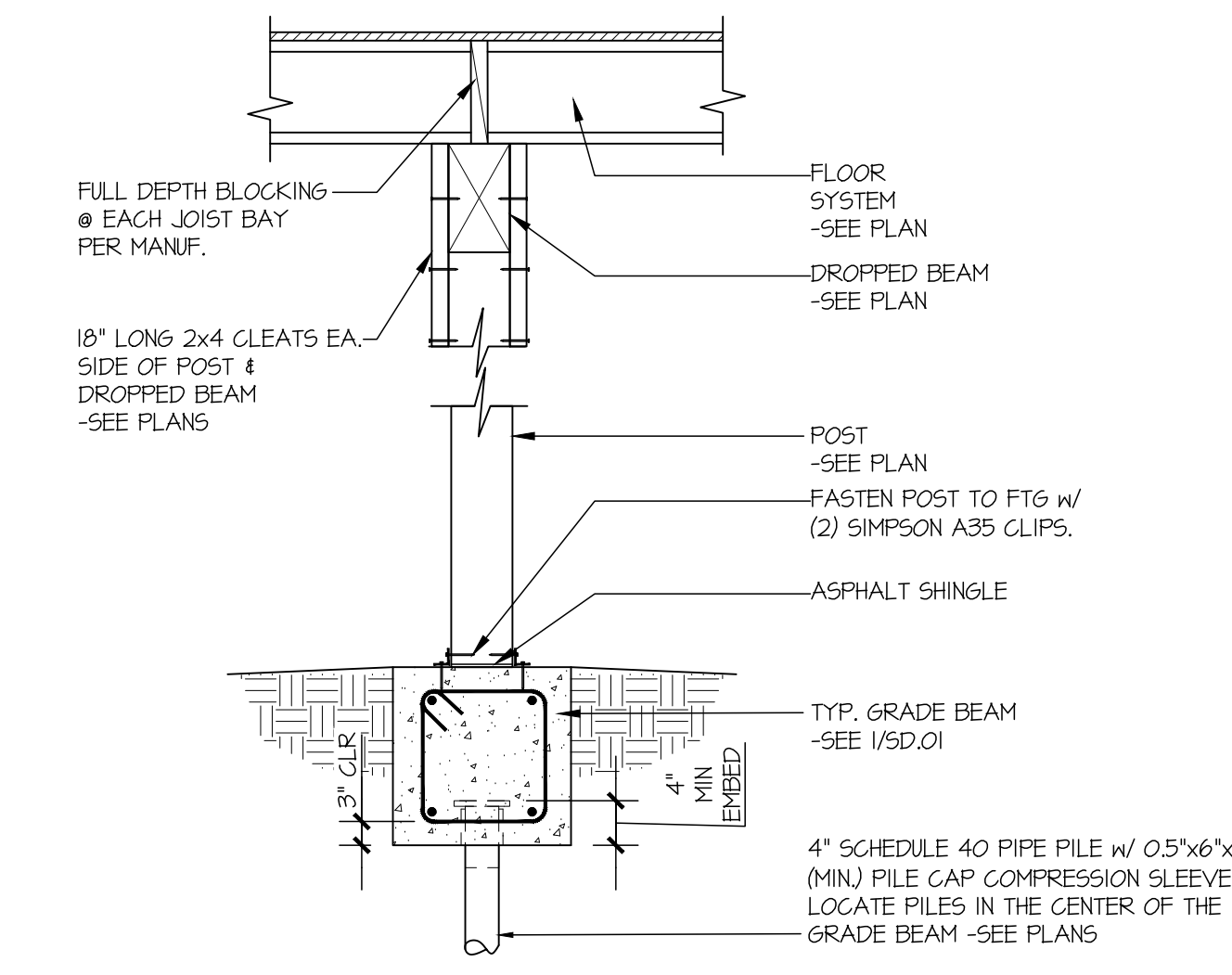
SECTION 4
SCALE: 3/4"=1'-0"



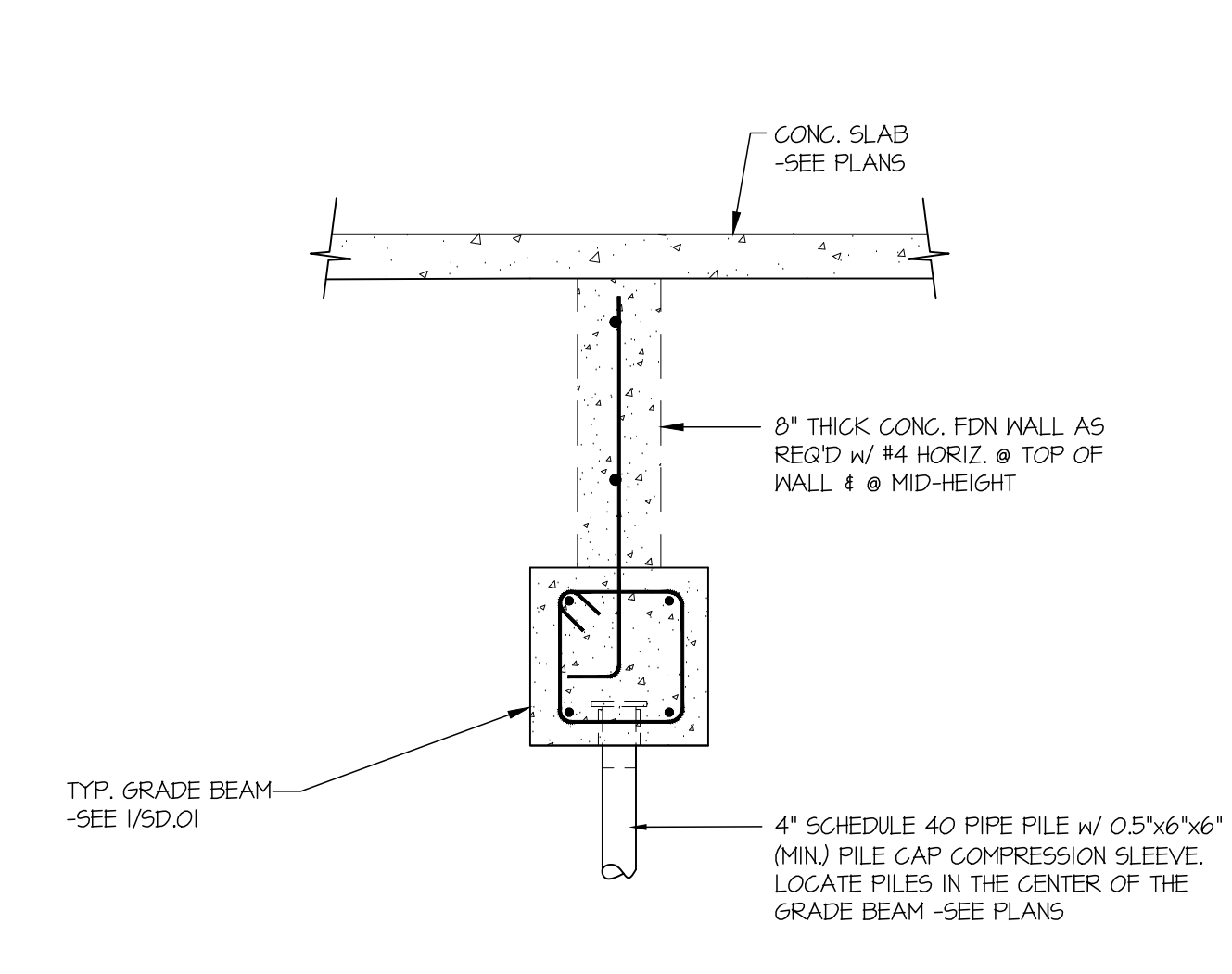
SECTION 5
SCALE: 3/4"=1'-0"



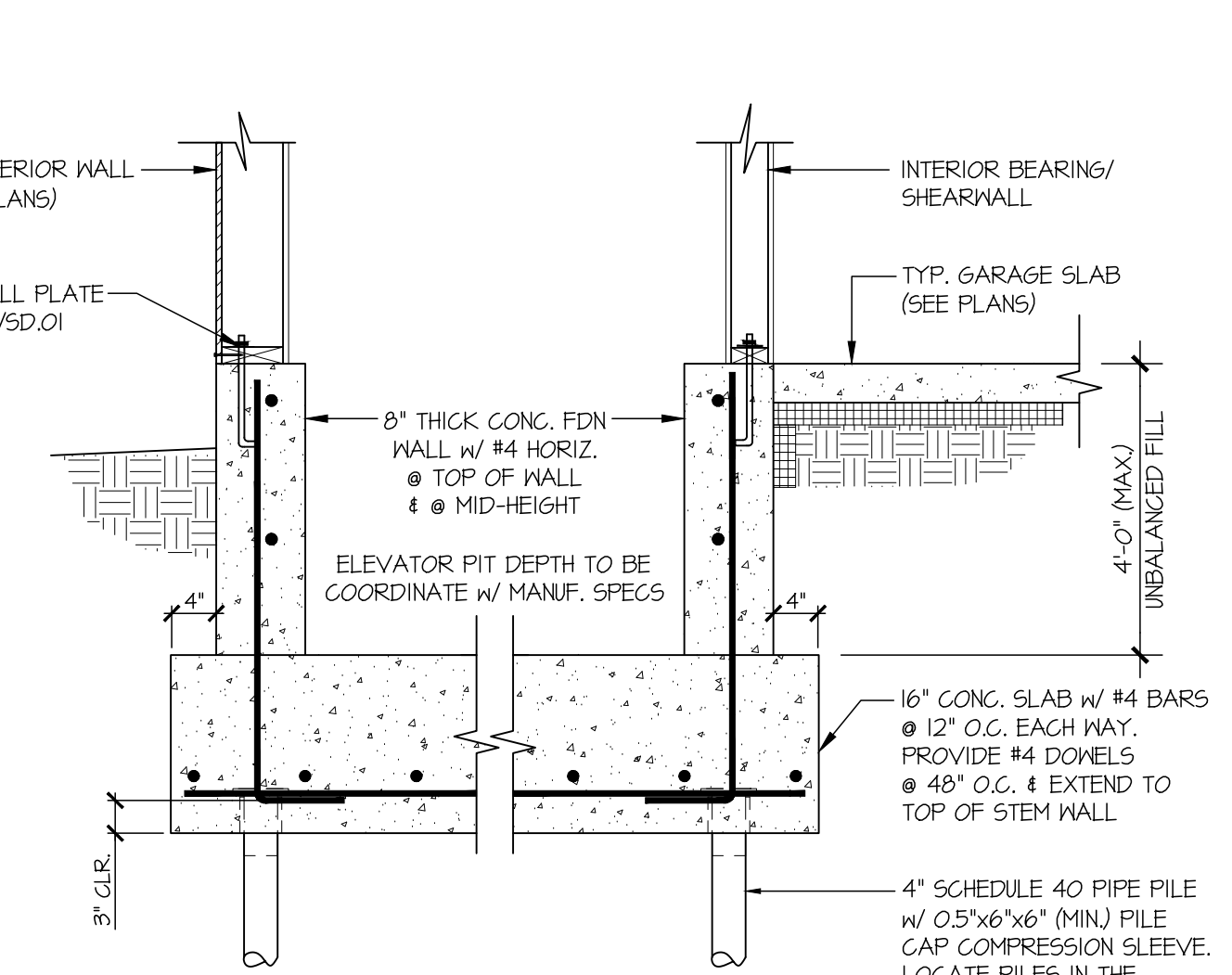
SECTION 6
SCALE: 3/4"=1'-0"



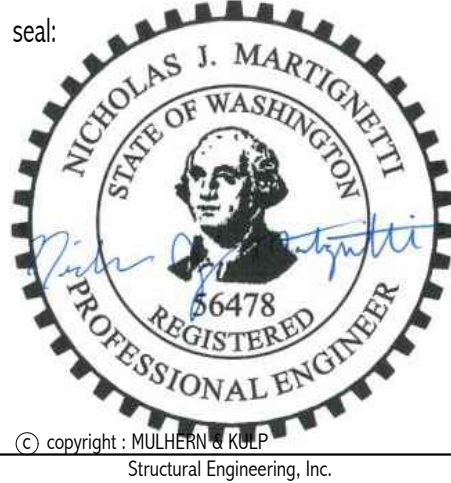
SECTION 7
SCALE: 3/4"=1'-0"



SECTION 8
SCALE: 3/4"=1'-0"



SECTION 9
SCALE: 3/4"=1'-0"



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhern+kulp.com

M&K project number: 306-25001

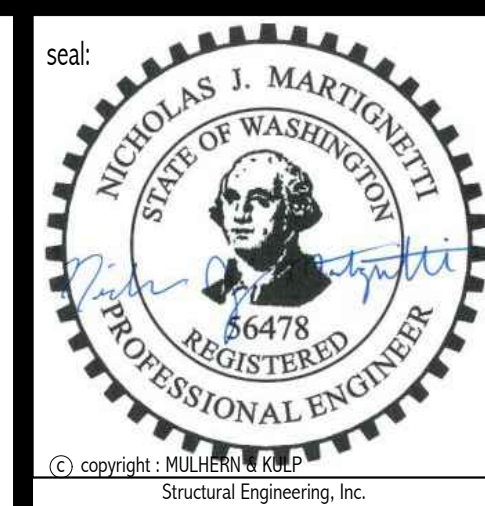
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

REVISIONS:

date:	initial:

MACPHERSON CONSTRUCTION

FOUNDATION DETAILS
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON



© copyright - MULHERN + KULP Structural Engineering, Inc.

MULHERN + KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7720 Trade Street, Suite 205, San Diego, CA 92121
p 619-660-0010 • mulhern+kulp.com

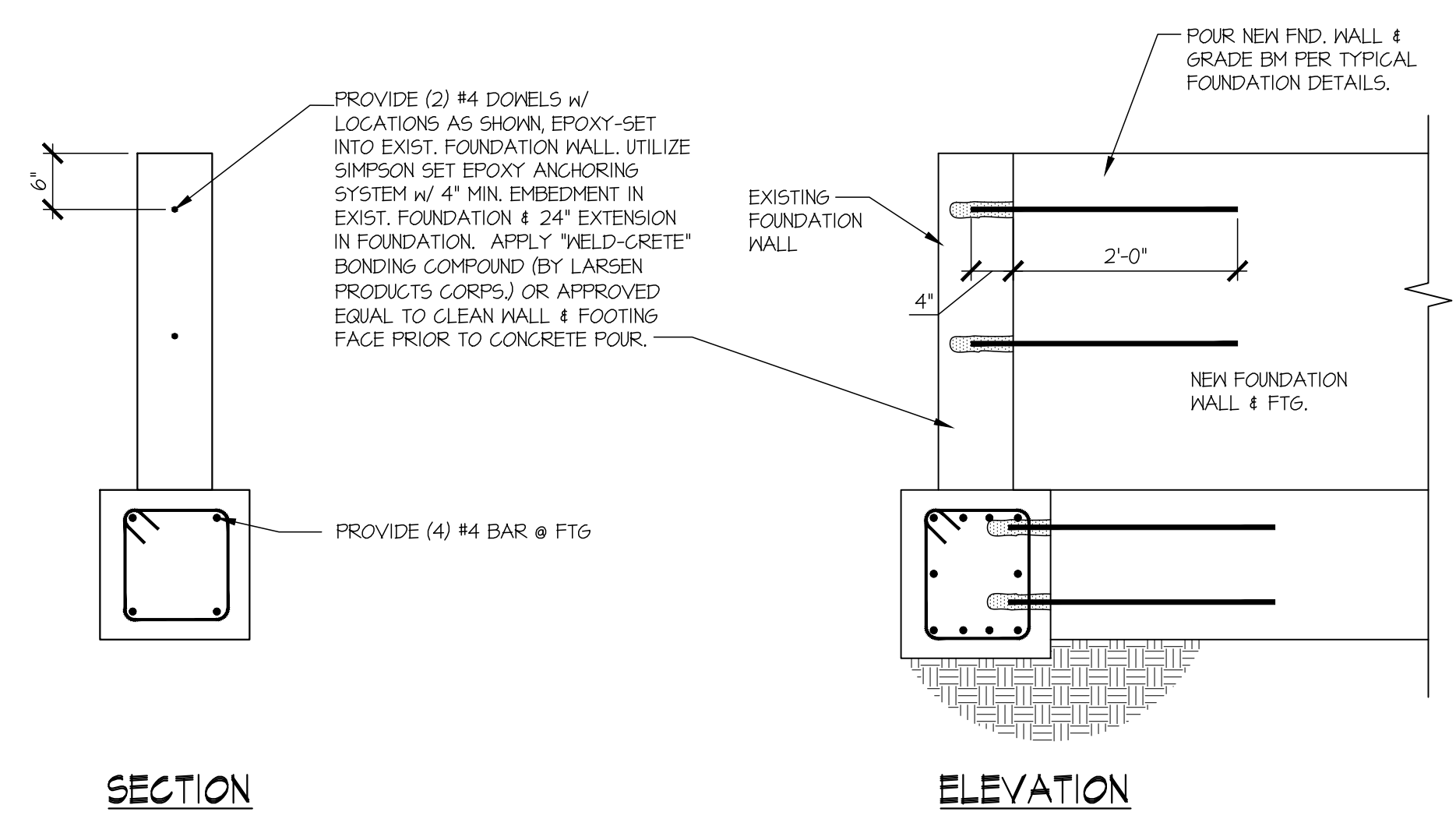
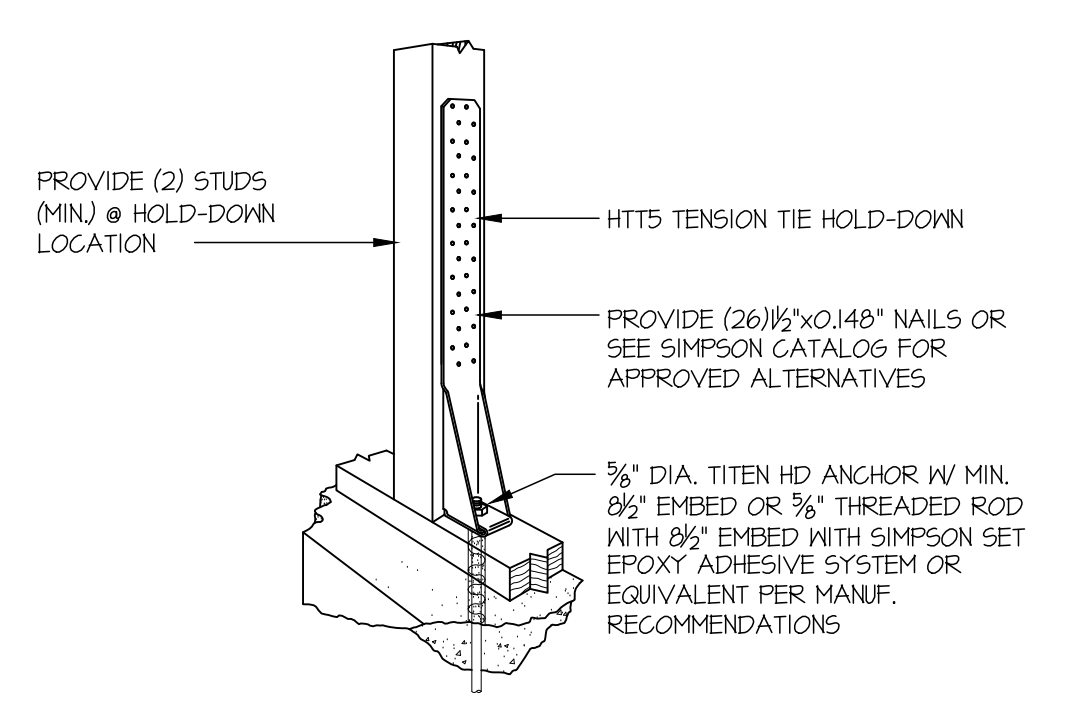
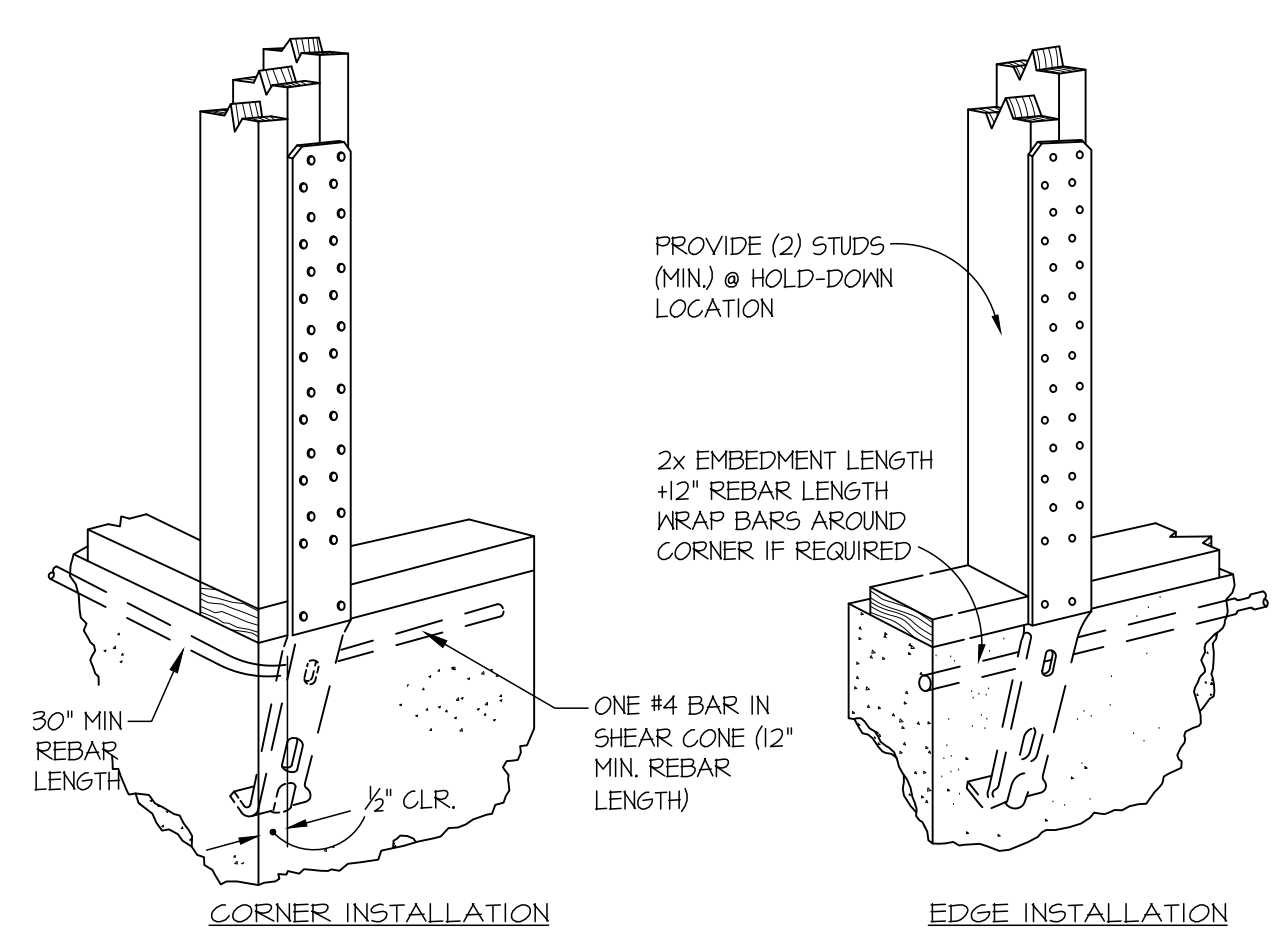
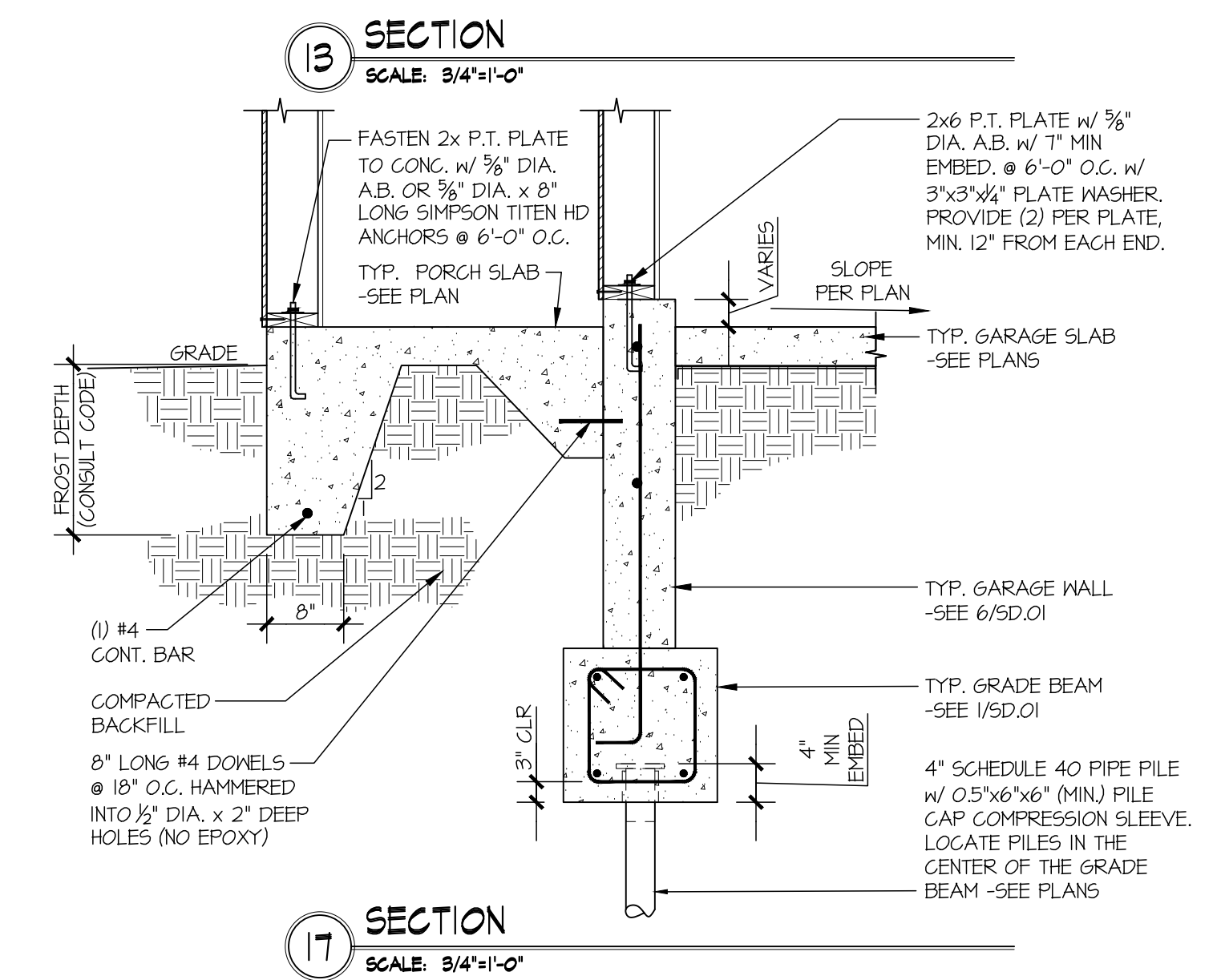
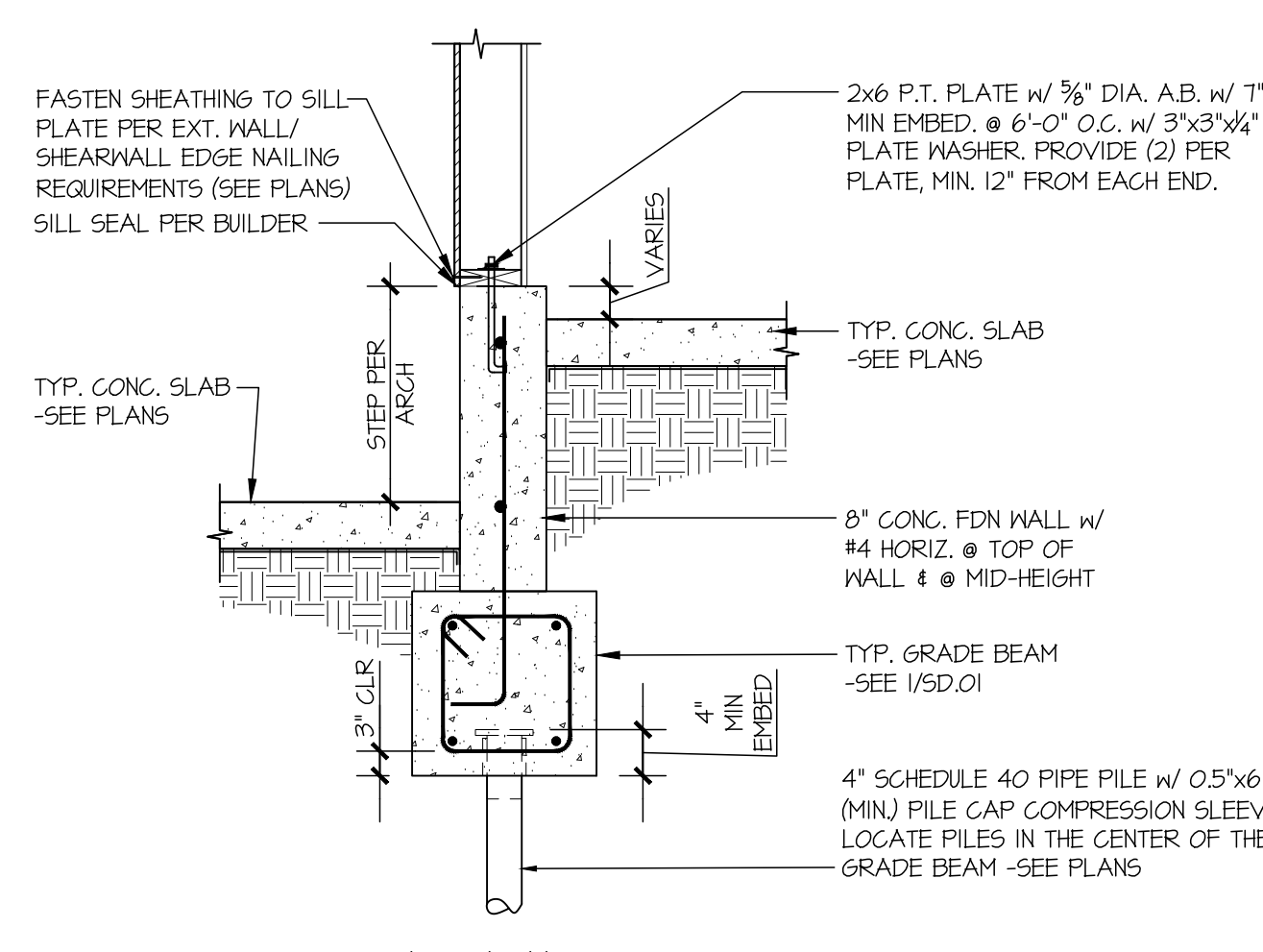
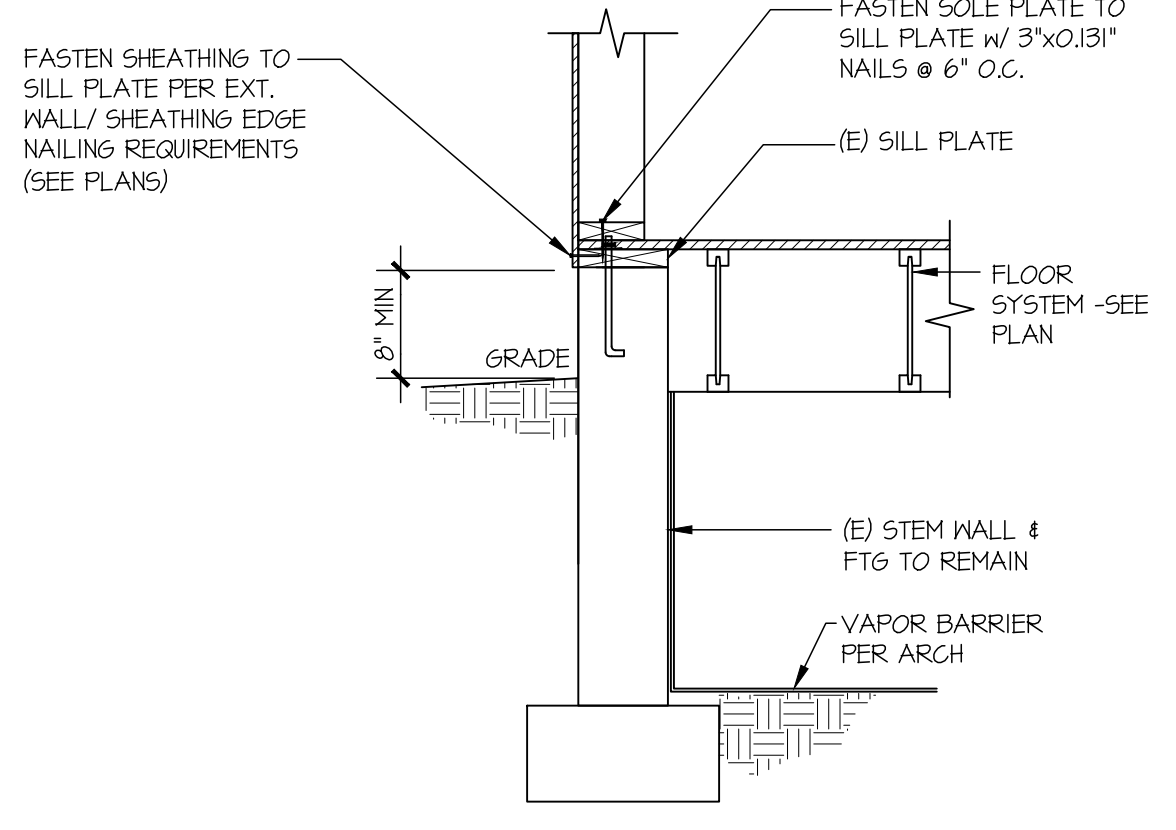
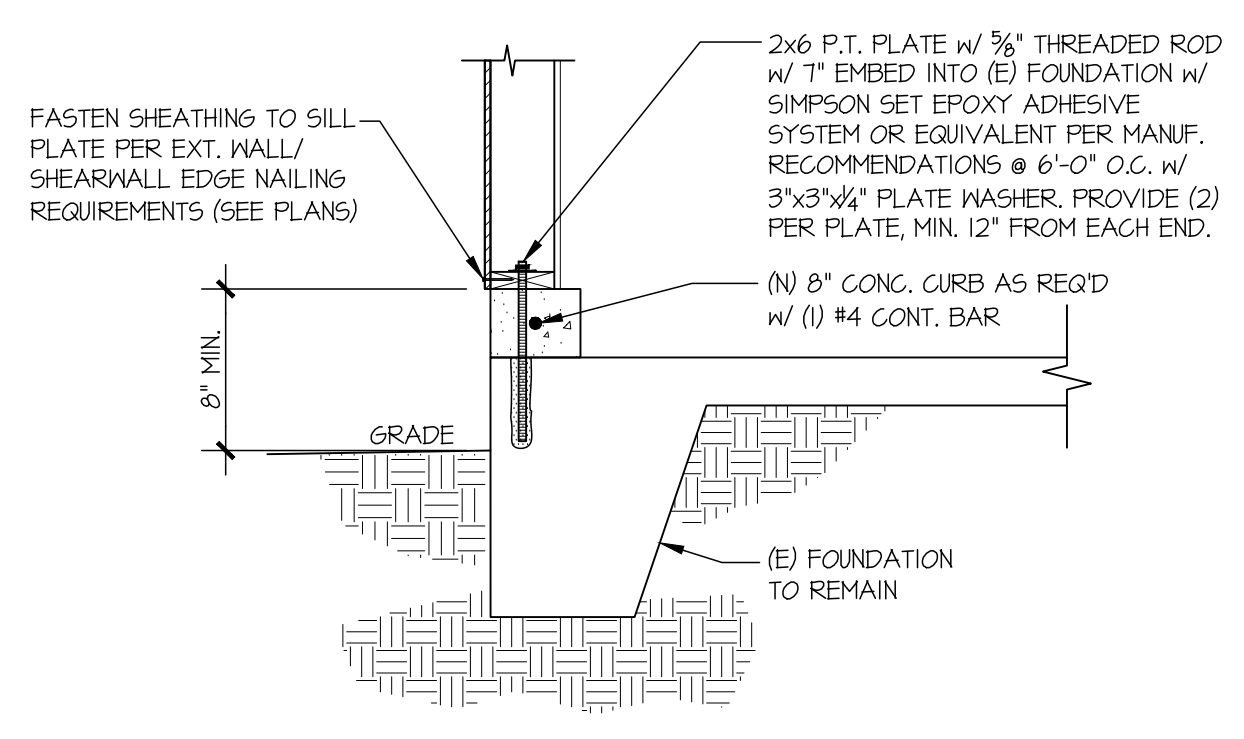
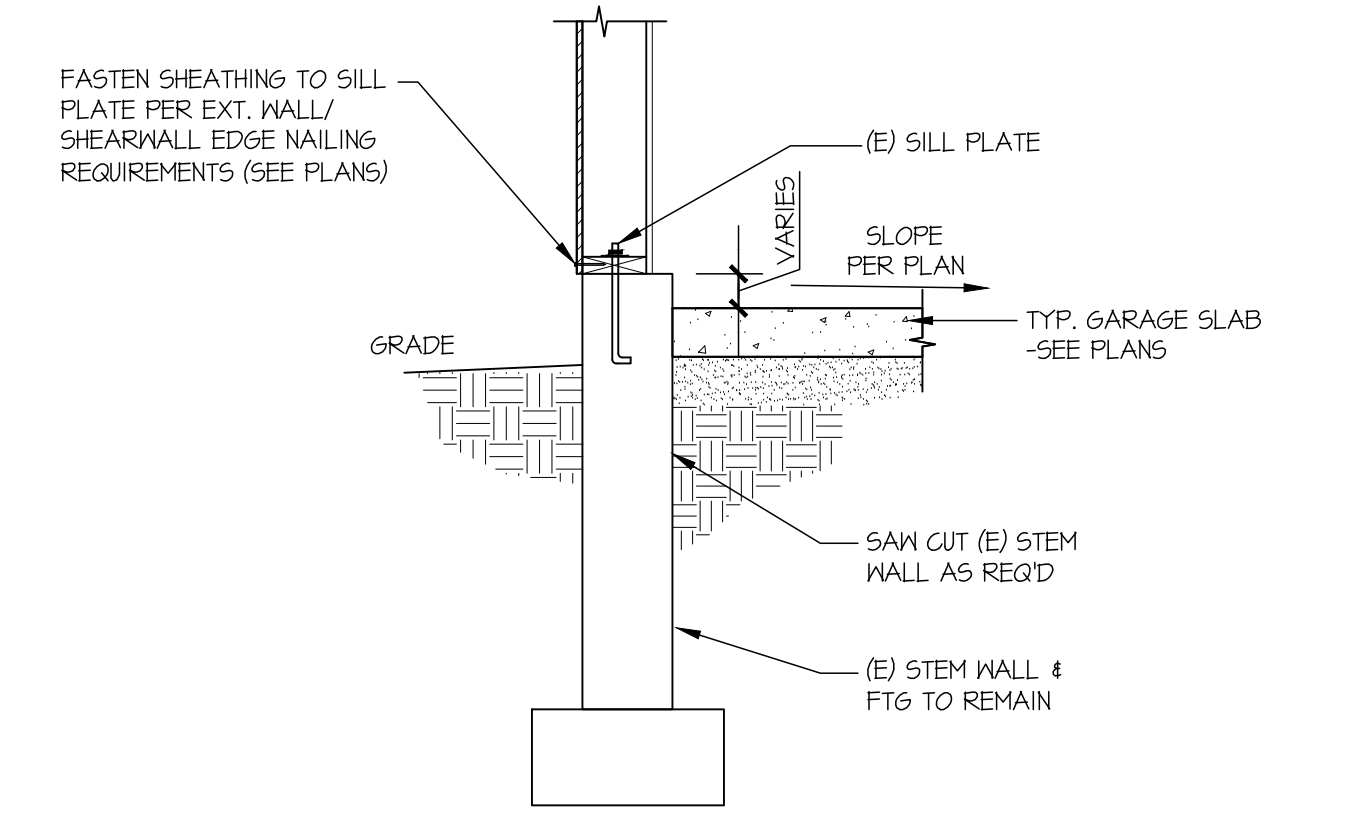
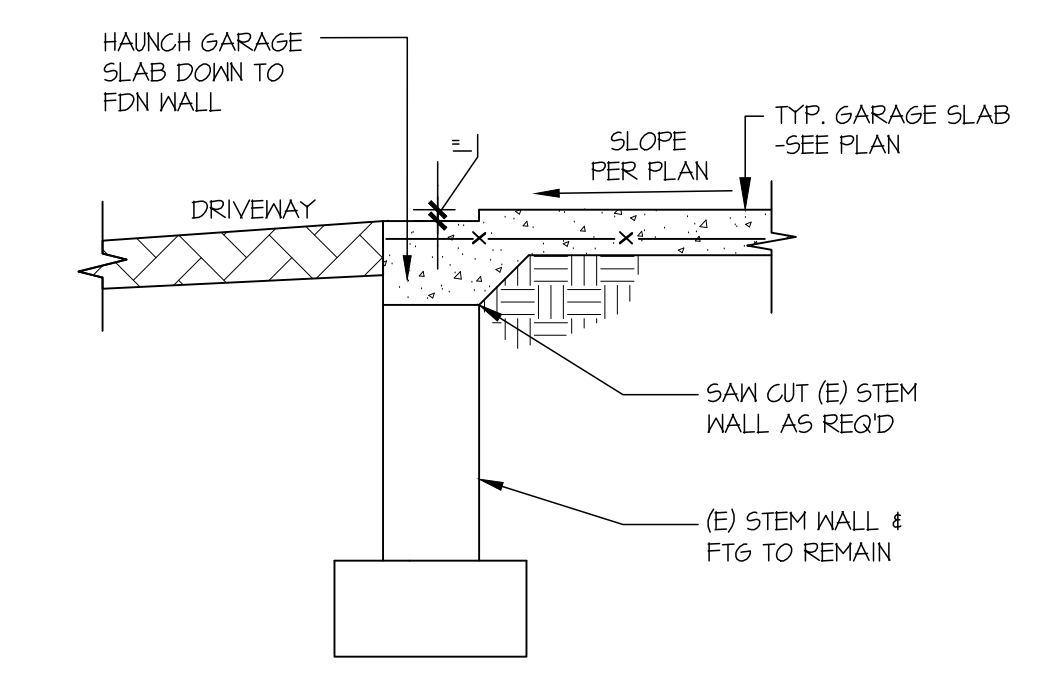
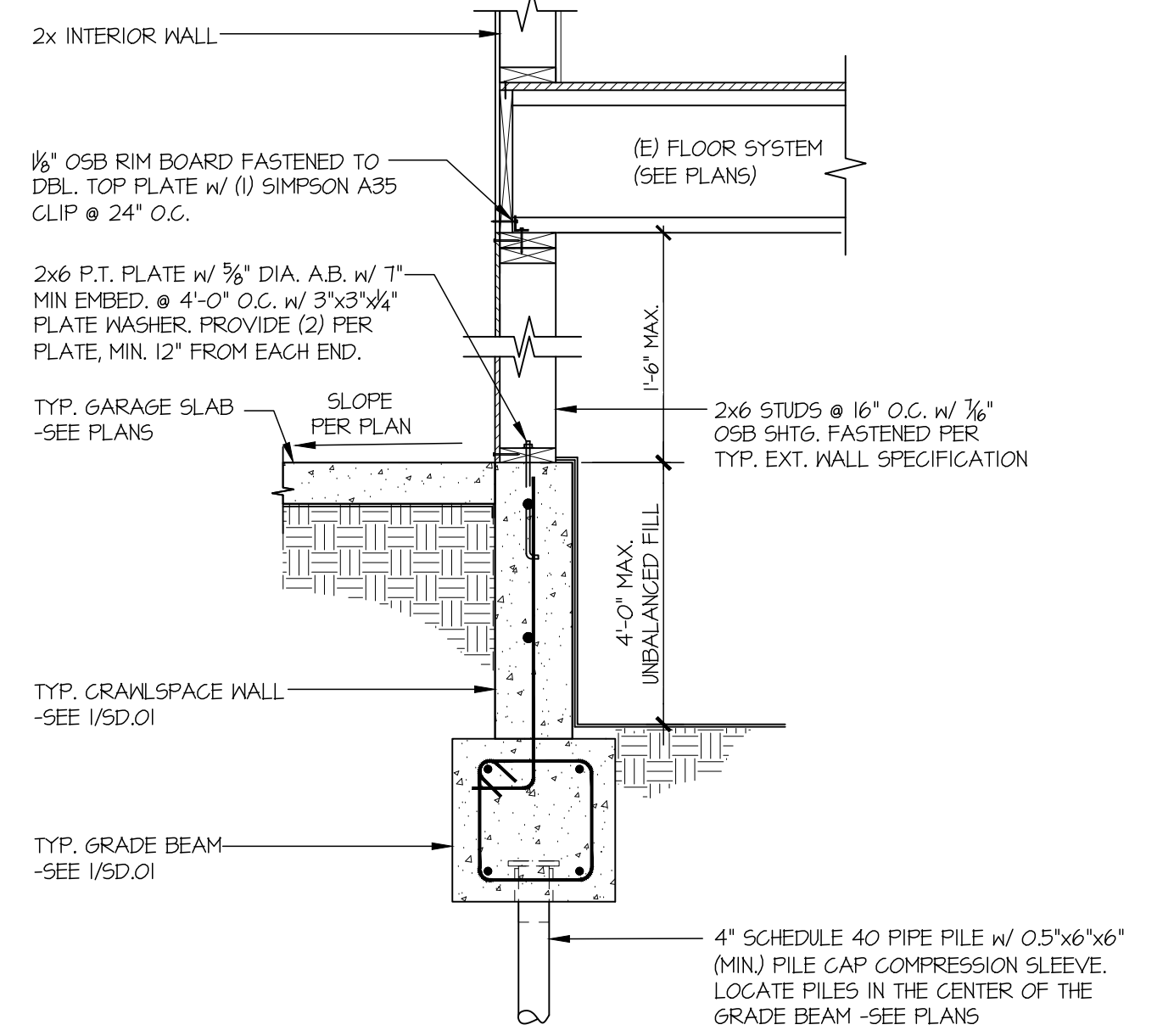
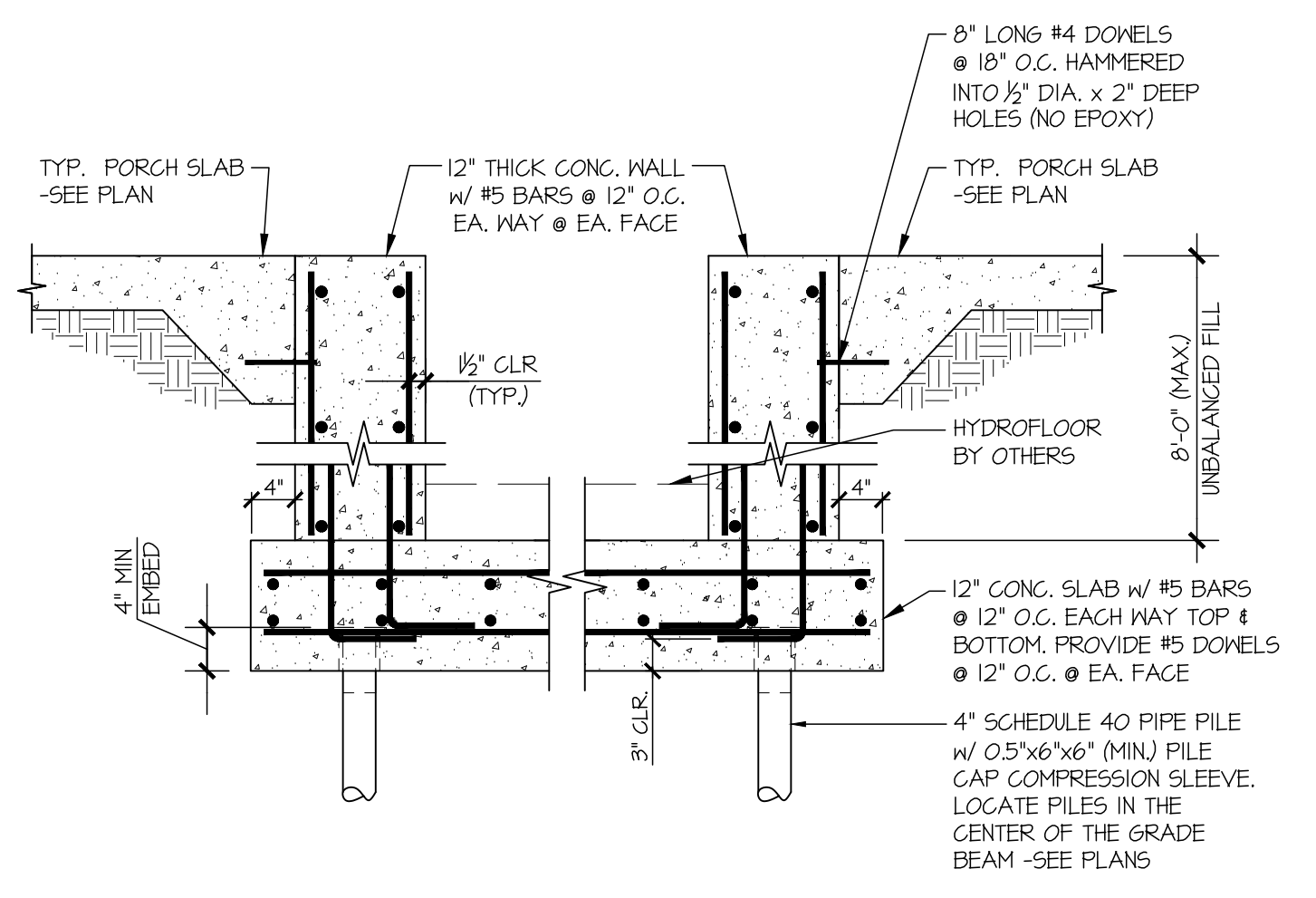
M&K project number: 306-25001
project mgr: NJM
drawn by: BFD
issue date: 03-27-25

REVISIONS:
date: initial:

MACPHERSON CONSTRUCTION

FOUNDATION DETAILS
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet:
SD.02



SECTION

ELEVATION