





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
L1	EXISTING CONDITIONS
L2	STREAM BUFFER MITIGATION PLAN
L3	PLANTING PLAN - STREAM BUFFER ENHANCEMENT
L4	PLANTING PLAN - SHORELINE BUFFER ENHANCEMENT
L5	PLANTING SCHEDULE & DETAILS
L6	PLANTING DETAIL & SPECIFICATIONS
A1.0	TREE PROTECTION 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

ENERGY REQ'S:

NEW CONDITIONED AREAS: SEE REQUIREMENTS 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)

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 ENGINEEER:	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

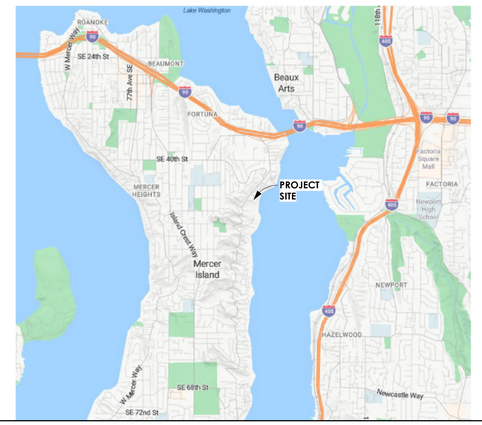
PROJECT INFO.

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



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
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
4/1/25		DAN	PERMIT SUBMITTAL

SHEET NUMBER

A0.0

8/11/2025 11:46:07 AM

ABBREVIATIONS

&	AND	KIT	KITCHEN
∠	ANGLE	LAM	LAMINATE
@	AT	LAV	LAVATORY
℄	CENTERLINE	LF	LINEAR FEET
Ø	DIAMETER	LT	LIGHT
⊥	PERPENDICULAR	MNFR	MANUFACTURER
#	POUND OR NUMBER	MATL	MATERIAL
(E)	EXISTING	MAX	MAXIMUM
ADD'L	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
BLKG	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	OD	OUTSIDE DIAMETER
CEM	CEMENT	OPNG	OPENING
CER	CERAMIC	OPP	OPPOSITE
CI	CAST IRON	PL	PLATE
CJ	CONSTRUCTION JOINT	PLAS	PLASTER
CLG	CEILING	PLYWD	PLYWOOD
CL	CLOSET	PR	PAIR
CLR	CLEAR	PT	PAINT
COL	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	REINF	REINFORCED
DET	DETAIL	REQD	REQUIRED
DIA	DIAMETER	RM	ROOM
DIM	DIMENSION	RO	ROUGH OPENING
DN	DOWN	REV	REVISED OR REVISION
DR	DOOR	S	SOUTH
DS	DOWNSPOUT	SC	SOLID CORE
DWG	DRAWING	SCHED	SCHEDULE
E	EAST	SF	SQUARE FEET
EA	EACH	SD	SMOKE DETECTOR
EJ	EXPANSION JOINT	SECT	SECTION
ELEC	ELECTRICAL	SH	SHELF
ELEV	ELEVATOR/ELEVATION	SHWR	SHOWER
ENCL	ENCLOSURE	SHT	SHEET
EQ	EQUAL	SIM	SIMILAR
EQUIP	EQUIPMENT	SPEC	SPECIFICATION
(E)	EXISTING	SQ	SQUARE
EXP	EXPANSION	SST	STAINLESS STEEL
EXT	EXTERIOR	SS	SERVICE SINK
FA	FIRE ALARM	STD	STANDARD
FD	FLOOR DRAIN	STL	STEEL
FNDN	FOUNDATION	STOR	STORAGE
FIN	FINISH	STRUCT	STRUCTURE OR STRUCTURAL
FLR	FLOOR	SUSP	SUSPENDED
FLASH	FLASHING	SYM	SYMMETRICAL
FOC	FACE OF CONCRETE	T	TREAD
FOF	FACE OF FINISH	TEL	TELEPHONE
FOS	FACE OF STUDS	TER	TERRAZZO
FT	FOOT OR FEET	T&G	TONGUE & GROOVE
FTG	FOOTING	TO	TOP OF
FURR	FURRING	TOW	TOP OF WALL
GA	GAUGE	TV	TELEVISION
GALV	GALVANIZED	TYP	TYPICAL
GL	GLASS	UNF	UNFINISHED
GND	GROUND	UNO	UNLESS NOTED OTHERWISE
GR	GRADE	VEST	VESTIBULE
GWB	GYPSUM WALL BOARD	W	WEST
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	HARDWARE	WSCT	WAINSCOT
HM	HOLLOW METAL	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		

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

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 THE LATEST ADOPTED VERSION OF THE INTERNATIONAL RESIDENTIAL CODE (IRC) AS AMENDED BY THE STATE OF WASHINGTON AND BE IN ACCORDANCE WITH ALL WASHINGTON STATE LAWS, REGULATIONS AND VARIOUS CODES IMPOSED BY LOCAL AUTHORITIES. ENERGY CODE REQUIREMENTS SHALL CONFORM TO THE 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 4½" 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 INCNOSISTENCIES 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 ERECTED 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 (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 INSULATION 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) 1½" 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 BAFFLES AT EAVE AND/OR SOFFIT VENTS TO MAINTAIN 1" MIN. OF VENTILATION ABOVE INSULATION. EXTEND BAFFLES 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 HALL 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 1½". 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 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 R703.6, 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.

ALL HEAT DETECTORS, SMOKE ALARMS, AND CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH THEIR USE. SMOKE DETECTOR POWER SOURCES TO BE INSTALLED IN ACCORDANCE WITH NFPA 72 & IRC R314. ALL ALARM DEVICES SHALL BE INTERCONNECTED PER IRC R314.4.

AT GARAGES, A HEAT DETECTOR OR HEAT ALARM SHALL BE INSTALLED 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. GARAGE SEPARATION REQUIREMENTS INCLUDE 5/8" TYPE X BETWEEN GARAGE AND HABITABLE SPACE ABOVE, 1/2" BETWEEN GARAGE AND HABITABLE SPACE ON GARAGE SIDE OF WALLS.

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 1 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 ½" GYPSUM 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 GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR/CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN ½" GYPSUM 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 " GYPSUM 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.

GAS APPLIANCES CONT....

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 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.

SEE GARAGE SECTION ABOVE FOR ADDITIONAL REQUIREMENTS FOR GAS APPLIANCES LOCATED IN GARAGES.

SEE FIREPLACES SECTION ABOVE FOR ADDITIONAL INFORMATION REGARDING GAS FIREPLACES.

GLAZING:

ALL GLASS AND GLAZING IS TO BE IN COMPLIANCE WITH (IRC) R308 AND THE WASHINGTON STATE SAFETY GLASS LAW.

GLAZING IN HAZARDOUS LOCATIONS SUCH AS GLASS ON DOORS, GLAZING WITHIN 24" ON EITHER SIDE OF A DOOR OPENING, OPENINGS WITHIN 60" VERTICAL AND 60" HORIZONTAL OF THE BOTTOM LANDING OF A STAIRWAY, STORM DOORS, RAILINGS, SHOWER DOORS, SLIDING GLASS DOORS AND TUB ENCLOSURES SHALL BE SAFETY GLAZING MATERIAL. (IRC) R308.4.

ALL EXTERIOR WALL GLAZING SHALL COMPLY WITH THE LATEST EDITION OF THE WASHINGTON STATE ENERGY CODE (WSEC)

SKYLIGHTS SHALL BE HERMETICALLY SEALED INSULATED, HEAT STRENGTHENED OR FULLY TEMPERED GLASS. SKYLIGHTS SHALL MEET THE REQUIREMENTS OF (IRC) R308.6

GLASS BLOCK SHALL BE 3" MINIMUM. THE MORTARED SURFACES SHALL BE TREATED FOR MORTAR BONDING. (IRC) R610.

POOLS:

WHERE APPLICABLE, OUTDOOR POOLS SHALL BE PROVIDED WITH A MIN. 48" HIGH BARRIER WHICH ALLOWS MAX. 4" SPHERE TO PASS THROUGH. SWING GATE OUTWARDS FROM POOL. IF LATCH IS LESS THAN 54" HIGH IT MUST BE ON POOL SIDE & MIN. 3" BELOW TOP OF GATE (ISPSC 2015).

ROOFING:

APPLY ROOFING IN ACCORDANCE WITH (IRC) R905.

BALCONIES, LANDINGS, EXTERIOR STAIRWAYS, OCCUPIED ROOFS AND SIMILAR SURFACES EXPOSED TO THE WEATHER AND SEALED UNDERNEATH SHALL BE WATERPROOFED AND SLOPED A MINIMUM OF 1/4" PER 12" (2% SLOPE) FOR DRAINAGE.

SOILS:

UNLESS A SOILS REPORT BY A SOILS ENGINEER IS PROVIDED AND ATTACHED THIS OFFICE ASSUMES NO RESPONSIBILITY AS TO THE PHYSICAL CHARACTERISTICS OF THE SOIL. FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING OF 1,500 PSF. ALL FOOTINGS SHALL BE CAST ON UNDISTURBED FIRM NATURAL SOIL OR COMPACTED SOIL OF 1,500 PSF BEARING CAPACITY AT LEAST 1'-6" BELOW LOWEST ADJACENT GRADE, FREE OF ORGANIC MATERIALS. FOOTING EXCAVATION SHALL BE FREE OF LOOSE SOILS, DEBRIS, AND FREE WATER AT ALL TIMES. THIS OFFICE TAKES NO RESPONSIBILITY IN VERIFYING THE ACCURACY OF ENGINEERING DATA SUPPLIED BY OTHERS.

STAIRS:

THE MINIMUM WIDTH FOR STAIRS SHALL BE 36". (IRC) R311.7.1.

THE MINIMUM HEADROOM FOR STAIRS SHALL BE 6'-8" MEASURED VERTICALLY FROM A PLANE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM. (IRC) R311.7.2.

THE MINIMUM TREAD DEPTH SHALL BE 10" (IRC) R311.7.5.2 AND THE MAXIMUM RISER HEIGHT SHALL BE 73/4" (IRC) R311.7.5.1.

CIRCULAR AND SPIRAL STAIRWAYS SHALL COMPLY WITH (IRC) R311.7.10.1.

HANDRAIL SHALL BE INSTALLED TO COMPLY WITH (IRC) R311.7.8.

INSTALL FIRE BLOCKING BETWEEN STAIR STRINGERS. COVER WALLS AND SOFFITS OF USABLE SPACE UNDER STAIR WITH ½" GYPSUM BOARD. (IRC) R302.11.

GUARDRAILS: ANY WALKING SURFACE 30" OR MORE ABOVE GRADE OR ADJACENT SURFACE SHALL HAVE GUARDRAILNOT LESS THAN 36" HIGH AND DESIGNED TO PREVENT A SPHERE LARGER THAN 4" IN DIAMETER TO PASS THROUGH. (IRC)

WASHINGTON STATE UNIVERSITY
Energy Program

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		Date	3/21/2025

All Climate Zones Table 402.1.3

	R-Value [a]	U-Factor [a]
Fenestration U-Factor [b,i]	n/a	0.30
Skylight U-Factor [b]	n/a	0.50
Ceiling [e]	60	n/a
Wood Frame Wall [g,j]	20+5 or 13+10	n/a
Floor	30	n/a
Below Grade Wall [c,h]	10/15/21 int + STB	n/a
Slab [d,j] 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-vaulted 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.

2021 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective March 15, 2024)

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.

1. 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.
2. Medium Dwelling Unit: ..... **8.0 credits**
   All dwelling units that are not included in #1, #3 or #4
3. Large Dwelling Unit: ..... **9.0 credits**
   Dwelling units exceeding 5000 square feet of conditioned floor area.
4. Dwelling units serving Group R-2 occupancies: ..... **6.5 credits**
   Section R401.1 and residential building Section R202 for Group R-2.
5. 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	☐
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	☐
3	For heating system based on electric resistance only (either forced air or Zonal)	0.5	☐
4[c]	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	☒
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	☐

a. See Section R401.1 and residential building in Section R202 for Group R-2 scope.
b. 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).
c. Additional points for the HVAC system are included in Table R406.3.

2021 Washington State Energy Code – Residential
Prescriptive Energy Code Compliance for All Climate Zones in Washington
Single Family – New & Additions (effective March 15, 2024)

Summary of Table R406.3

Options	*Energy Credit Option Descriptions*	*Credits – limited to one energy option from each category [d]*		*Comments:*
1.1	Efficient Building Envelope	0.5	☐	
1.2	Efficient Building Envelope	1.0	☒	U Value 0.25
1.3	Efficient Building Envelope	1.5	☐	
1.4	Efficient Building Envelope ☐	2.5	☐	
2.1	Air Leakage Control and Efficient Ventilation	1.0	☐	
2.2	Air Leakage Control and Efficient Ventilation	1.5	☐	
2.3	Air Leakage Control and Efficient Ventilation ☐	2.0	☐	
3.1[a]	High Efficiency HVAC	1.0	☐	
3.2 [a]	High Efficiency HVAC	0.5	☐	
3.3[a,c,d]	High Efficiency HVAC	0.5	☐	
3.4[a,d]	High Efficiency HVAC	1.5	☐	
3.5[d]	High Efficiency HVAC	1.5	☐	
3.6[a]	High Efficiency HVAC	1.0	☒	Centrally ducted air source cold climate heat pump, min 10 HPSF
3.7[a,c,d]	High Efficiency HVAC	2.0	☐	
3.8[a,d]	High Efficiency HVAC	1.0	☐	
3.9	High Efficiency HVAC	1.5	☐	
3.10[f]	High Efficiency HVAC ☐	2.5	☐	
3.11[c]	High Efficiency HVAC	0.5	☐	
4.1	High Efficiency HVAC Distribution System	0.5	☐	
5.1	Efficient Water Heating	0.5	☐	
5.2	Efficient Water Heating	0.5	☐	
5.3	Efficient Water Heating	0.5	☐	
5.4	Efficient Water Heating	1.0	☒	Energy Star rated gas or propoane water heater, min UEF 0.91
5.5	Efficient Water Heating	1.5	☐	
5.6	Efficient Water Heating	2.0	☐	
5.7	Efficient Water Heating	2.5	☐	
5.8	Efficient Water Heating ☐	2.5	☐	
6.1	Renewable Electric Energy (4.5 credits max)	0.5-4.5	3.0	Solar panels
7.1	Appliance Package	0.5	☐	
	Total Credits	9.0		Calculate Total

a. 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.
b. See Section R401.1 and residential building in Section R202 for Group R-2 scope.
c. 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.
d. This option may only be claimed if serving System Type 4 or 5 from Table R406.2.
e. Primary living areas include living, dining, kitchen, family rooms, and similar areas.
f. 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.

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

ENERGY COMPLIANCE

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

SHEET NUMBER

A0.2

8/6/2025 4:57:21 PM

ALTA/NSPS LAND TITLE SURVEY

LOCATED IN THE S.E. 1/4, OF THE N.E. 1/4, OF SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., KING COUNTY, WASHINGTON

SCHEDULE B, PART 2, EXCEPTIONS:

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

SPECIAL EXCEPTIONS:

1. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: MERCER ISLAND SEWER DISTRICT, A MUNICIPAL CORPORATION
PURPOSE: SEWER PIPELINE AND ALL NECESSARY APPURTENANCES
RECORDING DATE: JUNE 19, 1964
RECORDING NO.: 5750958
RECORDING DATE: JULY 8, 1964
RECORDING NO.: 5758750
AFFECTS: A PORTION OF SHORELANDS LYING WITHIN STRIP OF LAND 10 FEET IN WIDTH

(EASEMENT(S) ARE DEPICTED HEREON IN AN APPROXIMATE LOCATION, WITHIN THE SHORELANDS)

2. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SHOWN IN THE DOCUMENT:

RECORDING DATE: APRIL 23, 1965
RECORDING NO.: 5870467
PURPOSE: STORM DRAINAGE AND UTILITIES
AFFECTS: WESTERLY 10 FEET OF LOT 3, TRACT A, AND OTHER PROPERTY ADJOINING BUTTERWORTH ROAD

(EASEMENT(S) ARE DEPICTED HEREON)

3. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: CITY OF MERCER ISLAND
PURPOSE: UNDERGROUND STORM DRAIN RECORDING
DATE: APRIL 23, 1965
RECORDING NO.: 5870467
AFFECTS: THE NORTH 10 FEET OF LOT 1 AND ALL OF TRACT A

(EASEMENT(S) ARE DEPICTED HEREON)

4. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: MERCER ISLAND SEWER DISTRICT, A MUNICIPAL CORPORATION
PURPOSE: UNDERGROUND RIGID CONDUITS
RECORDING DATE: MAY 12, 1965
RECORDING NO.: 5878038
AFFECTS: PORTION OF TRACT A

(EASEMENT IS DEPICTED HEREON)

5. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SHOWN IN THE DOCUMENT

RECORDING DATE: SEPTEMBER 11, 1996
RECORDING NO.: 9609110173
PURPOSE: INGRESS AND EGRESS
AFFECTS: PORTION OF LOT 4 DESCRIBED AS FOLLOWS:
BEGINNING AT THE MOST WESTERLY CORNER OF SAID LOT 4, THEN SOUTH 22°26'49" EAST ALONG THE WESTERLY LINE OF SAID LOT 4 A DISTANCE OF 23.56 FEET; THENCE SOUTH 73°10'02" EAST ALONG THE SOUTHERLY LINE OF SAID LOT 4 A DISTANCE OF 35.00 FEET; THENCE NORTH 5°05'50" WEST A DISTANCE OF 53.14 FEET TO THE POINT OF BEGINNING.

(EASEMENT IS DEPICTED HEREON)

6. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: CITY OF MERCER ISLAND
PURPOSE: PUBLIC STORM DRAINAGE
RECORDING DATE: DECEMBER 29, 2000
RECORDING NO.: 20001229000271
AFFECTS: SOUTHEASTERLY PORTION OF SAID PREMISES

(EASEMENT IS DEPICTED HEREON, SEE NOTE)

7. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SHOWN IN THE DOCUMENT

RECORDING DATE: AUGUST 15, 2002
RECORDING NO.: 20020815001275
PURPOSE: UTILITIES TOGETHER WITH MAINTENANCE THEREOF
AFFECTS: SOUTHERLY PORTION OF SAID PREMISES

(EASEMENT(S) ARE DEPICTED HEREON)

8. COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, ENCROACHMENTS, DEDICATIONS, BUILDING SETBACK LINES, NOTES, STATEMENTS, AND OTHER MATTERS, IF ANY, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH ON MERCER ISLAND BOUNDARY LINE REVISION NO. M.I. 92-09-43:

RECORDING NO: 9212299014

(EASEMENT IS DEPICTED HEREON)

9. COVENANTS, CONDITIONS, RESTRICTIONS, RECITALS, RESERVATIONS, EASEMENTS, EASEMENT PROVISIONS, ENCROACHMENTS, DEDICATIONS, BUILDING SETBACK LINES, NOTES, STATEMENTS, AND OTHER MATTERS, IF ANY, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH ON THE BOUNDARY LINE ADJUSTMENT NO. 94-0467:

RECORDING NO: 9606139004

(EASEMENT(S) ARE DEPICTED HEREON)

10. EXCEPTIONS AND RESERVATIONS CONTAINED IN DEED WHEREBY THE GRANTOR EXCEPTS AND RESERVES ALL OIL, GASES, COAL, ORES, MINERALS, FOSSILS, ETC., AND THE RIGHT OF ENTRY FOR OPENING, DEVELOPING AND WORKING THE SAME AND PROVIDING THAT SUCH RIGHTS SHALL NOT BE EXERCISED UNTIL PROVISION HAS BEEN MADE FOR FULL PAYMENT OF ALL DAMAGES SUSTAINED BY REASON OF SUCH ENTRY

GRANTOR: STATE OF WASHINGTON
RECORDING NO.: 1579699

RIGHT OF THE STATE OF WASHINGTON OR ITS SUCCESSORS, SUBJECT TO PAYMENT OF COMPENSATION, TO ACQUIRE RIGHTS OF WAY FOR PRIVATE RAILROADS, SKID ROADS, FLUMES, CANALS, WATER COURSES OR OTHER EASEMENTS FOR TRANSPORTING AND MOVING TIMBER, STONE, MINERALS AND OTHER PRODUCTS FROM THIS AND OTHER LAND, AS RESERVED IN ABOVE-REFERENCED DEED.

AFFECTS: SECOND CLASS SHORELANDS

11. COVENANTS, CONDITIONS, RESTRICTIONS, LIABILITY FOR ASSESSMENTS, AND EASEMENTS BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, INCLUDING BUT NOT LIMITED TO THOSE BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, SOURCE OF INCOME, GENDER, GENDER IDENTITY, GENDER EXPRESSION, MEDICAL CONDITION OR GENETIC INFORMATION, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS SET FORTH IN THE DOCUMENT

RECORDING DATE: APRIL 23, 1965
RECORDING NO.: 5870467

(EASEMENTS ARE DEPICTED HEREON)

12. AGREEMENT, AND THE TERMS AND CONDITIONS THEREOF:

RECORDING DATE: DECEMBER 8, 1955
RECORDING NO.: 4644177
REGARDING: ESTABLISHING THE NORTH BOUNDARY LINE OF SECOND CLASS SHORELANDS ADJOINING LOT 1

(AGREEMENT NOTE IS DEPICTED HEREON)

SCHEDULE B, PART 2, EXCEPTIONS (CONTINUED):

13. AGREEMENT, AND THE TERMS AND CONDITIONS THEREOF:

RECORDING DATE: AUGUST 4, 1977
RECORDING NO.: 7708040644
REGARDING: THE BUILDING AND MAINTENANCE OF A DOCK ON THE SECOND CLASS SHORELANDS

(AGREEMENT NOTE IS DEPICTED HEREON)

14. AGREEMENT TO REMOVE AND REPLACE ENCROACHMENTS WITHIN PUBLIC RIGHT-OF-WAY, AND THE TERMS AND CONDITIONS THEREOF:

RECORDING DATE: NOVEMBER 25, 1997
RECORDING NO.: 9711251057

(IT IS UNCLEAR FROM THE DOCUMENT IF ANY ENCROACHMENTS HAVE BEEN OR WILL BE REMOVED UPON CITY NOTICE)

15. ANY QUESTION THAT MAY ARISE DUE TO SHIFTING AND CHANGING IN THE COURSE, BOUNDARIES OR HIGH WATER LINE OF LAKE WASHINGTON.

16. RIGHTS OF THE STATE OF WASHINGTON IN AND TO THAT PORTION, IF ANY, OF THE LAND WHICH LIES BELOW THE LINE OF ORDINARY HIGH WATER OF LAKE WASHINGTON.

17. ANY PROHIBITION OR LIMITATION OF USE, OCCUPANCY OR IMPROVEMENT OF THE LAND RESULTING FROM THE RIGHTS OF THE PUBLIC OR RIPARIAN OWNERS TO USE ANY PORTION WHICH IS NOW OR WAS FORMERLY COVERED BY WATER.

18. PARAMOUNT RIGHTS AND EASEMENTS IN FAVOR OF THE UNITED STATES FOR COMMERCE, NAVIGATION, FISHERIES AND THE PRODUCTION OF POWER.

19. RESERVATIONS AND EXCEPTIONS IN UNITED STATES PATENTS OR IN ACTS AUTHORIZING THE ISSUANCE THEREOF; INDIAN TREATY OR ABORIGINAL RIGHTS.

24. ANY RIGHTS, INTERESTS OR CLAIMS WHICH MAY EXIST OR ARISE BY REASON OF THE FOLLOWING MATTERS DISCLOSED BY AN INSPECTION AND BY SURVEY PREPARED BY M.W. MARSHALL DATED OCTOBER 5, 1992, UNDER JOB NO. 1260-E:

A) QUESTION OF THE LOCATION OF A HEDGE AND A CHAIN LINK FENCE ALONG A PORTION OF THE NORTH BOUNDARY LINE THAT DO NOT CONFORM TO THE PROPERTY LINE;

B) QUESTION OF THE LOCATION OF PLANTINGS ALONG THE WEST LINE OF THE PROPERTY THAT DO NOT CONFORM TO THE PROPERTY LINE;

C) QUESTION OF THE LOCATION OF PLANTINGS AND VEGETATION ALONG THE SOUTH LINE OF THE PROPERTY THAT DO NOT CONFORM TO THE PROPERTY LINE.

NOTES:

1. MONUMENTS VISITED ON 03/15/2024.

2. THIS SURVEY WAS PERFORMED ON THE GROUND BETWEEN THE DATES OF 02/12/24 AND 03/15/2024 UNDER THE GUIDELINES OF THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS AS ADOPTED BY ALTA AND NSPS.

3. NO EVIDENCE OF CEMETARIES, BURIAL GROUNDS OR LAKES BORDER OR RUN THROUGH THESE PREMISES. AN EXISTING STREAM WITH SMALL MAN-MADE PONDS BORDERS THE SOUTHERN BOUNDARY HEREON AND IS DEPICTED.

4. UTILITIES LOCATED AND MAPPED BY DIRECT FIELD OBSERVATIONS AND UTILITY COMPANY MARKED LOCATIONS. UTILITIES LOCATED AND MARKED THE WEEK OF MARCH 11, 2024 BY MT. VIEW LOCATING SERVICES.

5. NO EVIDENCE OF ANY RECENT EARTH WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WERE OBSERVED DURING THIS SURVEY.

6. NO PROPOSED CHANGES IN STREET RIGHT-OF-WAY LINES OR EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS OBSERVED DURING THIS SURVEY.

7. NO WETLANDS MARKERS WERE FOUND DURING THIS SURVEY.

8. THE REVISED PROPERTY AREA AS SHOWN ON THE ROSA LINE REVISION (RLR) EQUALS 83,107 SQ. FT., EXCLUSIVE OF EASEMENT FOR INGRESS & EGRESS. OUR CACULATED AREA EQUALS 83,106 SQ. FT. THESE AREAS ARE TO THE ROCK SEAWALL (HIGH WATER LINE) AS DEPICTED ON THE REVISION.
AS-BUILT LOCATIONS OF THE CURRENT ROCK SEAWALL DIFFER SLIGHTLY FROM THE 1996 REVISION. PROPERTY AREAS TO THE APPROXIMATE CURRENT FACE OF SEAWALL ARE AS FOLLOWS: 83,640 SQ. FT. (INCLUDING EASEMENT) AND 83,320 SQ. FT. EXCLUDING EASEMENT.

9. THE SEAWALL LOCATION WAS SURVEYED AND MEASURED ON FEB. 12, 2024. IT WAS MEASURED AT THE APPROXIMATE FACE (WATER SIDE) OF 2-MAN OR LARGER ROCKS AT POINTS OF ANGLE OR END POINTS. THESE MEASURED POINTS ARE ARBITRARY AS ROCK FACES ARE NOT ALIGNED IN CONTINUOUSLY STRAIGHT SECTIONS AND CONTAIN UNEVEN SURFACES. THE FACE OF SEAWALL IS SUBJECT TO CHANGE DUE TO NATURAL CAUSES. ACTUAL OWNERSHIP LINES EXTEND TO THE LIMITS OF SECOND CLASS SHORELANDS ADJOINING. NO ATTEMPT WAS MADE TO SURVEY THESE LIMITS.

REFERENCE SURVEYS:

1. PLAT OF TONJA ESTATES, VOL. 77, PAGE 64, KING COUNTY, WA.
2. ROSA LINE REVISION, CITY OF MERCER ISLAND FILE NO. 94-0467, REC. NO. 9606139004
3. FELTIS-EYRING BOUNDARY LINE REVISION, MERCER ISLAND FILE NO. M.I. 92-09-43, REC. NO. 9212299014

LEGEND:

⊗	FOUND CONCRETE MONUMENT IN CASE W/ 3/8" BRASS PLUG & PUNCH
●	SET 1/2" REBAR & CAP "CASCADE LS 37540"
○	FOUND REBAR & CAP OR IRON PIPE & CAP AS DESCRIBED
⊠	SET OR FOUND NAIL & WASHER AS DESCRIBED
CB	CATCH BASIN
AD	AREA DRAIN
SS	SANITARY SEWER MANHOLE
GV	GAS VALVE
GM	GAS METER
FH	FIRE HYDRANT
WV	WATER VALVE
WM	WATER METER
WH	WATER HOT BOX
WF	WATER FAUCET
TR	TELEPHONE OR COMM RISER
PT	POWER TRANSFORMER
PV	POWER VAULT
EB	ELECTRIC BOX
UP	UTILITY POLE
GA	GUY ANCHOR
MB	MAIL BOX
	CONIFER TREE
	LEYLAND CYPRESS IN ROW
	DECIDUOUS TREE
E	OVERHEAD ELECTRICAL AND/OR COMM LINES
UE	UNDERGROUND ELECTRICAL LINES
G	UNDERGROUND GAS MAIN
T	UNDERGROUND COMM LINES
S	SANITARY SEWER MAIN
W	UNDERGROUND WATER MAIN
	IRON FENCE ON CONC. FOOTING
X	CHAIN LINK FENCE
	ROCKERY
(P)	PLAT OF TONJA ESTATES
(RLR)	ROSA LINE REVISION REC. NO. 9606139004
CLF	CHAIN LINK FENCE
G	GATE
CP	CONCRETE PILLAR
EA	EDGE OF PAVEMENT
EC	EXTRUDED CURB
APP	APPLE
CW	COTTONWOOD
MAG	MAGNOLIA
SPR	SPRUCE
K	KATSURA
C	CEDAR
F	FIR
PE	PAULOWNIA/EMPRESS
CC	CHINESE CATALPA
DT	DECIDUOUS TREE
M	MAPLE
JS	JAPANESE STEWARTIA
P	PINE
L	LAUREL
J	JUNIPER
B	BIRCH
PC	PHOTINIA CV.
26.30	SPOT ELEVATION
A	PROPERTY CORNER NOTE
1	EXCEPTION REFERENCE NO. PER SCHEDULE B
	AREAS OF GRAVEL
	AREAS OF STONE PAVERS
	AREAS OF CONCRETE
	AREAS OF CONCRETE PAVERS

ALTA/NSPS LAND TITLE SURVEY CERTIFICATION

TO ROGER MACPHERSON RESIDENTIAL TRUST AND NANCY MACPHERSON RESIDENTIAL TRUST AND TO CHICAGO TITLE COMPANY OF WASHINGTON:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 4 AND 5 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MARCH 15, 2024.

DATE OF PLAT MAP: 03/21/24
NAME: Jeffrey Allen Otterson
REGISTRATION NO. 37540

JEFFREY ALLEN OTTERSON · STATE OF WASHINGTON · 37540 · REGISTERED PROFESSIONAL LAND SURVEYOR · 03/21/24

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF IN ROGER MACPHERSON RESIDENTIAL TRUST AND NANCY MACPHERSON RESIDENTIAL TRUST Mar. 2024

Jeffrey Allen Otterson
P.L.S. CERTIFICATE NO. 37540

JEFFREY ALLEN OTTERSON · STATE OF WASHINGTON · 37540 · REGISTERED PROFESSIONAL LAND SURVEYOR

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@cascadels.com

DRAWN BY: JAO | CHECKED BY: JAO | SHEET: 1 of 2 | DATE: Thu., Mar. 21, 2024
JOB NO.: 2024-003 | SCALE: N/A

GRAPHIC SCALE 1"=20'

20 0 20

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

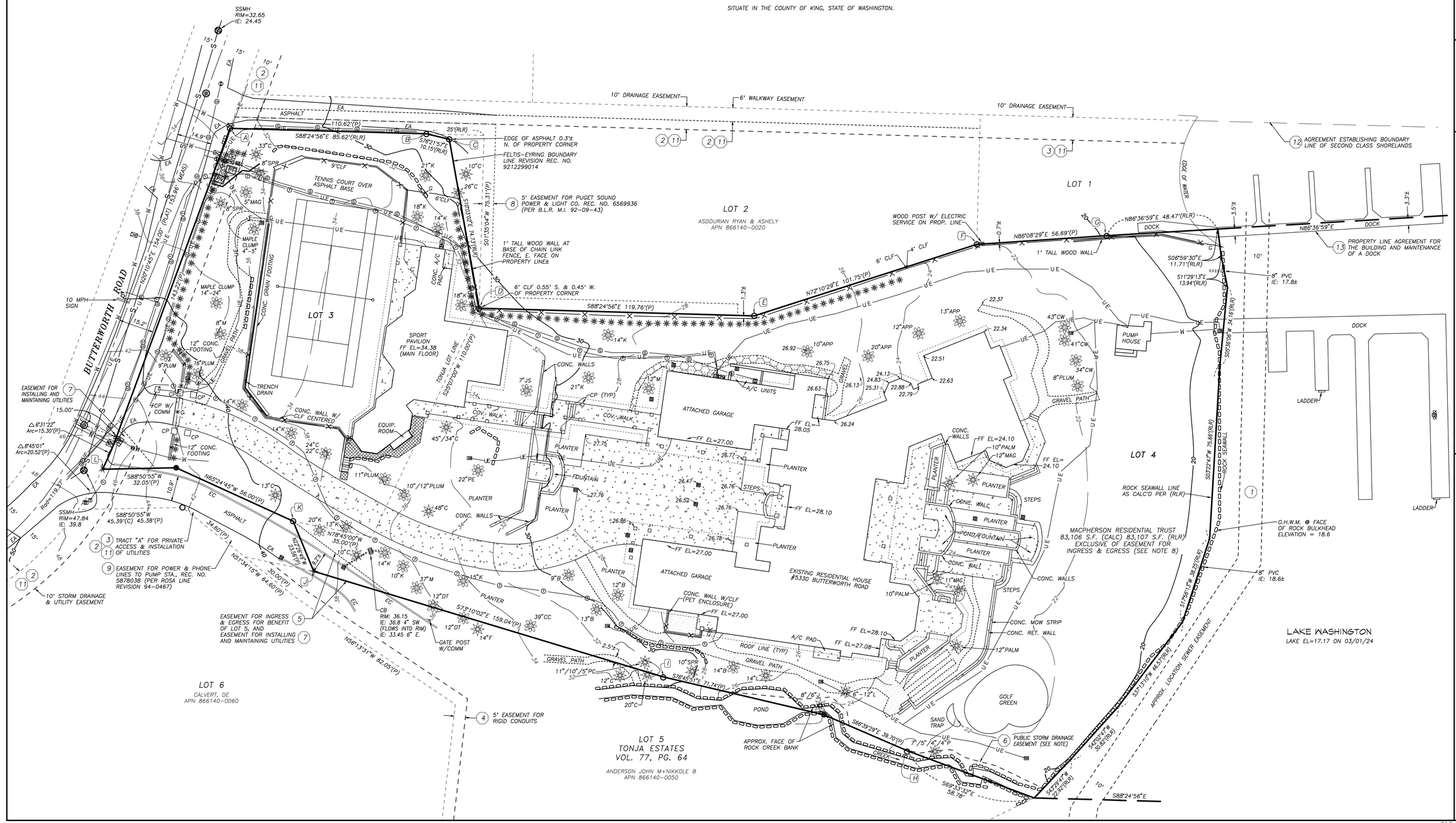
TOGETHER WITH AN UNDIVIDED 1/2 INTEREST IN TRACT A OF SAID PLAT;

(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 AND NANCY MACPHERSON RESIDENTIAL TRUST IN MAY, 2024

Jeffrey Allen Peterson
P.L.S. CERTIFICATE NO. 37540

JEFFREY ALLEN PETERSON 37540 REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF WASHINGTON

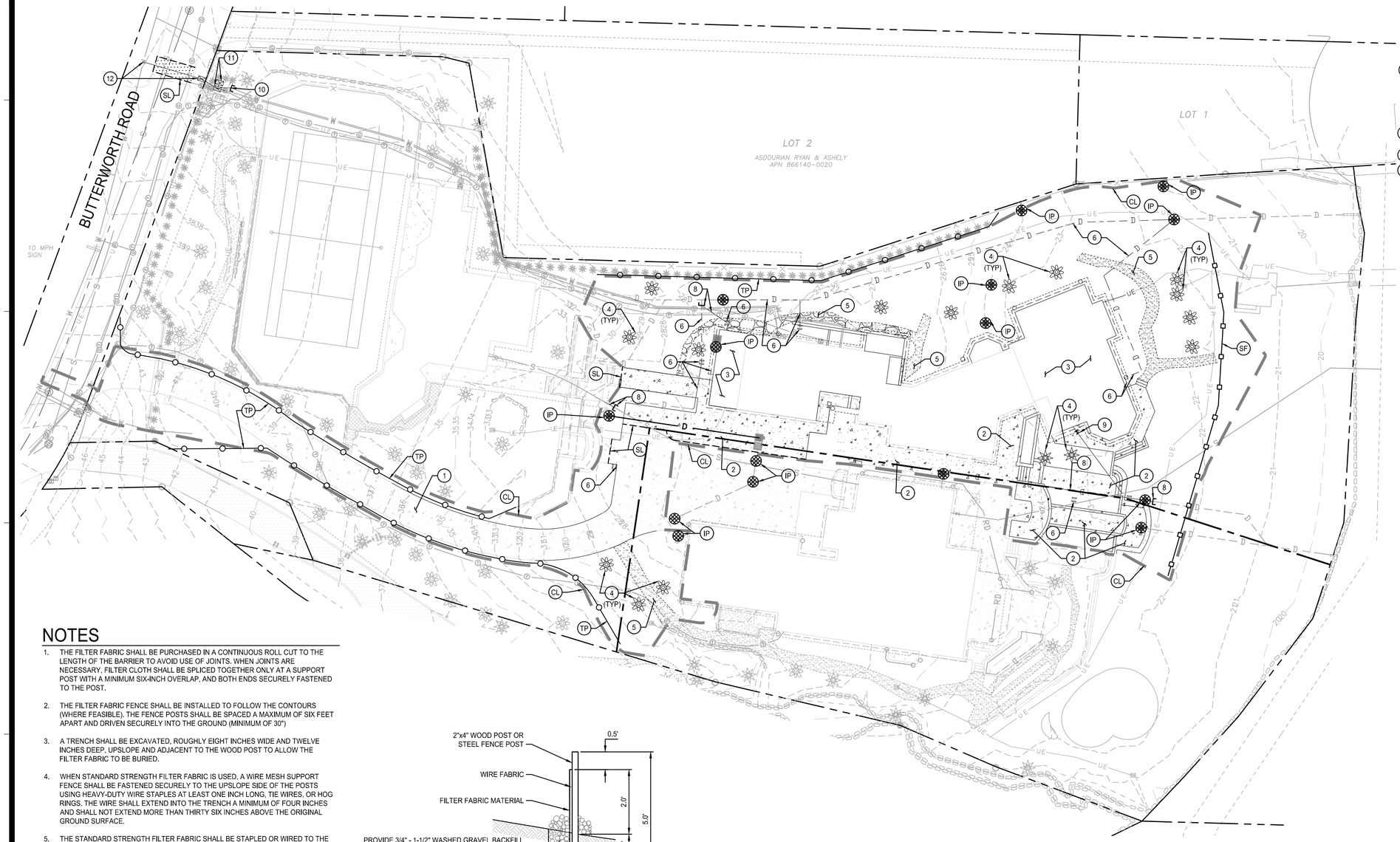
ALTA/NSPS LAND TITLE SURVEY

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@cascadels.com

DRAWN BY: JAO
JOB NO.: 2024-003
CHECKED BY: JAO
SCALE: 1"=20'
SHEET: 2 OF 2
DATE: Thu, Mar. 21, 2024

C:\Cascade\Projects\2024\2024-003.pro



LEGEND

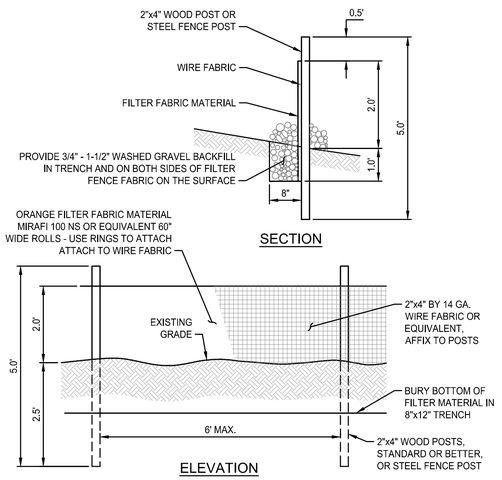
- RIGHT-OF-WAY / PROPERTY LINE
- LOT LINE
- CL — CLEARING / PROJECT LIMITS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING CONCRETE
- SF — SILT FENCE (1 / C1.0)
- IP — INLET PROTECTION (2 / C1.0)
- SL — SAWCUT LINE
- TREE PROTECTION FENCE
- REMOVE EXISTING TREE
- EXISTING TREE TO REMAIN
- 100 — EXISTING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

KEYNOTES

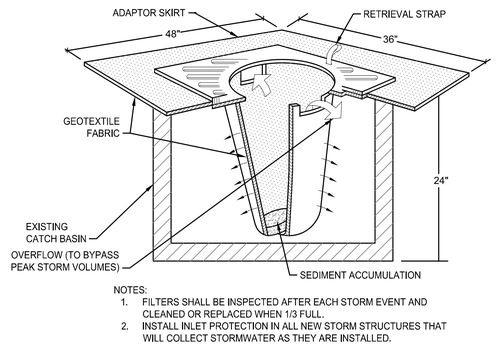
1. UTILIZE EXISTING DRIVEWAY AS CONSTRUCTION ENTRANCE
2. REMOVE EXISTING CEMENT CONCRETE.
3. REMOVE EXISTING BUILDING AND OVERHANG. REFER TO ARCHITECTURAL PLANS FOR EXTENTS OF DEMOLITION.
4. REMOVE EXISTING TREE.
5. REMOVE EXISTING ROCKERY/GRAVEL PATH.
6. REMOVE EXISTING UTILITY.
7. PRESERVE AND PROTECT EXISTING BUILDING.
8. REMOVE PORTION OF EXISTING UTILITY AND CAP IN PLACE.
9. REMOVE AND RELOCATE EXISTING UTILITY CONNECTION PER PLANS.
10. CUT AND CAP EXISTING 2" FIRE LINE.
11. REMOVE EXISTING 2" FIRE SUPPRESSION DOUBLE CHECK VALVE AND 5/8" METER LOOP. RECONNECT EXISTING WATER SERVICE LINE TO PROPOSED 1" WATER METER.
12. REMOVE EXISTING 2" METER AND SERVICE LINE AND REPLACE WITH PROPOSED WATER METER.

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 SPLICED 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.



1 SILT FENCE
NOT TO SCALE



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.

2 INLET PROTECTION
NOT TO SCALE

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.

N

20 10 0 20 40
SCALE IN FEET

Know what's below. Call before you dig.

PLOTTED: 7/29/2025 11:48 PM FILE: J4004-SHTESC.DWG LAST SAVED BY: JOHNMB

MACPHERSON RESIDENCE

5320 BUTTERWORTH RD
MERCER ISLAND, WA 98040

PERMIT SET

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

JOHN THOMAS BRADY
STATE OF WASHINGTON
24034982
REGISTERED PROFESSIONAL ENGINEER
07/29/2025

© 2024 Ethos Civil LLC. All rights reserved. No part of this document may be reproduced in any form without permission from Ethos Civil LLC.

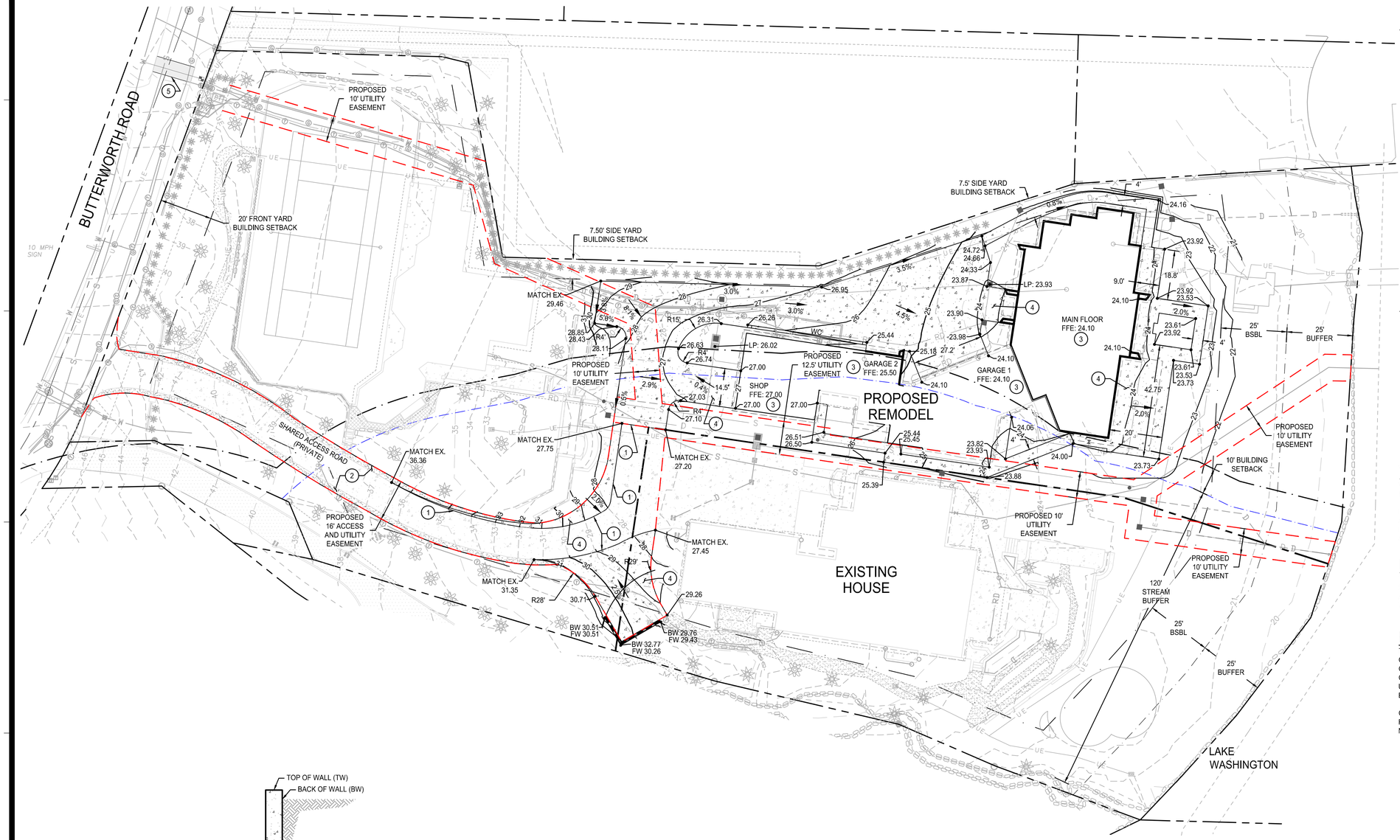
DESIGNED AMB
CHECKED JTB
DRAWN AMB
CHECKED JTB

#	DATE	DESCRIPTION

24004
07/29/2025

TESC AND DEMOLITION

C1.0



LEGEND

- RIGHT-OF-WAY / PROPERTY LINE
- LOT LINE
- PROPOSED EASEMENT
- PROPOSED BUILDING OUTLINE, REFER TO ARCHITECTURE PLAN
- BUILDING SETBACK LINE
- PROPOSED CEMENT CONCRETE PAVEMENT (3 / C2.0)
- PROPOSED GRAVEL SURFACING (2 / C2.0)
- EXISTING CEMENT CONCRETE PAVEMENT
- EXISTING GRAVEL SURFACING
- WC — 6" WEDGE CURB
- RETAINING WALL, REFER TO ARCHITECTURAL DRAWINGS (1 / C2.0)

KEYNOTES

1. MATCH EXISTING.
2. PROVIDE 2' GRAVEL SHOULDERS AS SHOWN ON PLANS. GRADED IN AT 2.0% UP FROM EXISTING DRIVEWAY SHOULDER. (2 / C2.0)
3. REFER TO ARCHITECTURAL PLANS FOR CHANGES IN FFE.
4. PROVIDE CEMENT CONCRETE PAVEMENT. (3 / C2.0)
5. UTILITY RESTORATION PATCH, MATCH EXISTING.

VERTICAL DATUM

VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

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.

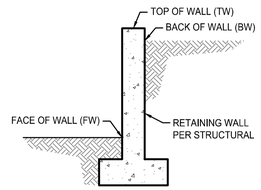
BASIS OF BEARING

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.

EARTHWORK QUANTITIES

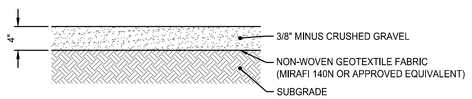
THE EARTHWORK QUANTITIES SHOWN BELOW ARE ESTIMATES ONLY. DO NOT USE THEM FOR BIDDING PURPOSES. THE QUANTITIES DO NOT ACCOUNT FOR STRIPPING, COMPACTION, CUT OR FILL ADJUSTMENT FACTORS, PAVEMENT SECTIONS, UTILITY TRENCHING, OR OTHER FACTORS THAT AFFECT EARTHWORK QUANTITIES.

CUT: 170 CY
FILL: 50 CY
NET: 120 CY (CUT)



1 WALL SPOT ELEVATIONS

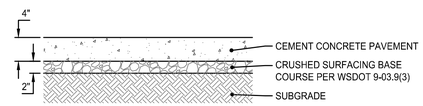
NOT TO SCALE



NOTES:
1. DEPTHS INDICATED ARE COMPACTED THICKNESSES.
2. CRUSHED GRAVEL AND SUBGRADE SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% BASED ON THE MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM D-1557. IF COMPACTION REQUIREMENT IS NOT MET, EXCAVATE AND REPLACE WITH 6" GRAVEL BASE PER WSDOT 4-02. GRAVEL BASE SHALL BE INCREASED AS REQUIRED TO ACHIEVE A FIRM AND UNYIELDING SUBGRADE.
3. RECYCLED CONCRETE IS NOT ACCEPTABLE.

2 GRAVEL SURFACING

NOT TO SCALE



NOTES:
1. DEPTHS INDICATED ARE COMPACTED THICKNESSES.
2. CEMENT CONCRETE PAVEMENT SHALL CONSIST OF PORTLAND CEMENT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AND A MINIMUM RUPTURE MODULUS OF 580 PSI.
3. ALL BASE MATERIAL SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% BASED ON THE MODIFIED PROCTOR MAXIMUM DRY DENSITY PER ASTM D-1557.
4. SUBGRADE SHALL BE COMPACTED TO A FIRM AND UNYIELDING CONDITION PRIOR TO PLACEMENT OF ANY PAVEMENT LAYERS. ANY LOCALIZED ZONES OF SOFT, ORGANIC-RICH, OR DEBRIS-LADEN SOILS SHOULD BE OVEREXCAVATED AND REPLACED WITH STRUCTURAL FILL MATERIAL.
5. RECYCLED CONCRETE IS NOT ACCEPTABLE.

3 CEMENT CONCRETE

NOT TO SCALE

N

20 10 0 20 40

SCALE IN FEET

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

PLOTTED: 7/29/2025 - 11:59 PM FILE: 24004-SHEETLEVNG LAST SAVED BY: JOHNBAB

MACPHERSON RESIDENCE

5320 BUTTERWORTH RD
MERCER ISLAND, WA 98040

PERMIT SET

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

THOMAS BRAUN — STATE OF WASHINGTON — 24034982 — REGISTERED PROFESSIONAL ENGINEER

07/29/2025

© 2024 Ethos Civil LLC. All rights reserved. No part of this document may be reproduced in any form without permission from Ethos Civil LLC.

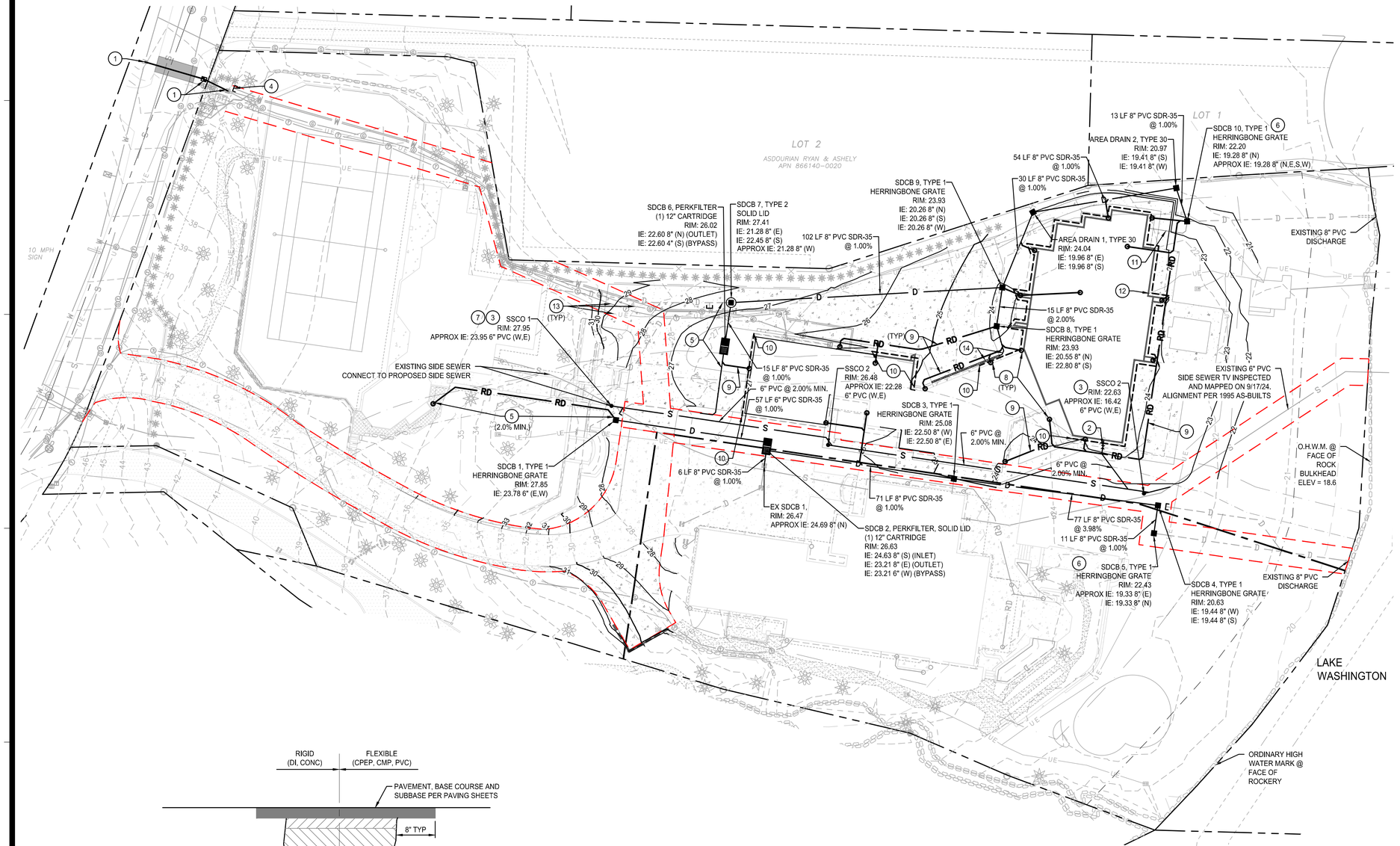
DESIGNED: AMB
CHECKED: JTB
DRAWN: AMB
CHECKED: JTB

#	DATE	DESCRIPTION

24004
07/29/2025

SITE PLAN

C2.0

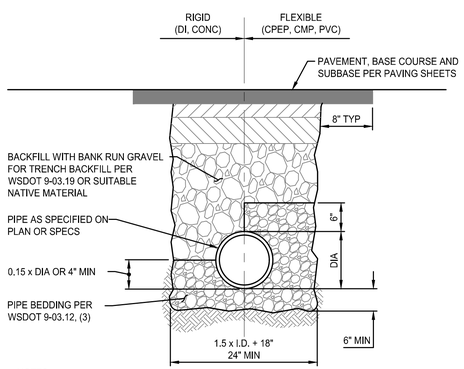


LEGEND

- RIGHT-OF-WAY / PROPERTY LINE
- LOT LINE
- PROPOSED EASEMENT
- PROPOSED BUILDING OUTLINE, REFER TO ARCHITECTURE PLAN
- S — SANITARY SIDE SEWER (1 C3.0)
- SANITARY SEWER CLEANOUT (3 C3.1)
- CATCH BASIN TYPE 1 OR AREA DRAIN TYPE 30 PER PLAN CALLOUT (1 C3.1, 5 C3.1)
- CATCH BASIN TYPE 2 (6 C3.1)
- D — STORM DRAINAGE PIPING (1 C3.0)
- W — WATER PIPING (1 C3.0)
- WATER METER (2 C3.1)
- FOOTING DRAIN (2 C3.0)
- TRENCH DRAIN, ZURN Z886
- RD — ROOF DRAIN (3 C3.0)
- PERKFILTER (4 C3.1)
- SEWER BACKFLOW PREVENTION

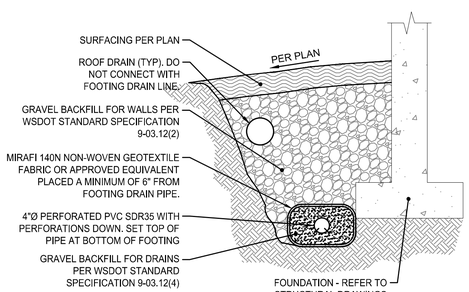
KEYNOTES

1. PROVIDE 1" WATER METER (SIZE AS REQUIRED) AND RECONNECT TO EXISTING WATER MAIN AND RPBA. (2 C3.1)
2. PROVIDE SEWER BACKFLOW PREVENTION VALVE.
3. CONNECTION TO EXISITNG SEWER SERVICE LINE. POTHOLE TO LOCATE EXACT LOCATION AND DEPTH OF EXISTING LINE.
4. CAP EXISTING 2" FIRE LINE.
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. (2 C3.0)
11. 4" PVC FOOTING DRAIN TIGHTLINE @ 2.00% MIN.
12. RECONNECT POWER LINE TO PROPOSED BUILDING EXPANSION.
13. PROTECT EXISTING UTILITIES.
14. PROVIDE 27 LF ZURN Z886 TRENCH DRAIN WITH CAST IRON GATE, 4" PVC DRAIN LINE TO PROPOSED CATCH BASIN @ 1.00% MIN.

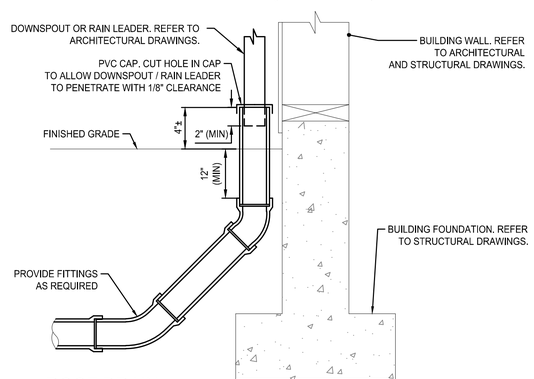


NOTES:
1. BACKFILL MATERIAL SHALL NOT HAVE ROCKS OR PARTICLES LARGER THAN 1" WITHIN 12" OF THE PIPE. BACKFILL MATERIAL SHALL BE PLACED IN 8" MAXIMUM LOOSE LIFTS AND COMPACTED TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D-1557).
2. CONSTRUCT ALL STORM AND ROOF DRAINS IN CONFORMANCE WITH 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

N
30 15 0 30 60
SCALE IN FEET

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

PLOTTED: 7/29/2025 - 16:15 PM FILE: J4004-SHEETS.DWG LAST SAVED BY: JOHNBABB

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

THOMAS E. JOHNBABB — STATE OF WASHINGTON — 24034982 — REGISTERED PROFESSIONAL ENGINEER
07/29/2025

© 2024 Ethos Civil LLC. All rights reserved. No part of this document may be reproduced in any form without permission from Ethos Civil LLC.

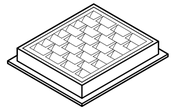
DESIGNED AMB
CHECKED JTB
DRAWN AMB
CHECKED JTB

#	DATE	DESCRIPTION

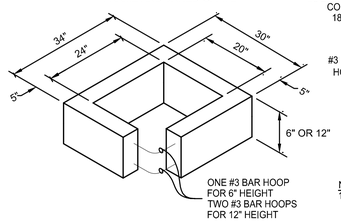
24004
07/29/2025

UTILITY PLAN

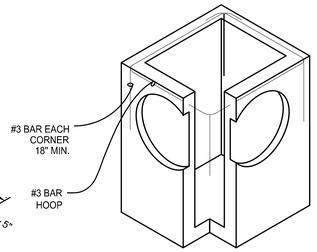
C3.0



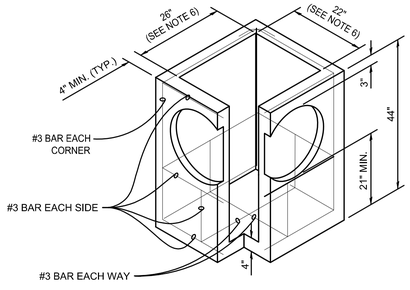
FRAME AND VANED GRATE



RECTANGULAR ADJUSTMENT SECTION



ALTERNATIVE PRECAST BASE SECTION



SECTION B-B

NOTE:
1. AS ACCEPTABLE ALTERNATIVES TO THE REBAR SHOWN IN THE PRECAST BASE SECTION, FIBERS (PLACED ACCORDING TO THE STANDARD SPECIFICATIONS), OR WIRE MESH HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT SHALL BE USED WITH THE MINIMUM REQUIRED REBAR SHOWN IN THE ALTERNATIVE PRECAST BASE SECTION. WIRE MESH SHALL NOT BE PLACED IN THE KNOCKOUTS.
2. THE KNOCKOUT DIAMETER SHALL NOT BE GREATER THAN 20". KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STANDARD SPECIFICATION 9-04.3.
3. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE LOWEST PIPE INVERT SHALL BE 5'.
4. THE FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE UP OR DOWN. THE FRAME MAY BE CAST INTO THE ADJUSTMENT SECTION.
5. THE PRECAST BASE SECTION MAY HAVE A ROUNDED FLOOR, AND THE WALLS MAY BE SLOPED AT A RATE OF 1:24 OR STEEPER.
6. THE OPENING SHALL BE MEASURED AT THE TOP OF THE PRECAST BASE SECTION.
7. ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BASIN HAS BEEN PLACED.

PIPE ALLOWANCES

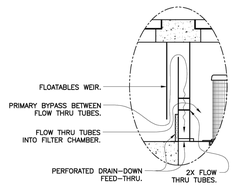
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
*CPSSP (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

*CORRUGATED POLYETHYLENE STORM SEWER PIPE

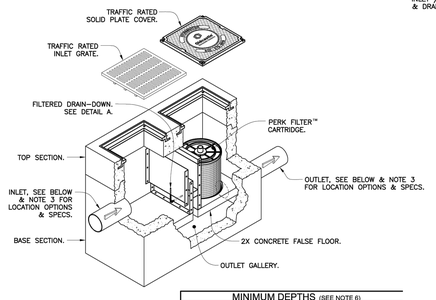
1 CATCH BASIN TYPE 1
NOT TO SCALE

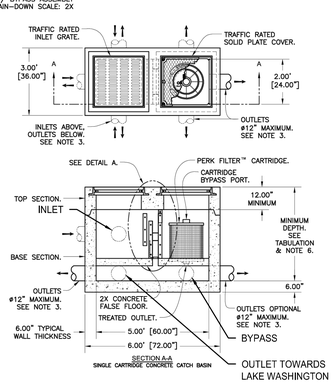
Notes:

1. Precast concrete structure shall be manufactured in accordance with ASTM Designation C857 and C858.
2. Perk Filter™ Catch basin shall be supplied with traffic rated (H20) bicycle-proof grates and solid plate cover.
3. Inlet pipe(s) may enter device on three sides of the inlet chamber. Outlet pipe(s) may exit on all four sides. All pipe is Ø 12" maximum.
4. Inlet chamber shall be supplied with a drain-down device designed to remove standing water between storm events.
5. Perk Filter™ cartridge shall be maintained in accordance with manufacturer recommendations.
6. For depths less than the specified minimum contact Oldcastle® Stormwater Solutions for engineering assistance.



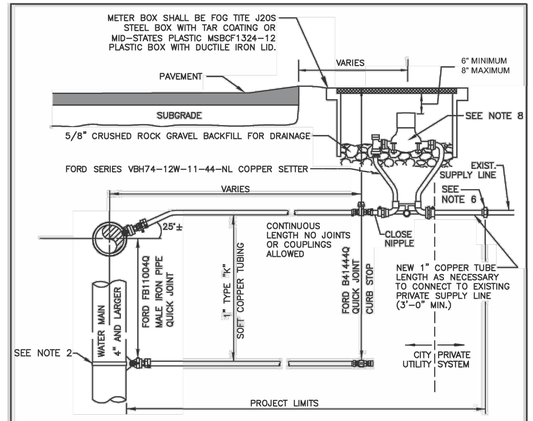
DETAIL A
INLET / BYPASS ASSEMBLY & DRAIN-DOWN SCALE: 2X





MINIMUM DEPTHS (SEE NOTE 6)					
	CARTRIDGE SIZE	Ø 6.0" OUTLET PIPE (IN INCHES)	Ø 8.0" OUTLET PIPE (IN INCHES)	Ø 10.0" OUTLET PIPE (IN INCHES)	Ø 12.0" OUTLET PIPE (IN INCHES)
	12.00"	39	41	43	45
	18.00"	46	48	50	52
STACKED	12.00" + 12.00"	56	58	60	62
STACKED	18.00" + 12.00"	63	65	67	69

4 OLDCASTLE PERKFILTER SINGLE CARTRIDGE CONCRETE CATCH BASIN
NOT TO SCALE



NOTES

1. WATER SERVICES SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT DATED 01/04/2014.
2. ON EXISTING WATER MAINS USE NYLON COATED D.I. SADDLE WITH STAINLESS STEEL DOUBLE STRAPS, ROMAC 202NS, OR APPROVED EQUAL.
3. MINIMUM DISTANCE BETWEEN CORP STOPS SHALL BE 18" MINIMUM DISTANCE BETWEEN TAPS, BETWEEN CORP STOP AND PIPE ENDS SHALL BE 24", ALL HORIZONALLY STAGGERED.
4. PLASTIC METER BOXES SHALL NOT BE INSTALLED WITHIN ROADWAY, SIDEWALK, OR DRIVEWAYS.
5. UPON CITY ENGINEER'S APPROVAL, METER BOXES ARE ALLOWED TO BE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT OR SIDEWALK.
6. WHEN CONNECTING TO EXISTING PRIVATE SUPPLY LINE CONTAINING FERROUS METAL, PROVIDE INSULATING COUPLING (DB SERIES WITH C21 SERIES ADAPTERS) AND PROVIDE REDUCER AS NECESSARY TO MATCH EXISTING PRIVATE SUPPLY LINE DIAMETER.
7. SERVICE LINE SHALL BE PERPENDICULAR TO THE WATER MAIN AND STRAIGHT TO WATER METER, UNLESS OTHERWISE APPROVED BY CITY ENGINEER. PROVIDE WINDING SLACK IN THE SERVICE LINE BETWEEN THE MAIN AND WATER METER.
8. WATER METER SUPPLIED BY CITY.
9. ALL FITTINGS TO BE BRASS COMPRESSION TYPE, FORD QUICK JOINT OR EQUAL.
10. NO SERVICE CONNECTIONS BETWEEN BLOW-OFF AND END OF MAIN.

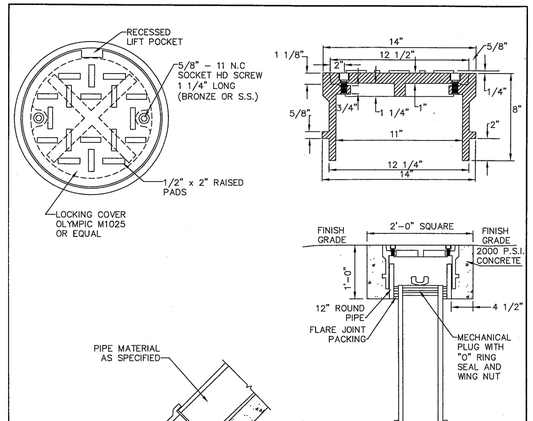
CITY OF MERCER ISLAND
STANDARD DETAILS
WATER

1" WATER METER INSTALLATION

REV DATE						APPROVED

05-02-2023 | NO SCALE | **W-13**

2 WATER METER
NOT TO SCALE



FOR PVC PIPE

NOTES

1. SEE S-27 FOR INSTALLATION DETAILS.

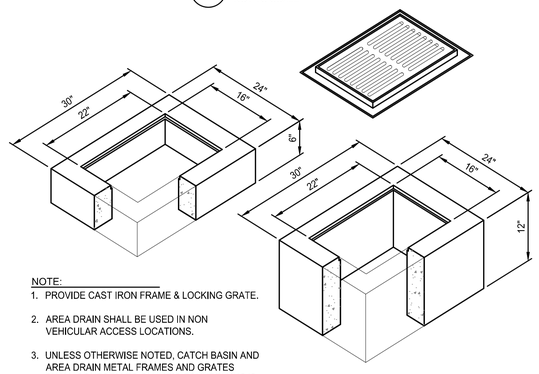
CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

CLEAN OUT DETAIL

REV DATE						APPROVED

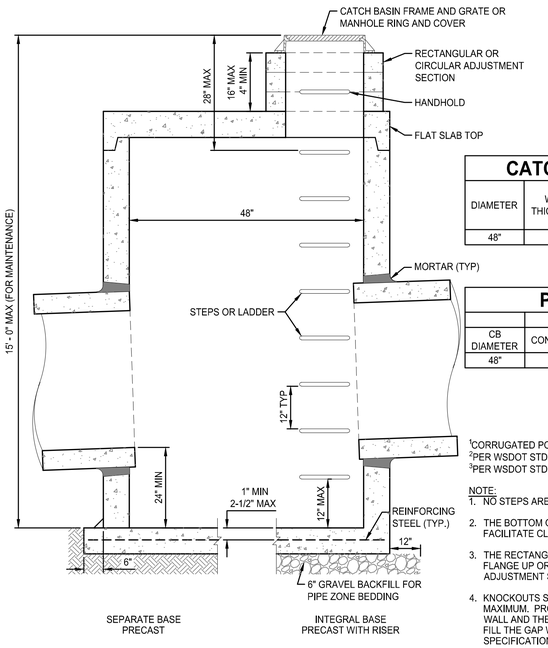
6-5-2009 | NO SCALE | **S-19**

3 CLEANOUT
NOT TO SCALE



NOTE:
1. PROVIDE CAST IRON FRAME & LOCKING GRATE.
2. AREA DRAIN SHALL BE USED IN NON VEHICULAR ACCESS LOCATIONS.
3. UNLESS OTHERWISE NOTED, CATCH BASIN AND AREA DRAIN METAL FRAMES AND GRATES SHALL CONFORM TO OLYMPIC FOUNDRY INC.'S 20"X24" AND 18"X24" LOCKING FRAME AND GRATE "TWS" ADA PEDESTRIAN GRATE PER THE SPECIFICATIONS.

5 AREA DRAIN - TYPE 30
NOT TO SCALE



CATCH BASIN DIMENSIONS				
DIAMETER	WALL THICKNESS	BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"

PIPE ALLOWANCES					
	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
CB DIAMETER	CONCRETE	ALL METAL	CPEP[1]	SOLID WALL PVC[2]	PROFILE WALL PVC[3]
48"	24"	30"	24"	27"	30"

[1]CORRUGATED POLYETHYLENE PIPE PER WSDOT STD SPEC 9-05.20
[2]PER WSDOT STD SPEC 9-05.12 (1)
[3]PER WSDOT STD SPEC 9-05.12 (2)

NOTE:
1. NO STEPS ARE REQUIRED WHEN HEIGHT IS 4' OR LESS.
2. THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE SLOPED TO FACILITATE CLEANING.
3. THE RECTANGULAR FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE UP OR DOWN. THE FRAME MAY BE CAST INTO THE ADJUSTMENT SECTION.
4. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STANDARD SPECIFICATION 9-04.3.

6 CATCH BASIN TYPE 2
NOT TO SCALE

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

PLOTTED: 7/29/2025 1:16:39 PM FILE: 24004-SHEETS.DWG LAST SAVED BY: JOHNBABB

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

STATE OF WASHINGTON THOMAS B. JOHNBABB 24034982 REGISTERED PROFESSIONAL ENGINEER
07/29/2025

© 2024 Ethos Civil LLC. All rights reserved. No part of this document may be reproduced in any form without permission from Ethos Civil LLC.

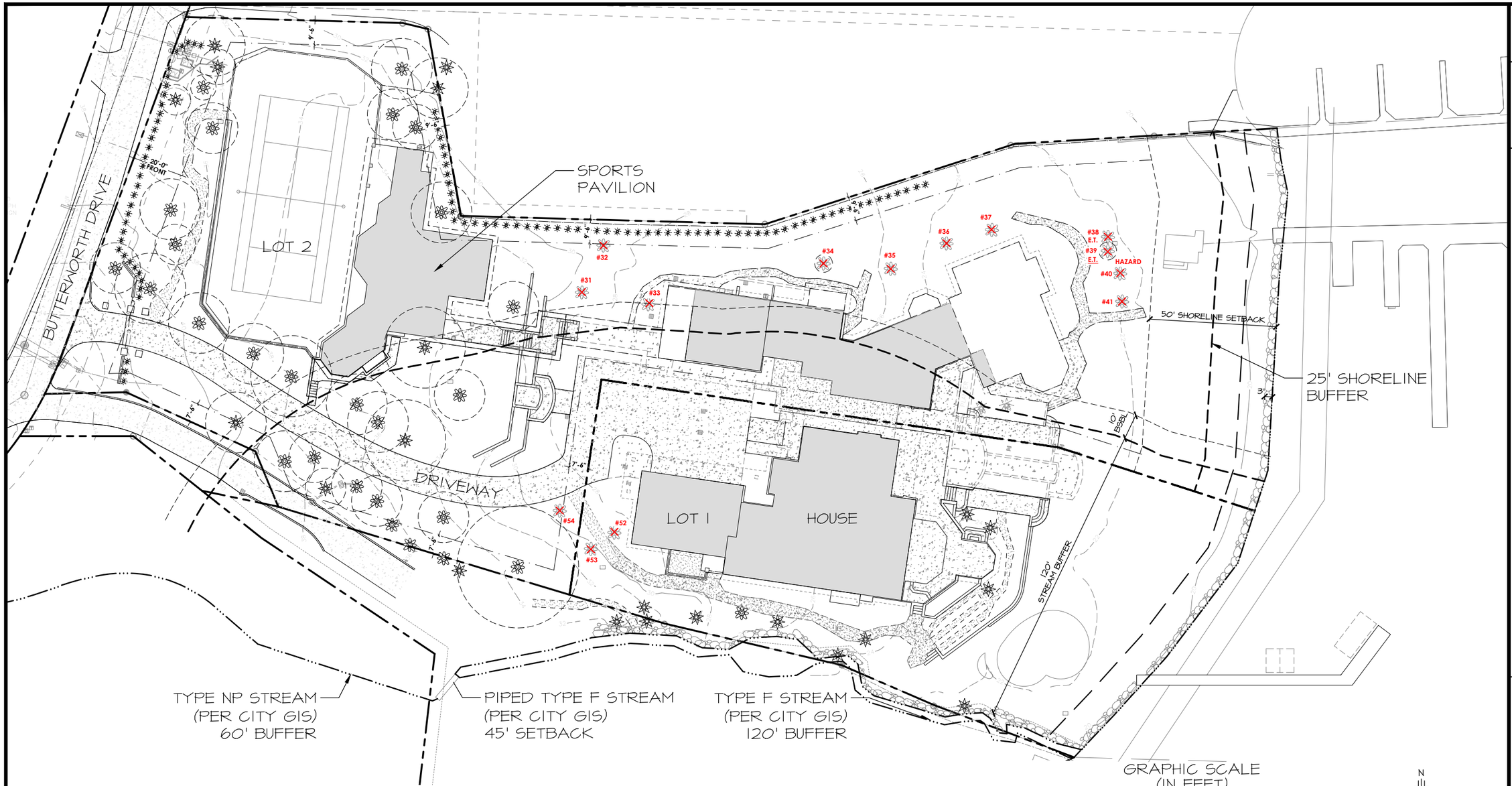
DESIGNED AMB
CHECKED JTB
DRAWN AMB
CHECKED JTB

#	DATE	DESCRIPTION

24004
07/29/2025

NOTES AND DETAILS

C3.1



PLAN LEGEND

- PROPERTY LINE
- STREAM / O.H.W.M. LOCATION
- STREAM / SHORELINE BUFFER
- 10' STRUCTURE SETBACK
- 10' SHORELINE BUFFER
- TREES TO BE REMOVED PER ARBORIST REPORT

GRAPHIC SCALE
(IN FEET)

0 20 40 60 80 120

SCALE: 1:40

N

NOTES

1. BASE INFORMATION PROVIDED BY CASCADE LAND SURVEYING, 16009 AP TUBBS RD E, BUCKLEY, WA 98321. 253.820.4016, JEFF@CASCADELS.COM.

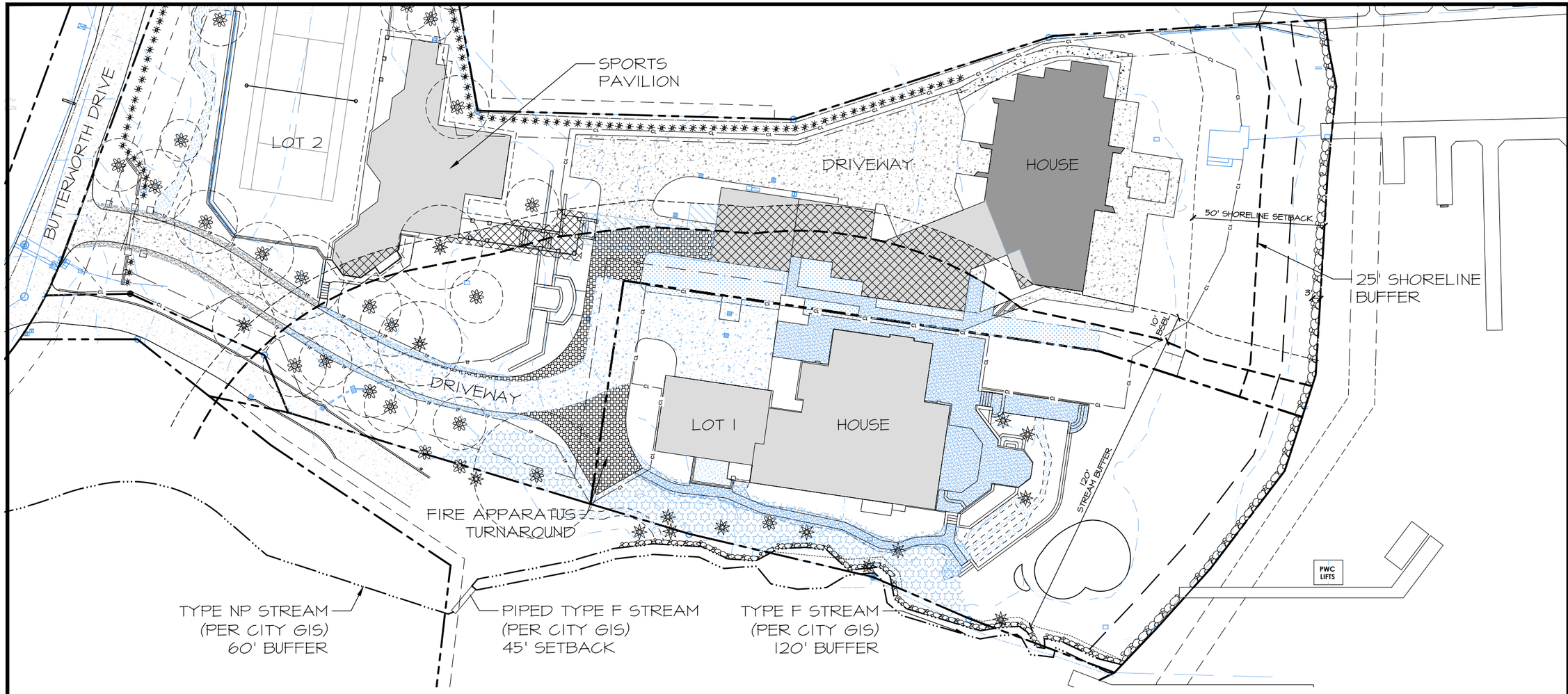
PROJECT 7341
DRAWN KV
SCALE AS NOTED
DATE 6-2-25
REVISED 6-4-25

1/6

FIGURE 1: EXISTING CONDITIONS
BUTTERWORTH BLA
5320 AND 5330 BUTTERWORTH ROAD
MERCER ISLAND, WASHINGTON
PARCEL 866140-0040 AND -0045

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 - Carnation, WA 98014 - 425.333.4535 - altoliver.com

7341-MIT-6-4-25.dwg



STREAM BUFFER / SETBACK IMPACTS

EXISTING IMPERVIOUS TO REMAIN	
STRUCTURE	3,675 SF
DRIVEWAY	3,555 SF
SIDEWALKS, PATHS, SHOULDERS	3,389 SF
TOTAL EXISTING IMPERVIOUS:	10,619 SF

REMOVED IMPERVIOUS	
STRUCTURE	685 SF
SIDEWALKS, PATHS, MISC	2,020 SF
TOTAL REMOVED IMPERVIOUS:	2,705 SF

NEW IMPERVIOUS	
DRIVEWAY AND HAMMERHEAD	1,790 SF
SIDEWALKS, PATHS, MISC	33 SF
TOTAL NEW IMPERVIOUS:	1,823 SF

NOTE: AREAS ARE MEASURED WITHIN THE LIMITS OF THE STREAM BUFFER/SETBACK. ALL AREAS OUTSIDE BUFFER/SETBACK ARE EXCLUDED.

IMPERVIOUS DECREASE IN BUFFER/SETBACK = 822 SF

MITIGATION LEGEND

STREAM BUFFER ENHANCEMENT 2,860 SF

GRAPHIC SCALE (IN FEET)

0 20 40 60 80 120

SCALE: 1:40

N

NOTES

1. BASE INFORMATION PROVIDED BY CASCADE LAND SURVEYING, 16009 AP TUBBS RD E, BUCKLEY, WA 98321. 253.820.4016, JEFF@CASCADELS.COM.

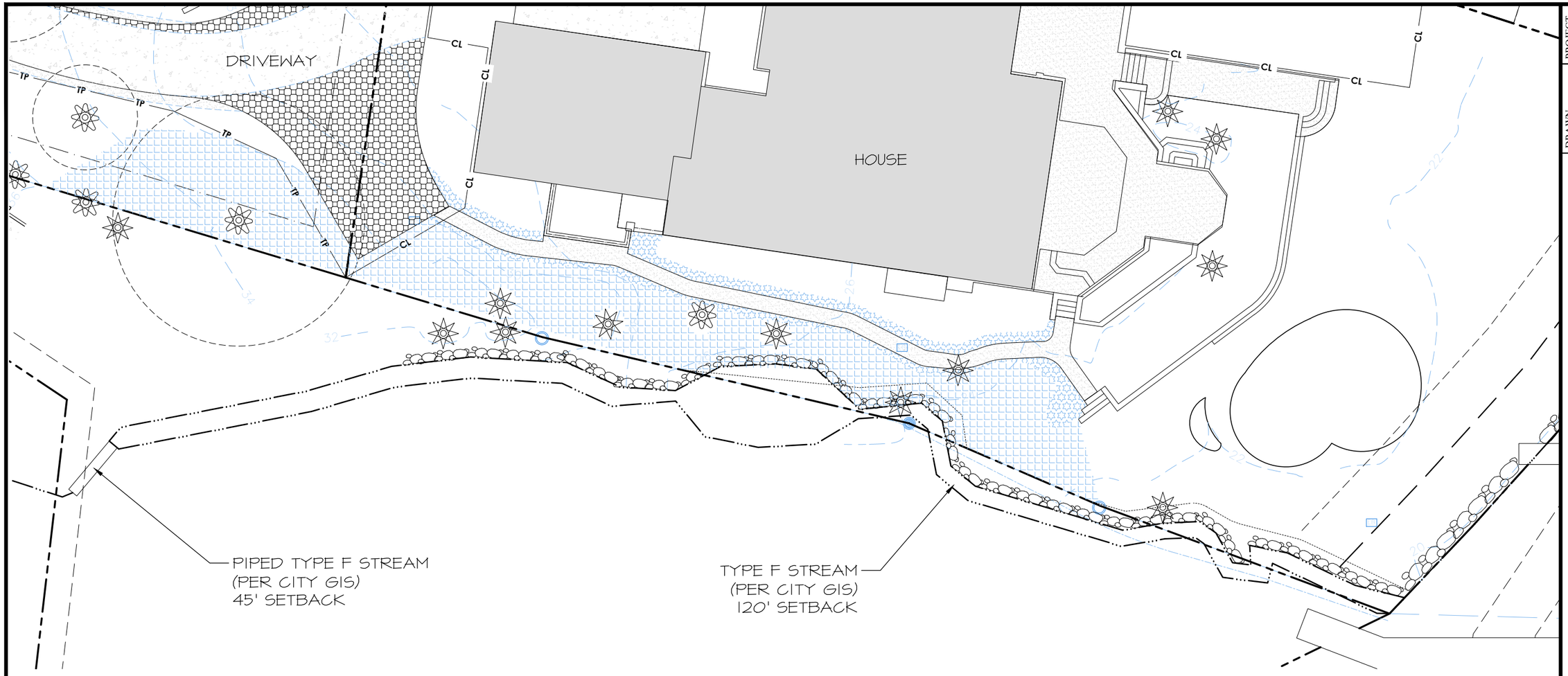
FIGURE 2: STREAM BUFFER MITIGATION PLAN
BUTTERWORTH BLA
5320 AND 5330 BUTTERWORTH ROAD
MERCER ISLAND, WASHINGTON
PARCEL 8661400040 AND -0045

PROJECT 7341
DRAWN KV
SCALE AS NOTED
DATE 6-2-25
REVISED 6-4-25

2/6

AOA Environmental Planning & Landscape Architecture
Altmann Oliver Associates, LLC
PO Box 578 - Carnation, WA 98014 - 425.333.4535 - altoliver.com

7341-MIT-6-4-25.dwg



PLANT SCHEDULE FOR STREAM BUFFER - AREA 1

GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	QTY	SIZE (MIN.)	NOTES
	FRAGARIA CHILOENSIS	BEACH STRAWBERRY	2' O.C.	125	1 GAL.	FULL & BUSHY
	POLYSTICHUM MUNITUM	SWORD FERN*	3' O.C.	155	1 GAL.	FULL & BUSHY

* PLANT SWORD FERN AT 3' SPACING AROUND EXISTING NATIVE GROUNDCOVER FOR A TOTAL OF ~50% OF THE AREA.

GRAPHIC SCALE
(IN FEET)

0 10 20 30 40 60

SCALE:1:20

N

NOTES

1. BASE INFORMATION PROVIDED BY CASCADE LAND SURVEYING, 16009 AP TUBBS RD E, BUCKLEY, WA 98321. 253.820.4016, JEFF@CASCADELS.COM.

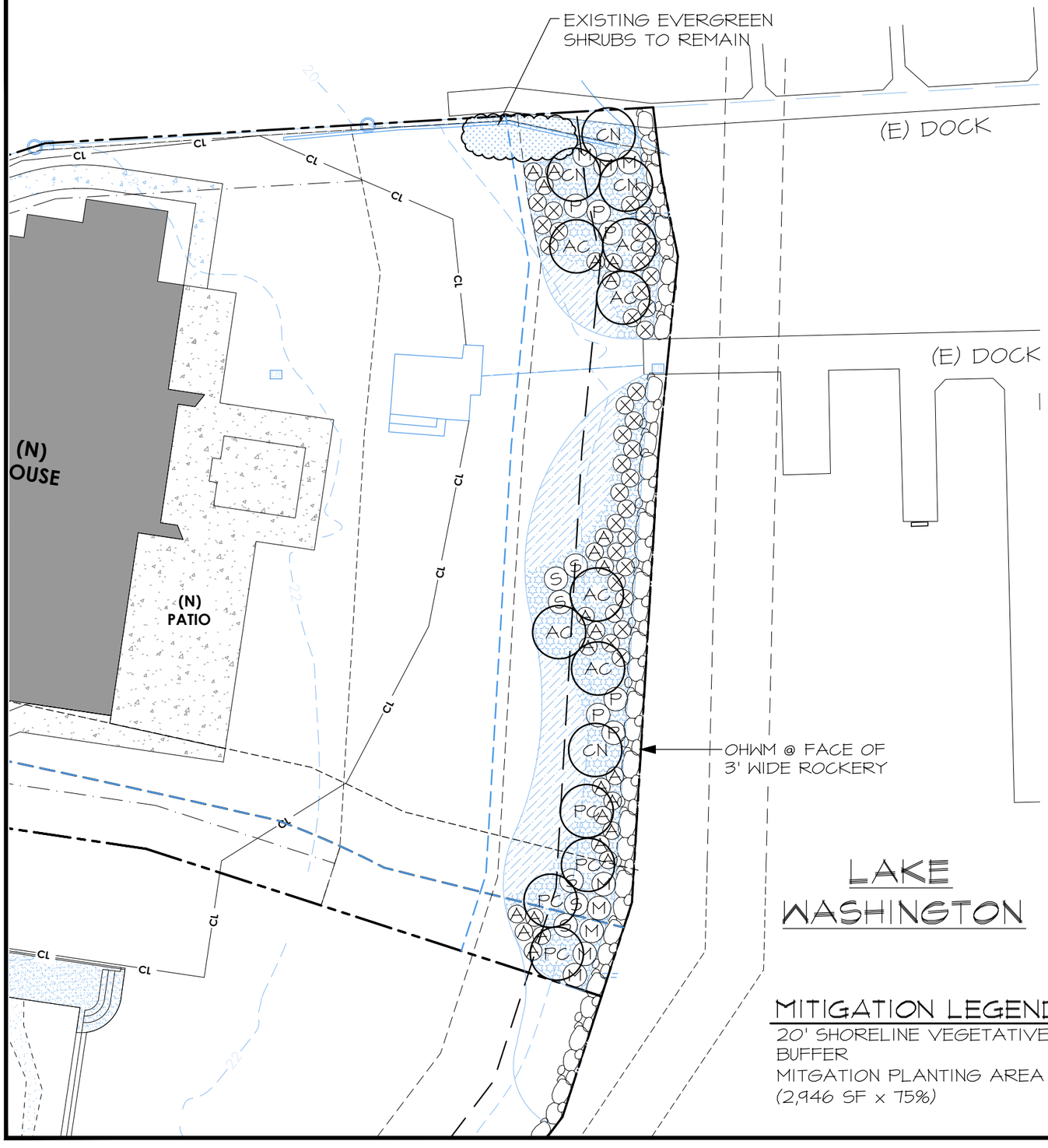
FIGURE 3: PLANTING PLAN - STREAM BUFFER ENHANCEMENT
BUTTERWORTH BLA
5320 AND 5330 BUTTERWORTH ROAD
MERCER ISLAND, WASHINGTON
PARCEL 866140-0040 AND -0045

PROJECT	7341
DRAWN	KV
SCALE	AS NOTED
DATE	6-2-25
REVISED	6-4-25

3/6

Altmann Oliver Associates, LLC
PO Box 578 - Carnation, WA 98014 - 425.333.4535 - allolive.com
AOA Environmental Planning & Landscape Architecture

7341-MIT-6-4-25.dwg



PLAN LEGEND

- PROPERTY LINE
- LAKE WASHINGTON O.H.W.M. LOCATION - 25' SHORELINE BUFFER - 50' BSBL
- 20' SHORELINE VEGETATIVE BUFFER
- 25' SHORELINE BUFFER
- 50' SHORELINE STRUCTURE SETBACK
- 10' SHORELINE BUFFER

PLANT SCHEDULE FOR SHORELINE - AREA 2

TREES

KEY	SCIENTIFIC NAME	COMMON NAME	QTY
AC	ACER CIRCINATUM	VINE MAPLE	6
CN	CORNUS NUTTALLII	PACIFIC DOGWOOD	4
PC	PINUS CONTORTA	SHORE PINE	4

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME	QTY
S	AMELANCHIER ALNIFOLIA	SERVICEBERRY	6
M	MORELLA CALIFORNICA	PACIFIC WAX MYRTLE	8
P	PHILADELPHUS LEWISII	MOCK ORANGE	6
X	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	35

GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME	QTY
A	ATHYRIUM FILIX- FEMINA	LADY FERN	24
	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLONDE AMBITION GRAMA GRASS	188
	FRAGARIA CHILOENSIS	COASTAL STRAWBERRY	242

GRAPHIC SCALE (IN FEET)

0 10 20 30 40 60

SCALE: 1:20

N

MITIGATION LEGEND

20' SHORELINE VEGETATIVE BUFFER	2,946 SF
MITGATION PLANTING AREA (2,946 SF x 75%)	2,210 SF

NOTES

1. BASE INFORMATION PROVIDED BY CASCADE LAND SURVEYING, 16009 AP TUBBS RD E, BUCKLEY, WA 98321. 253.820.4016, JEFF@CASCADELS.COM.

PROJECT 7341
DRAWN KV
SCALE AS NOTED
DATE 6-2-25
REVISED 6-4-25
4/6

FIGURE 4: PLANTING PLAN - SHORELINE BUFFER ENHANCEMENT
BUTTERWORTH BLA
5320 AND 5330 BUTTERWORTH ROAD
MERCER ISLAND, WASHINGTON
PARCEL 8661400040 AND -0045

Altmann Oliver Associates, LLC
PO Box 578 - Carnation, WA 98014 - 425.333.4535 - altoliver.com
AOA Environmental Planning & Landscape Architecture

7341-MIT-6-4-25.dwg

PLANT SCHEDULE

TREES

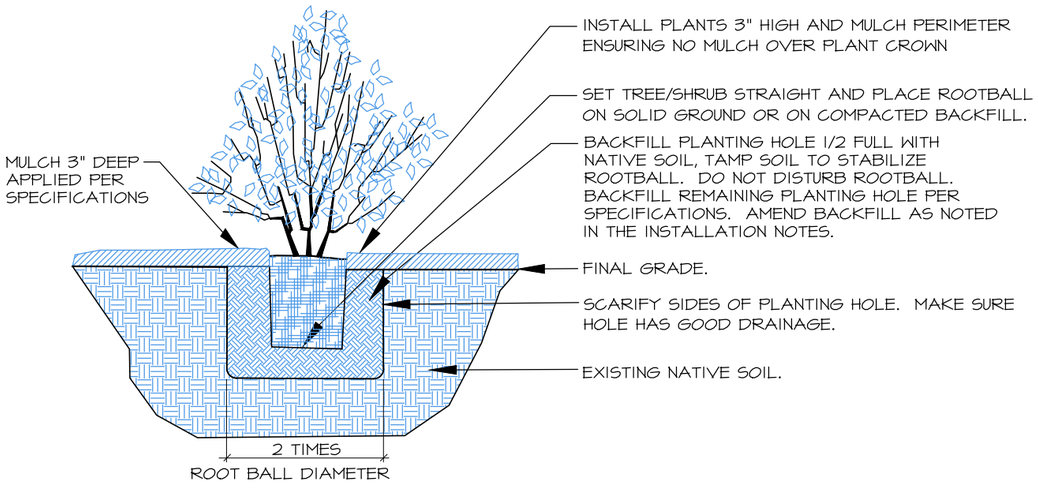
KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	AREA 1 QTY	AREA 2 QTY	SIZE (MIN.)	NOTES
AC	ACER CIRCINATUM	VINE MAPLE	9' O.C.		6	2 GAL.	MULTI-TRUNK (3 MIN.)
CN	CORNUS NUTTALLII	PACIFIC DOGWOOD	9' O.C.		4	2 GAL.	SINGLE TRUNK
PC	PINUS CONTORTA	SHORE PINE	9' O.C.		4	2 GAL.	FULL & BUSHY

SHRUBS

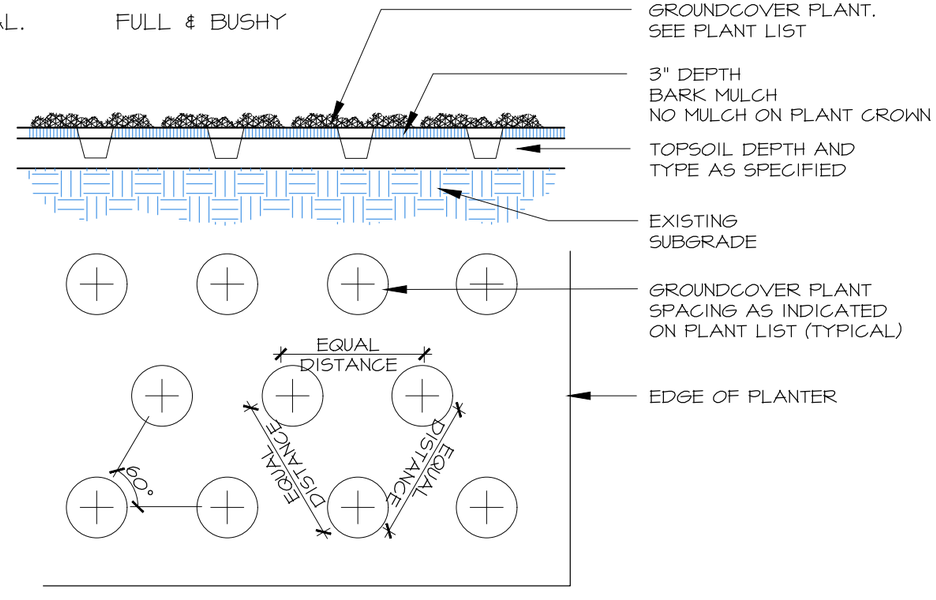
KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	AREA 1 QTY	AREA 2 QTY	SIZE (MIN.)	NOTES
S	AMELANCHIER ALNIFOLIA	SERVICEBERRY	4' O.C.		6	1 GAL.	MULTI-CANE (3 MIN.)
M	MORELLA CALIFORNICA	PACIFIC WAX MYRTLE	4' O.C.		8	1 GAL.	MULTI-CANE (3 MIN.)
P	PHILADELPHUS LEWISII	MOCK ORANGE	4' O.C.		6	1 GAL.	FULL & BUSHY
X	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	3' O.C.		35	1 GAL.	FULL & BUSHY

PERENNIALS & GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	AREA 1 QTY	AREA 2 QTY	SIZE (MIN.)	NOTES
A	ATHYRIUM FILIX- FEMINA	LADY FERN	2' O.C.		24	1 GAL.	FULL & BUSHY
	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLONDE AMBITION GRAMA GRASS	2' O.C.		188	1 GAL.	FULL & BUSHY
	FRAGARIA CHILOENSIS	COASTAL STRAWBERRY	2' O.C.	125	242	1 GAL.	FULL & BUSHY
	POLYSTICHUM MUNITUM	SWORD FERN	3' O.C.	155		1 GAL.	FULL & BUSHY



1 CONTAINER TREE/SHRUB PLANTING DETAIL (TYP.)
SCALE: NTS



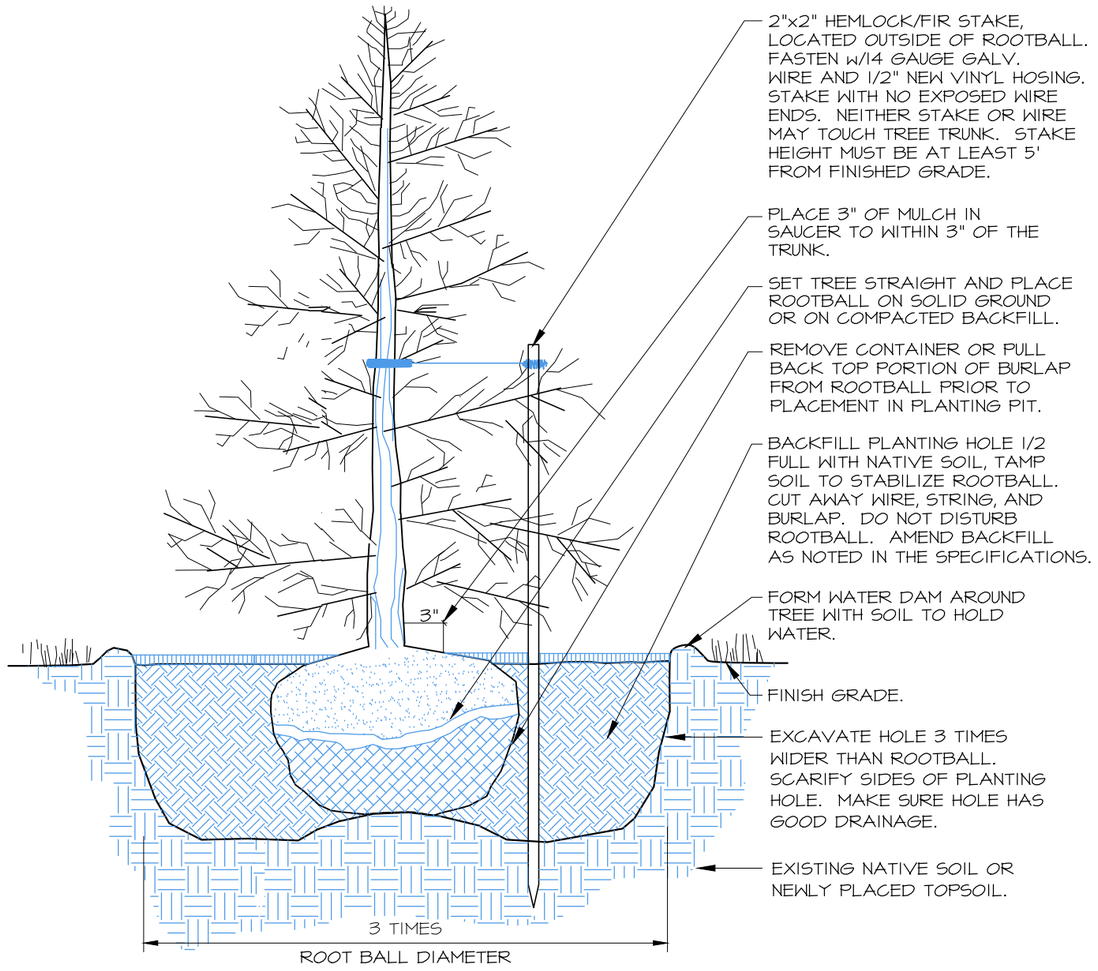
2 GROUNDCOVER PLANTING DETAIL (TYP.)
SCALE: NTS

PROJECT 7341
DRAWN KV
SCALE AS NOTED
DATE 6-2-25
REVISED 6-4-25
5/6

FIGURE 5: PLANTING SCHEDULE & DETAILS
BUTTERWORTH BLA
5320 AND 5330 BUTTERWORTH ROAD
MERCER ISLAND, WASHINGTON
PARCEL 866140-0040 AND -0045

Altmann Oliver Associates, LLC
PO Box 578 - Carnation, WA 98014 - 425.333.4535 - altoliver.com
AOA Environmental Planning & Landscape Architecture

7341-MIT-6-4-25.dwg



1 B&B EVERGREEN TREE PLANTING (TYP.)

SCALE: NTS

SPECIFICATIONS

1. PRIOR TO PLANTING, ALL NON-ORGANIC DEBRIS AND NON-NATIVE, INVASIVE VEGETATION SHALL BE HAND-REMOVED AND EXPORTED OFF SITE. IRRIGATION SHALL BE ADJUSTED TO COVER MITIGATION AREA. ALL LAWN IN THE SHORELINE BUFFER ENHANCEMENT PLANTING SHALL BE REMOVED WITH A SOD STRIPPER.
2. PRIOR TO PLANTING, ALL NON-NATURAL MATERIALS SHALL BE REMOVED (GRAVEL, ROCK, CONCRETE) FROM EXISTING DEVELOPED AREAS AND YARD. A 6" LIFT OF IMPORTED CEDAR GROVE 3-WAY TOPSOIL SHALL BE PLACED AND TILLED INTO THE TOP 6" OF SUBGRADE PRIOR TO PLANTING.
3. IMPORTED CEDAR GROVE 3-WAY TOPSOIL SHALL BE PLACED IN THE NON-GRADED AREAS AFTER WEED REMOVAL TO PRE-REMOVED GRADES PRIOR TO PLANTING AND MULCHING.
4. ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 15TH.
5. ALL PLANTS SHALL BE PIT-PLANTED IN PLANTING PITS EXCAVATED 2X THE DIAMETER OF THE PLANT. PITS SHALL BE BACKFILLED WITH A 30/70 MIX OF STEERCO TO NATIVE SOIL. PLANTS SHALL BE INSTALLED 2" HIGH AND SURFACED MULCHED TO A DEPTH OF 3" WITH WOOD CHIPS PLACED CONTINUOUSLY THROUGHOUT THE PLANTING BED.
6. ALL PLANTS SHALL BE NURSERY GROWN (IN W. WA OR OR.) FOR AT LEAST 1 YEAR FROM PURCHASE DATE, FREE FROM DISEASE OR PESTS, WELL-ROOTED, BUT NOT ROOT-BOUND AND TRUE TO SPECIES.
7. LANDSCAPE CONTRACTOR TO INSTALL DRIP OR LOW-FLOW IRRIGATION SYSTEM CAPABLE OF HEAD TO HEAD COVERAGE OF ALL PLANTINGS.
8. ALL PLANTINGS SHALL BE IRRIGATED AT A RATE OF ½" OF FLOW 2-3 TIMES WEEKLY, FROM JUNE 15-OCT 15 THE FIRST YEAR AFTER PLANTING. THE SECOND YEAR, FLOW SHOULD BE REDUCED TO PROVIDE ½" OF FLOW 1-2 TIMES WEEKLY FROM JULY 1-SEPT 30. THE SYSTEM CAN BE REMOVED AFTER 3 YEARS.
9. UPON APPROVAL OF PLANTING INSTALLATION BY AOA, MERCER ISLAND WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL OF CONSTRUCTION.
10. MAINTENANCE SHALL BE IMPLEMENTED ON A REGULAR BASIS ACCORDING TO THE SCHEDULE BELOW.

ANNUAL MAINTENANCE SCHEDULE

MAINTENANCE ITEM	J	F	M	A	M	J	J	A	S	O	N	D
WEED CONTROL			1		1		1			1		
GENERAL MAINT.			1		1		1			1		
WATERING - YEAR 1						4	8	8	8	4		
WATERING - YEAR 2							4	4	4			

1-8 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.

MAINTENANCE WILL INCLUDE:
1. REMOVAL OF NON-NATIVE PLANTS, BY HAND, AS LISTED ABOVE.
2. CONTINUED APPLICATION OF IRRIGATION, AS NOTED ABOVE.
3. REMOVAL OF PEST INFESTATIONS, LIKE TENT CATERPILLAR AND SPRUCE APHID.
4. THINNING OF RED ALDER AND MOWING OF TALL GRASSES, AS DIRECTED BY AOA TO ENSURE SURVIVAL OF PLANTED SPECIES.

PROJECT 7341 | 6/6
DRAWN KV | SCALE AS NOTED | DATE 6-2-25 | REVISED 6-4-25

FIGURE 6: PLANTING DETAIL & SPECIFICATIONS
BUTTERWORTH BLA
5320 AND 5330 BUTTERWORTH ROAD
MERCER ISLAND, WASHINGTON
PARCEL 8661400040 AND -0045

Altmann Oliver Associates, LLC
AOA Environmental Planning & Landscape Architecture
PO Box 578 - Carnation, WA 98014 - 425.333.4535 - altoliver.com

7341-MIT-6-4-25.dwg

TREE RETENTION (MICC 19.10.060)

THE FOLLOWING TREES SHALL BE PRIORITIZED FOR RETENTION:

A. EXCEPTIONAL TREES;
B. TREES WITH A DIAMETER OF MORE THAN 24 INCHES;
C. TREES THAT HAVE A GREATER LIKELIHOOD OF LONGEVITY; AND
D. TREES THAT ARE PART OF A HEALTHY GROVE.

DEFINITION OF EXCEPTIONAL TREE (MICC 19.16):

A TREE OR GROUP OF TREES THAT BECAUSE OF ITS UNIQUE HISTORICAL, ECOLOGICAL, OR AESTHETIC VALUE CONSTITUTES AN IMPORTANT COMMUNITY RESOURCE. AN EXCEPTIONAL TREE IS A TREE THAT IS RARE OR EXCEPTIONAL BY VIRTUE OF ITS SIZE, SPECIES, CONDITION, CULTURAL/HISTORIC IMPORTANCE, AGE, AND/OR CONTRIBUTION AS PART OF A TREE GROVE. TREES WITH A DIAMETER OF MORE THAN 36 INCHES, OR WITH A DIAMETER THAT IS EQUAL TO OR GREATER THAN THE DIAMETER LISTED IN THE EXCEPTIONAL TREE TABLE, ARE CONSIDERED EXCEPTIONAL TREES:

REGULATED TREES (TREES 10" OR GREATER)	**32 EXISTING TREES**
REQUIRED RETENTION	**10 TREES (30%)**
PROPOSED RETENTION (10 REMOVED)	**22 TREES (70%)**

TREE REPLACEMENT (MICC 19.10.070)

• <10" (2 TREES)	2
• 10" - 24" (5 TREES)	10
• 24" - 36" (2 TREES)	12
• >36" OR EXCEPTIONAL TREES	0
TOTAL REPLACEMENTS	24

NOTE - SEE TREE INVENTORY & REPLACEMENT FORM

REPLANTING REQUIREMENTS:

- 50% OF THE TREES NEED TO BE PACIFIC NORTHWEST NATIVE, PER THE KING COUNTY NATIVE PLANT GUIDE FOR WESTERN WASHINGTON.
- REPLACEMENT TREES NEED TO BE AT LEAST 10' APART FROM EACH OTHER, STRUCTURES, FENCES AND UTILITIES.
- CONIFERS SHALL BE AT LEAST 6' TALL.
- DECIDUOUS TREES SHALL BE AT LEAST 1.5" CALIPER.
- IF REQUESTED AND YOU CAN SHOW NO ROOM EXISTS ON SITE FOR ALL THE TREES, THE REMAINDER CAN BE A FEE IN LIEU IF REQUESTED.
- A TREE WATERING PLAN MUST BE IMPLEMENTED TO ENSURE THE TREES SURVIVE LONG TERM.

LEGEND

- TP — TREE PROTECTION FENCING (PER ARBORIST REPORT)
- CL — CLEARING LIMITS (PER CIVIL PLANS)
- HAZARD — DEAD, SICK, DYING TREE, PROPOSED FOR REMOVAL
- REGULATED TREE, PROPOSED FOR REMOVAL
- RT — REPLACEMENT TREES UNDER THIS PERMIT (24 TOTAL)
- RT — REPLACEMENT TREES FOR PERMIT 2503-110 (15 TOTAL)

NOTE: FOR TREE REPLACEMENT CRITERIA, REFER TO MICC 19.10.070 (ALSO NOTED ABOVE UNDER REPLACEMENT REQS.

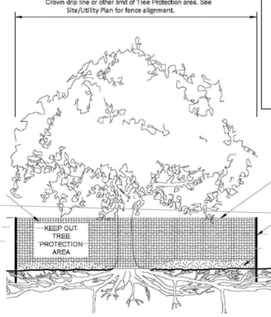
TREE PROTECTION AREA (TPZ)

KEEP OUT!

DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

1. Correction Notices or Stop Work Orders until compliance is achieved
2. RE Inspection Fees/financial penalties
3. Arborist reports recommending mitigation



Notes

1. No pruning shall be performed unless under the direction of the Project Arborist. Including limbing trees up.
2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.160).
4. Any work in approved TPZ must be with the permission of the Land Use and Planning Division at landuse.planning@mercergov.org
5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

Tree protection fence: 4-6' **chain link** fence, solidly anchored into the ground, or if authorized High-density polyethylene fencing with 3.5" x 1.5" openings; color orange. Steel posts installed at 8' o.c.

2" x 6" steel posts or approved equal

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

Any Work in the protected area must be with the permission of the Land Use and Planning Division at landuse.planning@mercergov.org

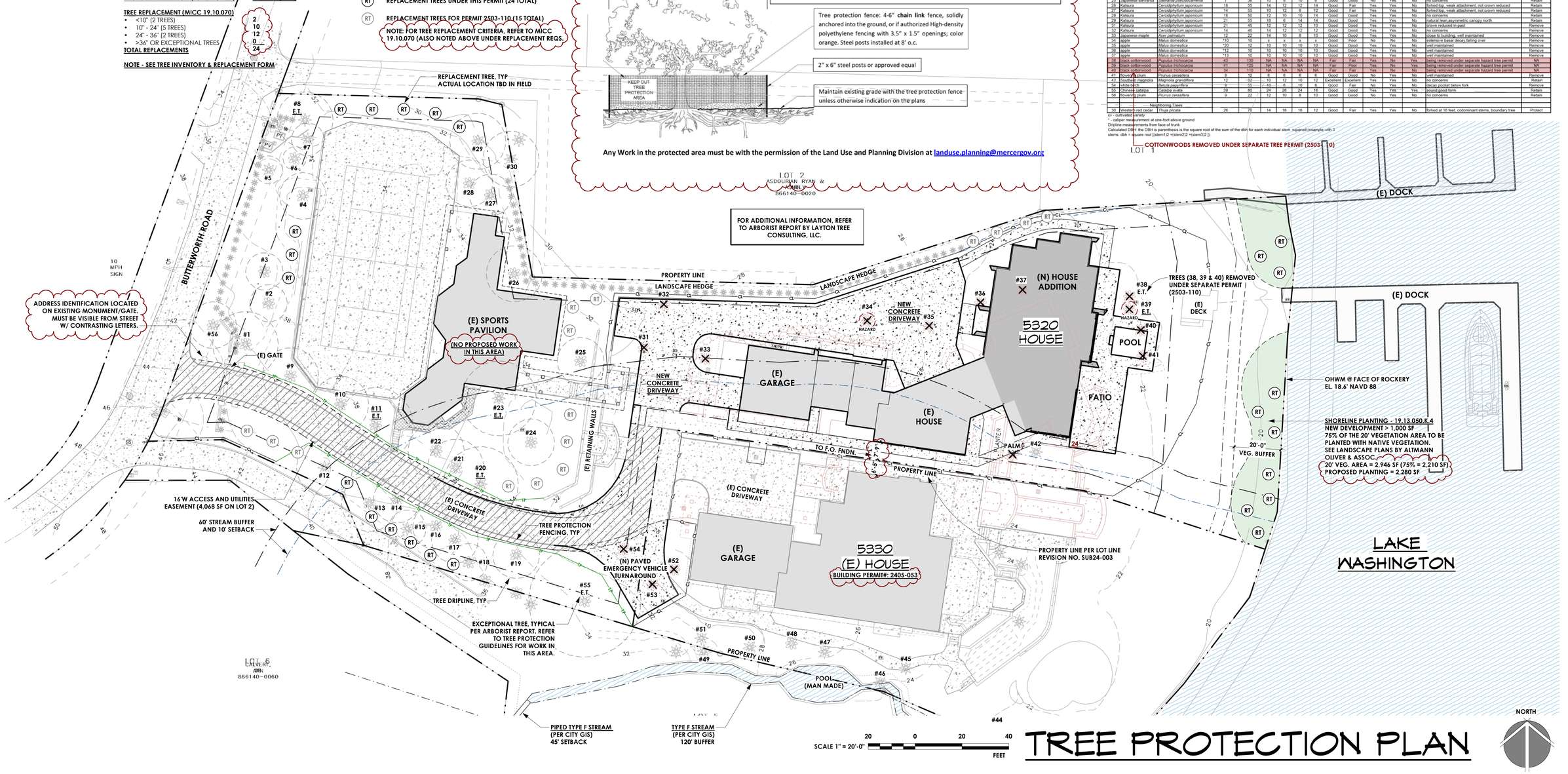
Layton Tree Consulting LLC

For: MacPherson Construction
Site: 5330 Butterworth RD - Mercer Island

Tree Summary Table
Date: 2/8/2024

Tree/ Tag #	Species Common Name	Species Scientific Name	DBH (inches)	Height (feet)	Dripline (feet) N	E	S	W	Health Condition	Structural Condition	Regulated Yes/No	Viable Tree	Exceptional Yes/No	Comments	Proposal
1	flowering plum	Prunus cerasifera	16	40	12	14	18	6	Good	Good	Yes	Yes	No	lean, asymmetric canopy east	Retain
2	Japanese maple	Acer palmatum	8	26	8	6	14	8	Good	Good	No	Yes	No	no concerns	Retain
3	bigleaf maple 7	Acer macrophyllum	14 to 24	90	32	18	24	28	Fair	Fair	Yes	No	Yes	large cluster, extensive soft rot fungus	Retain
4	Japanese maple	Acer palmatum	5,5,5,4 (9)	18	12	10	12	6	Good	Good	No	Yes	No	no concerns	Retain
5	Serbian spruce cv.	Picea omorika	8	45	4	6	6	6	Good	Good	No	Yes	No	no concerns	Retain
6	Southern magnolia	Magnolia grandiflora	6	20	4	4	6	2	Good	Fair	No	Yes	No	lean, asymmetric canopy east	Retain
7	Serbian spruce cv.	Picea omorika	8	40	2	8	8	2	Good	Fair	No	Yes	No	natural lean east	Retain
8	Western red cedar	Thuja plicata	33	75	14	10	18	12	Good	Good	Yes	Yes	No	no concerns	Retain
9	Katsura	Cercidiphyllum japonicum	14	36	10	18	12	8	Good	Fair	Yes	Yes	No	old broken top	Retain
10	Katsura	Cercidiphyllum japonicum	14	45	12	14	8	10	Good	Fair	Yes	Yes	No	forked top	Retain
11	Western red cedar	Thuja plicata	24,22 (32)	70	18	16	16	14	Excellent	Good	Yes	Yes	No	trunks fork at root crown	Retain
12	Alaska cedar	Chamaecyparis nootkatensis	13	50	12	14	12	8	Excellent	Excellent	Yes	Yes	No	no concerns	Retain
13	Katsura	Cercidiphyllum japonicum	20	45	16	10	8	14	Good	Fair	Yes	Yes	No	trunk forks at 5 feet, crown reduced	Retain
14	Katsura	Cercidiphyllum japonicum	13	35	12	8	6	6	Fair	Fair	Yes	Yes	No	suppressed, crown reduced	Retain
15	Alaska cedar	Chamaecyparis nootkatensis	10	45	8	8	8	6	Excellent	Poor	Yes	Yes	No	forked at 16 feet, codominant stems	Retain
16	Katsura	Cercidiphyllum japonicum	14	40	12	10	6	8	Good	Fair	Yes	Yes	No	forked top,crown reduced	Retain
17	Katsura	Cercidiphyllum japonicum	10	40	10	12	6	6	Good	Good	Yes	Yes	No	no concerns	Retain
18	bigleaf maple	Acer macrophyllum	37	65	12	16	20	4	Poor	Fair	Yes	No	Yes	extensive soft rot fungus	Retain
19	Katsura	Cercidiphyllum japonicum	15	40	12	6	8	8	Good	Good	Yes	Yes	No	crown reduced	Retain
20	Western red cedar	Thuja plicata	48	90	12	18	20	10	Good	Fair	Yes	Yes	Yes	significant trunk decay, forked top, slight lean south	Retain
21	flowering plum	Prunus cerasifera	10,12 (16)	40	14	12	18	10	Good	Fair	Yes	Yes	No	forked at 4 feet, codominant stems	Retain
22	flowering plum	Prunus cerasifera	11	45	12	10	8	12	Good	Fair	Yes	Yes	No	forked at 10 feet, codominant stems	Retain
23	Western red cedar	Thuja plicata	45,34 (56)	100	16	10	22	16	Good	Good	Yes	Yes	Yes	close to building, foliage somewhat sparse	Retain
24	Paulownia Empress	Paulownia tomentosa	22	50	8	10	18	6	Good	Fair	Yes	Yes	No	lean, asymmetric canopy east,some trunk decay	Retain
25	Japanese stewartia	Stewartia pseudocamellia	7	36	10	8	10	8	Good	Good	No	Yes	No	no concerns	Retain
26	Katsura	Cercidiphyllum japonicum	18	55	14	12	12	14	Good	Fair	Yes	Yes	No	forked top, weak attachment, not crown reduced	Retain
27	Katsura	Cercidiphyllum japonicum	14	55	10	12	6	12	Good	Fair	Yes	Yes	No	forked top, weak attachment, not crown reduced	Retain
28	Katsura	Cercidiphyllum japonicum	18	50	12	10	10	14	Good	Good	Yes	Yes	No	no concerns	Retain
29	Katsura	Cercidiphyllum japonicum	21	55	18	6	14	14	Good	Good	Yes	Yes	No	natural lean,asymmetric canopy north	Retain
30	Katsura	Cercidiphyllum japonicum	21	45	12	12	12	10	Good	Good	Yes	Yes	No	crown reduced in past	Retain
32	Katsura	Cercidiphyllum japonicum	14	40	14	12	12	12	Good	Good	Yes	Yes	No	no concerns	Remove
33	Japanese maple	Acer palmatum	12	22	14	10	8	10	Good	Good	Yes	Yes	No	close to building, well maintained	Remove
34	apple	Malus domestica	*10	10	x	x	x	x	Good	Poor	No	No	No	extensive basal decay,falling over	Remove
35	apple	Malus domestica	*20	12	10	10	10	10	Good	Good	Yes	Yes	No	well maintained	Remove
36	apple	Malus domestica	*12	10	10	10	10	10	Good	Good	Yes	Yes	No	well maintained	Remove
37	apple	Malus domestica	*13	10	10	10	10	10	Good	Good	Yes	Yes	No	well maintained	Remove
38	black cottonwood	Populus trichocarpa	42	130	NA	NA	NA	NA	Fair	Fair	Yes	No	Yes	being removed under separate hazard tree permit	NA
39	black cottonwood	Populus trichocarpa	41	125	NA	NA	NA	NA	Fair	Poor	Yes	No	Yes	being removed under separate hazard tree permit	NA
40	black cottonwood	Populus trichocarpa	34	110	NA	NA	NA	NA	Fair	Fair	Yes	No	Yes	being removed under separate hazard tree permit	NA
41	flowering plum	Prunus cerasifera	8	12	8	6	6	6	Good	Good	No	Yes	No	well maintained	Remove
42	Southern magnolia	Magnolia grandiflora	12	32	10	12	10	12	Excellent	Excellent	Yes	Yes	No	no concerns	Retain
54	white birch	Betula papyrifera	9	55	10	6	10	8	Good	Fair	No	Yes	No	decay pocket below fork	Remove
55	Chinese catalpa	Catalpa ovata	20	60	24	26	24	18	Good	Good	Yes	Yes	No	sound,good form	Retain
56	flowering plum	Prunus cerasifera	9	22	12	10	8	10	Good	Good	No	Yes	No	no concerns	Retain
		Neighboring Trees													
30	Western red cedar	Thuja plicata	26	70	14	16	18	12	Good	Fair	Yes	Yes	No	forked at 16 feet, codominant stems, boundary tree	Protect

cv - cultivated variety
* - caliper measurement at one-foot above ground
Dripline measurements from face of trunk
Calculated DBH: the DBH is parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [stem12 +stem22 +stem32]).



TREE PROTECTION PLAN

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

TREE SITE PLAN

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL
8/6/25	3		PERMIT RESPONSE 2

SHEET NUMBER **A1.0**

8/12/2025 9:51:12 AM

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.

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 (>16' = 200%)	0 SF
TOTAL:	**8,830 SF**
REMOVED FLOOR AREA:	
MAIN	1,905 SF
UPPER	170 SF
GARAGE	305 SF
MODIFIER (12-16' = 150%)	0 SF
MODIFIER (>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 (>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 TRELLIS, 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)

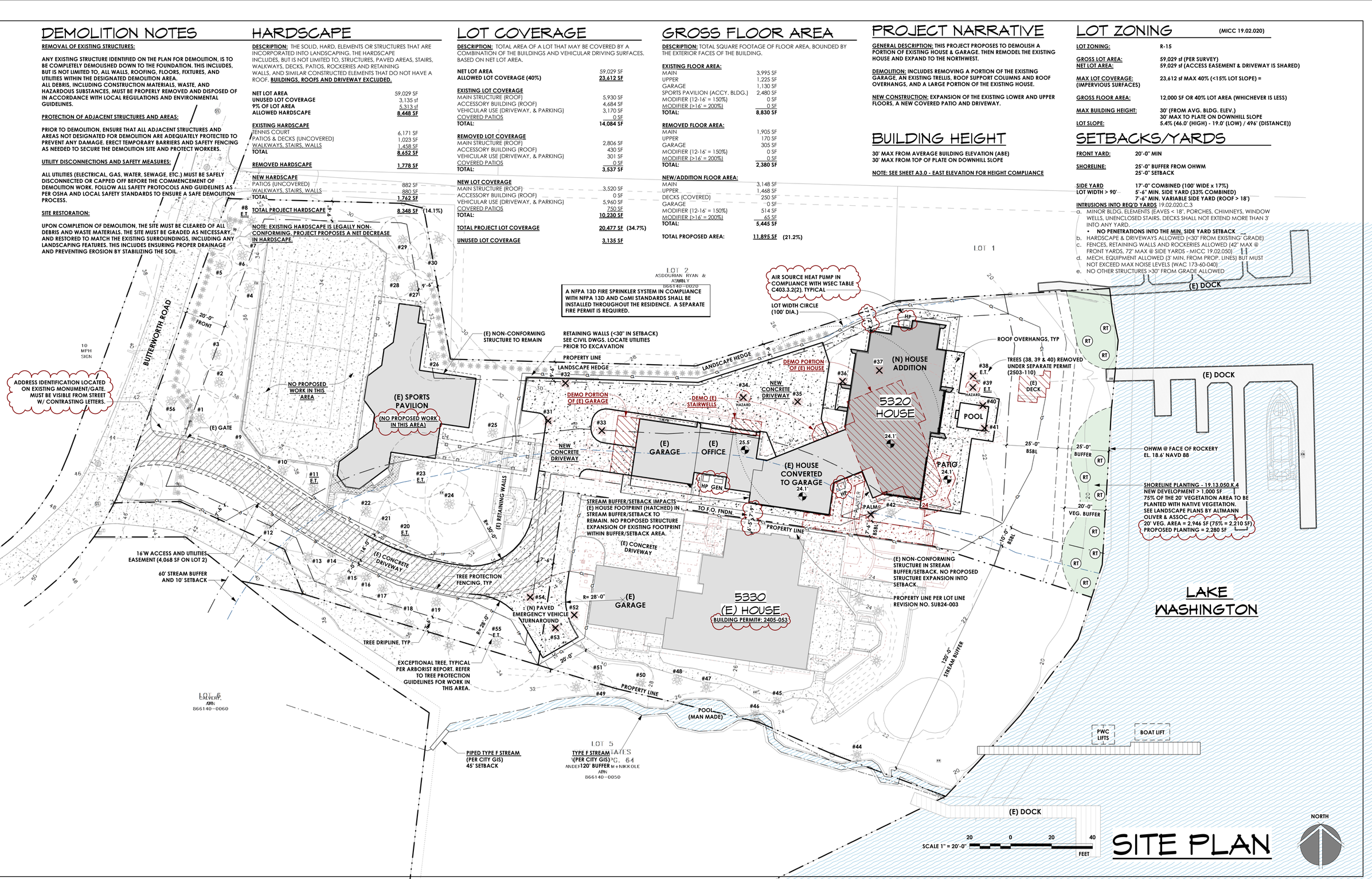
LOT ZONING:	**R-15**
GROSS LOT AREA:	**59,029 sf (PER SURVEY)**
NET LOT AREA:	**59,029 sf (ACCESS EASEMENT & DRIVEWAY IS SHARED)**
MAX LOT COVERAGE: (IMPERVIOUS SURFACES)	**23,612 sf MAX 40% (<15% LOT SLOPE) =**
GROSS FLOOR AREA:	**12,000 SF OR 40% LOT AREA (WHICHEVER IS LESS)**
MAX BUILDING HEIGHT:	**30' (FROM AVG. BLDG. ELEV.)** **30' MAX TO PLATE ON DOWNHILL SLOPE**
LOT 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 = 17%)**
LOT WIDTH > 90'	**5'-6" 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
   - **NO PENETRATIONS INTO THE MIN. SIDE YARD SETBACK**
b. HARDSCAPE & DRIVEWAYS ALLOWED (<30" FROM EXISTING GRADE)
c. FENCES, RETAINING WALLS AND ROCKERIES ALLOWED (42" MAX @ FRONT YARDS, 72" MAX @ SIDE YARDS - MICC 19.02.050)
d. MECH. EQUIPMENT ALLOWED (3' MIN. FROM PROP. LINES) BUT MUST NOT EXCEED MAX NOISE LEVELS (WAC 173-60-040)
e. NO OTHER STRUCTURES >30" FROM GRADE ALLOWED



SITE PLAN

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

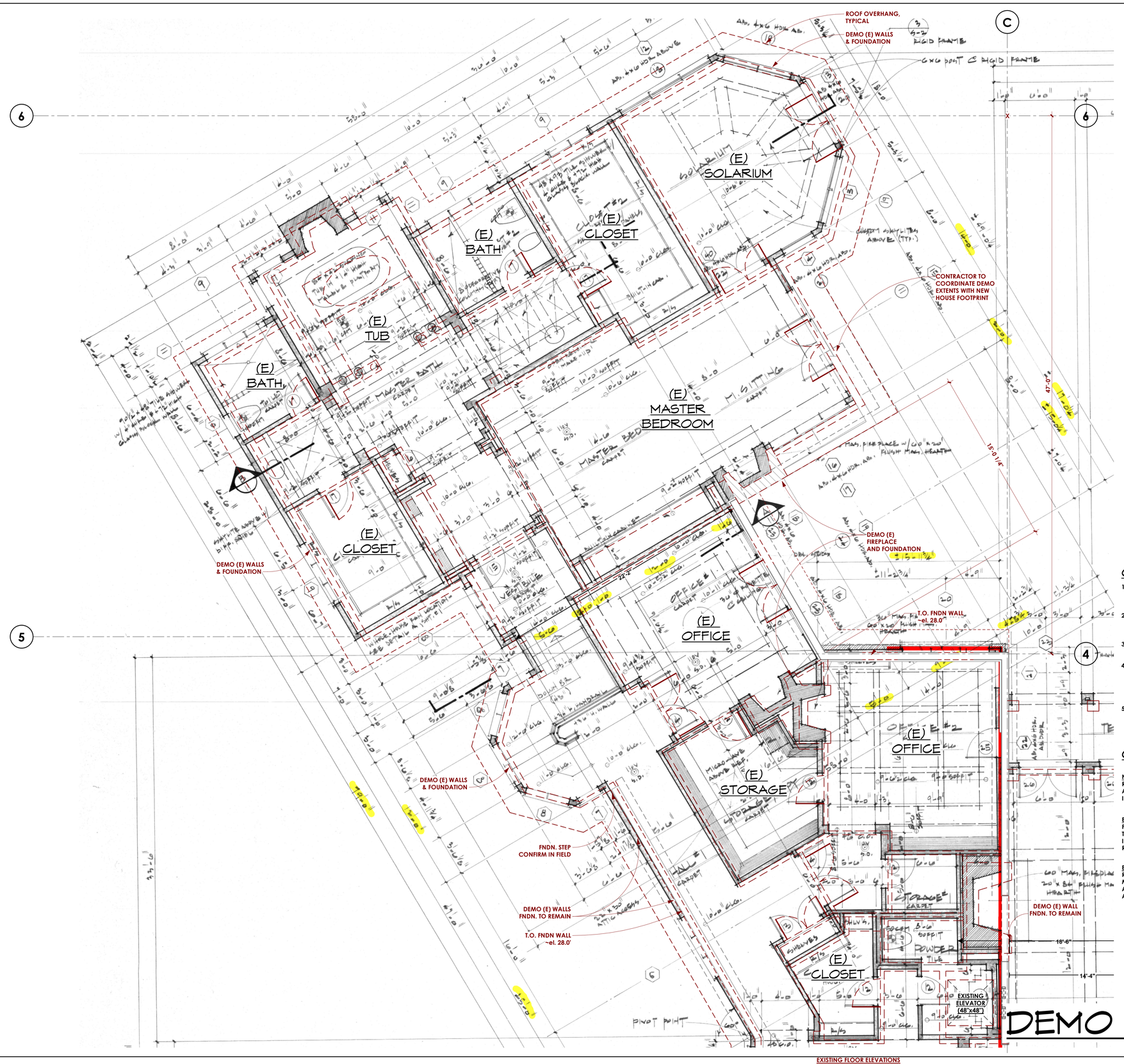
5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 866140-0040

SITE PLAN

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL
8/6/25	3		PERMIT RESPONSE 2

SHEET NUMBER **A1.1**

8/12/2025 10:30:16 AM



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 MECHANCIAL, 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 SECRURE, DRY STORAGE FOR OWNER RETAINED ITEMS.

CONSTRUCTION LEGEND

NEW CONSTRUCTION
REFER TO STRUCTURAL DRAWINGS AND SPECS FOR ADDITIONAL INFORMATION.

EXISTING STRUCTURE TO REMAIN
PATCH AND REPAIR AS NECESSARY TO MATCH SURROUNDING WALL INCLUDING CONDITIONS RESULTING FROM DEMOLITION.

EXISTING STRUCTURE TO BE DEMOLISHED
REMOVE ANY EXCESS BUILDING MATERIAL FROM CONNECTION POINTS AT FLOORS, CEILINGS OR WALLS TO PREP AREA FOR PAINT OR FINISH MATERIAL.

NORTH

EXISTING FLOOR ELEVATIONS
MAIN FLR = 28.1'
GARAGE FLR = 27.0'

DEMO PLAN - MAIN

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

2" @ FULL SCALE

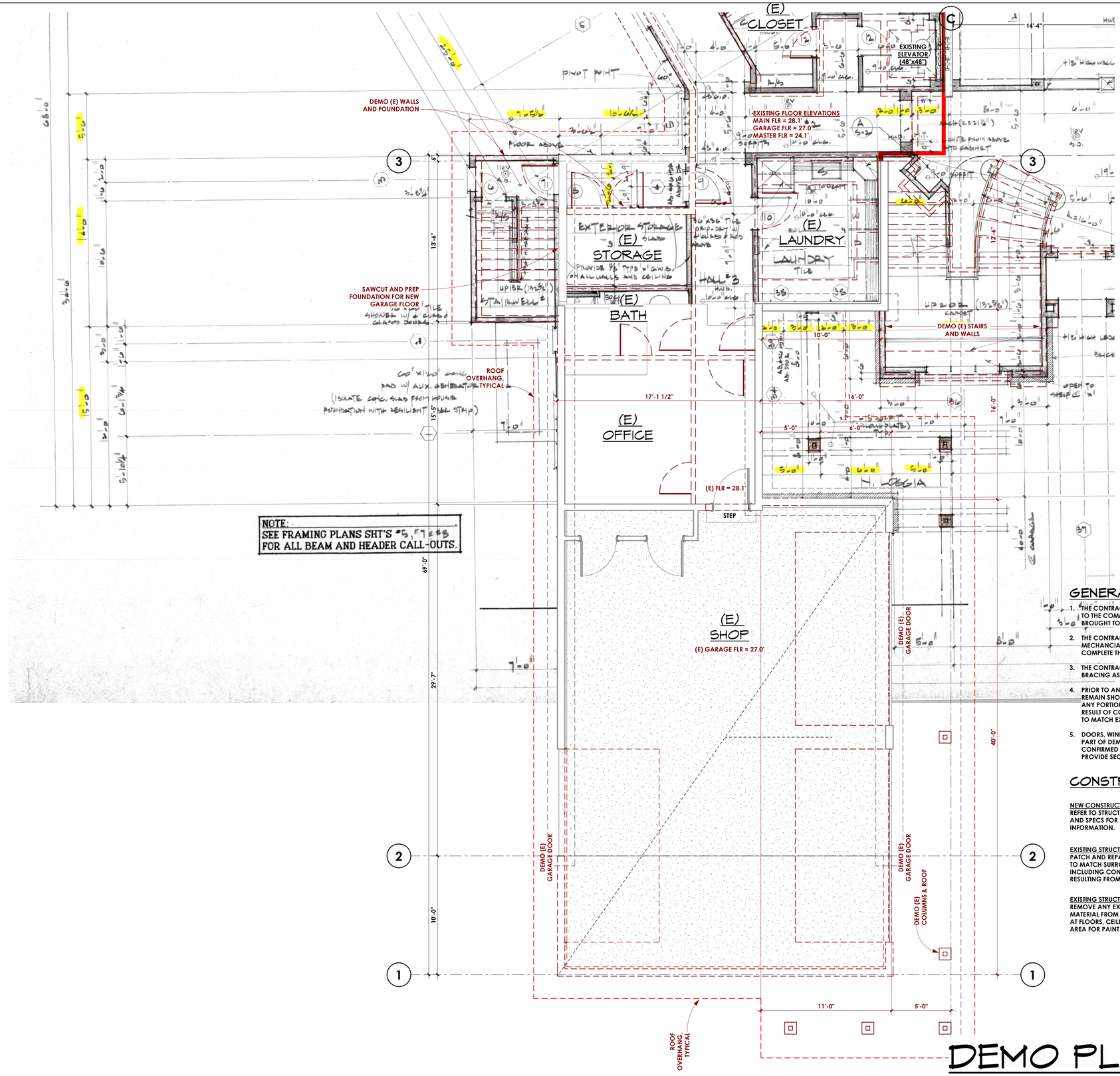
DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL

MACPHERSON RESIDENCE
5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 8661400040
DEMO PLAN - MAIN

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

SHEET NUMBER
A2.0a

8/6/2025 4:57:24 PM



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 MECHANCIAL, 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 SECRURE, DRY STORAGE FOR OWNER RETAINED ITEMS.

CONSTRUCTION LEGEND

NEW CONSTRUCTION
REFER TO STRUCTURAL DRAWINGS AND SPECS FOR ADDITIONAL INFORMATION.

EXISTING STRUCTURE TO REMAIN
PATCH AND REPAIR AS NECESSARY TO MATCH SURROUNDING WALL INCLUDING CONDITIONS RESULTING FROM DEMOLITION.

EXISTING STRUCTURE TO BE DEMOLISHED
REMOVE ANY EXCESS BUILDING MATERIAL FROM CONNECTION POINTS AT FLOORS, CEILINGS OR WALLS TO PREP AREA FOR PAINT OR FINISH MATERIAL.

NORTH

DEMO PLAN - MAIN

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

DEMO PLAN - MAIN

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

SHEET NUMBER
A2.0b

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

8/6/2025 4:57:26 PM

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. HPSF = 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
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

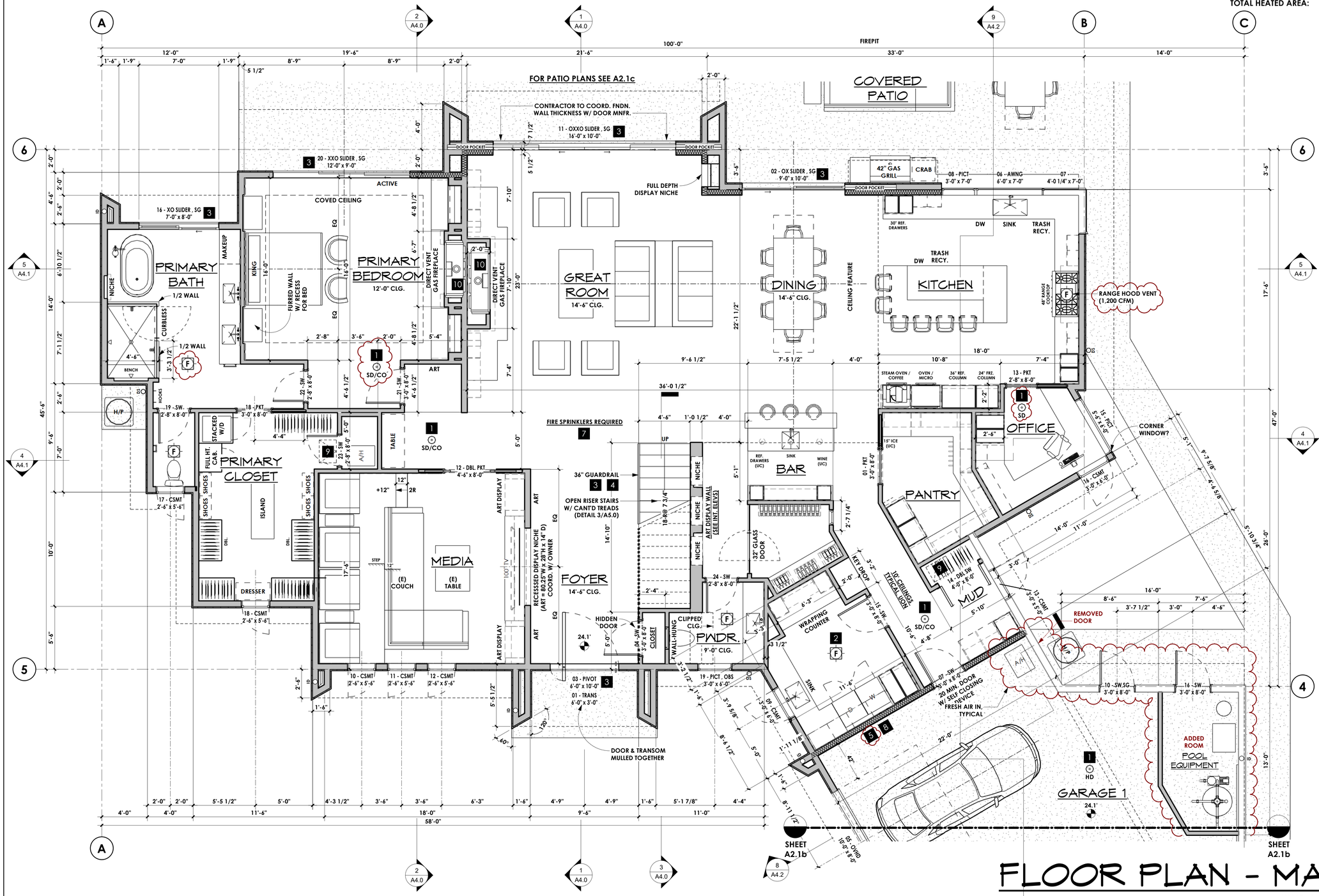
NOTES:
1. U-VALUE: REFER TO GENERAL NOTES ENERGY SECTION FOR MIN. VALUES, AND COVER SHEET ENERGY NOTES FOR CREDIT OPTIONS.
2. WINDOWS ARE TYPICALLY CENTERED IN EXT. WALL UNLESS DIMENSIONED OTHERWISE.
3. DOOR HINGE JAMB TO BE 4 1/2" FROM ADJACENT WALL UNLESS NOTED OTHERWISE.
4. SET EXTERIOR DOORS PRIOR 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.

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	GUEST STAIRS	124 SF	YES
MAIN FLOOR	SHOP	1,112 SF	
MAIN FLOOR	GARAGE 1	1,068 SF	
MAIN FLOOR	GARAGE 2	293 SF	
UPPER FLOOR	FLOOR AREA	2,571 SF	YES
GROSS BUILDING AREA		8,596 SF	
TOTAL HEATED AREA:		6,180 SF	



SCALE THIS DRAWING, IN FEET

FLOOR PLAN - MAIN

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

NORTH

2" @ FULL SCALE

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL
8/6/25	1	DAN	PERMIT SUBMITTAL 2

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
A2.1a

8/12/2025 10:47:55 AM

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. HPSF = 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
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.

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.

CRAWL SPACE VENTILATION:

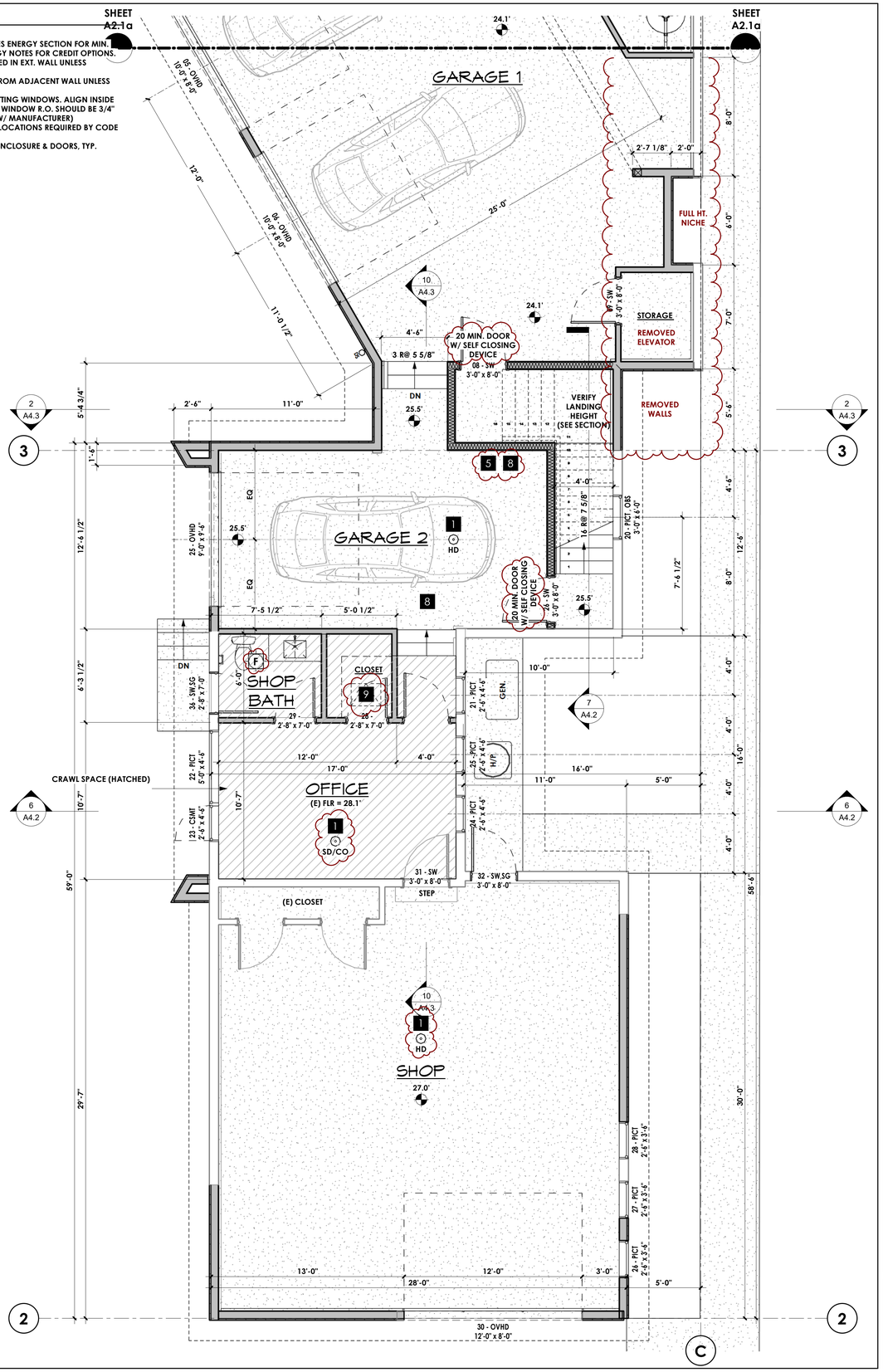
REQUIREMENTS: PROVIDE CRAWL SPACE VENTILATION AT 1st / 300sf OF CRAWL SPACE AREA (PER WAC 51-51-0408)

- CRAWL SPACE AREA: 260 SF
- TOTAL VENTING REQ'D: .86 SF (260 SF / 300)
- TYPICAL VENT SIZE: 8" x 16" (73sI / .5sf)
- TOTAL VENTS REQ'D: 2 VENTS (.86 / .5SF)

NOTE: ACTUAL VENT LAYOUT TO BE DETERMINED IN FIELD.

FLOOR AREAS

LEVEL	DESCRIPTION	AREA	HEATED
MAIN FLOOR	FLOOR AREA	3,428 SF	YES
MAIN FLOOR	GUEST STAIRS	124 SF	YES
MAIN FLOOR	SHOP	1,112 SF	
MAIN FLOOR	GARAGE 1	1,068 SF	
MAIN FLOOR	GARAGE 2	293 SF	
UPPER FLOOR	FLOOR AREA	2,571 SF	YES
GROSS BUILDING AREA		8,596 SF	
TOTAL HEATED AREA:		6,180 SF	



FLOOR PLAN - MAIN

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

NORTH

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

2" @ FULL SCALE

DATE	REV.	BY	DESCRIPTION
4/1/25	1	DAN	PERMIT SUBMITTAL
8/6/25	2	DAN	PERMIT SUBMITTAL 2

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

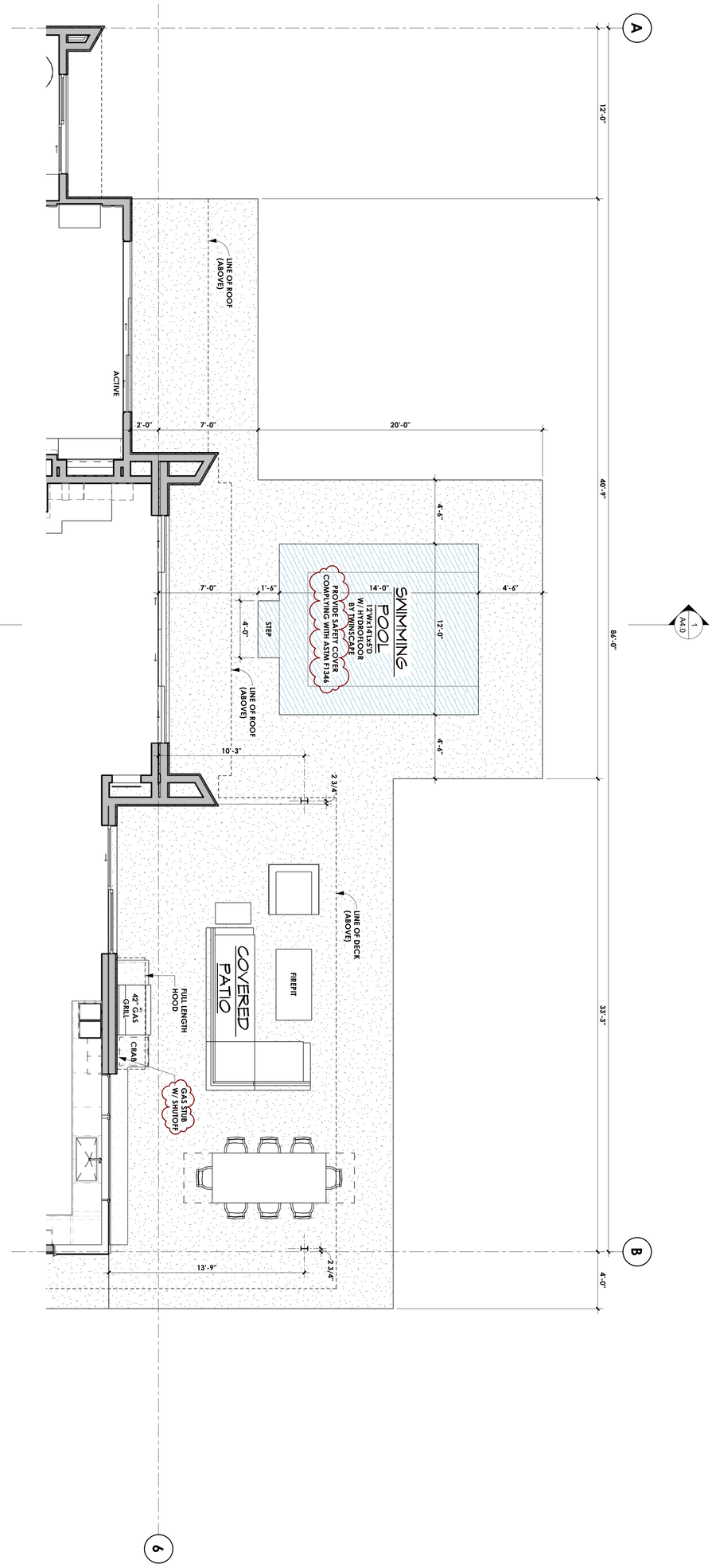
MacPherson
Construction & Design
22605 SE 56th St Suite 140, Issaquah, WA 98029
PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A2.1b

8/6/2025 4:58:01 PM

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"

NORTH

SHEET NUMBER
A2.1c

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

OUTDOOR PATIO PLAN

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL
8/6/25	1	DAN	PERMIT SUBMITTAL 2

2" IS FULL SCALE

8/6/2025 4:58:04 PM

2" @ FULL SCALE

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL
8/6/25	1	DAN	PERMIT SUBMITTAL 2

MACPHERSON RESIDENCE

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

FLOOR PLAN - UPPER

SHEET A2.2

SHEET A2.2

SHEET A2.2

SHEET A2.2

CHRIS' ROOM
KING
CLOSET
A/H
COSTUME ROOM
GUEST FOYER
REMOVED ROOF
GUEST LOUNGE
70" TV
GUEST KITCHEN
SINK 18" DW
MICRO / VENT 24" COOKTOP
24" REF.
PANTRY
RANGE HOOD VENT (1,200 CFM)
GUEST BATH
SHOWER
GUEST BEDROOM
QUEEN
EGRESS
CLOSET
WALL BELOW (CANTILEVER FLOOR)
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.

(E) ROOF DEMOLISHED

ENERGY CODE REQUIREMENTS:
MAXIMUM HEATING OUTPUT = XX,XXX BTU/HR
PROVIDE AIR SOURCE HEAT PUMP WITH MIN. HPSF = 11
PROVIDE HIGH EFFICIENCY GAS HOT WATER HEATER WITH MIN. UEF = .91

FLOOR AREAS

LEVEL	DESCRIPTION	AREA	HEATED
MAIN FLOOR	FLOOR AREA	3,428 SF	YES
MAIN FLOOR	GUEST STAIRS	124 SF	YES
MAIN FLOOR	SHOP	1,112 SF	
MAIN FLOOR	GARAGE 1	1,068 SF	
MAIN FLOOR	GARAGE 2	293 SF	
UPPER FLOOR	FLOOR AREA	2,571 SF	YES
GROSS BUILDING AREA		8,596 SF	
TOTAL HEATED AREA:		6,180 SF	

DECK
PEDESTAL PAVERS (SLOPE 1/4"/FT.)
12"W FIREPLACE CHASE BETWEEN TRANSOM WINDOWS. CONTRACTOR TO CONFIRM VENT SIZE W/ FIREPLACE MNFR. ADJUST AS NECESSARY.
36" GUARDRAIL
DOUBLE-SIDED DIRECT VENT GAS FIREPLACE
JORDAN'S ROOM
QUEEN
BENCH
CLOSET
GREAT ROOM (OPEN BELOW)
JORDAN'S LOUNGE
70" TV
JORDAN'S BATH
COFFEE
UPPER STORAGE
CORNER GAS FIREPLACE DIRECT-VENT
CHRIS' LOUNGE
CHRIS' BATH
DECK
WATERPROOF (150 sf)
(SLOPE 1/4"/FT.)
ROOF ABOVE (DASHED)
ACTIVE
EGRESS
CHRIS' ROOM
KING
CLOSET

KEY NOTES:

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 & EXTERIOR 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.

NORTH

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

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

SHEET NUMBER
A2.2

8/6/2025 4:58:10 PM

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

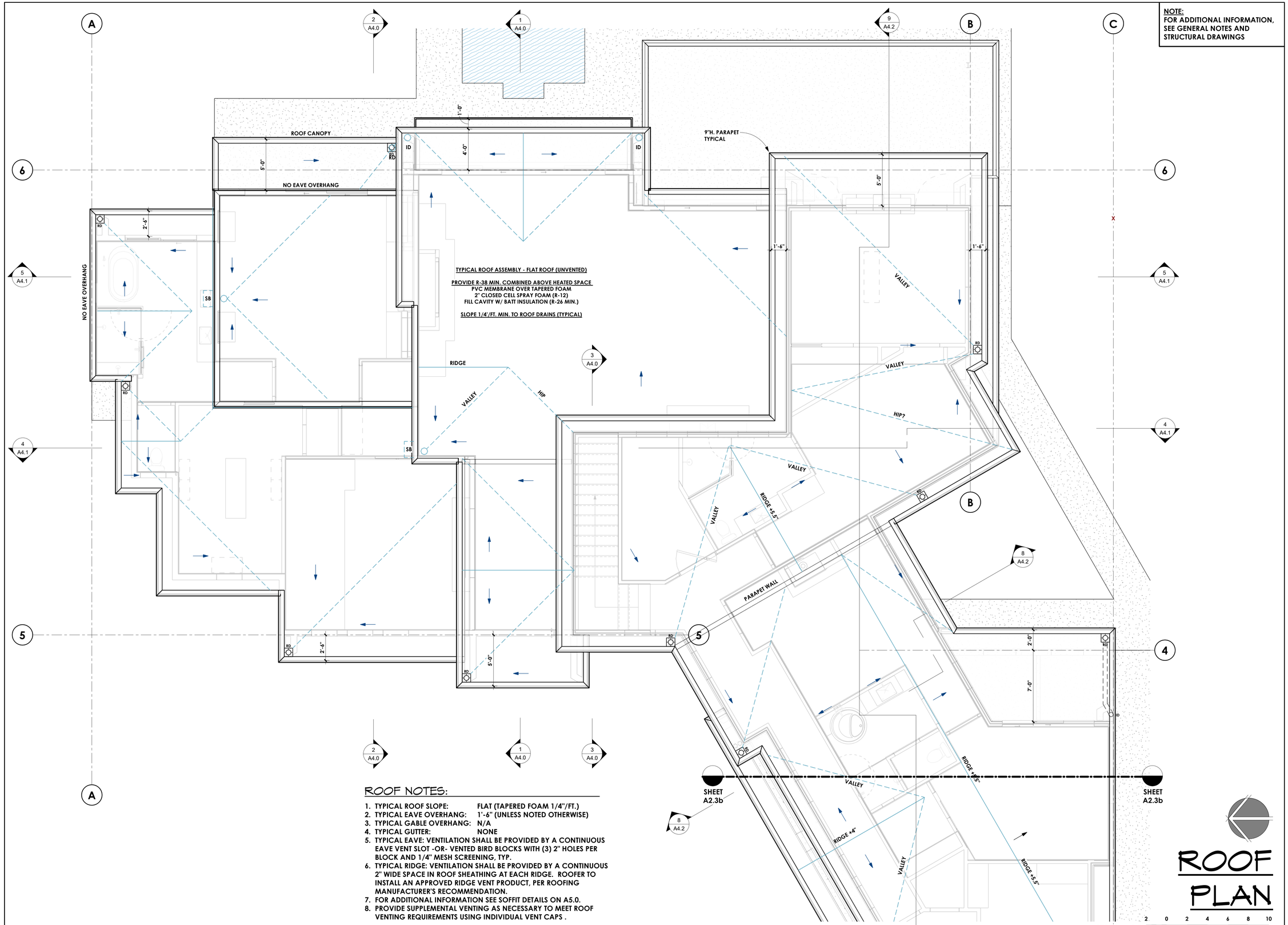
2" @ FULL SCALE

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

MACPHERSON RESIDENCE

5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 8661400040

ROOF PLAN



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 .

SCALE 1/4" = 1'-0"
0 2 4 6 8 10 FEET

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

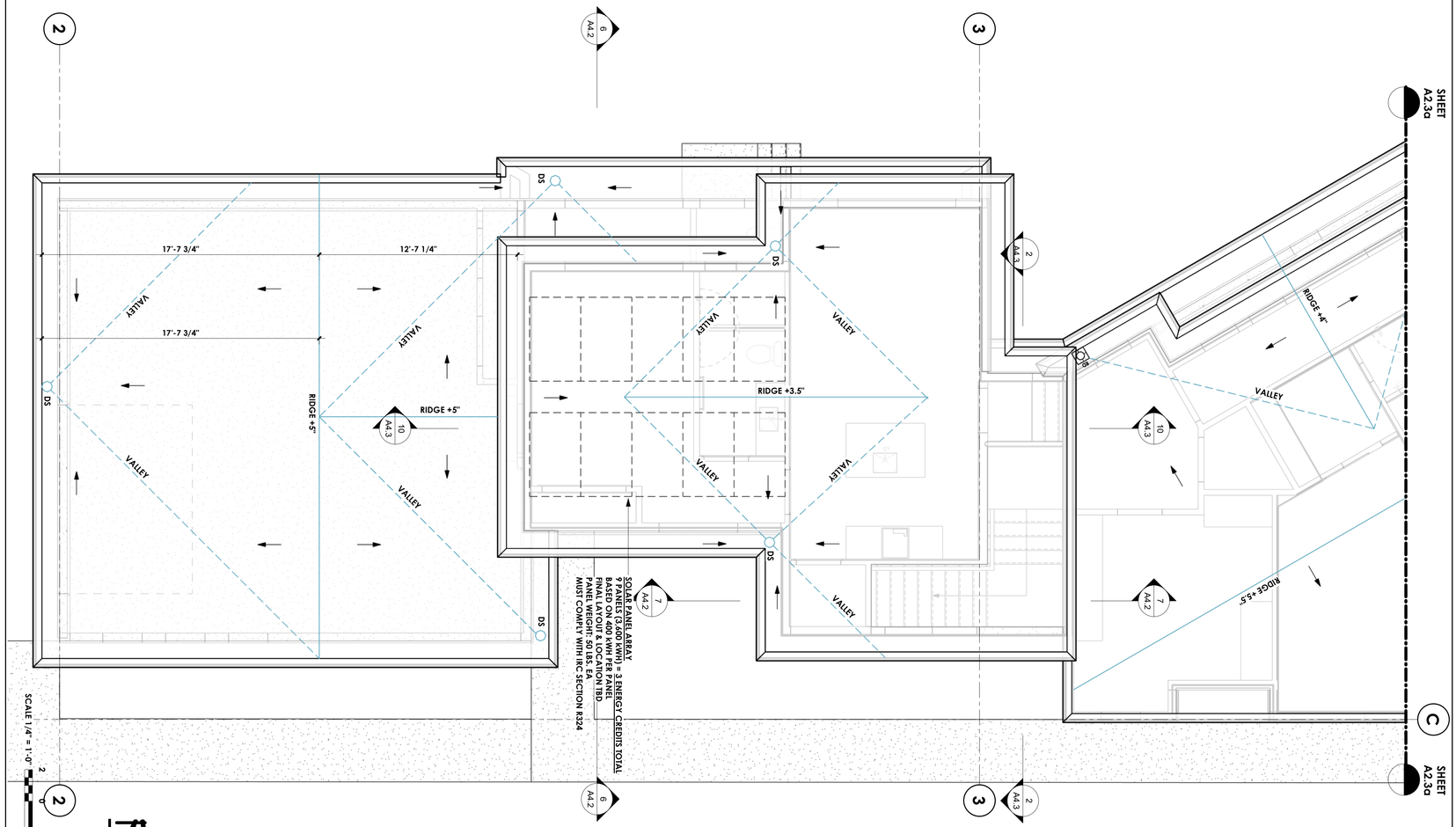
MacPherson
Construction & Design
22605 SE 56th St Suite 140, Issaquah, WA 98029
PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER
A2.3a

8/6/2025 4:58:18 PM

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

MacPherson Construction & Design

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

SHEET NUMBER **A2.3b**

MACPHERSON RESIDENCE

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

ROOF PLAN

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

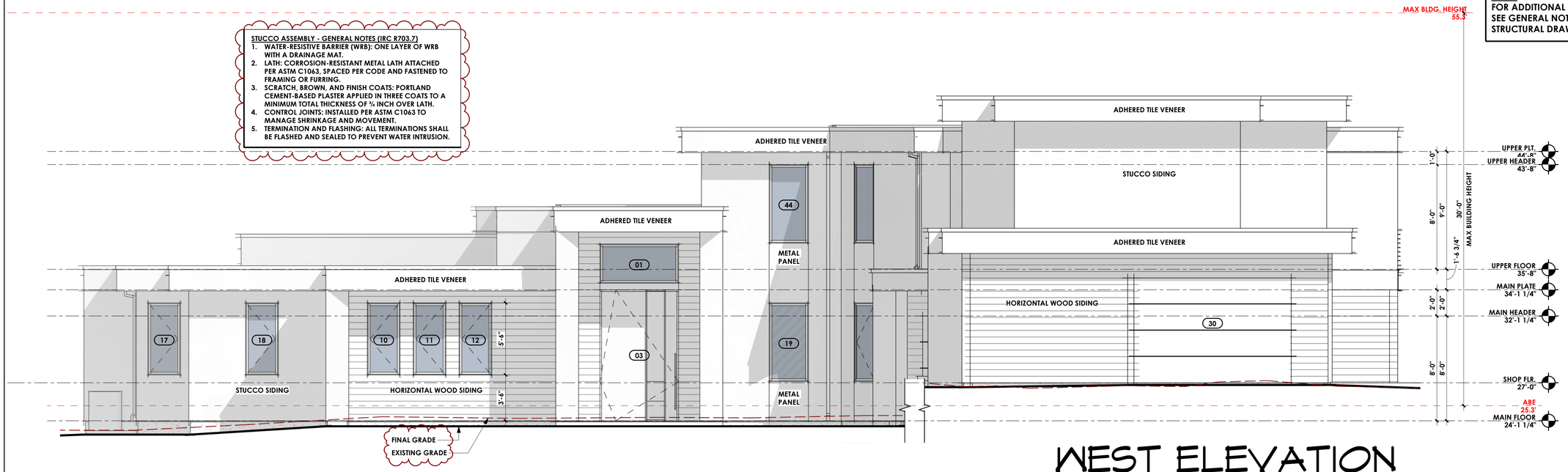
2" IF NOT FULL SCALE

8/6/2025 4:58:17 PM

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

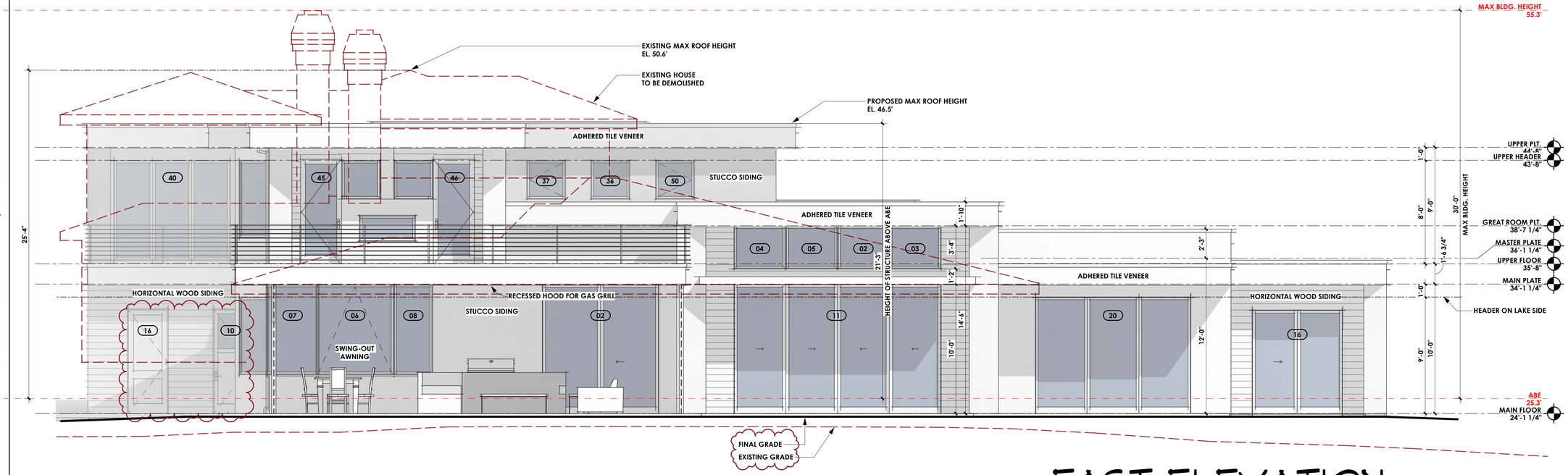
STUCCO ASSEMBLY - GENERAL NOTES (IRC R703.7)

1. WATER-RESISTIVE BARRIER (WRB): ONE LAYER OF WRB WITH A DRAINAGE MAT.
2. LATH: CORROSION-RESISTANT METAL LATH ATTACHED PER ASTM C1063, SPACED PER CODE AND FASTENED TO FRAMING OR FURRING.
3. SCRATCH, BROWN, AND FINISH COATS: PORTLAND CEMENT-BASED PLASTER APPLIED IN THREE COATS TO A MINIMUM TOTAL THICKNESS OF ¾ INCH OVER LATH.
4. CONTROL JOINTS: INSTALLED PER ASTM C1063 TO MANAGE SHRINKAGE AND MOVEMENT.
5. TERMINATION AND FLASHING: ALL TERMINATIONS SHALL BE FLASHED AND SEALED TO PREVENT WATER INTRUSION.



WEST ELEVATION

1/4" = 1'-0"



EAST 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

2" @ FULL SCALE

DATE	REV.	BY	DESCRIPTION
4/1/25	1	DAN	PERMIT SUBMITTAL
8/6/25		DAN	PERMIT SUBMITTAL 2

MACPHERSON RESIDENCE

5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 8661400040

EXTERIOR ELEVATIONS

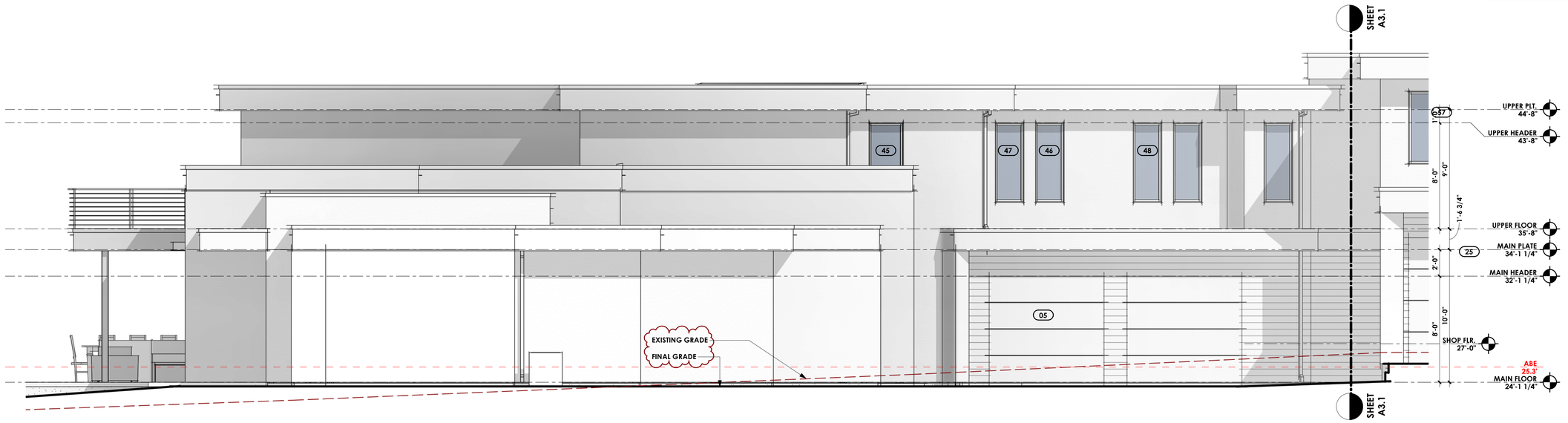
MacPherson Construction & Design
22605 SE 56th St Suite 140, Issaquah, WA 98029
PH. 425.391.3333 FAX 425.557.2841

SHEET NUMBER

A3.0

8/6/2025 4:58:27 PM

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



NORTH ELEVATION

1/4" = 1'-0"



NORTH 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

2" @ FULL SCALE

REV.	DATE	BY	DESCRIPTION
1	4/1/25	DAN	PERMIT SUBMITTAL
2	8/6/25	DAN	PERMIT SUBMITTAL 2

MACPHERSON RESIDENCE

5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 8661400040

EXTERIOR ELEVATIONS

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

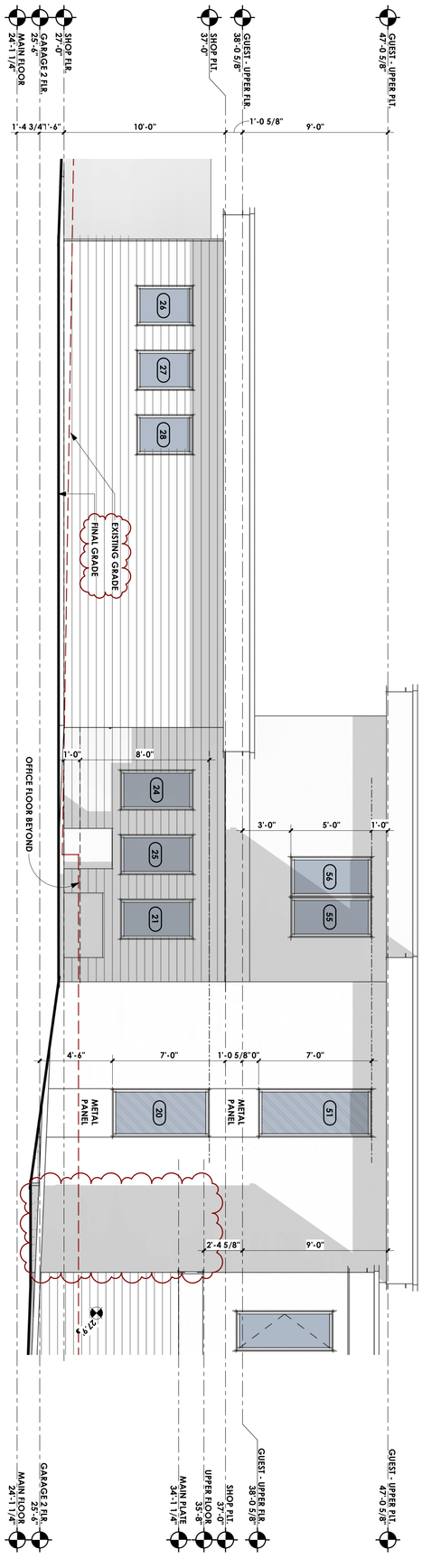
SHEET NUMBER

A3.1

8/6/2025 4:58:32 PM

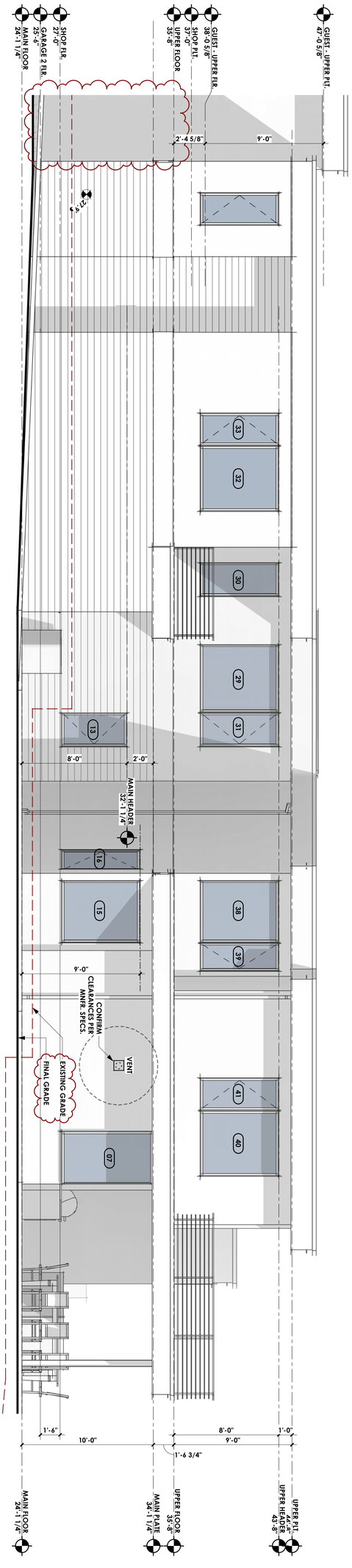
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

SCALE THIS DRAWING, IN FEET



SOUTH ELEVATION

1/4" = 1'-0"



SOUTH ELEVATION

1/4" = 1'-0"

8/6/2025 4:58:36 PM

SHEET NUMBER

A3.2

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

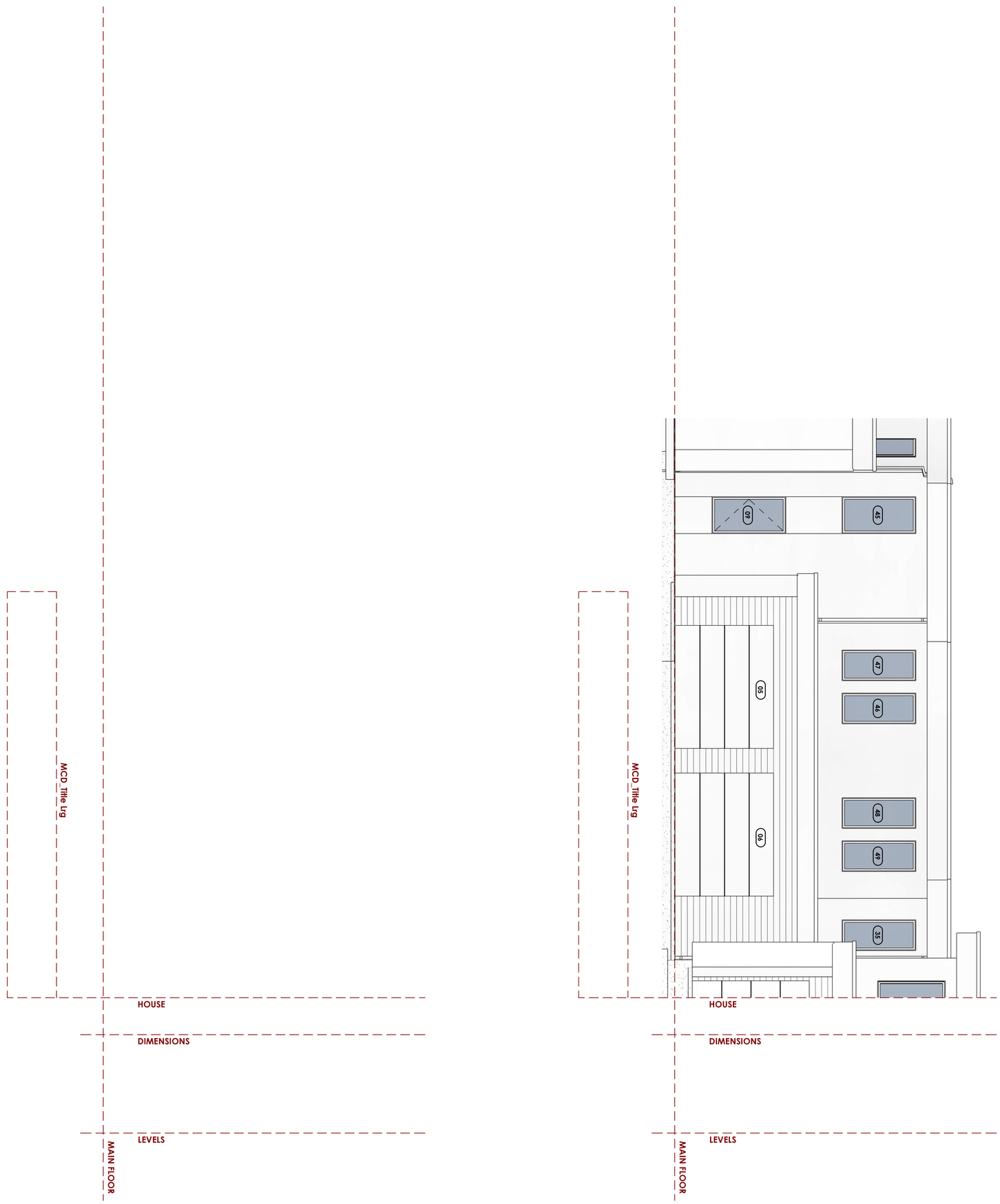
EXTERIOR ELEVATIONS

DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL
8/6/25	1	DAN	PERMIT SUBMITTAL 2

2" IS FULL SCALE

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



8/6/2025 4:58:38 PM

SHEET NUMBER

A3.3

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

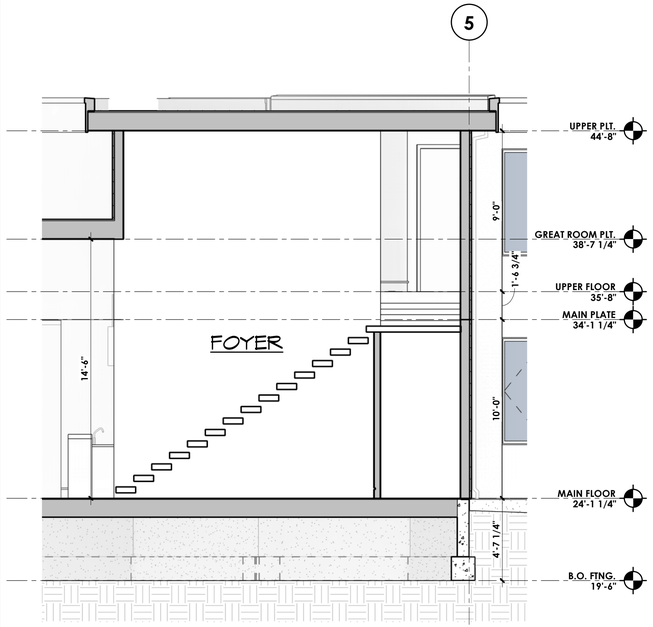
MACPHERSON RESIDENCE

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

EXTERIOR ELEVATIONS

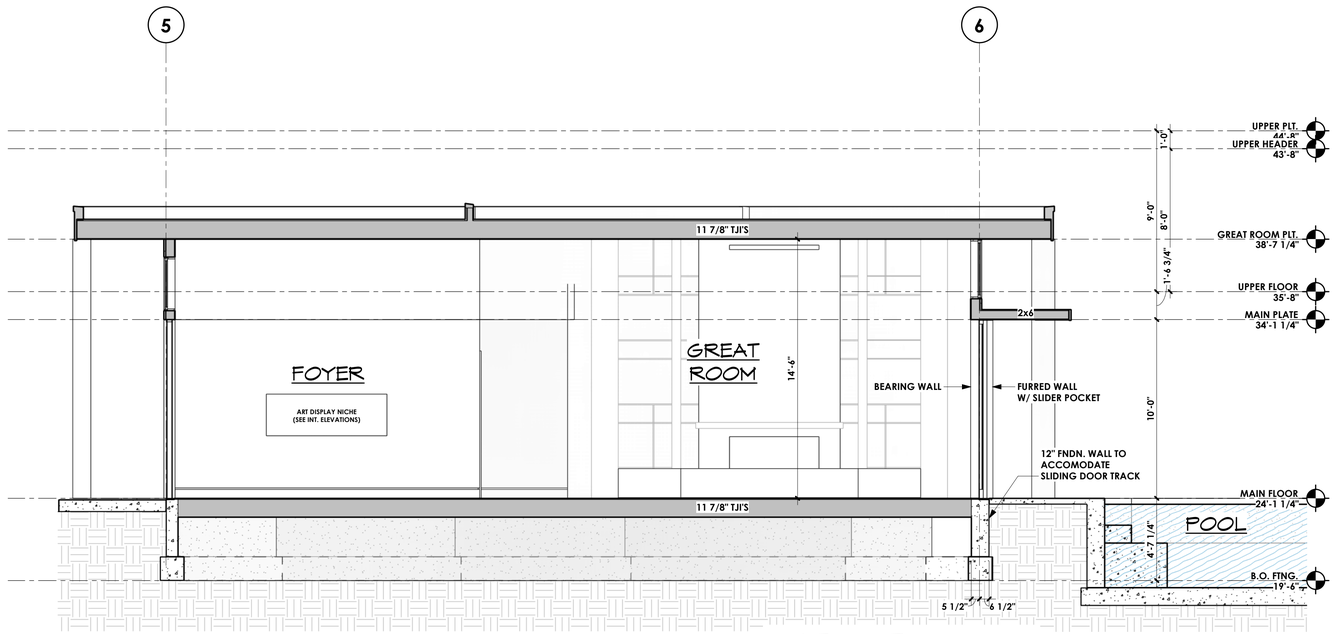
DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL

2" IF NOT THIS SCALE



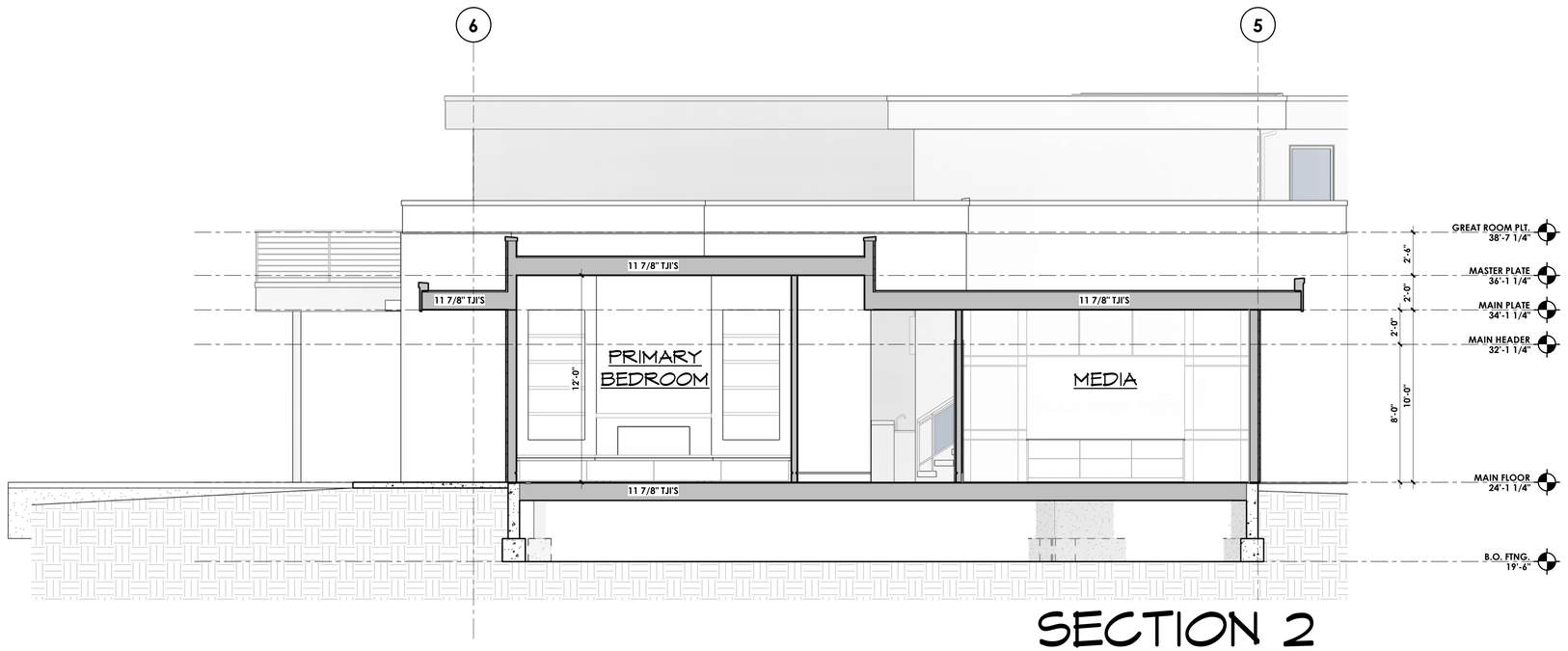
SECTION 3

1/4" = 1'-0"



SECTION 1

1/4" = 1'-0"



SECTION 2

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

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

BUILDING SECTIONS

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

SHEET NUMBER

A4.0

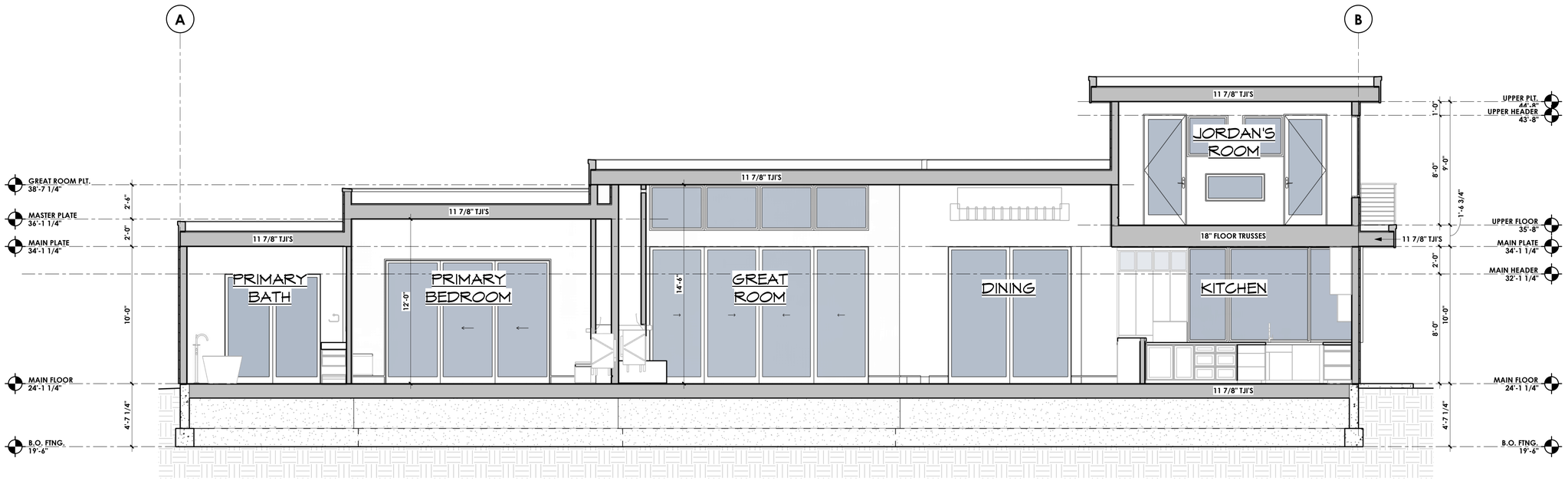
8/6/2025 4:58:42 PM

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



SECTION 4

1/4" = 1'-0"



SECTION 5

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

2" @ FULL SCALE

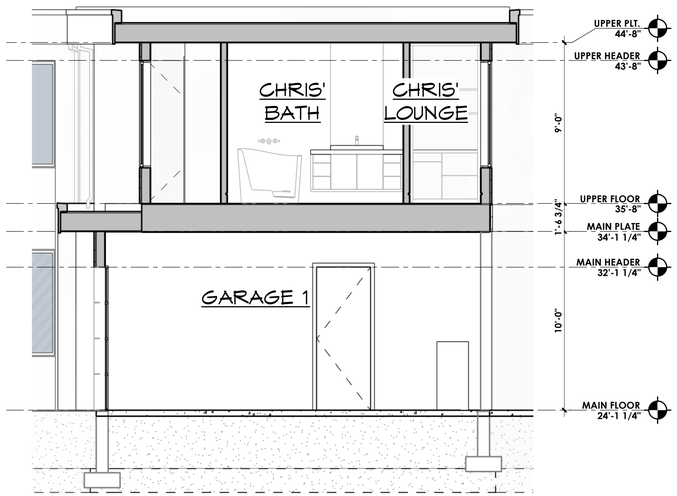
DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL

MACPHERSON RESIDENCE
5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 8661400040
BUILDING SECTIONS

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

SHEET NUMBER
A4.1

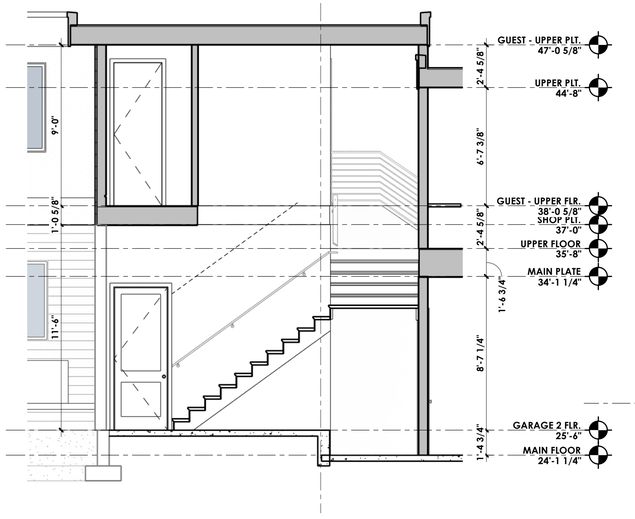
8/6/2025 4:58:45 PM



SECTION 8

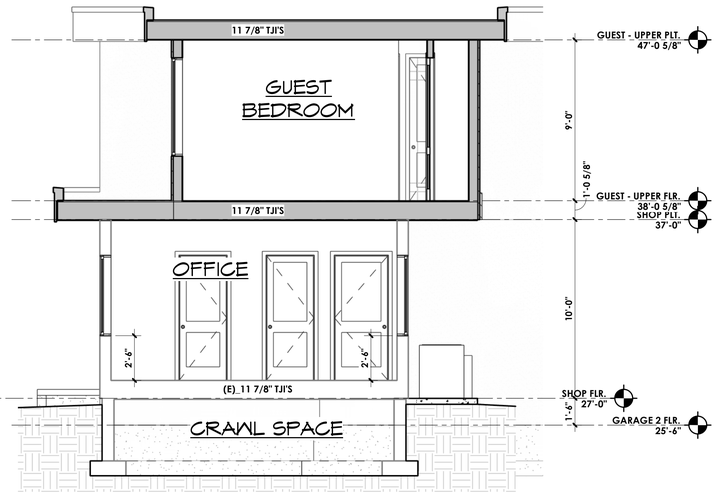
1/4" = 1'-0"

3



SECTION 7

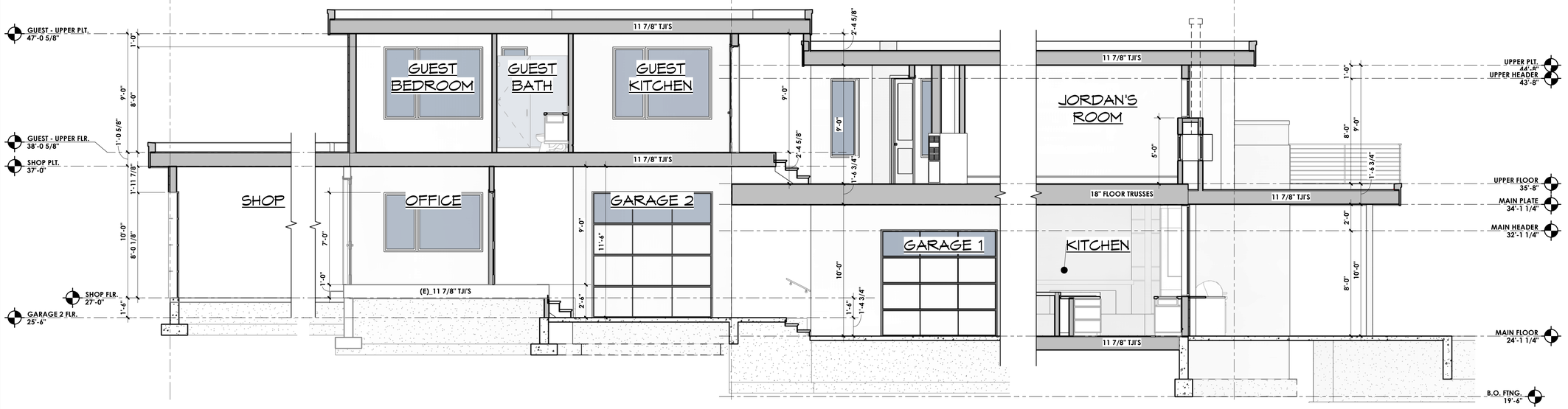
1/4" = 1'-0"



SECTION 6

1/4" = 1'-0"

2 3 6



SECTION 9

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

2" @ FULL SCALE

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

MACPHERSON RESIDENCE

5320 BUTTERWORTH RD.
MERCER ISLAND, WA 98040
PARCEL #: 8661400-0040

BUILDING SECTIONS

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

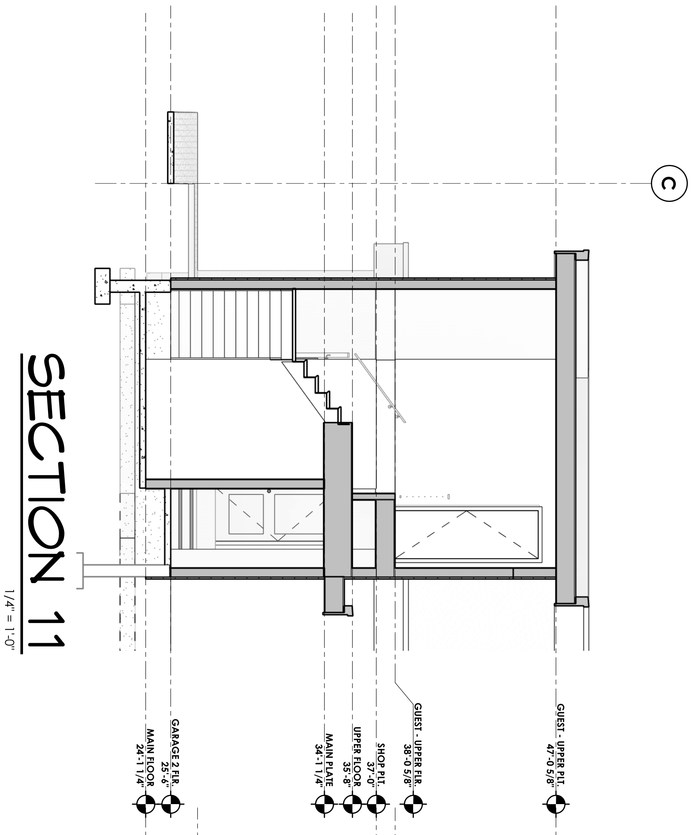
SHEET NUMBER

A4.2

8/6/2025 4:58:49 PM

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



SECTION 11

1/4" = 1'-0"



SECTION 10

1/4" = 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

BUILDING SECTIONS

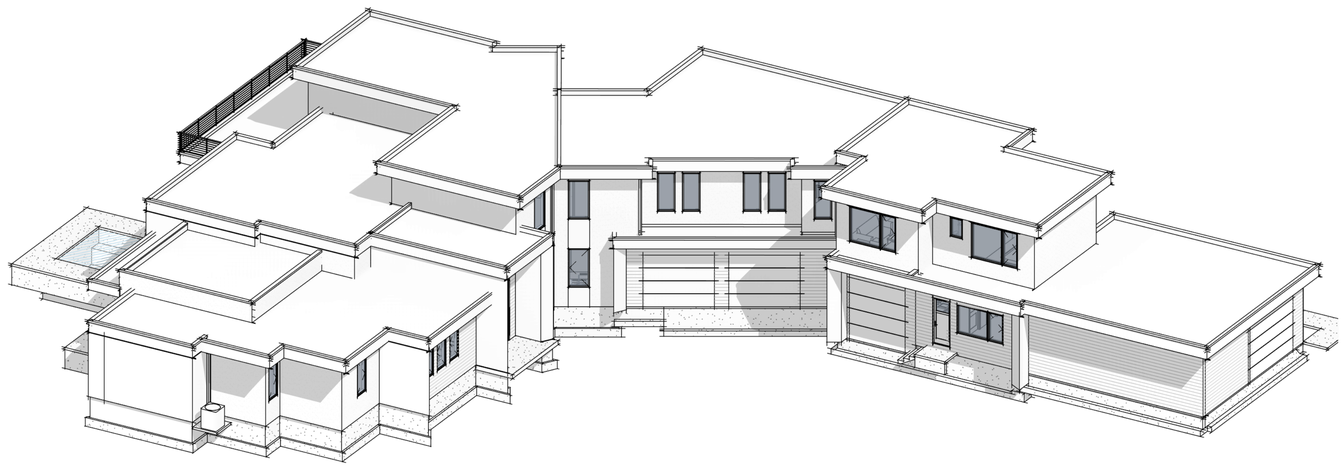
DATE	REV.	BY	DESCRIPTION
4/1/25		DAN	PERMIT SUBMITTAL
8/6/25	1	DAN	PERMIT SUBMITTAL 2

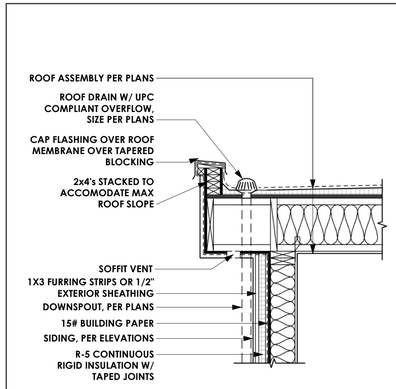
SHEET NUMBER

A4.3

8/6/2025 4:58:51 PM

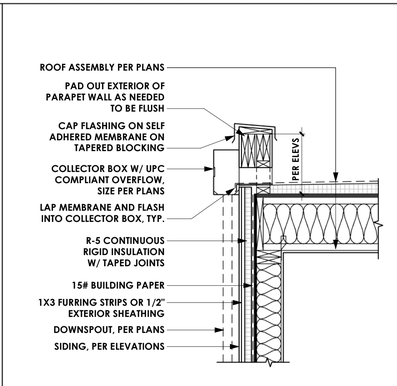
2" IS FULL SCALE





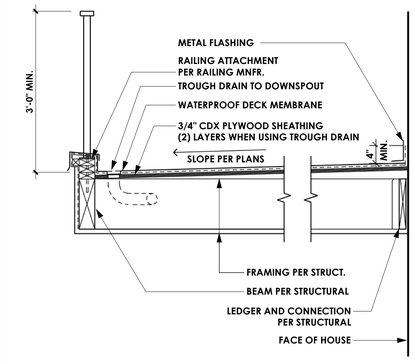
6 FLAT ROOF - OVERHANG UNVENTED

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



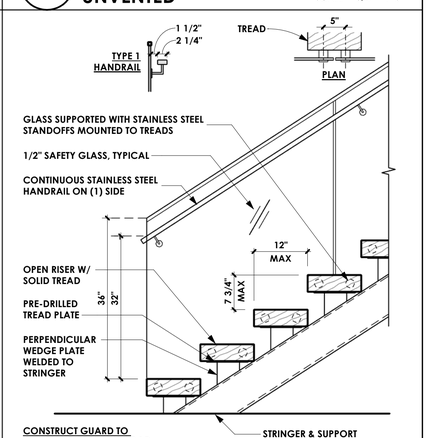
5 FLAT ROOF - NO OVERHANG UNVENTED

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



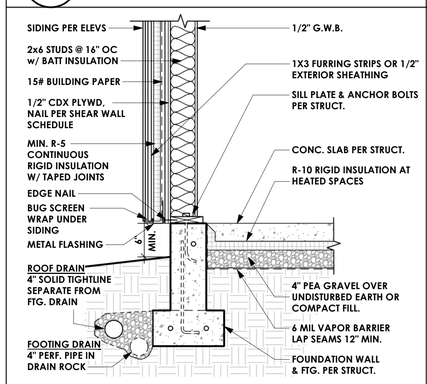
4 TYP WATERPROOF DECK (w/ CURB)

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



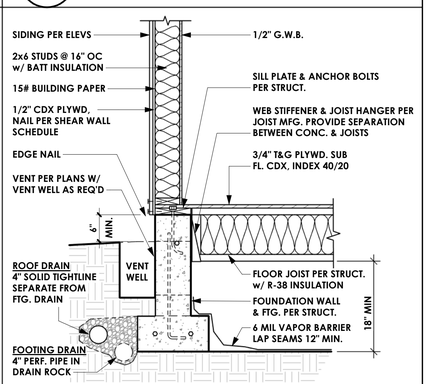
3 TYP OPEN RISER STAIR

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"

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
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

8/6/2025 4:58:57 PM

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	GREAT ROOM	02	TRANS	4'-0"	3'-4"	13 SF	11'-2"	14'-6"	
MAIN FLOOR	GREAT ROOM	03	TRANS	4'-0"	3'-4"	13 SF	11'-2"	14'-6"	
MAIN FLOOR	GREAT ROOM	04	TRANS	4'-0"	3'-4"	13 SF	11'-2"	14'-6"	
MAIN FLOOR	GREAT ROOM	05	TRANS	4'-0"	3'-4"	13 SF	11'-2"	14'-6"	
MAIN FLOOR	KITCHEN	06	AWNG	6'-0"	7'-0"	42 SF	3'-0"	10'-0"	
MAIN FLOOR	KITCHEN	07		4'-0 1/4"	7'-0"	28 SF	3'-0"	10'-0"	
MAIN FLOOR	KITCHEN	08	PICT	3'-0"	7'-0"	21 SF	3'-0"	10'-0"	
MAIN FLOOR	LAUNDRY	09	CSMT	3'-0"	6'-0"	18 SF	3'-0"	9'-0"	
MAIN FLOOR	MEDIA	10	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	MEDIA	11	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	MEDIA	12	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	MUD	13	CSMT	3'-0"	5'-0"	15 SF	3'-0"	8'-0"	
MAIN FLOOR	MUD	14	PICT	1'-4"	8'-0"	11 SF	0"	8'-0"	
MAIN FLOOR	OFFICE	15	PICT	5'-6"	6'-0"	33 SF	3'-0"	9'-0"	
MAIN FLOOR	OFFICE	16	CSMT	3'-0"	6'-0"	18 SF	3'-0"	9'-0"	
MAIN FLOOR	PRIMARY BATH	17	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	PRIMARY CLOSET	18	CSMT	2'-6"	5'-6"	14 SF	3'-6"	9'-0"	
MAIN FLOOR	PWDR.	19	PICT	3'-0"	6'-0"	18 SF	3'-0"	9'-0"	OBS
GARAGE 2 FLR.		20	PICT	3'-0"	6'-0"	18 SF	4'-6"	10'-6"	OBS
SHOP FLR.	GARAGE 2	21	PICT	2'-6"	4'-6"	11 SF	3'-6"	8'-0"	
SHOP FLR.	OFFICE	22	PICT	5'-0"	4'-6"	23 SF	3'-6"	8'-0"	
SHOP FLR.	OFFICE	23	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	25	PICT	2'-6"	4'-6"	11 SF	3'-6"	8'-0"	
SHOP FLR.	SHOP	26	PICT	2'-6"	3'-6"	9 SF	4'-6"	8'-0"	
SHOP FLR.	SHOP	27	PICT	2'-6"	3'-6"	9 SF	4'-6"	8'-0"	
SHOP FLR.	SHOP	28	PICT	2'-6"	3'-6"	9 SF	4'-6"	8'-0"	
UPPER FLOOR	CHRIS' LOUNGE	29	PICT	6'-0"	6'-0"	36 SF	2'-0"	8'-0"	
UPPER FLOOR	CHRIS' LOUNGE	30	PICT	3'-0"	6'-0"	18 SF	2'-0"	8'-0"	
UPPER FLOOR	CHRIS' LOUNGE	31	CSMT	3'-0"	6'-0"	18 SF	2'-0"	8'-0"	
UPPER FLOOR	CHRIS' ROOM	32	PICT	5'-0"	6'-0"	30 SF	2'-0"	8'-0"	
UPPER FLOOR	CHRIS' ROOM	33	CSMT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	COSTUME ROOM	34	CSMT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	GUEST FOYER	35	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	JORDAN'S BATH	36	PICT	3'-0"	3'-0"	9 SF	5'-0"	8'-0"	
UPPER FLOOR	JORDAN'S BATH	37	CSMT	3'-0"	3'-0"	9 SF	5'-0"	8'-0"	
UPPER FLOOR	JORDAN'S LOUNGE	38	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	40	PICT	5'-0"	6'-0"	30 SF	2'-0"	8'-0"	
UPPER FLOOR	JORDAN'S ROOM	41	CSMT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	JORDAN'S ROOM	42	TRANS	3'-0"	3'-0"	9 SF	5'-0"	8'-0"	
UPPER FLOOR	JORDAN'S ROOM	43	TRANS	3'-0"	3'-0"	9 SF	5'-0"	8'-0"	
UPPER FLOOR	JORDAN'S ROOM	00	PICT	4'-4"	2'-0"	9 SF	1'-9"	3'-9"	NOT A WINDOW
UPPER FLOOR	JORDAN'S ROOM	00	PICT	4'-4"	2'-0"	9 SF	1'-9"	3'-9"	NOT A WINDOW
UPPER FLOOR	UPPER HALL	44	PICT	3'-0"	6'-0"	18 SF	2'-0"	8'-0"	SG
UPPER FLOOR	UPPER HALL	45	PICT	3'-0"	6'-0"	18 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	46	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	47	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	48	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER HALL	49	PICT	2'-6"	6'-0"	15 SF	2'-0"	8'-0"	
UPPER FLOOR	UPPER STORAGE	50	CSMT	3'-0"	3'-0"	9 SF	5'-0"	8'-0"	
GUEST - UPPER FLR.		51	PICT	3'-0"	7'-0"	21 SF	1'-0"	8'-0"	SG
GUEST - UPPER FLR.	GUEST BATH	52	PICT	2'-0"	3'-0"	6 SF	5'-0"	8'-0"	
GUEST - UPPER FLR.	GUEST BEDROOM	53	PICT	5'-0"	5'-6"	28 SF	2'-6"	8'-0"	
GUEST - UPPER FLR.	GUEST BEDROOM	54	CSMT	2'-6"	5'-6"	14 SF	2'-6"	8'-0"	
GUEST - UPPER FLR.	GUEST BEDROOM	55	PICT	2'-6"	5'-0"	13 SF	3'-0"	8'-0"	
GUEST - UPPER FLR.	GUEST BEDROOM	56	PICT	2'-6"	5'-0"	13 SF	3'-0"	8'-0"	
GUEST - UPPER FLR.	GUEST LOUNGE	57	PICT	5'-0"	5'-6"	28 SF	2'-6"	8'-0"	
GUEST - UPPER FLR.	GUEST LOUNGE	58	CSMT	2'-6"	5'-6"	14 SF	2'-6"	8'-0"	
TOTAL WINDOWS: 60						988 SF			

DOOR SCHEDULE

LEVEL	ROOM	MARK	OPERATION	WIDTH	HEIGHT	AREA	FIRE RATING	COMMENTS
MAIN FLOOR	BAR	01	PKT	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	DBL. 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	POOL EQUIPMENT	16	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	18	PKT	3'-0"	8'-0"	24 SF		
MAIN FLOOR	PRIMARY BATH	19	SW	2'-8"	8'-0"	21 SF		
MAIN FLOOR	PRIMARY BEDROOM	20	XXO SLIDER	12'-0"	9'-0"	108 SF		SG
MAIN FLOOR	PRIMARY BEDROOM	21	SW	3'-0"	8'-0"	24 SF		
MAIN FLOOR	PRIMARY BEDROOM	22	SW	2'-8"	8'-0"	21 SF		
MAIN FLOOR	PRIMARY CLOSET	23	SW	2'-8"	8'-0"	21 SF		
MAIN FLOOR	PWDR.	24	SW	2'-8"	8'-0"	21 SF		
GARAGE 2 FLR.	GARAGE 2	25	OVHD	9'-0"	9'-6"	86 SF		
GARAGE 2 FLR.	GARAGE 2	26	SW	3'-0"	8'-0"	24 SF		
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	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	2'-8"	8'-0"	21 SF		
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	SW	2'-8"	8'-0"	21 SF		
UPPER FLOOR	GUEST FOYER	42	SW	2'-8"	8'-0"	21 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	3'-0"	8'-0"	24 SF		
UPPER FLOOR	JORDAN'S ROOM	46	SW	3'-0"	8'-0"	24 SF		
UPPER FLOOR	JORDAN'S ROOM	47	PKT	3'-0"	8'-0"	24 SF		
UPPER FLOOR	MECH.	48	SW	2'-8"	8'-0"	21 SF		
UPPER FLOOR	UPPER HALL	49	PVT	4'-0"	8'-0"	32 SF		
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 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.	GUEST FOYER	55	SW	2'-8"	8'-0"	21 SF		
GUEST - UPPER FLR.	GUEST KITCHEN	56	SW	2'-8"	8'-0"	21 SF		
GUEST - UPPER FLR.	GUEST KITCHEN	57	SW	2'-8"	8'-0"	21 SF		
GRAND TOTAL: 56						1,993 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:
1. U-VALUE: MIN. 0.25 PER WSEC ENERGY CREDIT OPTION 1.2.
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.

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
8/6/25	1	DAN	PERMIT SUBMITTAL 2

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

8/6/2025 4:58:59 PM

PILE STRUCTURAL NOTES

GRADE BEAM ON PIPE PILINGS:

- 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 1143-81 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.

BASEMENT SLAB

4" CONC. SLAB ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

GARAGE SLAB

4" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

PORCH SLAB

4" CONC. SLAB ON GRADE ON 4" MIN. GRANULAR FILL ON 95% 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, U.N.O.:
  - f'c = 2,500 psi: ..... FOUNDATION WALLS*
  - 2,500 psi: ..... FOOTINGS*
  - 3,000 psi: ..... GRADE BEAMS
  - 2,500 psi: ..... INTERIOR SLABS ON GRADE
  - 3,500 psi: ..... GARAGE & EXT. SLABS ON GRADE
  - fy = 60,000 psi
  - * UTILIZE 5½" SACK 2500 PSI CONCRETE MIXES THAT ARE EQUIVALENT TO 3,000 PSI CONCRETE FOR WEATHERING POTENTIAL
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.
- FOUNDATION WALL DESIGN IS BASED ON BACKFILL SOIL PRESSURE OF 55 PCF AT-REST, 35 PCF ACTIVE & 7H 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 95% 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 ⅝" DIA. ANCHOR BOLTS W/ MIN. 3"x3"x¼" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN ½" OF EXTERIOR EDGE OF SILL PLATE) PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS, U.N.O. (SEE FND. 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 STHD14 (R.I.) 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.)

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 BRACING, GUYS, 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 MK 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:

A. ROOF TRUSSES:
   1/4" DEAD LOAD
B. FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS:
   1/8" DEAD LOAD
C. 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 RAFTERS/JOISTS :	10
FLOOR TRUSSES :	15
FLOOR JOISTS :	10
DECK JOISTS :	10
TILE FLOORS :	10
LIVE LOAD (PSF):	
ROOF :	20
RESIDENTIAL LIVING AREAS :	40
RESIDENTIAL SLEEPING AREAS :	30
RESIDENTIAL WOOD DECKS:	60
GARAGE :	50
SNOW LOAD:	
GROUND SNOW LOAD (Pg) (PSF) :	25
ROOF SNOW LOAD (Ps) (PSF) :	25
SNOW EXPOSURE FACTOR (Ce) :	0.9
SNOW LOAD IMPORTANCE FACTOR (I) :	1.0
THERMAL FACTOR (Ct) :	1.2

LATERAL DESIGN LOADS:

WIND LOAD: (IBC 1609)	
SPEED (Vult) (MPH) :	100
WIND RISK CATEGORY :	II
IMPORTANCE FACTOR (Iw) :	1.0
EXPOSURE CATEGORY :	C
INTERNAL PRESSURE COEFF. (GCpi) :	±0.18
TOPOGRAPHIC FACTOR (Kzt) :	1.0
SEISMIC LOAD: (IBC 1613)	
SEISMIC RISK CATEGORY :	II
SEISMIC IMPORTANCE FACTOR (Ie) :	1.0
MAPPED SPECTRAL RESPONSE :	
Ss= 1.437 Sl= 0.499	
SITE CLASS :	F
SPECTRAL RESPONSE COEFF. :	
Sms= 1.293 Sm= 0.499	
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. (Cs) :	
TRANS: 0.199 LONG: 0.199	
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 MK 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 R301.1.3 OF THE 2021 IRC. ACCORDINGLY, THIS HOME, AS DOCUMENTED AND DETAILED HEREWITHIN, 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)

- 7/16" OSB OR 15/32" PLYWOOD:

  FASTEN SHEATHING w/ 2½"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 U.N.O. ON PLANS.

3" o.c. EDGE NAILING

(WHERE NOTED ON PLANS)

- 7/16" OSB OR 15/32" PLYWOOD:

  ONLY AT LOCATIONS INDICATED ON PLANS - SHEATHE WALL SHOWN WITH ⅞" OSB. FASTEN SHEATHING w/ 2½"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:

1. LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" o.c.
2. ALL SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES FASTENED TOGETHER w/ 3"x0.131" NAILS @ 8" O.C. USE (12)8d'x0.131" NAILS AT EACH LAP SPLICE, (6) EACH SIDE OF JOINT (TYP. U.N.O.)
3. ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
4. ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.

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 HOLDDOWN.

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, U.N.O.
- 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, U.N.O.
- 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, U.N.O.
- 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, U.N.O.
- BUILT-UP POSTS SHALL BE 2x4 OR 2x6 HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O. & SOLID WOOD COLUMNS SHALL BE SPRUCE PINE FIR (SPF) #2 GRADE LUMBER, OR BETTER, U.N.O.
- 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 HANGER NAILS SHALL BE INSTALLED PER MANFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: 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. U.N.O.
- 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:
  - LSL MEMBERS - Fb=2325 PSI; Fv=310 PSI; E=1.55x10^6 PSI
  - LVL MEMBERS - Fb=2600 PSI; Fv=285 PSI; E=2.0x10^6 PSI
  - GLB MEMBERS - Fb(+)=2400 PSI; Fb(-)=1850 PSI; Fv=265 PSI; E=1.8x10^6 PSI; DF/DF, 24F-V4 (U.N.O)
- ENGINEERED LUMBER POSTS TO MEET OR EXCEED THE FOLLOWING:
  - LVL MEMBERS - Fb=2400 PSI; Fc⊥=2500 PSI; E=1.8x10^6 PSI
- 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 2x8 & 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 TPI-1 2.3.2.3 & 2.3.4.3.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. U.N.O.
- 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 SOURCED MATERIALS. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, NOT LESS THAN ASTM A653, TYPE G185 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.

FLOOR FRAMING

- I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA AND SHALL RUN CONTINUOUS OVER SUPPORTS WHEREVER POSSIBLE. ALL LOADS SHOWN ON PLAN FOR MANUF. DESIGNS ARE ASD LEVEL LOADS, U.N.O. (EXCLUDES STONE/MARBLE OR WET BED CONSTRUCTED FLOORS - CONTACT MK FOR EXCLUDED DESIGNS).
- 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 (U.N.O. ON PLANS):
  SINGLE PLY: SIMPSON LUS28
  DOUBLES: 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 ½" 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. U.N.O.
- FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS W/ ½" LONG NAILS.

ROOF FRAMING

- FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) 'SIMPSON' H2.5T CLIP. PROVIDE (2) 'SIMPSON' H2.5T 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 ½" x 0.131" NAILS @ 6"o.c. AT PANEL EDGES & @ 6" 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 WTCA & TPI'S BCSI 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.

seal:

NICHOLAS J. MARTIGNETTI — STATE OF WASHINGTON — 56478 — REGISTERED PROFESSIONAL ENGINEER

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25	BFD
AHJ/A REVISIONS + PLAN REVIEW	

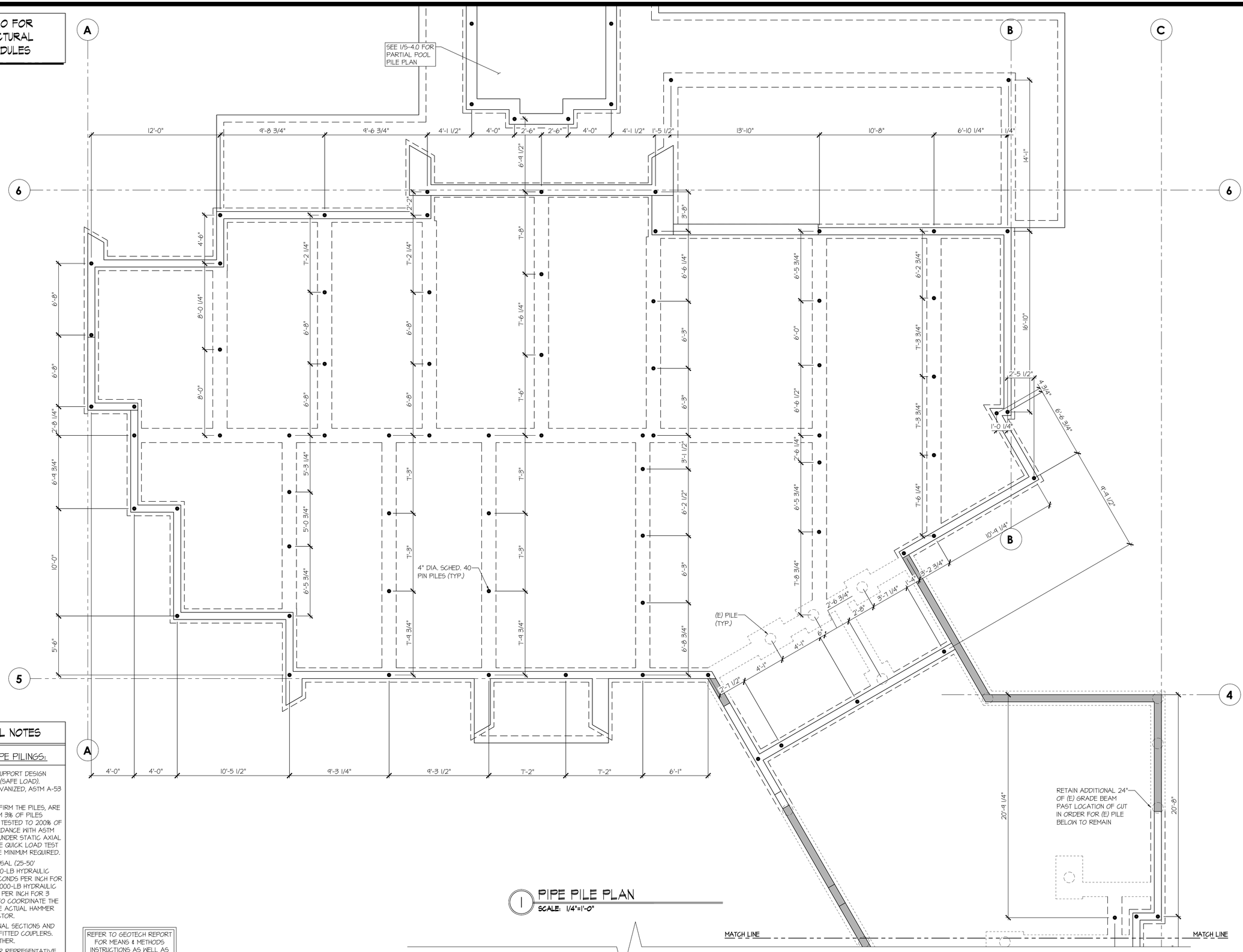
MacPherson Construction

Structural Notes

5330 Butterworth Rd
North Lot
Mercer Island, Washington

sheet: S-0.0

REFER TO S-0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES



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

PILE STRUCTURAL NOTES

GRADE BEAM ON PIPE PILINGS:

- 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 1143-81 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

seal:

NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

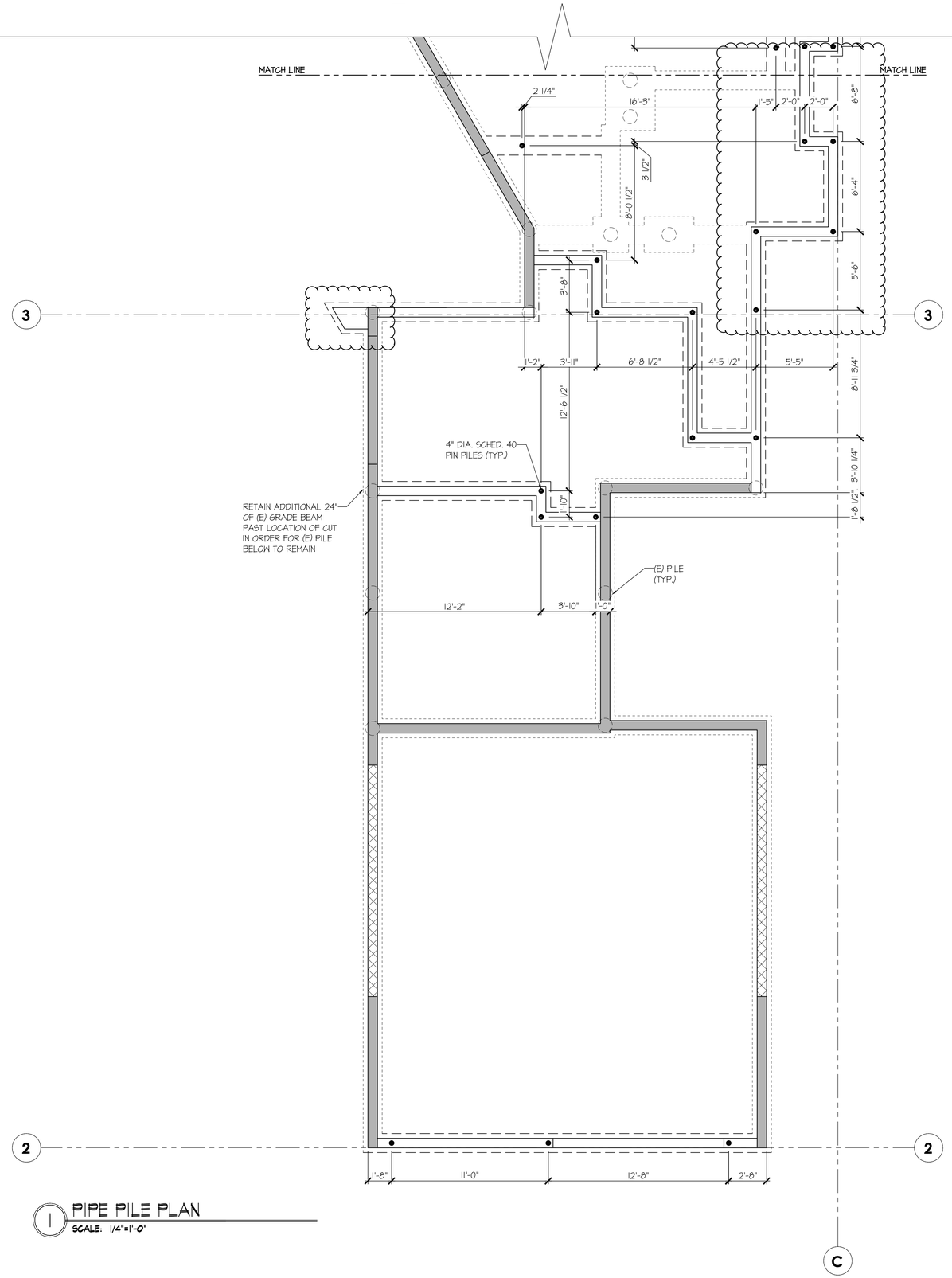
MacPherson Construction

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



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

PILE STRUCTURAL NOTES

GRADE BEAM ON PIPE PILINGS:

- 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 1143-81 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

seal:

NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

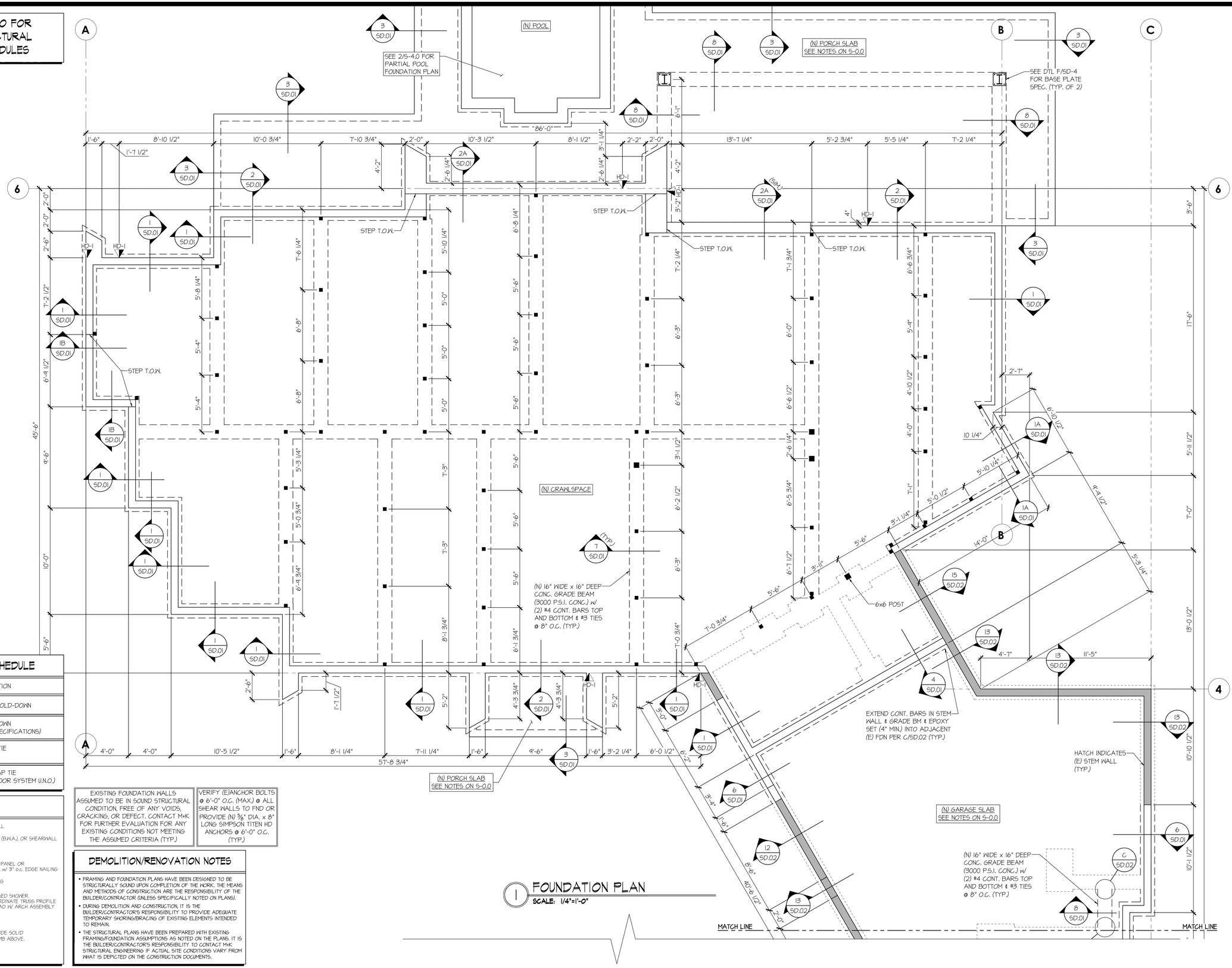
MacPherson Construction

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 STHD14 (R.U) 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 MANUF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD W/ ARCH ASSEMBLY
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDOWN.

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 FND OR PROVIDE (N) ⅝" 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.

1 FOUNDATION PLAN

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

seal:

NICHOLAS J. MARTIGNETTI — STATE OF WASHINGTON — 36478 — REGISTERED PROFESSIONAL ENGINEER

© copyright : MULHERN + KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

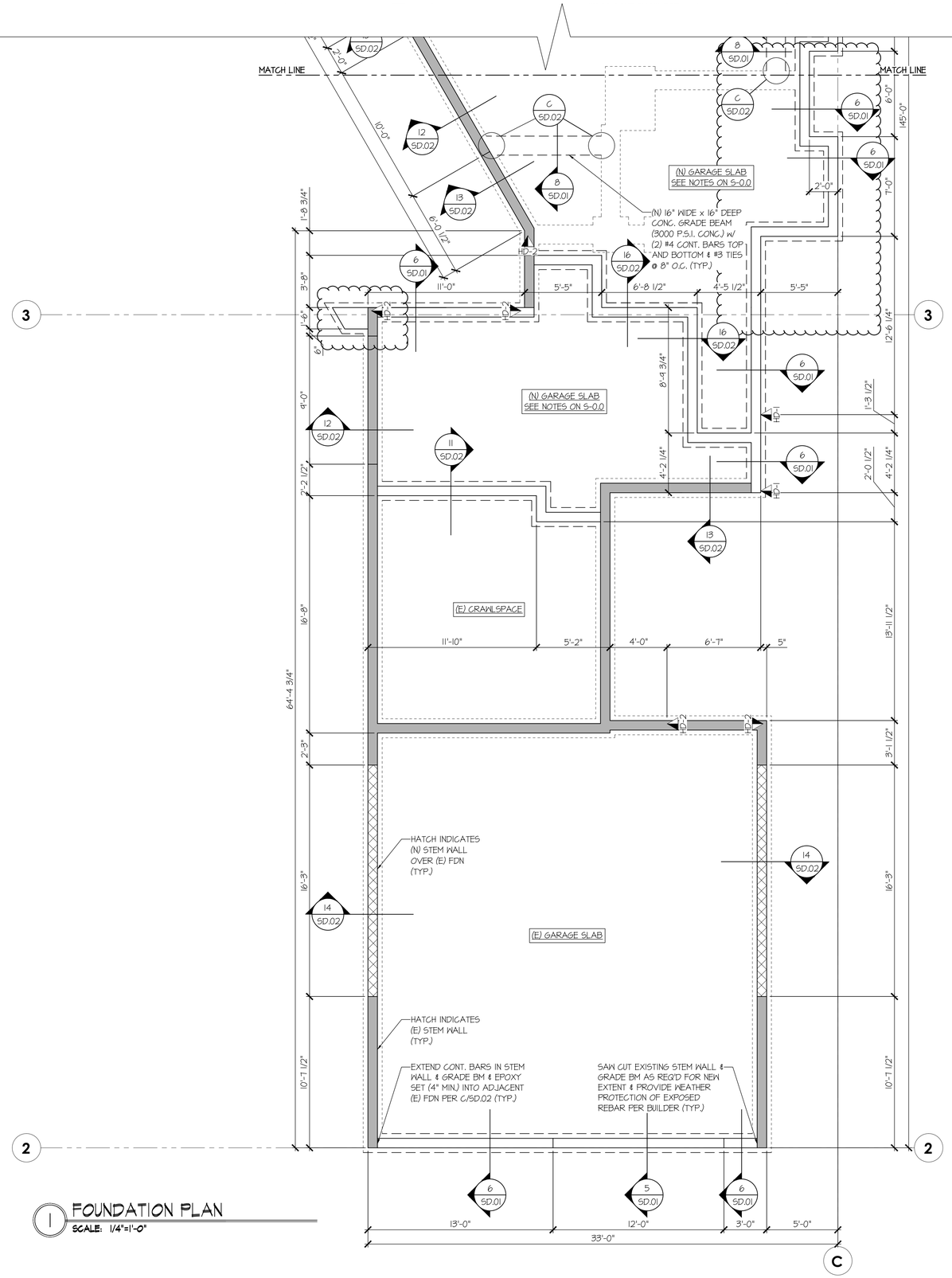
MacPherson Construction

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
HD-1	SIMPSON STHD14 (R.I.) 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 MANUF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD W/ ARCH ASSEMBLY
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDOWN.

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 FND OR PROVIDE (N) ⅝" 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.

seal:
NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER
© copyright : MULHERN + KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

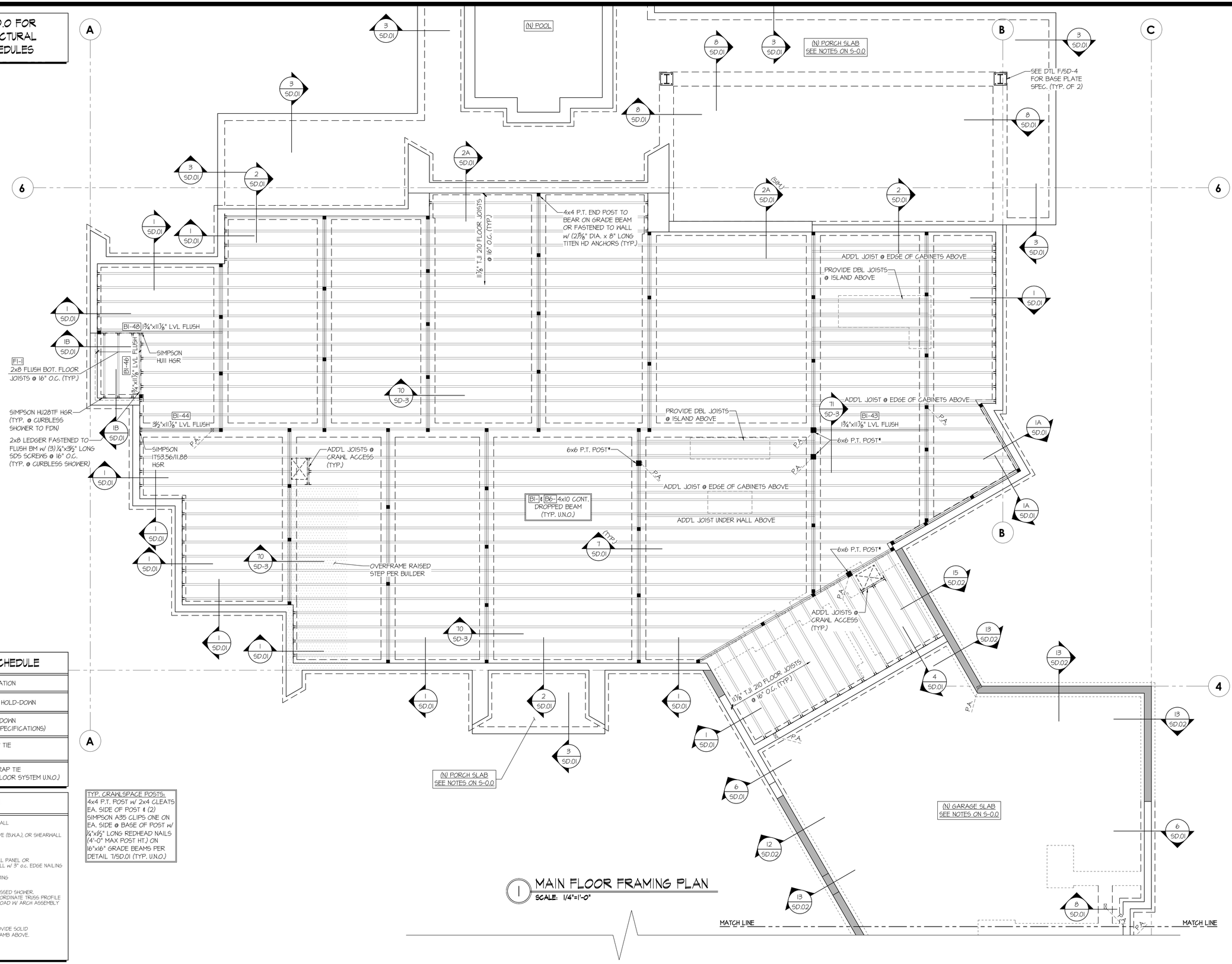
MacPherson Construction

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 STHD14 (R.I.) 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 MANUF. TO COORDINATE TRUSS PROFILE & ASSEMBLY DEAD LOAD W/ ARCH ASSEMBLY
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDOWN.

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/ ¼"x1½" LONG REDHEAD NAILS (4'-0" MAX POST HT.) ON 16"x16" GRADE BEAMS PER DETAIL 7/SD.01 (TYP. U.N.O.)

1 MAIN FLOOR FRAMING PLAN

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

seal: NICHOLAS J. MARTIGNETTI · STATE OF WASHINGTON · 56478 · REGISTERED PROFESSIONAL ENGINEER

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
07/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

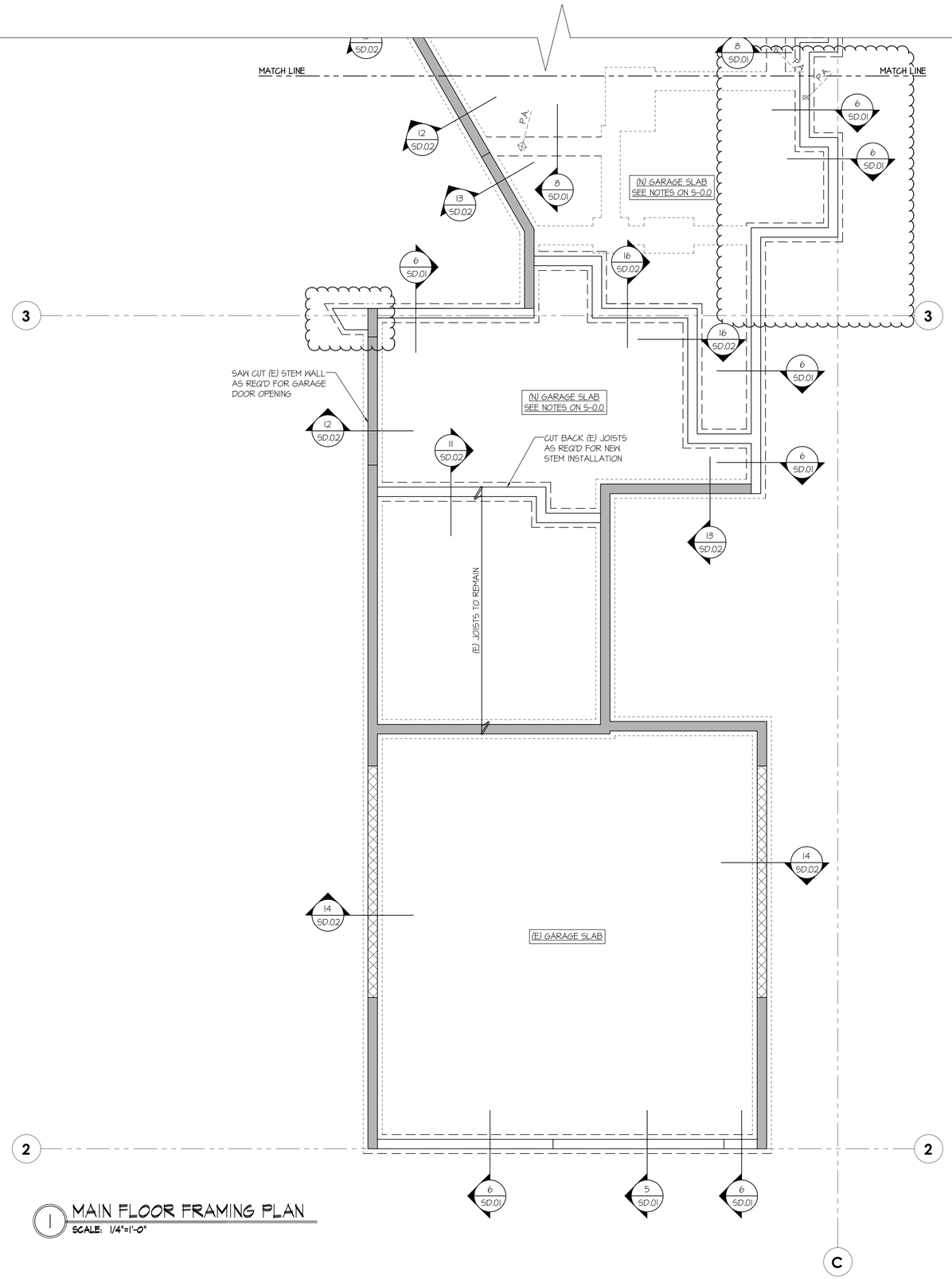
MacPherson Construction

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



MAIN FLOOR FRAMING PLAN

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

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.U) 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 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 HOLDOWN.

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/ ¼"x1½" LONG REDHEAD NAILS (4'-0" MAX POST HT.) ON 16"x16" GRADE BEAMS PER DETAIL 7/SD.01 (TYP. U.N.O.)

seal:
NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER
© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25 ARCH REVISIONS + PLAN REVIEW	BFD

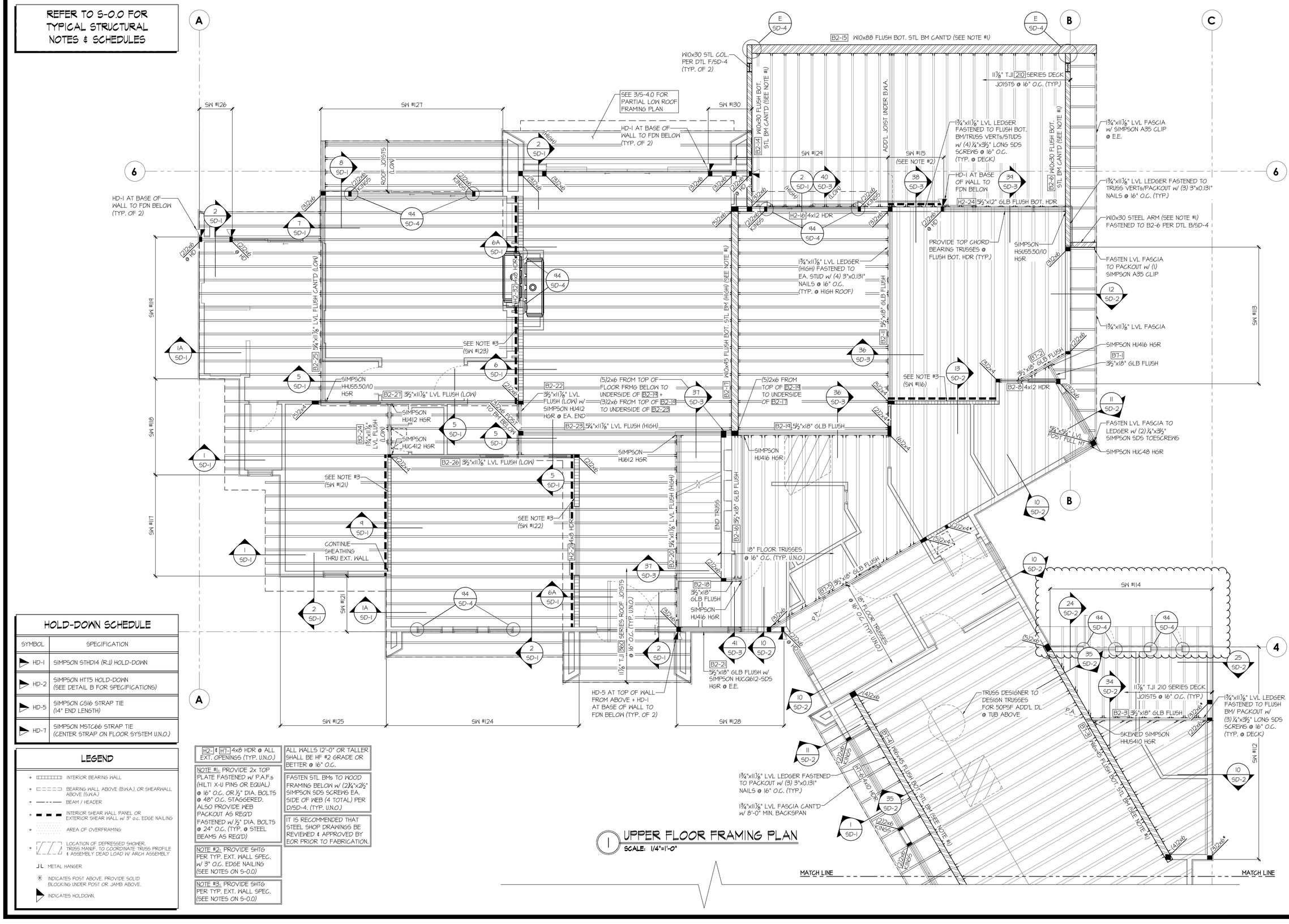
MACPHERSON CONSTRUCTION

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



HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.U) 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 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 HOLDDOWN.

H2-1 & H7-1 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 ½" DIA. BOLTS @ 48" O.C. STAGGERED. ALSO PROVIDE WEB PACKOUT AS REQ'D FASTENED w/ ½" 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)¼"x2½" 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.

1 UPPER FLOOR FRAMING PLAN

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

seal: NICHOLAS J. MARTIGNETTI STATE OF WASHINGTON 56478 REGISTERED PROFESSIONAL ENGINEER

© copyright : MULHERN + KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
07/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

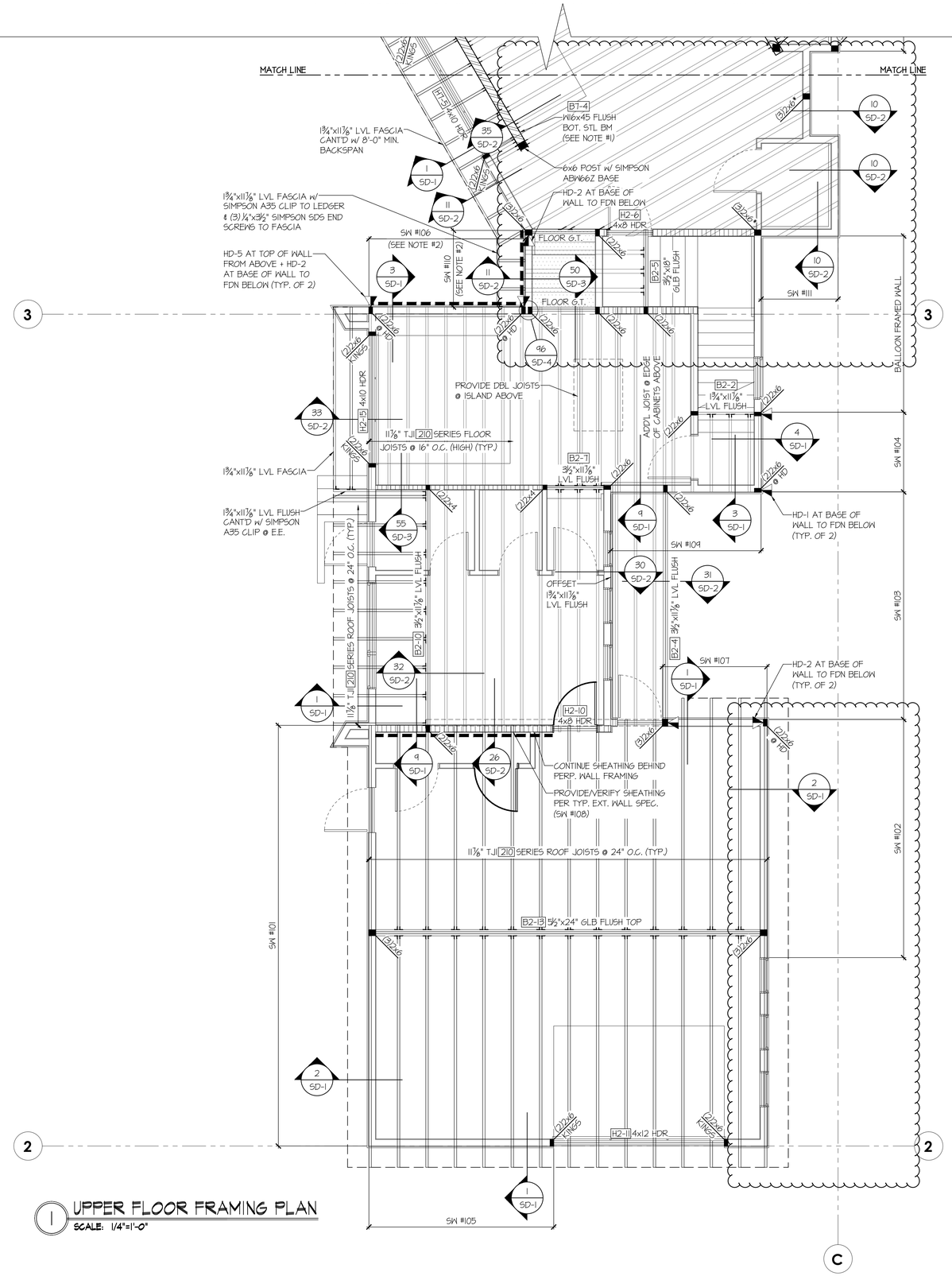
MacPherson Construction

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



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

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.J) 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 SHOINER. 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 HOLDOWN.

H2-[#] H1-[#] 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 ½" DIA. BOLTS @ 48" O.C. STAGGERED. ALSO PROVIDE WEB PACKOUT AS REQ'D FASTENED w/ ½" 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)¼"x2½" 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.

seal:
NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER
© copyright : MULHERN + KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
07/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

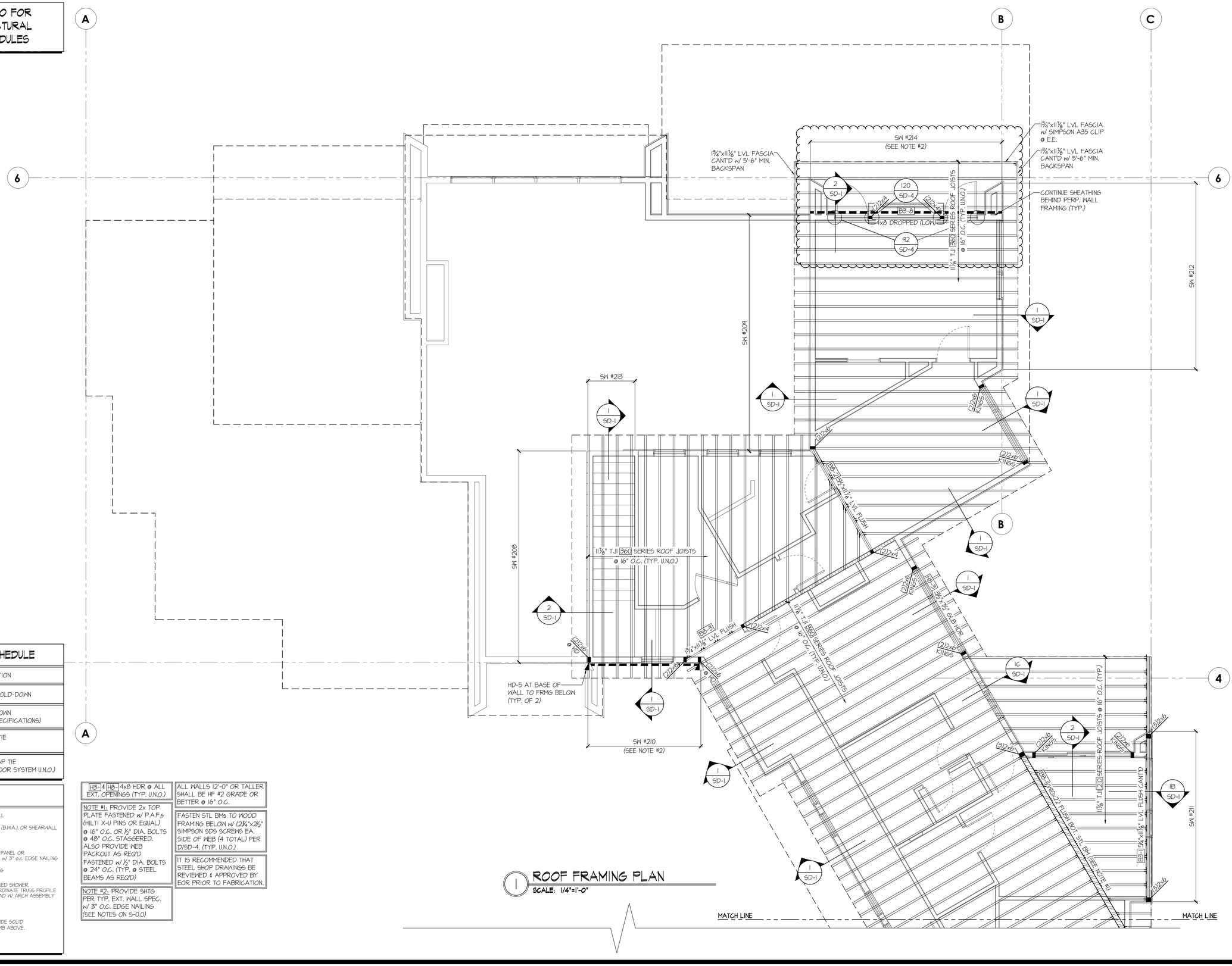
MacPherson Construction

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



ROOF FRAMING PLAN

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

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.U.) 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 SHOINER. 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 HOLDOWN.

HB-1 & HB-2 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 ½" DIA. BOLTS @ 48" O.C. STAGGERED. ALSO PROVIDE WEB PACKOUT AS REQ'D FASTENED w/ ½" 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)¼"x2½" 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.

seal:
NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

© copyright : MULHERN + KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

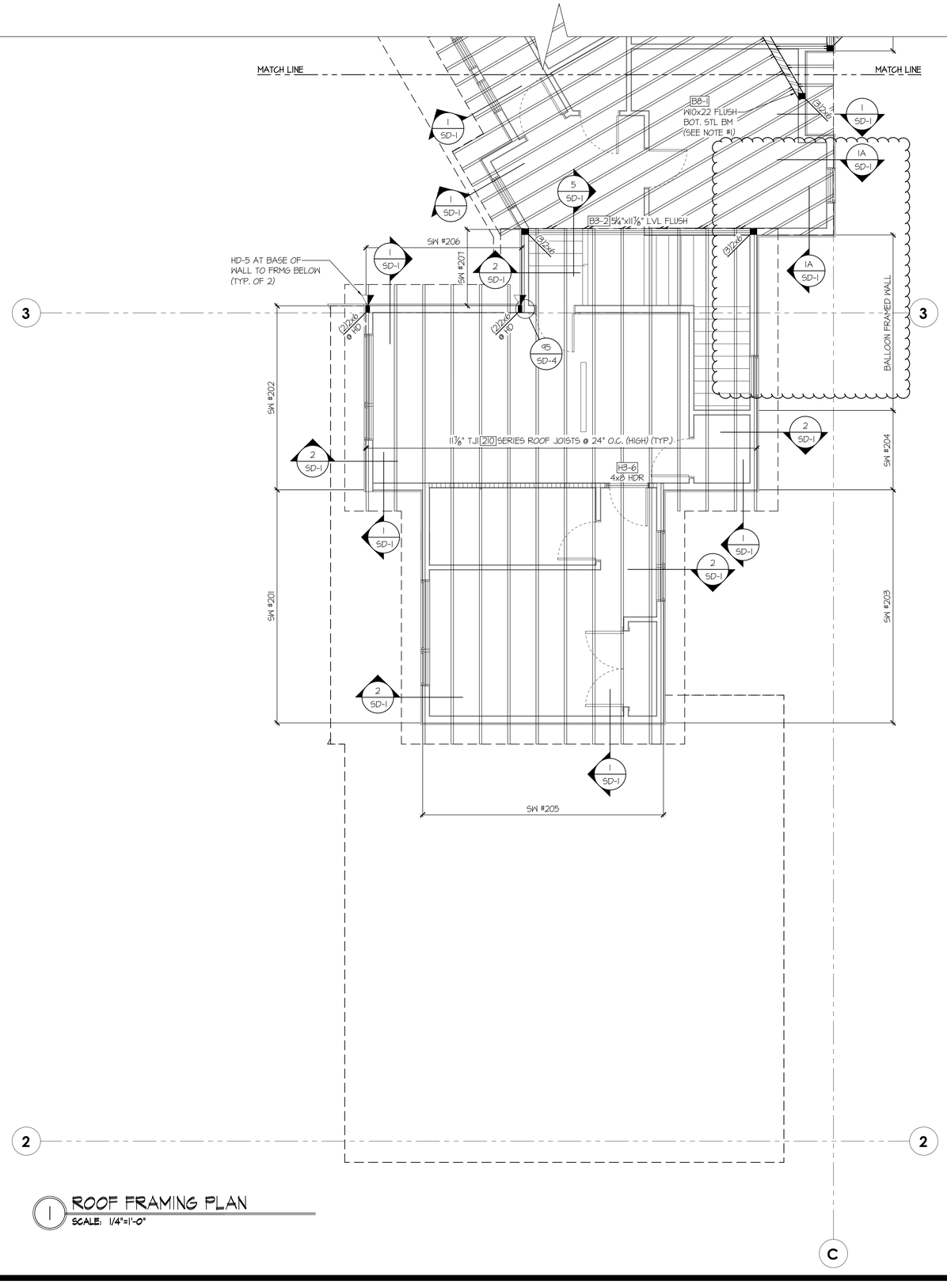
MacPherson Construction

ROOF FRAMING PLAN

5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet: S-3.0A

REFER TO S-0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES



ROOF FRAMING PLAN

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

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.U) 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 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 HOLDOWN.

H3- & H8- 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 ½" DIA. BOLTS @ 48" O.C. STAGGERED. ALSO PROVIDE WEB PACKOUT AS REQ'D FASTENED w/ ½" 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)¼"x2½" 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.

seal:

NICHOLAS J. MARTIGNETTI STATE OF WASHINGTON 56478 REGISTERED PROFESSIONAL ENGINEER

© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25 ARCH REVISIONS + PLAN REVIEW	BFD

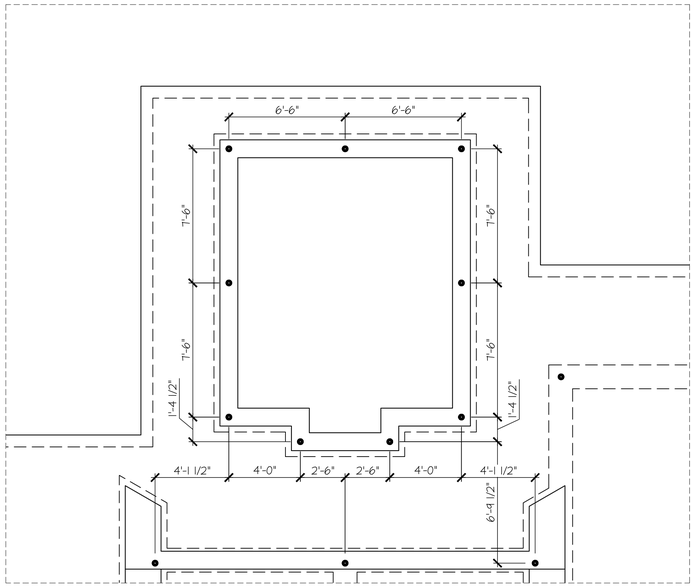
MacPherson Construction

ROOF FRAMING PLAN

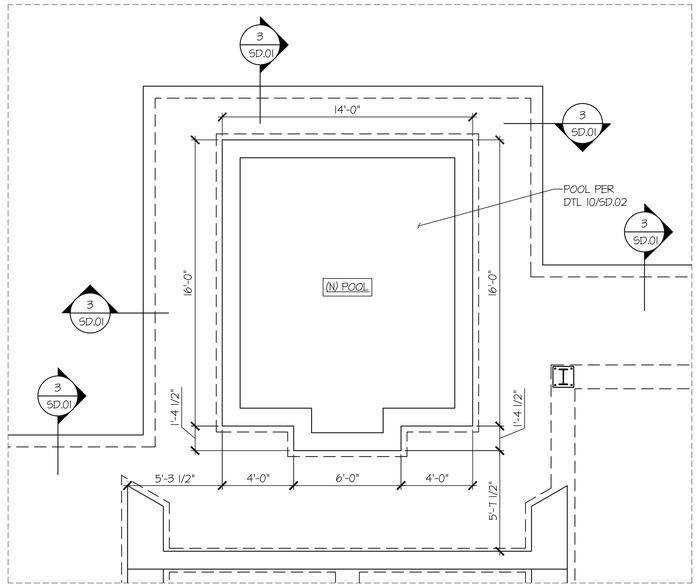
5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

sheet: S-3.0B

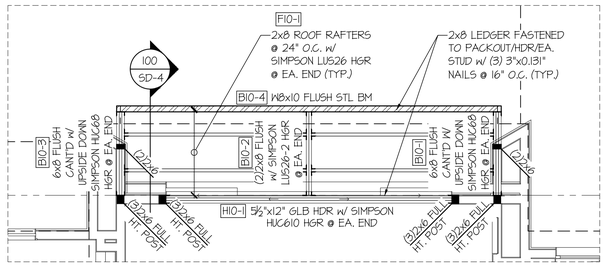
REFER TO S-0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES



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



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



3 REAR AWNING FRAMING PLAN
SCALE: 1/4"=1'-0"

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
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDOWN.

seal:

NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

© copyright : MULHERN + KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:

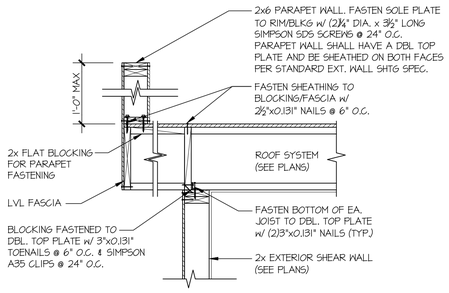
date:	initial:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

MacPherson Construction

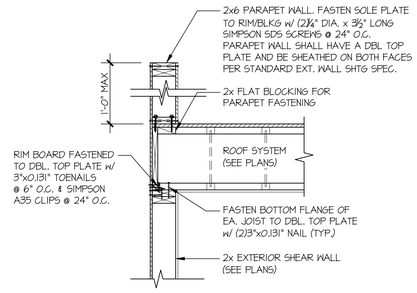
AWNING & POOL PLANS

5330 BUTTERWORTH RD
NORTH LOT
MERCER ISLAND, WASHINGTON

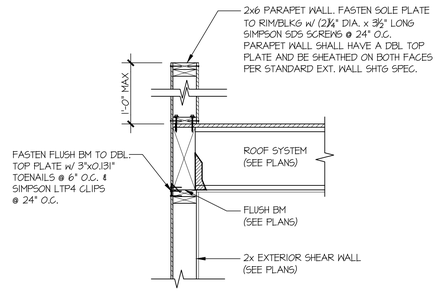
sheet: S-4.0



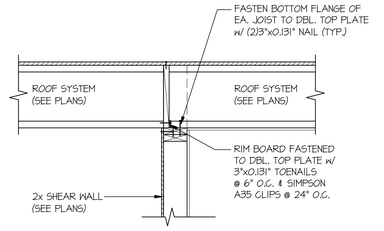
1 SECTION
SCALE: 3/4"=1'-0"



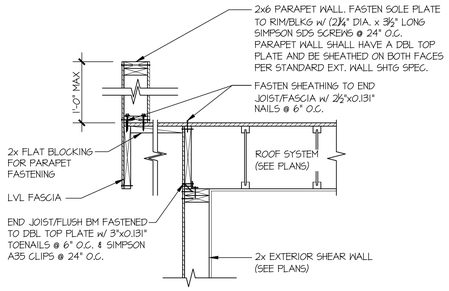
1A SECTION
SCALE: 3/4"=1'-0"



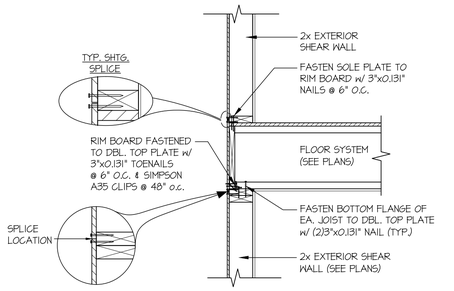
1B SECTION
SCALE: 3/4"=1'-0"



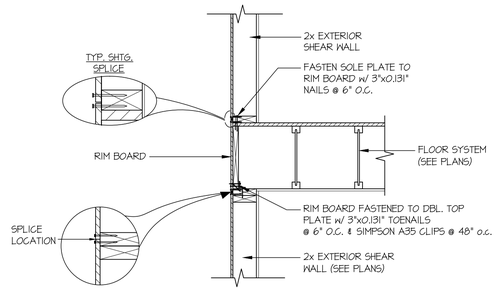
1C SECTION
SCALE: 3/4"=1'-0"



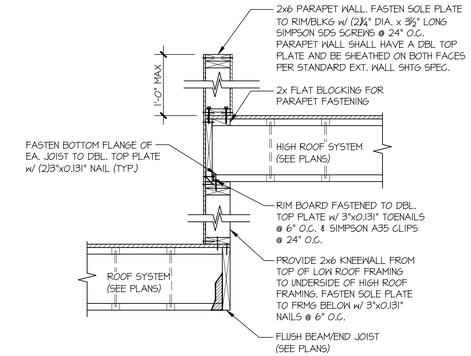
2 SECTION
SCALE: 3/4"=1'-0"



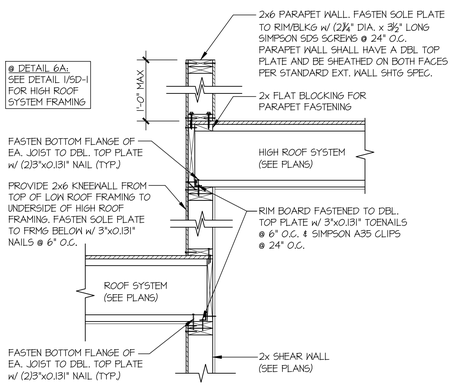
3 SECTION
SCALE: 3/4"=1'-0"



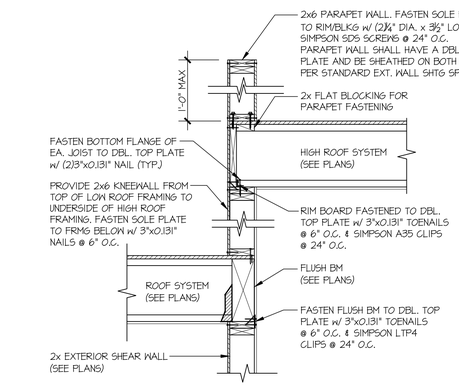
4 SECTION
SCALE: 3/4"=1'-0"



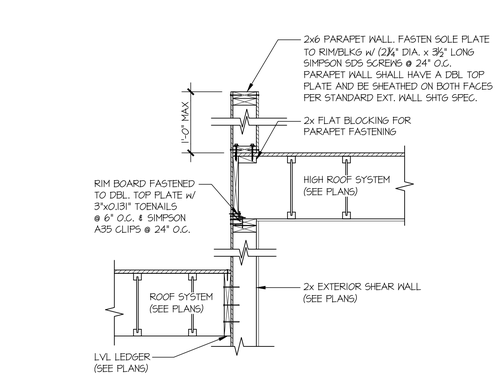
5 SECTION
SCALE: 3/4"=1'-0"



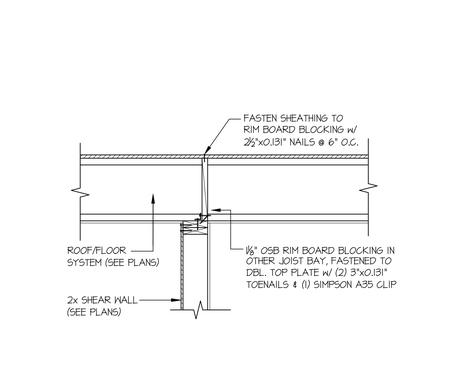
6 6A SECTION
SCALE: 3/4"=1'-0"



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

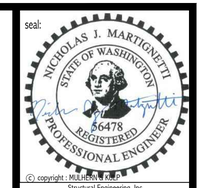


8 SECTION
SCALE: 3/4"=1'-0"



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

seal:



© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:

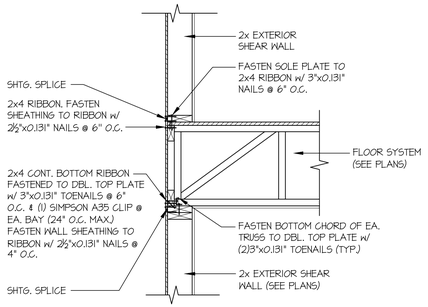
date:	initial:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

MacPherson Construction

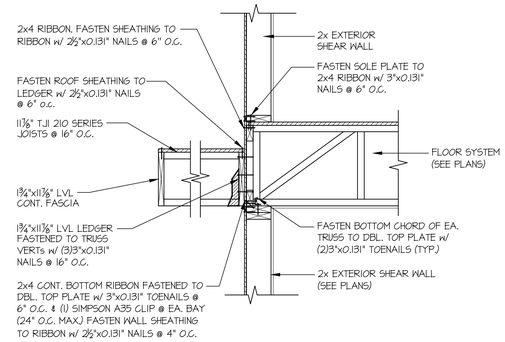
Structural Details

5330 Butterworth Rd
North Lot
Mercer Island, Washington

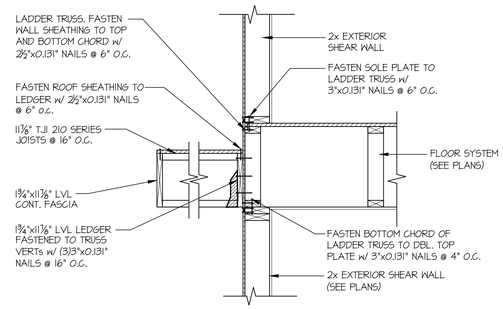
sheet:
SD-1



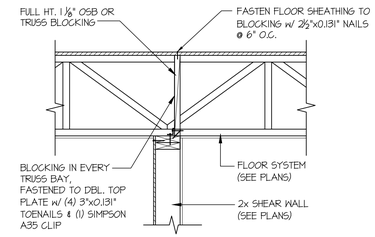
10 SECTION
SCALE: 3/4"=1'-0"



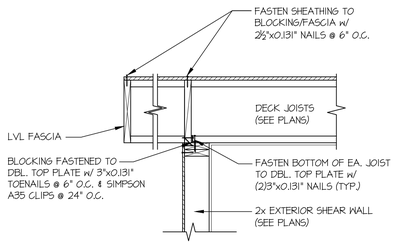
11 SECTION
SCALE: 3/4"=1'-0"



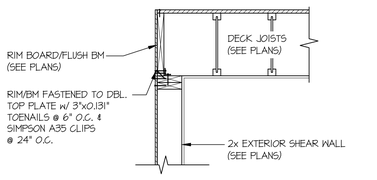
12 SECTION
SCALE: 3/4"=1'-0"



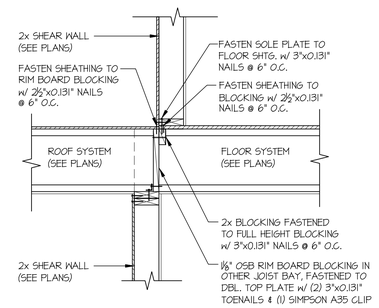
13 SECTION
SCALE: 3/4"=1'-0"



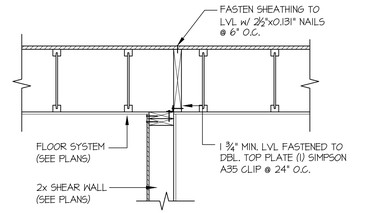
24 SECTION
SCALE: 3/4"=1'-0"



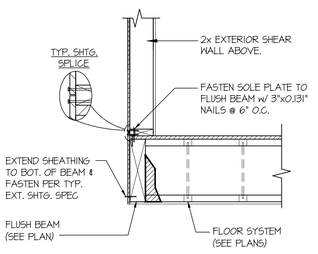
25 SECTION
SCALE: 3/4"=1'-0"



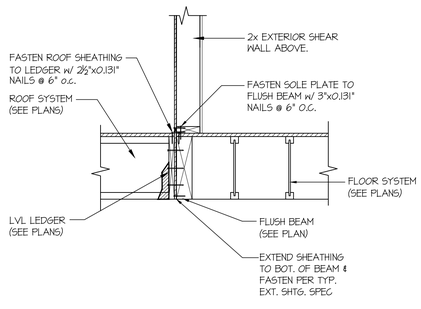
26 SECTION
SCALE: 3/4"=1'-0"



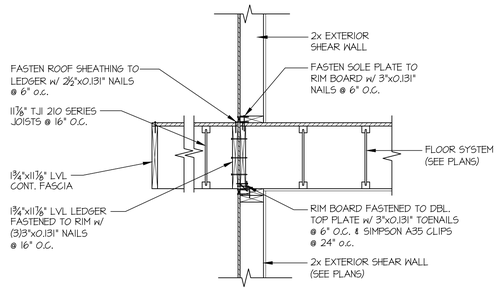
30 SECTION
SCALE: 3/4"=1'-0"



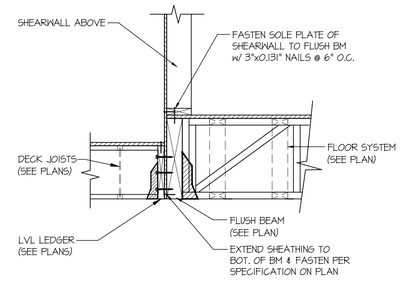
31 SECTION
SCALE: 3/4"=1'-0"



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



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



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

seal:

NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:

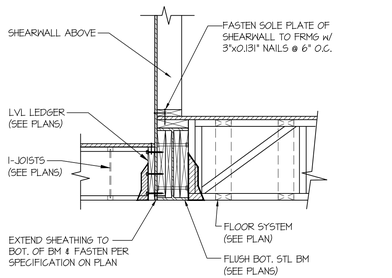
date:	initial:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

MacPherson Construction

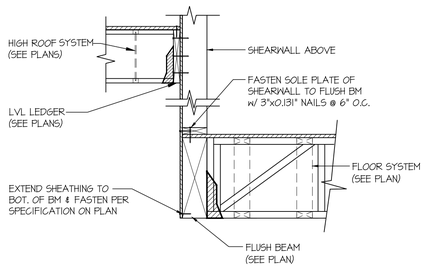
Structural Details

5330 Butterworth Rd
North Lot
Mercer Island, Washington

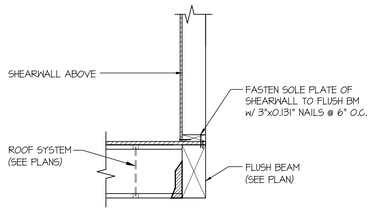
sheet:
SD-2



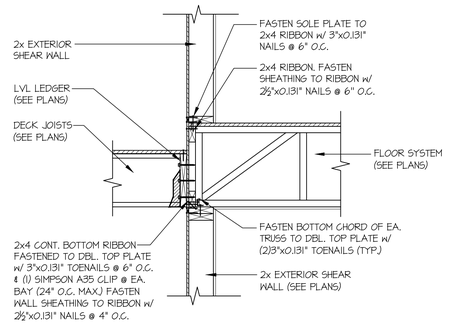
35 SECTION
SCALE: 3/4"=1'-0"



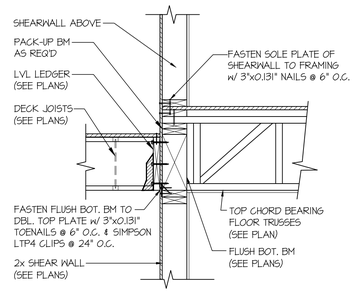
36 SECTION
SCALE: 3/4"=1'-0"



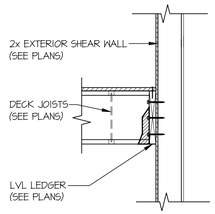
37 SECTION
SCALE: 3/4"=1'-0"



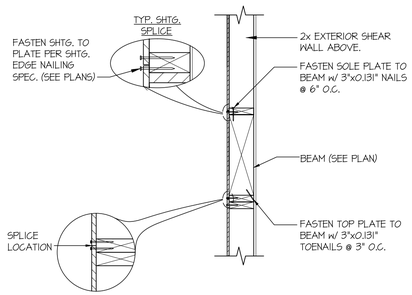
38 SECTION
SCALE: 3/4"=1'-0"



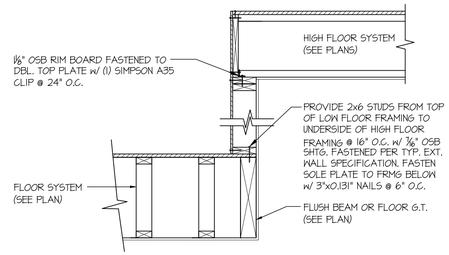
39 SECTION
SCALE: 3/4"=1'-0"



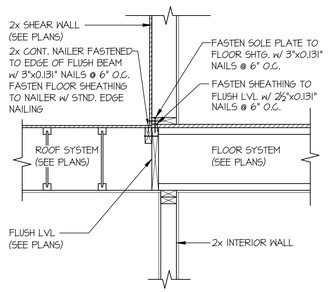
40 SECTION
SCALE: 3/4"=1'-0"



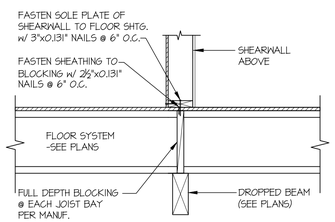
41 SECTION
SCALE: 3/4"=1'-0"



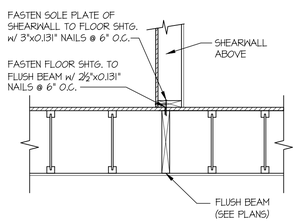
50 SECTION
SCALE: 3/4"=1'-0"



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



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



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

seal:
NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER
© copyright : MULHERN + KULP
Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:

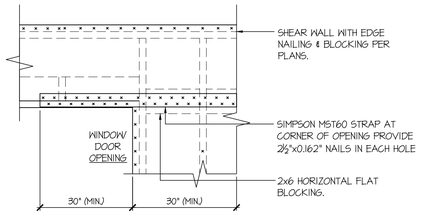
date:	initial:
07/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

MacPherson Construction

Structural Details

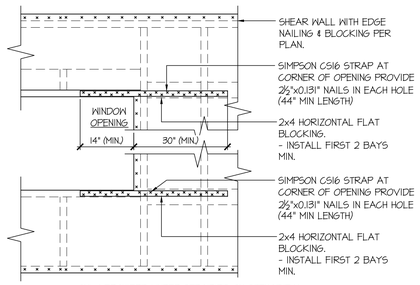
5330 Butterworth Rd
North Lot
Mercer Island, Washington

sheet:
SD-3



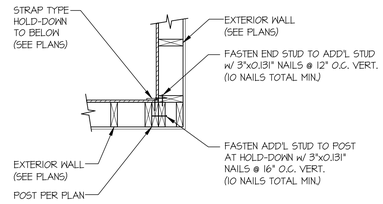
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS

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

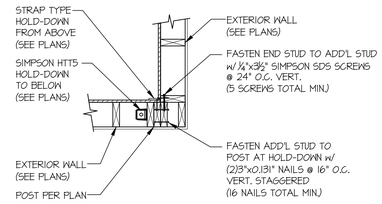


- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

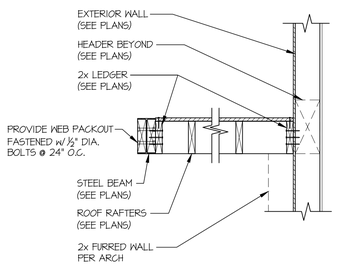
94 SECTION
SCALE: 3/4"=1'-0"



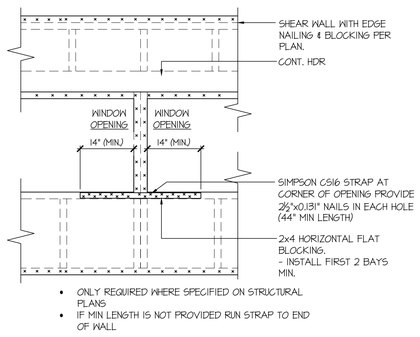
95 SECTION
SCALE: 3/4"=1'-0"



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

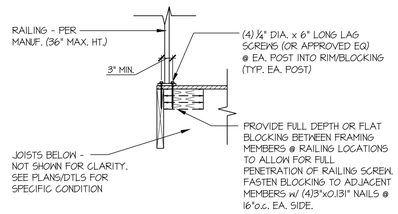


00 SECTION
SCALE: 3/4"=1'-0"

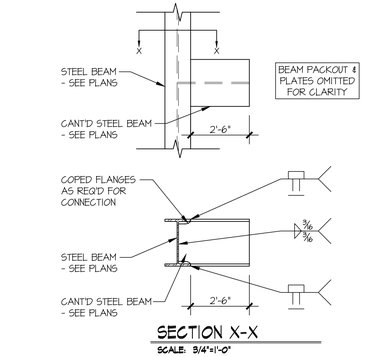


- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

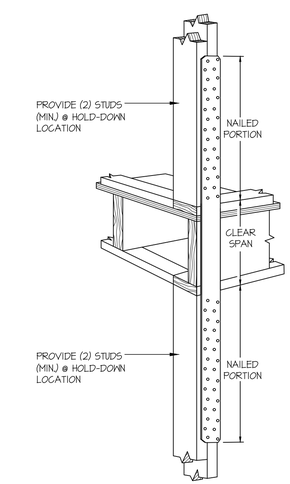
20 SECTION
SCALE: 3/4"=1'-0"



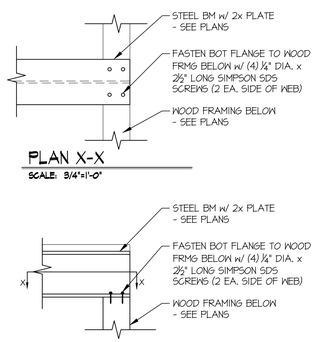
A TYP. RAILING CONNECTION
SCALE: 3/4"=1'-0" WOOD FRMG BELOW



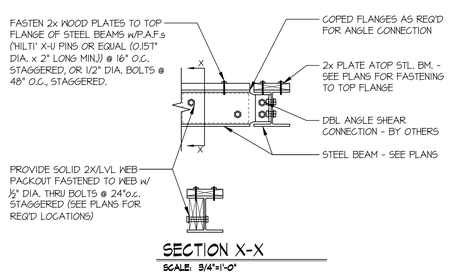
B SECTION
SCALE: 3/4"=1'-0"



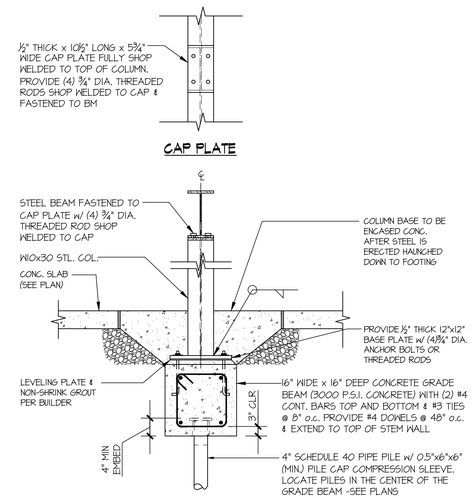
C TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE SIMPSON STRAP HD @ FLOOR FRAMING



D STL BM TO WOOD FRMG CONNECTION
SCALE: 3/4"=1'-0"



E DOUBLE ANGLE STEEL CONNECTION
SCALE: 3/4"=1'-0"



F STL COL CONNECTION
SCALE: 3/4"=1'-0"

seal:
NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER
© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:

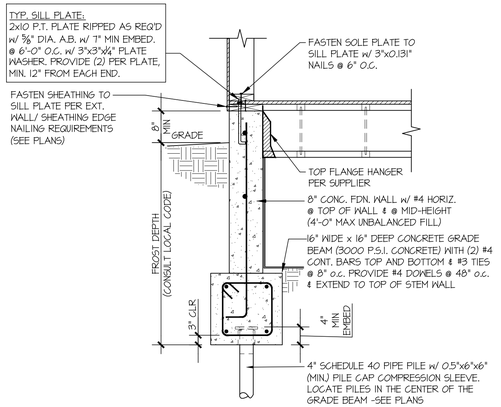
date:	initial:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

MacPherson Construction

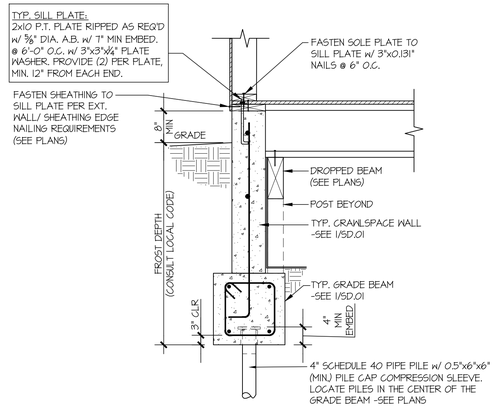
Structural Details

5330 Butterworth Rd
North Lot
Mercer Island, Washington

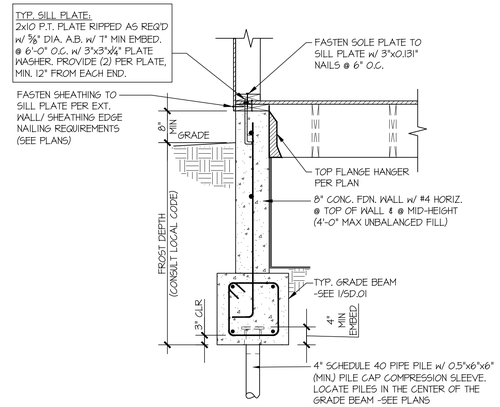
sheet: SD-4



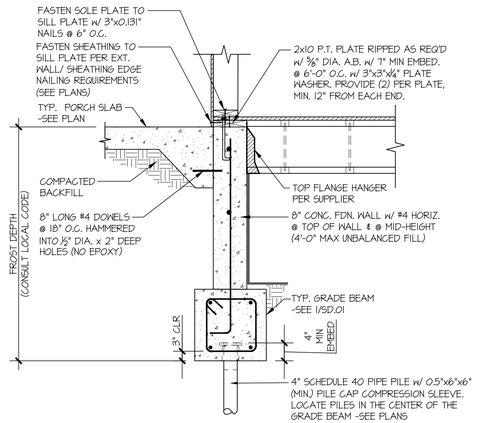
1 SECTION
SCALE: 3/4"=1'-0"



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



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



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

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

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

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

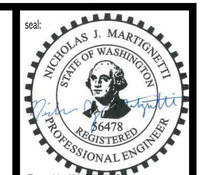
5 SECTION
SCALE: 3/4"=1'-0"

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

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

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

seal:



© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:

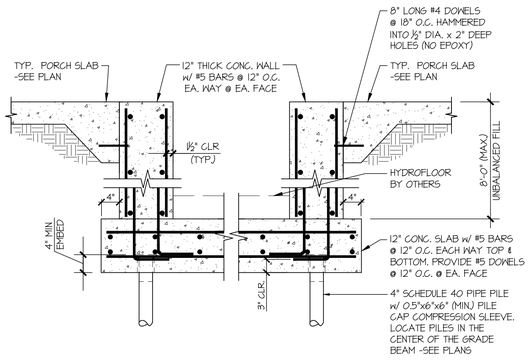
date:	initial:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

MacPherson Construction

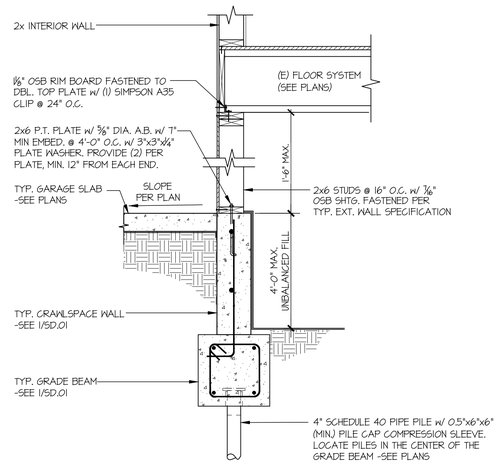
Foundation Details

5330 Butterworth Rd
North Lot
Mercer Island, Washington

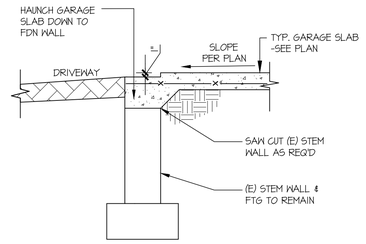
sheet: SD.01



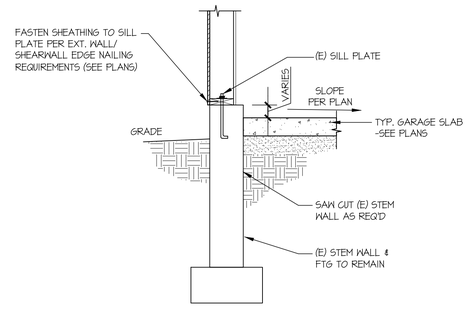
10 SECTION
SCALE: 3/4"=1'-0"



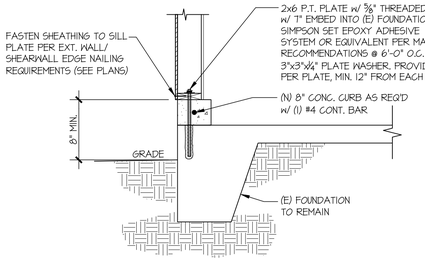
11 SECTION
SCALE: 3/4"=1'-0"



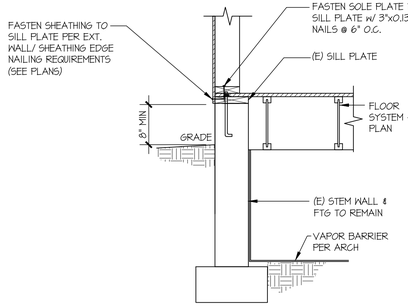
12 SECTION
SCALE: 3/4"=1'-0"



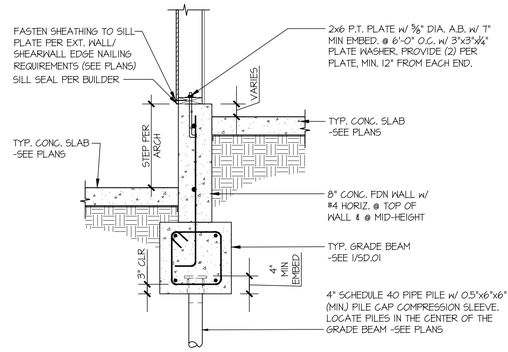
13 SECTION
SCALE: 3/4"=1'-0"



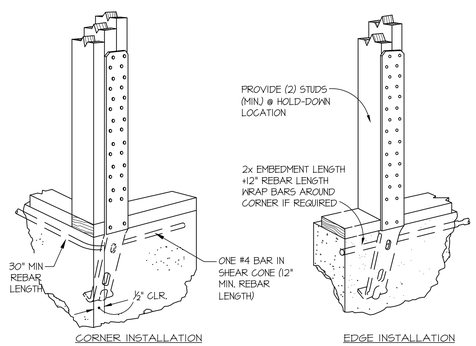
14 SECTION
SCALE: 3/4"=1'-0"



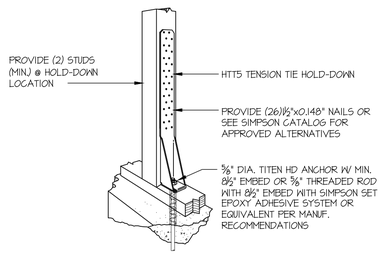
15 SECTION
SCALE: 3/4"=1'-0"



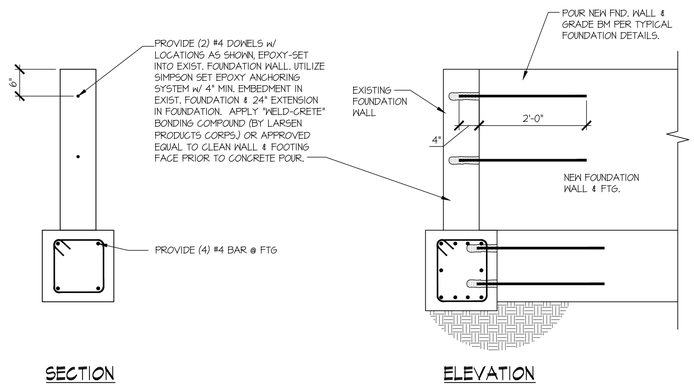
16 SECTION
SCALE: 3/4"=1'-0"



A TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE
SIMPSON STHD HD @ FOUNDATION



B TYPICAL HOLD-DOWN
NOT TO SCALE
SIMPSON HTT5 SHOWN



C TYPICAL (N) TO (E) FOUNDATION DETAIL
SCALE: 3/4"=1'-0"

seal:
NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER
© copyright : MULHERN + KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
7220 Trade Street, Suite 295, 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:
01/30/25	BFD
ARCH REVISIONS + PLAN REVIEW	

MacPherson Construction

Foundation Details

5330 Butterworth Rd
North Lot
Mercer Island, Washington

sheet:
SD.02