GENERAL NOTES

1. CODE COMPLIANCE:
ALL WORK SHALL COMPLY WITH THE 2018 IRC, 2018 IMC, 2018 IFGC, 2018 IFC, 2018 UPC, 2018 IPMC, 2008 NEC, 2018 INTERNATIONAL ENERGY CONSERVATION CODE WITH WASHINGTON STATE AMENDMENTS, 2009 ICC A117.1, AND WITH ALL LOCAL CODES AND ORDINANCES.

2. DIMENSIONS:
DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ARCHITECT OF DISCREPANCIES. IF WORK IS STARTED PRIOR TO NOTIFICATION, THE GENERAL AND SUBCONTRACTOR PROCEED AT THEIR OWN RISK.
UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TO FACE OF STUDS OR FACE OF CONCRETE WALLS. FACE OF STONE VENEER LIES 6" +/- OUTSIDE THE FACE OF FRAMING. INTERIOR PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS OTHERWISE NOTED. VERIFY ALL ROUGH-IN DIMENSIONS FOR WINDOWS, DOORS, PLUMBING, ELECTRICAL FIXTURES AND APPLIANCES PRIOR TO COMMITMENT OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES OF DIMENSIONAL TOLERANCES REQUIRED.

3. DOCUMENT REVIEW/VERIFICATION:
CONSULT WITH ARCHITECT REGARDING ANY SUSPECTED ERRORS, OMISSIONS, OR CHANGES ON PLANS BEFORE PROCEEDING WITH THE WORK.

4. ROUGH OPENINGS/BACKING:
VERIFY SIZE AND LOCATION, AS WELL AS PROVIDE ALL OPENINGS THROUGH FLOORS AND WALLS, FURRING, CURBS, ANCHORS, INSERTS, EQUIPMENT BASES AND ROUGH BUCKS/BACKING FOR SURFACE-MOUNTED ITEMS.

5. FURRING:
PROVIDE FURRING AS REQUIRED TO CONCEAL MECHANICAL AND/OR ELECTRICAL EQUIPMENT IN FINISHED AREAS. FURRING NOT SHOWN ON PLANS SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.

6. GRADES:
VERIFY ALL GRADES AND THEIR RELATIONSHIP TO THE BUILDING(S).

7. FLOOR LINES:
FLOOR LINE" REFERS TO TOP OF CONCRETE SLAB OR TOP OF WOOD SUBFLOOR.

8. REPETITIVE FEATURES:
OFTEN DRAWN ONLY ONCE AND SHALL BE PROVIDED AS IF FULLY DRAWN.

9. DOORS:
DOORS NOT DIMENSIONALLY LOCATED SHALL BE 6" FROM STUD FACE TO EDGE OF DOOR, ROUGH OPENING OR CENTERED BETWEEN WALLS AS SHOWN.

10. WOOD MEMBERS IN CONTACT WITH CONCRETE, AND/OR EXPOSED TO WEATHER:
TO BE PRESSURE TREATED, TYPICAL. PROVIDE PRESSURE TREATED SILL PLATE IF FINISH GRADE IS WITHIN 8", TYPICAL.

11. FRAMING:
ALL NEW INTERIOR FRAME PARTITIONS TO BE 2X4 @ 16" O.C., & ALL NEW EXTERIOR FRAME PARTITIONS TO BE 2X6 @ 16" O.C., UNLESS OTHERWISE NOTED. VERIFY W/ STRUCTURAL DRAWINGS. EXISTING EXTERIOR WALLS ARE 2X4 STUDS @ 16" O.C., AND ARE TO REMAIN. NEW INTERMEDIATE FRAMING AT EXTERIOR WOOD WALLS REQUIRES HEADERS INSULATED WITH A MIN. R-10 INSULATION.

12. VENTILATION:
VENT ALL BATHROOM FANS, LAUNDRY FANS, RANGE HOODS AND DRYERS TO OUTSIDE ATMOSPHERE. BATHROOM/UTILITY ROOM FANS SHALL BE CAPABLE OF 5 AIR CHANGES PER HOUR AND SHALL BE VENTED DIRECTLY TO THE OUTSIDE THROUGH SMOOTH, RIGID, NON-CORROSIVE METAL, 24 GA. DUCTWORK. FLEX DUCTING IS NOT ALLOWED. WSEC R402.4.1.2 REQUIRES THE DWELLING UNIT TO BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE NOT EXCEEDING 5 AIR CHANGES PER HOUR. TESTING MUST BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF 0.2. NEW CONSTRUCTION MAY BE ISOLATED FROM EXISTING STRUCTURE FOR TESTING

13. FLUES:
FLUES TO BE LOCATED MINIMUM 2" FROM ALL COMBUSTIBLE MATERIALS.

14. DOWNSPOUTS:
LOCATE NEW DOWNSPOUTS AS SHOWN ON ROOF PLAN, FLOOR PLANS & ELEVATIONS.

15. OTHER DOCUMENTATION:
REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AND/OR LANDSCAPE DRAWINGS FOR ADDITIONAL DRAWINGS, NOTES, SCHEDULES, AND SYMBOLS.

16. PROTECTION:
PROTECT ALL EXISTING FINISHES AND SURFACES. ANY DAMAGE WILL BE REPAIRED WITHOUT ADDITIONAL COST TO OWNER.

17. PERMITS:
SEPARATE ELECTRICAL, MECHANICAL, AND PLUMBING PERMITS ARE REQUIRED IN ADDITION TO THE BASIC BUILDING PERMIT

18. ROOFING:
PROVIDE NEW ROOFING TO MATCH EXISTING.

19. EXHAUST DUCTS:
PROVIDE BACKDRAFT DAMPERS AT ALL EXHAUST DUCTS. PROVIDE COMBUSTION AIR OPENINGS INTO FURNACE ROOM PER UMC 703.

20. APPLIANCES:
CLEARANCES OF UL LISTED APPLIANCES FROM COMBUSTIBLE MATERIALS SHALL BE AS SPECIFIED IN UL LISTING.

21. WATER FLOW:
SHOWER SHALL BE EQUIPPED WITH FLOW CONTROL DEVICE TO LIMIT WATER FLOW TO 2.5 GALLONS PER MINUTE.

22. SMOKE DETECTORS:
SMOKE & CARBON MONOXIDE THROUGHOUT NEW CONSTRUCTION. NFPA 72 CHAPTER 29 MONITORED FIRE ALARM SYSTEM PER CoMI STANDARDS. SEPARATE PERMIT REQUIRED.

23. FIREBLOCKING:
FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION PER 2018 IRC SECTION R302.11, SPECIFICALLY: 1) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, 2) AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES, 3) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT T.O. & B.O. RUN, 4) AT OPENINGS AROUND VENTS, PIPES, ETC. AT CEILING AND FLOOR LEVEL.

24. ADDITIONAL FIRE CODE ALTERNATES:
INSTALLATION OF 1-HR RATED GYPSUM IN ALL AREAS. PROVIDE SOLID CORE OR FIRE RATED DOORS.

ENERGY NOTES

CLIMATIC ZONE: ZONE #4C -MARINE

THERMAL STANDARDS FOR OPENINGS: UNLIMITED OPTION

CODE: 2018 W.S.E.C. & 2018 IRC, WAC 51-11R

SPACE HEAT TYPE: NATURAL GAS, FORCED AIR SYSTEM

INSULATION VALUES: PRESCRIPTIVE METHOD

WALLS:	R-21
FLAT ATTICS/CEILINGS:	R-49
VAULTED CEILINGS:	R-38
FLOORS (OVER UNHEATED SPACES):	R-38
SLAB-ON-GRADE:	R-10

PER WSEC R401.3, A CERTIFICATE IS REQUIRED TO BE POSTED WITHIN 3 FT OF THE ELECTRICAL PANEL; IT MUST INCLUDE THE FOLLOW: PREDOMINATE R-VALUES, U-VALUES OF FENESTRATION, RESULTS FROM DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING, AND EFFICIENCIES OF HEATING/COOLING/WATER HEATING EQUIPMENT.

AIR INFILTRATION:
MANUFACTURED DOORS/WINDOWS: CONFORM TO SECTION R402.4.3 OF THE WASHINGTON STATE ENERGY CODE

EXTERIOR JOINTS/OPENINGS: SEAL, CAULK, GASKET OR WEATHERSTRIP TO LIMIT AIR LEAKAGE AT EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF; OPENINGS AT PENETRATIONS OF UTILITY SERVICES AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE

MOISTURE CONTROL:
WALLS: VAPOR RETARDER BONDED TO BATT INSULATION; INSTALL WITH STAPLES NOT MORE THAN 8 INCHES ON CENTER AND AND WITH A GAP BETWEEN AND OVER FRAMING NOT GREATER THAN 1/16 OF AN INCH; OR, VAPOR RETARDER OF ONE PERM CUP RATING (4 MIL POLYETHYLENE)

ATTICS/CEILINGS: VAPOR RETARDER OF ONE PERM CUP RATING (4 MIL POLYETHYLENE). INSTALL CONTINUOUSLY

CRAWL SPACE: 6 MIL POLYETHELENE

VENTILATION:
ATTICS WITH LOOSE FILL: N.A. BAFFLE VENT OPENINGS TO DEFLECT AIR ABOVE INSULATION SURFACE ENCLOSED JOIST OR RAFTER SPACES: PROVIDE MINIMUM OF ONE INCH CLEAR VENTED AIR SPACE ABOVE INSULATION. TAPER OR COMPRESS INSULATION AT PERIMETER TO INSURE PROPER VENTILATION, MAINTAINING MINIMUM OF R-38.

HEATING & COOLING:
GAS FURNACE & AIR SOURCE HEAT PUMP

TEMP. CONTROL:
FOR HEATING AND COOLING, THERMOSTAT SHALL BE CAPABLE OF BEING SET FROM 55-85 DEGREES FARENHEIT AND OF OPERATING THE HEATING/COOLING SYSTEM IN SEQUENCE. THERMOSTAT TO BE AUTOMATIC DAY/NIGHT SETBACK TYPE.

DUCT INSULATION:
THERMALLY INSULATE ALL PLENUMS, DUCTS AND ENCLOSURES IN ACCORDANCE WITH SECTION R403.3.1 OF THE WASHINGTON STATE ENERGY CODE.

a. ALL HEATING DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED WITH A MIN. OF R-8. ALL SEAM JOINTS SHALL BE TAPED, SEALED AND FASTENED WITH THE MINIMUM OF FASTENERS PER WSEC.

b. DUCTS WITHIN A CONCRETE SLAB OR IN THE GROUND SHALL BE INSULATED TO R-10, WITH INSULATION DESIGNED TO BE USED BELOW GRADE.

LIGHTING:
RECESSED LIGHTING FIXTURES INSTALLED IN BUILDING ENVELOPE SHALL COMPLY WITH WSEC PROVISIONS AND SHALL BE IC LISTED. A MIN. OF 75% OF PERMANENTLY INSTALLED LAMPS IN INTERIOR AND EXTERIOR LIGHTING FIXTURES MUST BE HIGH-EFFICACY LAMPS, PER WSEC R404.1.

PIPE INSULATION:
ALL HOT WATER PIPES, AND NON-RECIRCULATING COLD WATER PIPES LOCATED IN UNCONDITIONED SPACE, SHALL BE INSULATED TO R-3 MIN. PLUMBING OR MECHANICAL CANNOT DISPLACE THE REQUIRED INSULATION.

PLUMBING FIXTURES:
ALL PLUMBING FIXTURES SHALL CONFORM TO RCW 19.27.170
ALL TOILETS 1.6 GPM MAX
URINALS 1.0 GPF MAX
SHOWERHEADS <1.75 GPM
KITCHEN FAUCETS <1.75 GPM
LAVATORIES < 1.0 GPM

WHOLE HOUSE VENTILATION

a. WHOLE HOUSE VENTILATION SHALL BE PROVIDED BY LOCAL EXHAUST FAN, PROVIDING MIN. 90 CFM RUNNING CONTINUOUSLY PER 2018 IRC TABLES M1505.4.2 (1&2). FAN SHALL BE LESS THAN .35 WATT PER CFM AND RUN CONTINUOUSLY, AND HAVE A SONE RATING OF LESS THAN 1.0. VENTILATION SHALL BE ABLE TO OPERATE INDEPENDENTLY OF HEATING SYSTEM.

b. SYSTEM SHALL HAVE A 5"Ø SMOOTH FRESH AIR DUCT W/ LOUVER & SCREEN CONNECTED TO THE RETURN AIR STREAM 4' UPSTREAM OF THE AIR HANDLER AND INSULATED W/ R-4 MIN IN HEATED AREAS. ALL SUPPLY DUCTS IN CONDITIONED SPACE SHALL BE INSULATED TO MIN. R-4 PER IRC M1507.3.5.2.

c. SHALL HAVE A FILTER WITH A MERV OF AT LEAST 6 INSTALLED IN AN EASILY ACCESSIBLE LOCATION.

d. FRESH AIR VENT SHALL BE LOCATED AWAY FROM SOURCES OF ODORS OR FUMES, MIN 10' FROM PLUMBING OR APPLIANCE VENTS, AWAY FROM ROOMS W/ FUEL BURNING APPLIANCES, AND OUT OF ATTICS, CRAWL SPACES, AND GARAGES.

e. AIRFLOW FOR WHOLE HOUSE VENTILATION SHALL BE PROVIDED BY UNDERCUTTING INTERIOR DOORS 1/2" ABOVE FINISHED FLOOR, TYP.

f. WHOLE HOUSE VENTILATION SHALL BE TESTED, BALANCED AND VERIFIED AND A WRITTEN REPORT SHALL BE POSTED AND PROVIDED THE BUILDING OFFICIAL AND CERTIFICATION COMPLETED PER WSEC SECTIONS M1505.4.1.6 AND M1505.4.1.7.

g. AN EXHAUST FAN WHOLE HOUSE VENTILATION IS NOT ALLOWED WITH AN ERV SYSTEM.

BEDROOMS	6
HEATED SQUARE FOOTAGE	7046 SF
CFM = 0.01(7046 SF) + 7.5(6+1 BEDROOMS)	
AIRFLOW (CFM)	123 CFM MIN.

NOXIOUS WEEDS

DEVELOPMENT PROPOSALS FOR A NEW SINGLE-FAMILY HOME SHALL REMOVE JAPANESE KNOTWEED (POLYGONUM CUSPIDATUM) AND REGULATED CLASS A, REGULATED CLASS B, AND REGULATED CLASS C WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED, FROM REQUIRED LANDSCAPING AREAS ESTABLISHED PURSUANT TO SUBSECTION 19.02.020(F)(3)(A). NEW LANDSCAPING ASSOCIATED WITH NEW SINGLE-FAMILY HOME SHALL NOT INCORPORATE ANY WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED. PROVIDED, THAT REMOVAL SHALL NOT BE REQUIRED IF THE REMOVAL WILL RESULT IN INCREASED SLOPE INSTABILITY OR RISK OF LANDSLIDE OR EROSION.

GEOTECH ENGINEER

GEOTECHNICAL ENGINEER REQUIRED TO BE PRESENT ON SITE DURING EXCAVATION AND AT REGULAR INTERVALS DURING CONSTRUCTION TO MONITOR THE STABILITY OF THE TEMPORARY OPEN CUT EXCAVATIONS PROPOSED FOR SITE RETAINING WALLS AND RESIDENTIAL STRUCTURE EXCAVATIONS.

TREE PROTECTION

A TREE PROTECTION INSPECTION IS REQUIRED BEFORE START OF WORK

PROJECT DATA

PROJECT ADDRESS:	5300 BUTTERWORTH RD MERCER ISLAND 98040
PROPERTY TAX ID NUMBER:	866140-0020
SCOPE OF WORK:	CONSTRUCTION OF NEW TWO-STORY SINGLE FAMILY RESIDENCE WITH ATTACHED GARAGE
ZONING:	R-15
CONSTRUCTION TYPE:	TYPE V B
SEISMIC ZONE:	3
NUMBER OF STORIES:	2 STORIES
FIRE PROTECTION:	NFPA 13R FIRE SPRINKLERS
FIRE ALARM:	NFPA 72 CHAPTER 29 MONITORED FIRE ALARM SYSTEM PER CoMI STANDARDS. SEPARATE PERMIT REQUIRED.
BUILDING HEIGHT:	MAX. 30 FT ABOVE AVERAGE BUILDING ELEV.
GROSS FLOOR AREA:	12,000 SF OR 40 % LOT AREA, WHICHEVER IS LESS
LOT AREA:	20,076 SF
SETBACKS:	FRONT: 20' SIDE: 17% LOT WIDTH, MIN. 5' REAR: 25'

PROJECT TEAM

OWNER:

RYAN & ASHLEY ASDOURIAN
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040
PHONE: 206-963-4718
EMAIL: RASDO@MICROSOFT.COM

ARCHITECT:

STURMAN ARCHITECTS, INC.
9 - 103RD AVE NE SUITE 203
BELLEVUE, WA 98004
PHONE: 425.451.7003
CONTACT: BRAD STURMAN

GEOTECHNICAL ENGINEER:

GEOTECH CONSULTANTS, INC.
2401 10TH AVE EAST
SEATTLE, WA 98102
PHONE: 425.747.5618
CONTACT: MARC MCGINNIS

CIVIL ENGINEER:

PATRICK HARRON & ASSOCIATES, LLC
14900 INTERURBAN AVE S., SET. 279
SEATTLE, WA 98168
PHONE: 206.674.4659
CONTACT: SCHWIN CHAOSILAPAKUL

STRUCTURAL ENGINEER:

OG ENGINEERING
-
SEATTLE, WA
PHONE: 206.290.4608
CONTACT: OWEN GOULD

LEGAL DESCRIPTION

LOT 2, TONJA ESTATES, AS PER PLAT RECORDED IN VOLUME 77 OF PLATS, PAGE 64, RECORDS OF KING COUNTY, WASHINGTON;
TOGETHER WITH THAT PORTION OF LOT 3 OF SAID PLAT DESCRIBED AS FOLLOWS; BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 3; THENCE SOUTH 1°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.
TOGETHER WITH AN UNDIVIDED 1/7 TH INTEREST IN LOT 1 OF SAID PLAT.

DUTY OF COOPERATION

RELEASE AND ACCEPTANCE OF THESE DOCUMENTS INDICATES COOPERATION AMONG THE OWNER, CONTRACTOR, AND STURMAN ARCHITECTS. ANY ERRORS, OMISSIONS, OR DISCREPANCIES DISCOVERED IN THE USE OF THESE DOCUMENTS SHALL BE REPORTED IMMEDIATELY TO STURMAN ARCHITECTS. FAILURE TO DO SO WILL RELIEVE STURMAN ARCHITECTS FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES.

ANY DEVIATION FROM THESE DOCUMENTS WITHOUT THE CONSENT OF STURMAN ARCHITECTS IS UNAUTHORIZED. FAILURE TO OBSERVE THESE PROCEDURES SHALL RELIEVE STURMAN ARCHITECTS OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING FROM SUCH ACTIONS.

SHEET INDEX

A1.0	COVER SHEET - GENERAL & ENERGY NOTES, LEGAL, PROJECT DATA, CUT-FILL CALC, INDEX, SITE PLAN
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	SURVEY
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C2.0	DEMO & TESC PLAN
C2.1	TESC DETAILS
C3.0	GRADING & UTILITY PLAN
C3.1	STORM DRAINAGE PLAN
C3.2	STORM DRAINAGE DETAILS
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A2.0	MAIN FLOOR PLAN
A2.1	UPPER FLOOR
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S4	MAIN FLOOR WALL & FOUNDATION PLAN
S5	UPPER FLOOR FRAMING PLAN
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S6	ROOF FRAMING PLAN
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S8	SECTIONS & DETAILS
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S10	SECTIONS & DETAILS
WSWH2	STRONGWALL WSWH FRAMING DETAILS

2018 WSEC CREDITS

PROJECT IS A NEW RESIDENCE GREATER THAN 5,000 SQ FT CONDITIONED AREA, AND SO IS A LARGE DWELLING UNIT REQUIRING 7.0 CREDITS

OPTION	CREDITS	DESCRIPTION
2	1.0	-HEAT PUMP EFFICIENCY (AIR COOLED) 14.0 SEER, 11 HSPF
1.3	0.5	-VERTICAL FENESTRATION U = .28, FLOOR=R-38 -R-10 RIGID INSULATION ENTIRE PERIMETER AND UNDER ENTIRE SLAB
3.5	1.5	-AIR SOURCE, CENTRALLY DUCTED HEAT PUMP W/ MIN. HSPF OF 11.0
4.2	1.0	-HVAC EQUIP. & AND ITS DUCT SYSTEM INSTALLATION SHALL COMPLY W/ R403.3.7. ALL EQUIP. & DUCTS SHALL BE IN CONDITIONED SPACE, W/I CONTINUOUS AIR BARRIER & BUILDING THERMAL ENVELOPE.
5.3	1.0	-ENERGY STAR RATED GAS OR PROPANE WATER HEATER W/ A MIN. UEF OF 0.91
6.1	3.0	-FOR EACH 1200 kWh OF ELECTRICAL GENERATION PROVIDED BY SOLAR, 1 CREDIT WILL BE GIVEN, UP TO 3 CREDITS
TOTAL CREDITS	8	

*PLEASE NOTE: ALL APPLIANCES SHALL BE INSTALLED WITH SUPPORTING DOCUMENTATION ON SITE PRIOR TO FINAL INSPECTION. NO DRYER DUCTS OR DRYER VENT CAPS SHALL NOT BE INSTALLED

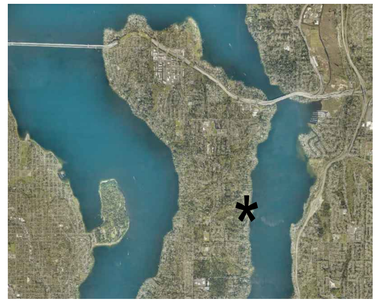
AVERAGE BUILDING ELEV.

AVERAGE BUILDING ELEVATION

	Wall Length	Elevation Pt.	Wall Length X Elev. Pt.
A	37	28.0	1036
B	6.5	28.0	182
C	17.5	28.0	490
D	9.79	28.0	274.12
E	6.42	28.0	179.76
F	14	28.0	392
G	6.42	28.0	179.76
H	10.75	28.0	301
I	11.58	27.0	312.66
J	14	27.0	378
K	17.67	26.0	459.42
L	2	25.5	51
M	34.21	25.0	855.25
N	16	25.0	400
O	5.96	25.5	151.98
P	34.54	26.0	898.04
Q	9.96	26.5	263.94
R	16.25	27.0	438.75
S	5	27.0	135
T	2	27.0	54
U	93.79	28.0	2626.12
V	3.23	29.0	93.67
W	2.5	29.0	72.5
X	13.79	28.0	386.12
Y	2.5	28.0	70
Z	7.73	28.0	216.44
	401.09	**708.5**	**10897.53**
10897.53	**27.17**	**Average Building Elevation**	
401.09			

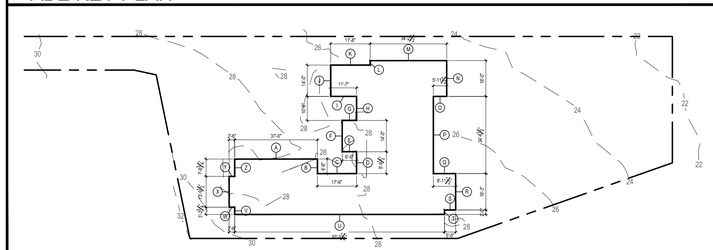
EXTERIOR ENTRY RENDER

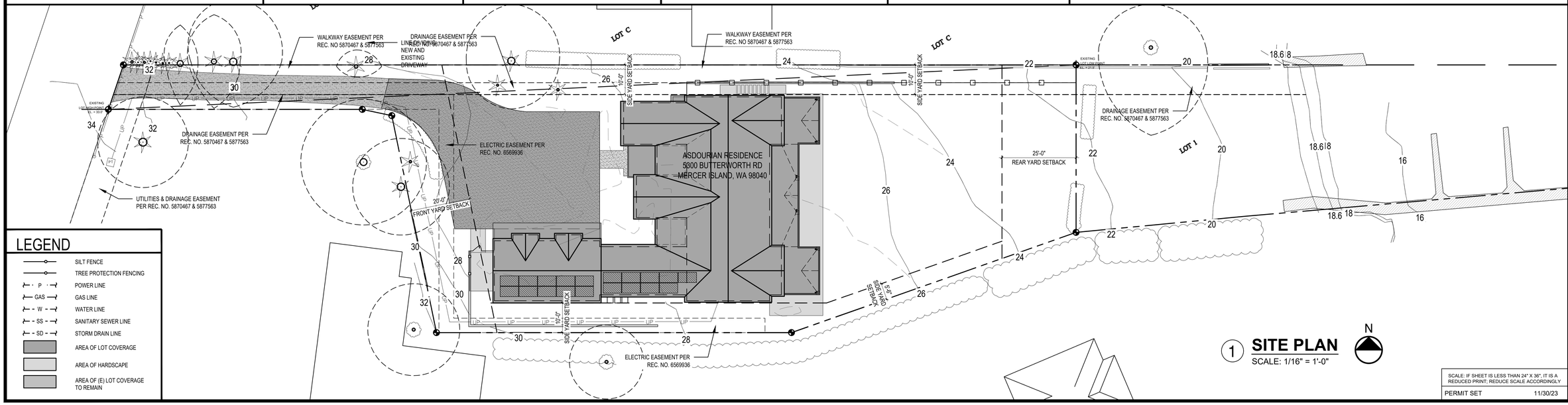
VICINITY MAP



ABE KEY PLAN

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





LEGEND

- SILT FENCE
- TREE PROTECTION FENCING
- POWER LINE
- GAS LINE
- WATER LINE
- SANITARY SEWER LINE
- STORM DRAIN LINE
- AREA OF LOT COVERAGE
- AREA OF HARDSCAPE
- AREA OF (E) LOT COVERAGE TO REMAIN

1 **SITE PLAN**
SCALE: 1/16" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" X 36", IT IS A REDUCED PRINT; REDUCE SCALE ACCORDINGLY

PERMIT SET 11/30/23

STURMAN ARCHITECTS
9 - 103rd Avenue NE Suite 203
Bellevue, WA 98004
TEL: 425.457.7003

REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON
5982

ASDOURIAN RESIDENCE
PERMIT SET
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

SITE PLAN GENERAL NOTES

REVISIONS:

DRAWN BY: KE

CHECKED BY: BJS

SHEET
A1.0

PLOT DATE: 11/30/2023

BUILDING AREA

	MAIN FLOOR	UPPER FLOOR		HEATED SUB-TOTAL	GARAGE/ WORKSHOP	GRAND TOTAL	UNHEATED PATIO	UNHEATED DECK
PROPOSED HOUSE:	3025 SF	4021 SF		7046 SF	861 SF	7907 SF	1001 SF	766 SF

LOT COVERAGE AND HARDSCAPE

	GROSS LOT S.F.	MAIN ROOF STRUCT	DRIVES/ PARKING	TOTAL LOT COVERAGE	% LOT COVERAGE
EXISTING LOT COVERAGE AREA	20,076 SF	0 SF	847 SF	847 SF	4.2 %
NET GAIN/LOSS IMPERVIOUS AREA		+5252 SF	+2428 SF	+7680 SF	+38.2 %
PROPOSED LOT COVERAGE AREA		5252 SF	3275 SF	8527 SF	42.5 %
% ALLOWED IMPERVIOUS AREA				8030.4 SF ALLOWABLE	40 %
FLAG LOT EXCEPTION				9034.2 SF ALLOWABLE	45 %

FRONT WALK	TRASH/ SIDEWALK	PATIO	SIDE PATH	RETAINING WALL	TOTAL HARDSCAPE	% HARDSCAPE
0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 %
+62 SF	+138 SF	+446 SF	+65 SF	+59 SF	+770 SF	+3.8 %
62 SF	138 SF	446 SF	65 SF	59 SF	770 SF	3.8 %
					1806.84 SF ALLOWABLE	9 %

HIGHEST EL: 33.0'
LOWEST EL: 21.5'
ELEVATION DIFFERENCE= 11.5'
11.5' DIVIDED BY 326.67' (HORIZ. DIST. BTWN. HIGHEST & LOWEST ELEV.) = .168

LOT SLOPE IS 3.5%, WHICH IS LESS THAN 15% SO LOT COVERAGE ALLOWED IS 40%.

ADDITIONAL 9% OF LOT SIZE WILL DETERMINE ALLOWABLE HARDSCAPE SURFACE

PER CODE 19.02.020.F.3.e.ii(b)

A DEVELOPMENT PROPOSAL ON A FLAG LOT THAT REQUIRES A DRIVEWAY THAT OCCUPIES MORE THAN 25% OF THE OTHERWISE ALLOWED LOT COVERAGE AREA. THE ALLOWED REDUCTION IN THE REQUIRED LANDSCAPING AREA AND INCREASE IN MAXIMUM LOT COVERAGE SHALL NOT EXCEED 5%, OR THE AREA OF THE DRIVEWAY IN EXCESS OF 25%OF THE LOT COVERAGE, WHICHEVER IS LESS.

1 SITE PLAN

SCALE: 1/8" = 1'-0"

N

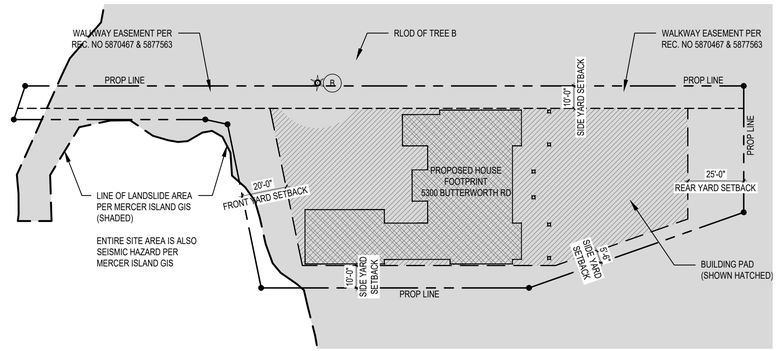
GROSS FLOOR AREA

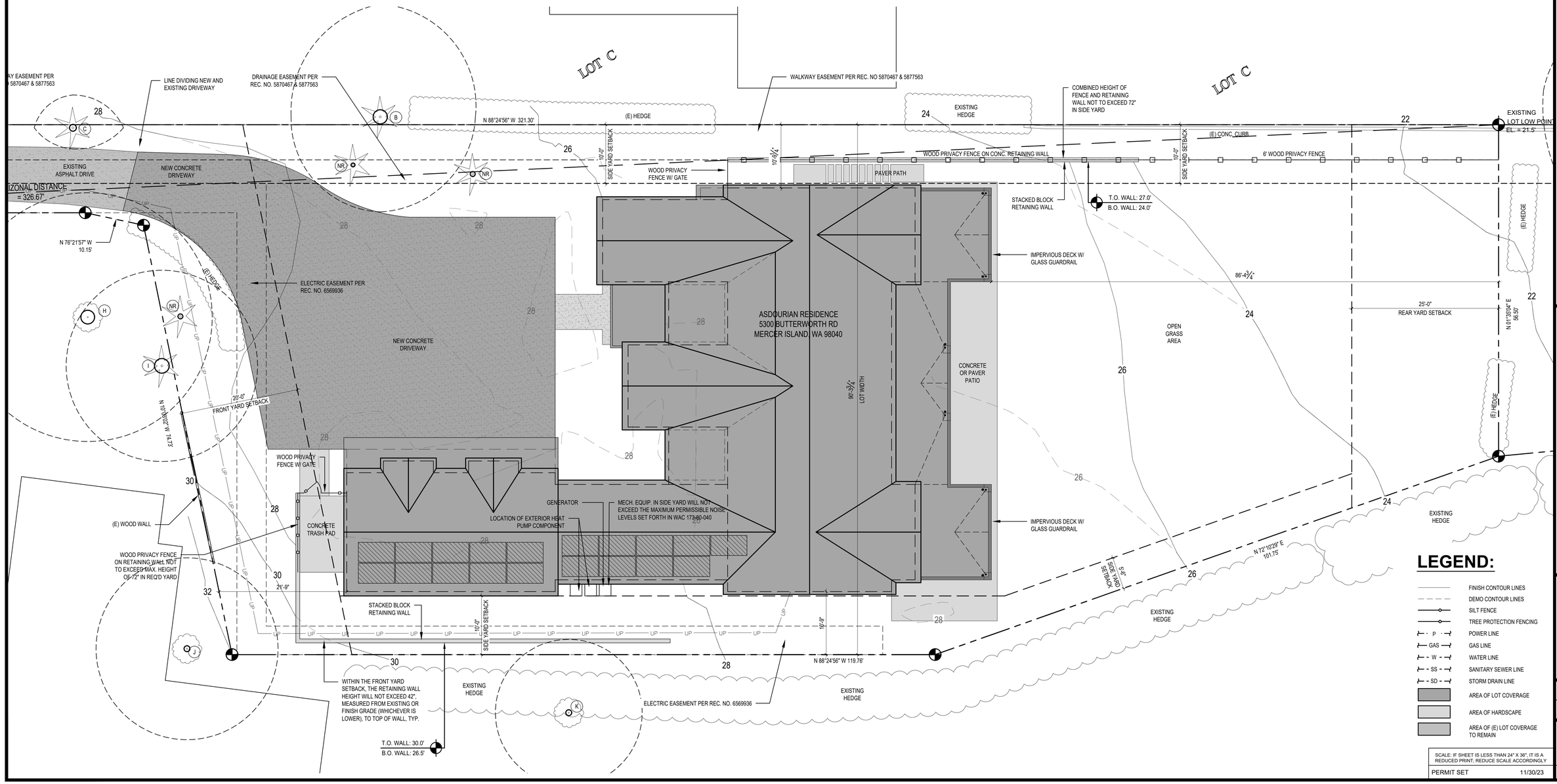
	BASEMENT EXCLUSION	NEW FLOOR AREA
MAIN FLOOR		3025 SF
SECOND FLOOR		4021 SF
GARAGE		861 SF
GROSS FLOOR AREA		7907 SF

NET LOT AREA	20,076 SF
ALLOWED MAX. % GFA COVERAGE	40.0 % OR 12,000 SF
ALLOWED GROSS FLOOR AREA	8030.4 SF
PROPOSED GROSS FLOOR AREA	7907 SF
STAIR ALLOWANCE	-138 SF
12'+ CEILING OF BED-2	+52 SF
12'+ CEILING OF STAIRS	+51.5 SF
12'+ CEILING OF REC ROOM	+65.5 SF
12'+ CEILING OF PRIMARY	+72 SF
TOTAL GFA COVERAGE	8010 SF OR 39.8%

BUILDING PAD DIAGRAM

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





LEGEND:

- FINISH CONTOUR LINES
- DEMO CONTOUR LINES
- SILT FENCE
- TREE PROTECTION FENCING
- POWER LINE
- GAS LINE
- WATER LINE
- SANITARY SEWER LINE
- STORM DRAIN LINE
- AREA OF LOT COVERAGE
- AREA OF HARDSCAPE
- AREA OF (E) LOT COVERAGE TO REMAIN

SCALE: IF SHEET IS LESS THAN 24" X 36", IT IS A REDUCED PRINT; REDUCE SCALE ACCORDINGLY

PERMIT SET 11/30/23

STURMAN ARCHITECTS
9 - 103rd Avenue NE Suite 203
Bellevue, WA 98004
TEL: 425.457.7003

REGISTERED ARCHITECT BRADLEY J. STURMAN STATE OF WASHINGTON 9982

ASDOURIAN RESIDENCE
PERMIT SET
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

SITE PLAN
SITE CALCS

REVISIONS:

DRAWN BY: KE

CHECKED BY: BJS

SHEET
A1.1

PLOT DATE: 11/30/2023

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

LOT 2, TONJA ESTATES, AS PER PLAT RECORDED IN VOLUME 77 OF PLATS, PAGE 64, RECORDS OF KING COUNTY, WASHINGTON;
TOGETHER WITH THAT PORTION OF LOT 3 OF SAID PLAT DESCRIBED AS FOLLOWS;
BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 3; THENCE SOUTH 1°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.
TOGETHER WITH AN UNDIVIDED 1/7 TH INTEREST IN LOT 1 OF SAID PLAT.

BASIS OF BEARINGS

ACCEPTED THE BEARING OF S 20°10'45" W BETWEEN MONUMENTS FOUND ALONG THE CENTERLINE OF BUTTERWORTH ROAD, PER REFERENCE NO. 1.

REFERENCES

R1. TONJA ESTATES, VOL. 77 OF PLATS, PG. 64, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

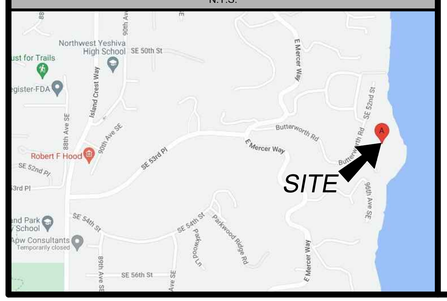
NAVD 88 PER CITY OF MERCER ISLAND BENCHMARK NO. 1934
DESCRIPTION: ½" BRASS PLUG IN 4"X4" CONC (DN 1.6')
LOCATION: OPP D/W HSE #5210 ON BUTTERWORTH RD
ELEVATION: 32.14'

SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN JANUARY OF 2023. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 8661400020
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 20,076 S.F. (0.46 ACRES)
7. THE PROPERTY DESCRIBED HEREON IS THE SAME AS THE PROPERTY DESCRIBED IN FIDELITY NATIONAL TITLE INSURANCE COMPANY'S OWNER'S POLICY NO. 611321770, WITH AN EFFECTIVE DATE OF NOVEMBER 15, 2022 AND THAT ALL EASEMENTS, COVENANTS AND RESTRICTIONS REFERENCED IN SAID TITLE COMMITMENT OR APPARENT FROM A PHYSICAL INSPECTION OF THE PROPERTY OR OTHERWISE KNOWN TO ME HAVE BEEN PLOTTED HEREON OR OTHERWISE NOTED AS TO THEIR EFFECT ON THE PROPERTY.
8. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
9. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

VICINITY MAP

N.T.S.



SCHEDULE B ITEMS

1. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: MERCER ISLAND SEWER DISTRICT
PURPOSE: SEWER
RECORDING DATE: JUNE 19, 1964
RECORDING NO.: 5750958
AFFECTS: REFERENCE IS HEREBY MADE TO DOCUMENT FOR FULL PARTICULARS
(AS CONSTRUCTED EAST OF SHORELINE.)

2. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: MERCER ISLAND SEWER DISTRICT
PURPOSE: SEWER
RECORDING DATE: JULY 8, 1964
RECORDING NO.: 5758750
AFFECTS: REFERENCE IS HEREBY MADE TO DOCUMENT FOR FULL PARTICULARS
(AS CONSTRUCTED EAST OF SHORELINE.)

3. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
PURPOSE: UTILITIES AND DRAINAGE
RECORDING DATE: APRIL 23, 1965
RECORDING NO.: 5870467
AFFECTS: REFERENCE IS HEREBY MADE TO DOCUMENT FOR FULL PARTICULARS
(PLOTTED UTILITIES AND DRAINAGE EASEMENTS. PLOTTED WALKWAY EASEMENT. UNDIVIDED 1/7 INTEREST IN LOT 1.)

4. 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 TONJA ESTATES:
RECORDING NO: 5877563
(PLOTTED UTILITIES AND DRAINAGE EASEMENTS. PLOTTED WALKWAY EASEMENT. UNDIVIDED 1/7 INTEREST IN LOT 1.)

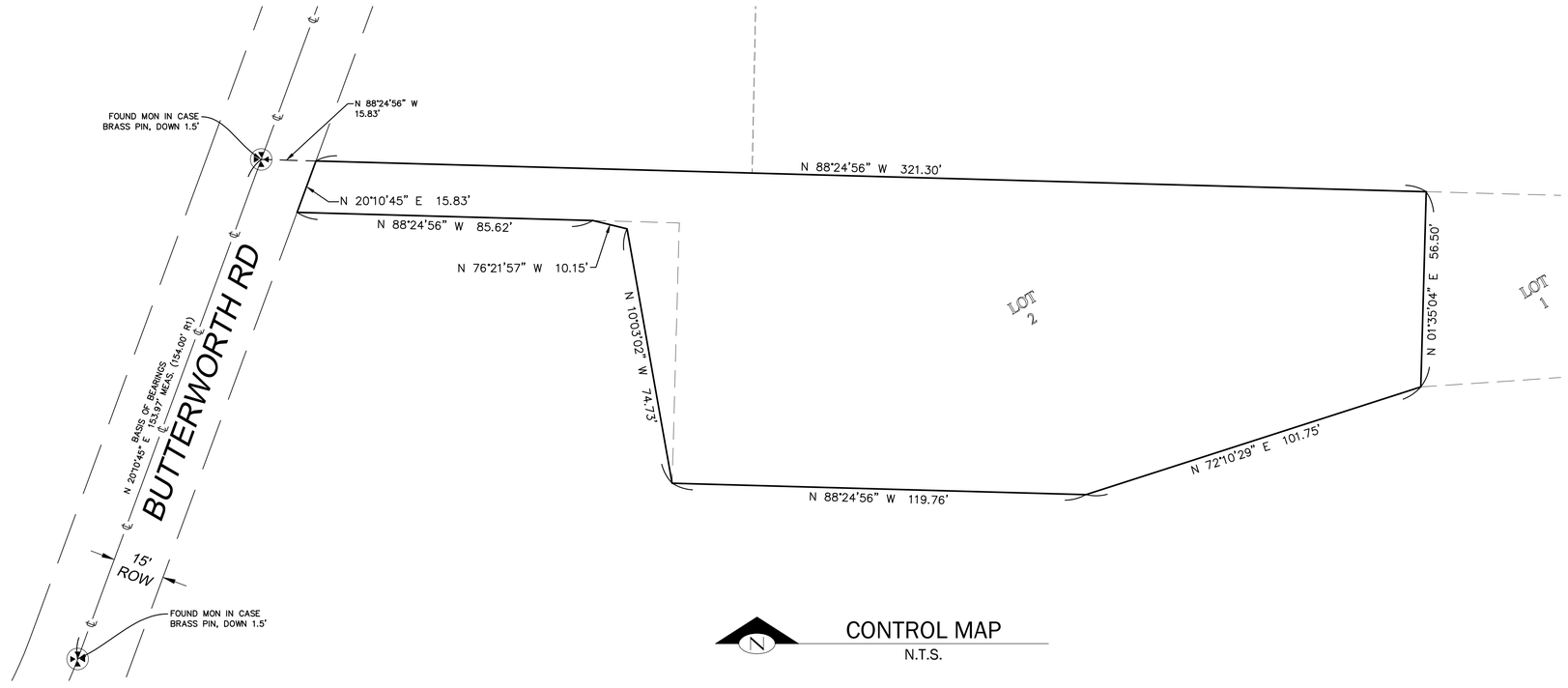
5. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
GRANTED TO: PUGET SOUND POWER & LIGHT COMPANY
PURPOSE: UTILITIES
RECORDING DATE: SEPTEMBER 26, 1969
RECORDING NO.: 6569936
AFFECTS: REFERENCE IS HEREBY MADE TO DOCUMENT FOR FULL PARTICULARS (PLOTTED)

7. 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 FELTIS-EYRING BOUNDARY LINE REVISION MERCER ISLAND FILE NO. M.I. 92-09-43:
RECORDING NO: 9212299014 (CURRENT CONDITIONS SHOWN)

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 ROSA LINE REVISION MERCER ISLAND FILE NO. 94-0467:
RECORDING NO: 9606139004 (CURRENT CONDITIONS SHOWN)

LEGEND

- AREA DRAIN
- ASPHALT SURFACE
- BUILDING
- CENTERLINE ROW
- CONCRETE SURFACE
- DECK
- FENCE LINE (CHAIN LINK)
- FENCE LINE (WOOD)
- GV GAS VALVE
- HEDGE FOLIAGE LINE
- MB MAILBOX (RESIDENTIAL)
- MONUMENT (IN CASE, FOUND)
- PST POST
- P POWER METER
- P POWER (OVERHEAD)
- PP POWER POLE
- PT POWER TRANSFORMER
- PROPERTY LINE (SUBJECT)
- PROPERTY LINES (ADJACENT)
- REBAR & CAP (SET)
- REBAR AS NOTED (FOUND)
- RETAINING WALL
- RIGHT-OF-WAY LINES
- ROCKERY
- SS SEWER LINE
- SEWER MANHOLE
- SUBDIVISION LINES
- SIZE TYPE TREE (AS NOTED)
- W WATER LINE
- WM WATER METER
- BO BLOW OFF VALVE
- G GAS LINE
- UP POWER (UNDERGROUND)
- WALKWAY EASEMENT PER REC. NO. 5870467 & 5877563
- DRAINAGE EASEMENT PER REC. NO. 5870467 & 5877563
- SEWER EASEMENT PER REC. NO. 5750958 & 5758750
- UTILITIES & DRAINAGE EASEMENT PER REC. NO. 5870467 & 5877563
- ELECTRIC EASEMENT PER REC. NO. 6569936



CONTROL MAP

N.T.S.

STEEP SLOPE/BUFFER DISCLAIMER:

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INDEXING INFORMATION

SE 1/4 NE 1/4
SECTION: 19
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING

We are the measure | terrane.net

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 8661400020

ASDOURIAN RESIDENCE
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

02/10/23

TERRANE
10801 Main Street, Suite 102
Bellevue, WA 98004
p: 425-458-4488 | e: info@terrane.net

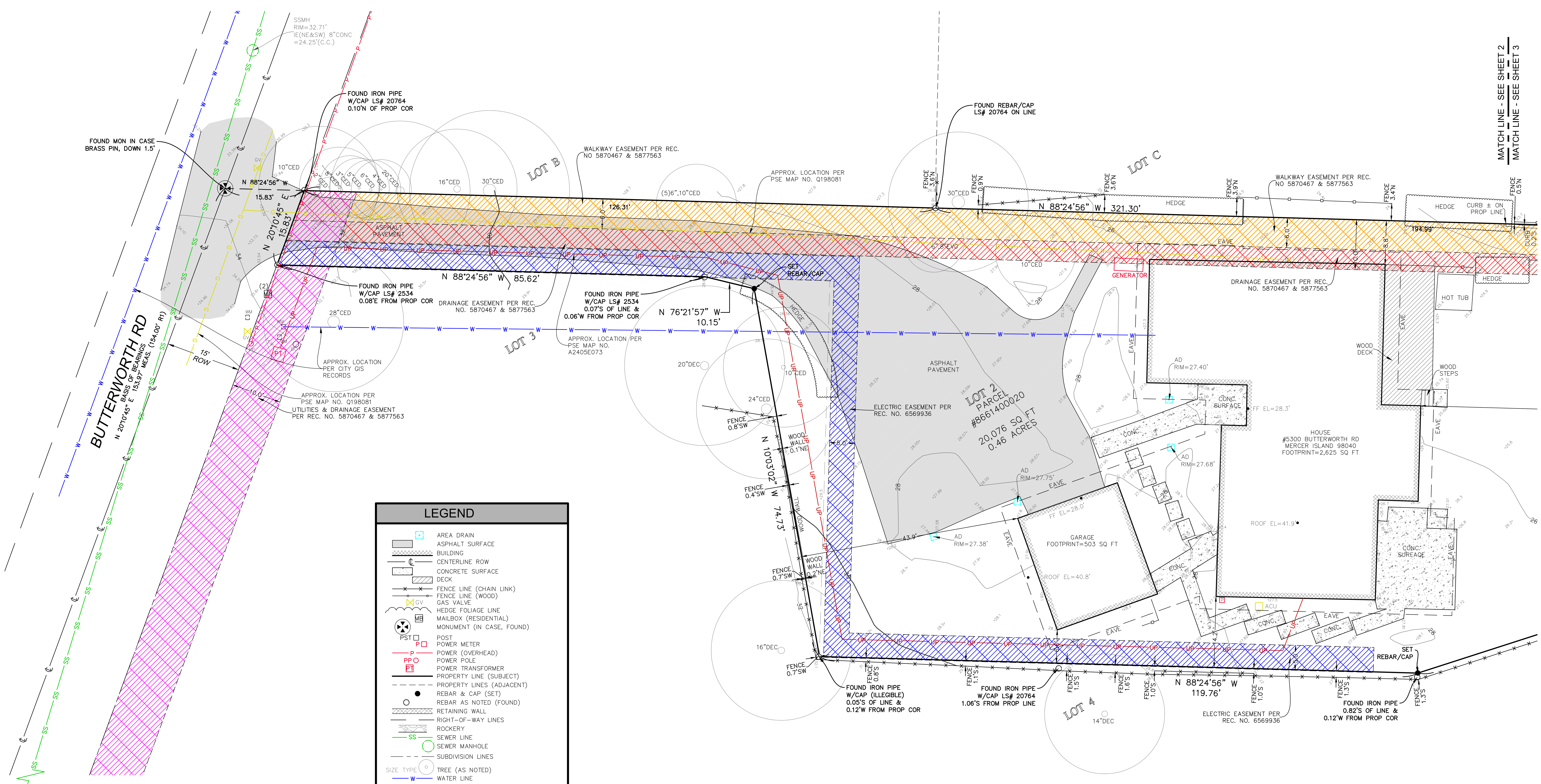
JOB NUMBER:	230068
DATE:	02/10/23
DRAFTED BY:	TGC
CHECKED BY:	JGM/TBH
SCALE:	N.T.S.

REVISION HISTORY

SHEET NUMBER
1 OF 3

TOPOGRAPHIC & BOUNDARY SURVEY

INDEXING INFORMATION
SE 1/4 NE 1/4
SECTION: 19
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING



LEGEND

- AREA DRAIN
- ASPHALT SURFACE
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- DECK
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- WATER LINE
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- SEWER EASEMENT PER REC. NO. 5750958 & 5758750
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- ELECTRIC EASEMENT PER REC. NO. 6569936

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(IN FEET)
1 INCH = 10 FT.

We are the measure | terrane.net

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 8661400020

ASDOURIAN RESIDENCE
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

JACOB GOODMAN MILLER, STATE OF WASHINGTON, REGISTERED PROFESSIONAL LAND SURVEYOR 56654
02/10/23

TERRANE
10801 Main Street, Suite 102
Bellevue, WA 98004
p: 425-458-4488 | e: info@terrane.net

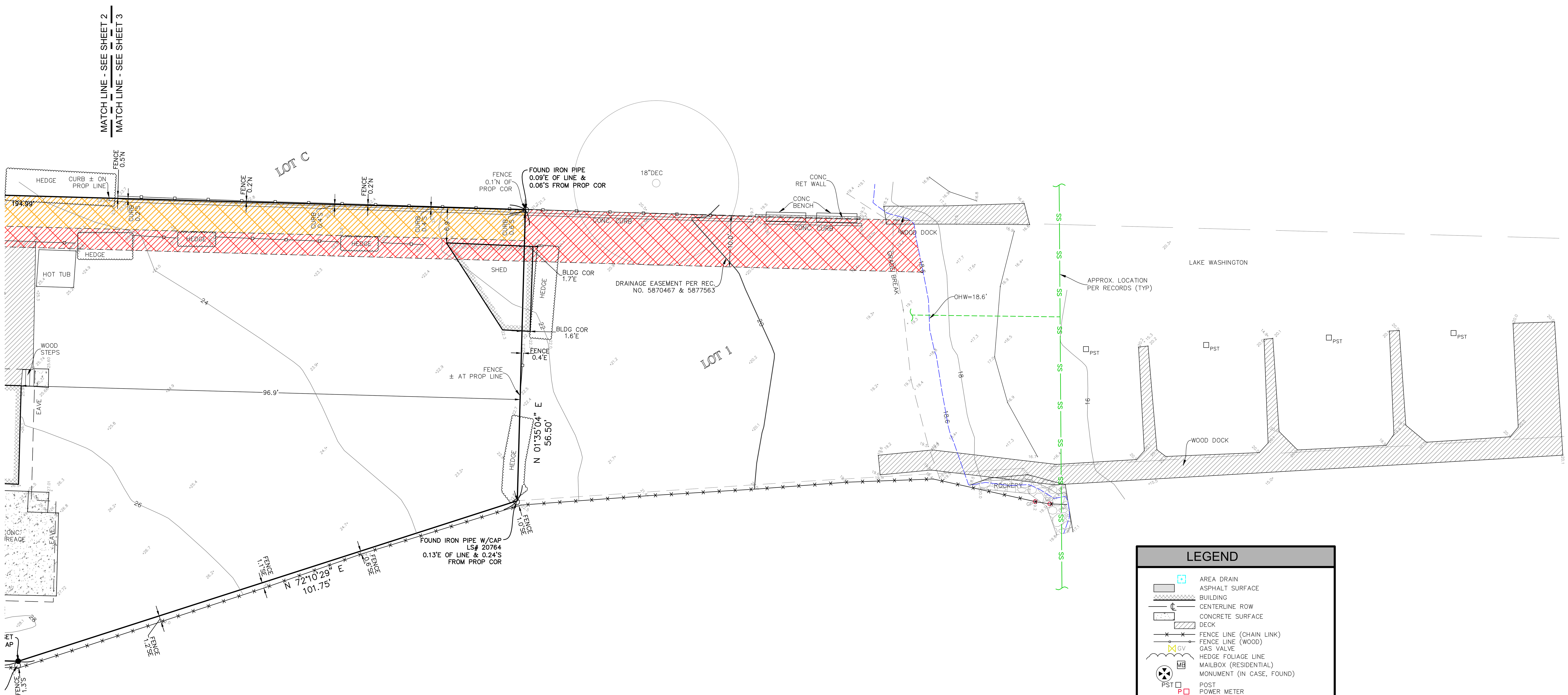
JOB NUMBER:	230068
DATE:	02/10/23
DRAFTED BY:	TGC
CHECKED BY:	JGM/TBH
SCALE:	1"= 10'

REVISION HISTORY

TOPOGRAPHIC & BOUNDARY SURVEY

INDEXING INFORMATION

SE 1/4 NE 1/4
SECTION: 19
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING



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(IN FEET)
1 INCH = 10 FT.

We are the measure | terrane.net

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 8661400020

ASDOURIAN RESIDENCE
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

TERRANE
10801 Main Street, Suite 102
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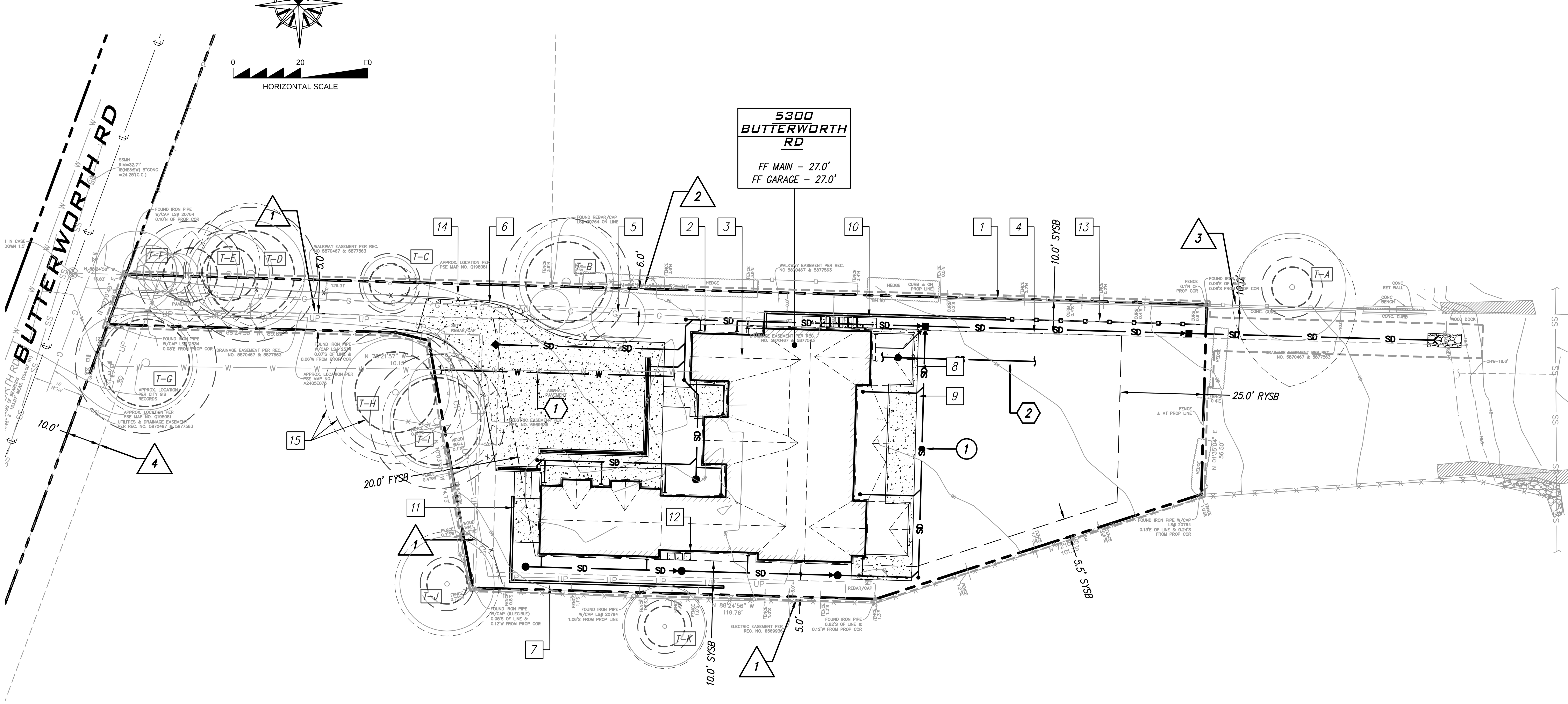
SCALE:	1"= 10'

REVISION HISTORY

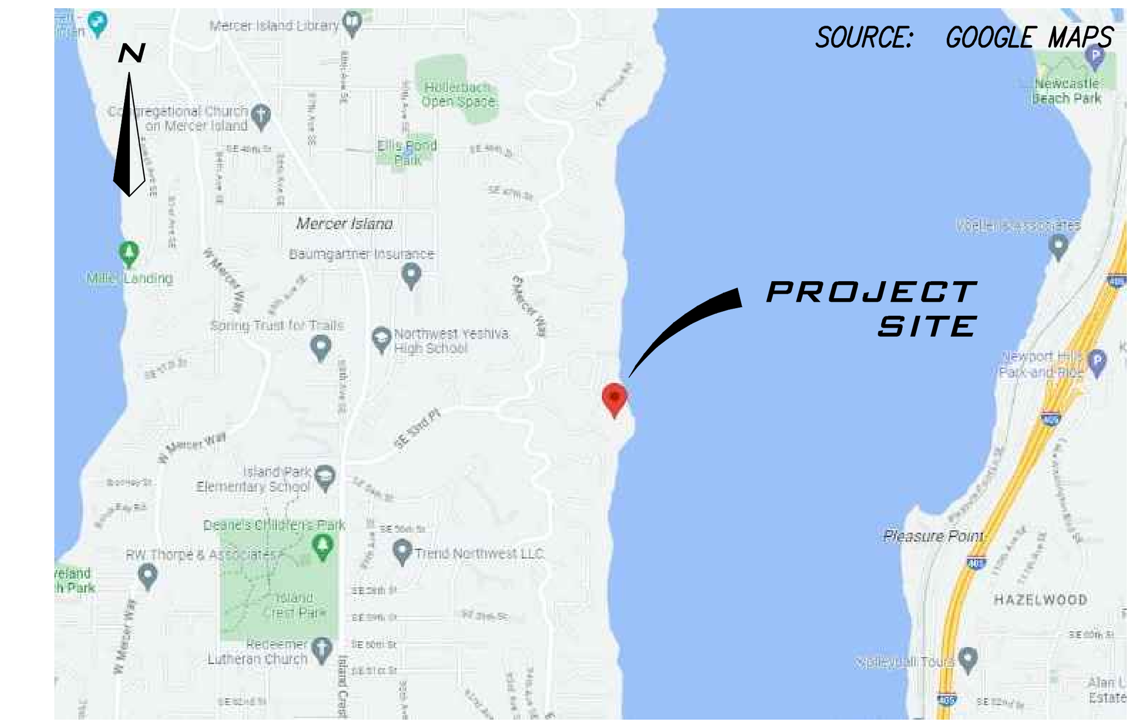
SHEET NUMBER
3 OF 3

ASDOURIAN RESIDENCE

SE 1□, NE 1□, SEC 1□, T 2□N, R 0□E, W. M.



SITE PLAN
SCALE: 1"=20'



VICINITY MAP
SCALE: NTS

PROJECT TEAM:

OWNER:
RYAN AND ASHLEY ASDOURIAN
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040
EMAIL: RASDO@MICROSOFT.COM

PROJECT ARCHITECT:
STURMAN ARCHITECTS
BRAD STURMAN
9-103RD AVE NE, SUITE 203
BELLEVUE, WA 98004
PH: (425) 451-7003
EMAIL: BRAD@STURMANARCHITECTS.COM

PROJECT CIVIL ENGINEER:
PATRICK HARRON & ASSOCIATES, LLC
SCHWIN CHAOSILAPAKUL, PE
14900 INTERURBAN AVENUE S #279
SEATTLE, WA 98168
PH: (206) 674-4659
EMAIL: SCHWIN@PATRICKHARRON.COM

PROJECT SURVEYOR:
TERRANE
JACOB MILLER
10801 MAIN ST, SUITE 102
BELLEVUE, WA 98004
PH: (425) 458-4488
EMAIL: SUPPORT@TERRANE.NET

PROJECT GEOTECHNICAL ENGINEER:
GEOTECH CONSULTANTS, INC
MARC MCGINNIS
2401 10TH AVE EAST
SEATTLE, WA 98102
PH: (425) 747-5618
EMAIL: MARCM@GEOTECHNW.COM

PROJECT ARBORIST:
TREE SOLUTIONS, INC.
CHARLIE VOGELHEIM
2940 WESTLAKE AVE N #200
SEATTLE, WA 98109
PH: (206) 528-4670
EMAIL: CHARLIE@TREESOLUTIONS.NET

PROJECT INFORMATION:

DEVELOPMENT DATA:

PROJECT NAME	ASDOURIAN RESIDENCE
PROPERTY AREA	20076 SF (0.46 AC)
SITE ADDRESS	5300 BUTTERWORTH RD MERCER ISLAND, WA 98040
PARCEL NUMBER	8661400020
ZONED	R-15

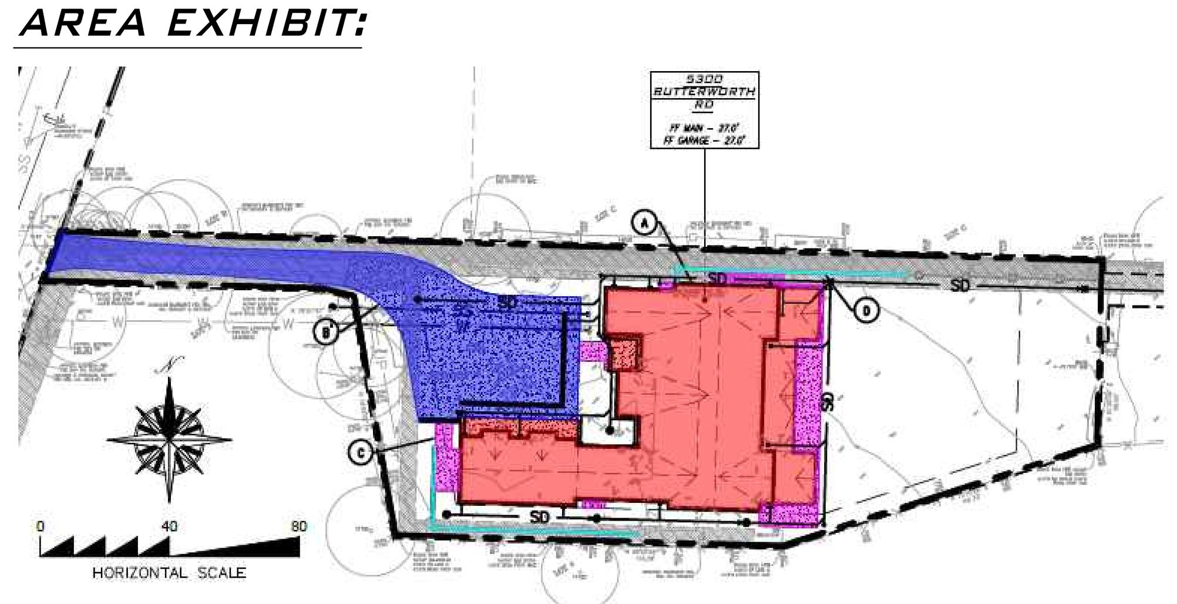
BUILDING SETBACKS:

FRONT YARD	20.0 FT
SIDE YARD	10.0 FT
REAR YARD	25.0 FT
LOT COVERAGE (BLDG)	40% (MAX)

UTILITIES:

SEWER	MERCER ISLAND PUBLIC WORKS
WATER	MERCER ISLAND PUBLIC WORKS
POWER	PUGET SOUND ENERGY
SCHOOLS	LAKE WASHINGTON #414
FIRE DISTRICT	MERCER ISLAND FIRE DEPARTMENT

AREA EXHIBIT:



AREA INVENTORY:

Proposed Surface Coverage Summary (Onsite)			
Callout	Description	(sf)	(ac)
	Total Property	20,076	0.461
A	New House Roof	5,203	0.119
B	Driveway	3,300	0.076
C	Walkways & Patio	727	0.017
D	Walls	110	0.003
	Total Proposed Hard Surface	9,340	0.214
	Total Pervious Surface (Lawn)	10,736	0.246

SITE CALLOUTS:

1. PROPERTY BOUNDARY, TYP.
2. PROPOSED BUILDING FOOTPRINT, TYP.
3. PROPOSED BUILDING ROOFLINE, TYP.
4. BUILDING SETBACK LINE, TYP. SEE DEVELOPMENT DATA NOTES FOR MINIMUM SETBACKS.
5. EXISTING TREES TO BE PROTECTED-IN-PLACE UNLESS OTHERWISE NOTED, TYP (SEE ARBORIST REPORT AND SHEET C2.0 FOR LIMITS OF DISTURBANCE AND TREE PROTECTION).
6. PROPOSED ON-SITE CONCRETE DRIVEWAY/PARKING, TYP (SEE SHEET C3.0 FOR GRADING PLAN).
7. PROPOSED STACKED BLOCK RETAINING WALL (< 4.0').
8. PROPOSED IMPERVIOUS DECK, TYP.
9. PROPOSED CONCRETE OR PAVER PATIO, TYP.
10. PROPOSED PAVER PATH.
11. PROPOSED CONCRETE TRASH PAD.
12. PROPOSED MECHANICAL/ELECTRICAL PAD, TYP.
13. PROPOSED PRIVACY FENCE, TYP.
14. TREE PROTECTION FENCING, TYP (SEE SHEET C2.0).
15. TREE DRIPLINE/RLOD/MLOD, TYP (SEE SHEET C2.0).

SITE NOTES:

1. SOILS OF DISTURBED PERVIOUS AREAS TO BE AMENDED.

STORM CALLOUTS:

1. PROPOSED STORM DRAINAGE SYSTEM, TYP (SEE SHEET C3.1 FOR DRAINAGE PLAN).

SEWER & WATER CALLOUTS:

1. PROPOSED DOMESTIC WATER SYSTEM, TYP (SEE SHEET C3.0 FOR WATER PLAN).
2. PROPOSED SANITARY SEWER SYSTEM, TYP (SEE SHEET C3.0 FOR SEWER PLAN).

EASEMENT CALLOUTS:

1. 5.0' ELECTRIC EASEMENT.
2. 6.0' WALKWAY EASEMENT.
3. 10.0' DRAINAGE EASEMENT.
4. 10.0' UTILITIES & DRAINAGE EASEMENT.

SHEET LIST

SHEET #	NAME	DESCRIPTION
1	C1.0	COVER SHEET & SITE PLAN
2	C2.0	DEMOLITION & TESC PLAN
3	C2.1	TESC DETAILS
4	C3.0	GRADING & UTILITY PLAN
5	C3.1	STORM DRAINAGE PLAN
6	C3.2	STORM DRAINAGE DETAILS
7	C3.3	UTILITY DETAILS

LEGAL DESCRIPTION:

LOT 2, TONJA ESTATES, AS PER PLAT RECORDED IN VOLUME 77 OF PLATS, PAGE 64, RECORDS OF KING COUNTY, WASHINGTON; TOGETHER WITH THAT PORTION OF LOT 3 OF SAID PLAT DESCRIBED AS FOLLOWS; BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 3; THENCE SOUTH 1°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. TOGETHER WITH AN UNDIVIDED 1/7 TH INTEREST IN LOT 1 OF SAID PLAT.

DATUM:

VERTICAL DATUM – NAVD 88 PER CITY OF MERCER ISLAND BENCHMARK NO. 1934 DESCRIPTION: ½" BRASS PLUG IN 4"X4" CONC (DN 1.6') LOCATION: OPP D/W HSE #5210 ON BUTTERWORTH RD. ELEVATION: 32.14'

HORIZONTAL DATUM (BASIS OF BEARINGS)
ACCEPTED THE BEARING OF S20°10'45"W BETWEEN MONUMENTS FOUND ALONG THE CENTERLINE OF BUTTERWORTH ROAD, PER REFERENCE NO. 1.

REFERENCES:

1. ARCHITECTURAL PLANS BY STURMAN ARCHITECTS.
2. BOUNDARY AND TOPOGRAPHIC SURVEY BY TERRANE.
3. GEOTECH REPORT BY GEOTECH CONSULTANTS, INC.
4. ARBORIST REPORT BY TREE SOLUTIONS, INC.

CALL 48 HOURS BEFORE YOU DIG 811

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555 OR 811 (CELL) A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

R#	DATE	DESCRIPTION	BY

11/22/23

CITY OF MERCER ISLAND BUILDING PERMIT

COVER SHEET & SITE PLAN

PATRICK HARRON & ASSOCIATES, LLC
Civil Engineering & Planning

PROJ. NO.	DSN. BY:
2310□	CC
DWN. BY: CC	CHK. BY: SC

ASDOURIAN RESIDENCE
ASDOURIAN RESIDENCE
5300 BUTTERWORTH RD
MERCER ISLAND, WA 980□0

DATE:	11/22/23
SCALE:	AS SHOWN
DRAWING NO:	C1.0
1 OF □	

Nov 22, 2023 12:40:29PM – User Schwin Chaosilapakul
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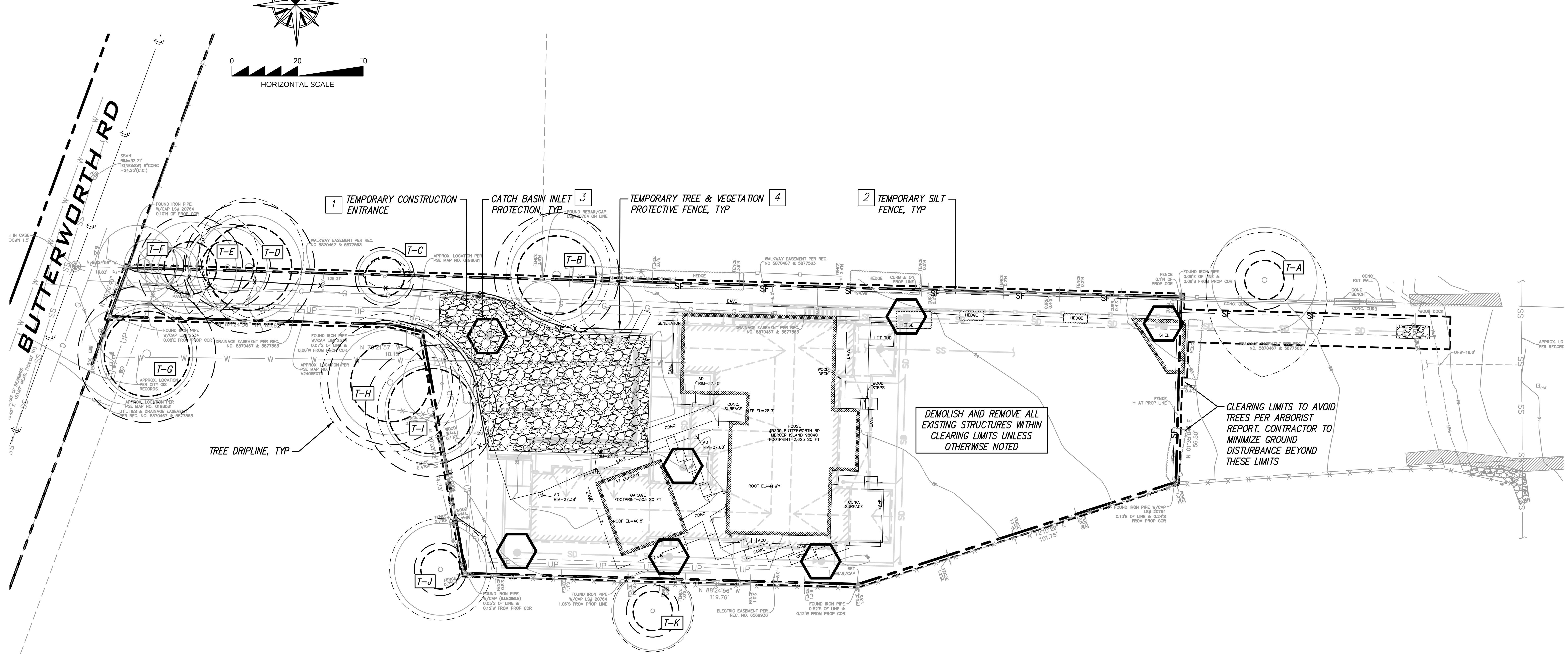
ASDOURIAN RESIDENCE

SE 1□□, NE 1□□, SEC 1□, T 2□N, R 0□E, W. M.



DEMOLITION & TESC PLAN

SCALE: 1"=20'

TESC LEGEND:

Symbol	Description
X	REMOVE TREE
Hexagon	CATCH BASIN INLET PROTECTION
- - - - -	SAWCUT
— SF —	TEMPORARY SILT FENCE
—— X ——	TEMPORARY TREE & VEGETATION PROTECTIVE FENCE
▬ ▬ ▬	CLEARING LIMITS
(hatched)	TEMPORARY CONSTRUCTION ENTRANCE

DEMOLITION & TESC CALLOUTS:

1. TEMPORARY CONSTRUCTION ENTRANCE (SEE DETAIL 1, SHEET C2.1). COORDINATE WITH SITE INSPECTOR FOR LOCATION AND EXTENTS.
2. TEMPORARY SILT FENCE, TYP (SEE DETAIL 2, SHEET C2.1 AND TESC NOTE 4). ALTERNATIVELY, STRAW WATTLES MY BE USED TO LESSEN IMPACTS ON TREE ROOT SYSTEMS IMPLEMENTATION OF SEDIMENT CONTROL SYSTEMS TO BE COORDINATED WITH PROJECT ARBORIST FOR AREAS WITHIN TPZ.
3. CATCH BASIN INLET PROTECTION, TYP (SEE DETAIL 3, SHEET C2.1).
4. TEMPORARY TREE & VEGETATION PROTECTIVE FENCE, TYP (SEE DETAIL 4, SHEET C2.1). SEE DEMOLITION & TESC NOTES, THIS SHEET, FOR ADDITIONAL TREE PROTECTION GUIDELINES.
5. SOILS OF DISTURBED PERVIOUS AREAS THROUGHOUT THE DURATION OF THE PROJECT ARE TO BE AMENDED, TYP.

DEMOLITION & TESC NOTES:

1. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION ON TREE PROTECTION.
2. PRIOR TO BEGINNING ANY CONSTRUCTION, COORDINATE INSTALLATION OF TREE PROTECTION FENCING WITH GENERAL CONTRACTOR, CITY AND OWNERS REPRESENTATIVE PROJECT ARBORIST. COORDINATE GRADING AND SOIL PREPARATION ACTIVITIES AROUND EXISTING TREES TO REMAIN WITH GENERAL CONTRACTOR, OWNERS REPRESENTATIVE, PROJECT ARBORIST AND CITY.
3. TREE PROTECTION BARRIERS SHALL BE INITIALLY ERECTED AT 5 FEET OUTSIDE OF THE DRIP LINE PRIOR TO MOVING ANY HEAVY EQUIPMENT ON SITE.
   - TREE PROTECTION FENCING SHALL ONLY BE MOVED WHERE NECESSARY TO INSTALL IMPROVEMENTS, BUT ONLY AS CLOSE AS THE LIMITS OF DISTURBANCE, AS INDICATED IN THE ARBORIST REPORT.
   - EXCAVATION LIMITS SHOULD BE LAID OUT IN PAINT ON THE GROUND TO AVOID OVER EXCAVATING.
   - EXCAVATIONS WITHIN THE DRIP LINES SHALL BE MONITORED BY A QUALIFIED TREE PROFESSIONAL SO NECESSARY PRECAUTIONS CAN BE TAKEN TO DECREASE IMPACTS TO TREE PARTS. A QUALIFIED ARBORIST SHALL MONITOR EXCAVATIONS WHEN WORK IS REQUIRED AND ALLOWED UP TO THE "LIMITS OF DISTURBANCE."
   - TO ESTABLISH SUB GRADE FOR FOUNDATIONS, CURBS AND PAVEMENT SECTIONS NEAR THE TREES, SOIL SHOULD BE REMOVED PARALLEL TO THE ROOTS AND NOT AT 90-DEGREE ANGLES TO AVOID BREAKING AND TEARING ROOTS THAT LEAD BACK TO THE TRUNK WITHIN THE DRIP-LINE. ANY ROOTS DAMAGED DURING THESE EXCAVATIONS SHOULD BE EXPOSED TO SOUND TISSUE AND CUT CLEANLY WITH A SAW.
   - AREAS EXCAVATED WITHIN THE DRIP LINE OF RETAINED TREES SHOULD BE THOROUGHLY IRRIGATED WEEKLY DURING DRY PERIODS.
   - PREPARATIONS FOR FINAL LANDSCAPING SHALL BE ACCOMPLISHED BY HAND WITHIN THE DRIP LINES OF RETAINED TREES. PLANTINGS WITHIN THE DRIP LINES SHALL BE LIMITED. LARGE EQUIPMENT SHALL BE KEPT OUTSIDE OF THE TREE PROTECTION ZONES.
4. FILTER/SILT FENCING WITHIN THE TPZ OF RETAINED TREES SHALL BE INSTALLED IN A MANNER THAT DOES NOT SEVER ROOTS. INSTALL SO THAT FILTER/SILT FENCING SITS ON THE GROUND AND IS WEIGHED IN PLACE BY SANDBAGS OR GRAVEL. DO NOT TRENCH TO INSERT FILTER/SILT FENCING INTO THE GROUND. REFER TO PROJECT ARBORIST TREE PROTECTION SPECIFICATIONS ON C2.1.

TABLE OF TREES:

REFERENCE ARBORIST REPORT

Tree Solutions Inc
Consulting Arborists

Table of Trees

5300 Butterworth Rd, Mercer Island, WA

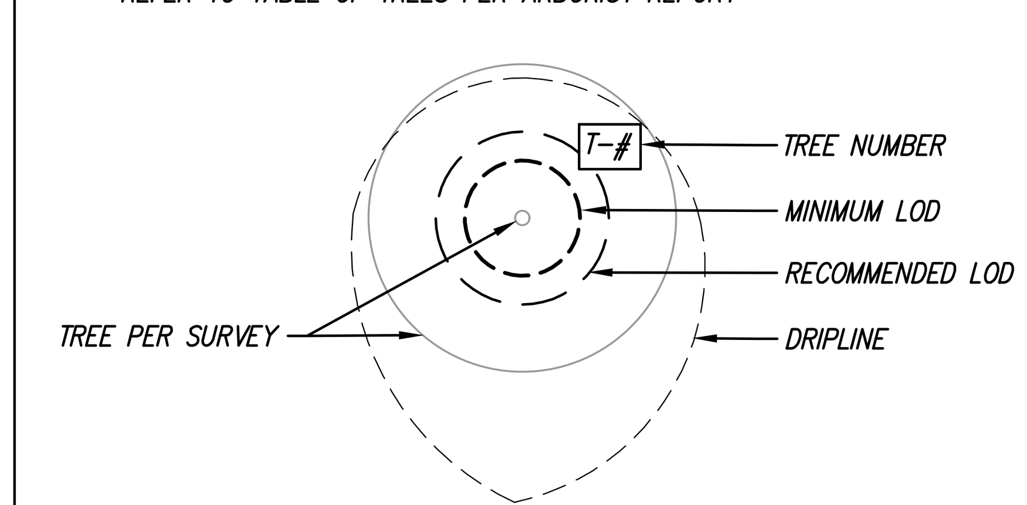
Arborist: Charlie Vogelheim
Date of Inventory: 3/9/2023
Table Prepared: 3/10/2023

DSH (Diameter at Standard Height) is measured 4.5 feet above grade, or as specified in the Guide for Plant Appraisal, 10th Edition, published by the Council of Tree and Landscape Appraisers.
DSH for multi-stem trees are noted as a single stem equivalent, which is calculated using the method defined in the Guide for Plant Appraisal, 10th Edition.
Letters are used to identify trees on neighboring property with overhanging canopies.
Minimum Limit of Disturbance (MLOD) is defined as 5 times trunk diameter or 6 feet, whichever is greater.
Recommended Limit of Disturbance (RLOD) is 8 times trunk diameter or greater depending on tree species and/or condition.
Dripline is measured from the center of the tree to the outermost extent of the canopy.

						Dripline Radius (feet)										
Tree ID	Scientific Name	Common Name	DSH (inches)	Health Condition	Structural Condition	N	E	S	W	Exceptional Threshold	Exceptional	24-Inch DSH or Greater	MLOD (feet)	RLOD (feet)	Proposed Action	Notes
A	*Salix matsudana 'Tortuosa'*	*Corkscrew willow*	14.0	Good	Fair	14.6	18.6	29.6	17.6	-		-	6	9		Lean to south, narrow structural branch attachments.
B	*Thuja plicata*	*Western Redcedar*	29.1	Good	Good	19.2	16.2	16.2	15.2	*30.0*		Yes	12	19		Corrected lean to north, codominant at base.
C (onsite tree)	*Thuja plicata*	*Western Redcedar*	13.9	Good	Fair	5.6	8.6	3.6	6.6	*30.0*		-	6	9		Codominant at base with 6 stems. Maintained as 20 foot hedge.
D	*Thuja plicata*	*Western Redcedar*	30.0	Good	Good	21.3	16.3	15.3	14.3	*30.0*	Exceptional - Size	Yes	13	20		Lean too north, corrected at 30 feet. Cracks in asphalt to the south suggest surface roots, wildlife hole at 6 feet.
E	*Thuja plicata*	*Western Redcedar*	20.0	Good	Good	15.8	8.8	15.8	8.8	*30.0*		-	8	13		
F	*Thuja plicata*	*Western Redcedar*	24.0	Good	Good	13.0	6.0	14.0	5.0	*30.0*		Yes	10	16		
G	*Thuja plicata*	*Western Redcedar*	32.0	Good	Good	15.3	15.3	15.3	15.3	*30.0*	Exceptional - Size	Yes	13	21		Corrected lean to East, surface roots.
H	*Cercis canadensis*	*Redbud*	28.0	Good	Good	21.2	21.2	21.2	21.2	-		Yes	12	19		Surface roots, soil has been blown away.
I	*Thuja plicata*	*Western Redcedar*	30.0	Good	Good	16.3	16.3	16.3	16.3	*30.0*	Exceptional - Size	Yes	13	20		
J	*Cercis canadensis*	*Redbud*	12.0	Good	Good	15.5	15.5	15.5	15.5	-		-	6	8		Surface roots, obstructed view.
K	*Cercis canadensis*	*Redbud*	12.0	Good	Good	12.5	12.5	12.5	12.5	-		-	6	8		Surface roots, obstructed view.

TREE LEGEND:

REFER TO TABLE OF TREES PER ARBORIST REPORT



CALL 48 HOURS BEFORE YOU DIG
811

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555 OR 811 (CELL) A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

R#	DATE	DESCRIPTION	BY
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SCHWIN CHOOSILAPAKUL, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER
11/22/23

CIT□ OF MERCER ISLAND
BUILDING PERMIT

DEMOLITION □ TESC PLAN

PATRICK HARRON & ASSOCIATES, LLC
Ci□i□ Engineering □ P□nning
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PROJ. NO.	DSN. BY:
2310□	CC
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CC	SC

ASDOURIAN RESIDENCE

ASDOURIAN RESIDENCE
□300 BUTTERWORTH RD
MERCER ISLAND, WA □80□0

DATE: 11□22□23
SCALE: AS SHOWN
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2 OF □

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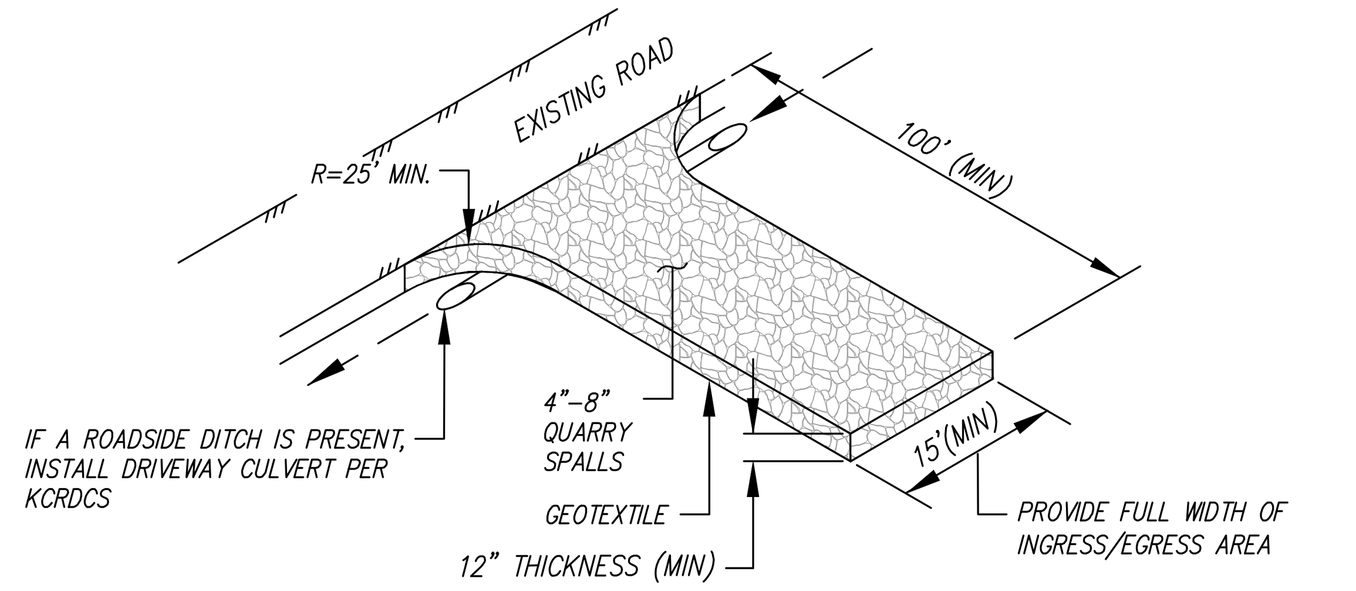
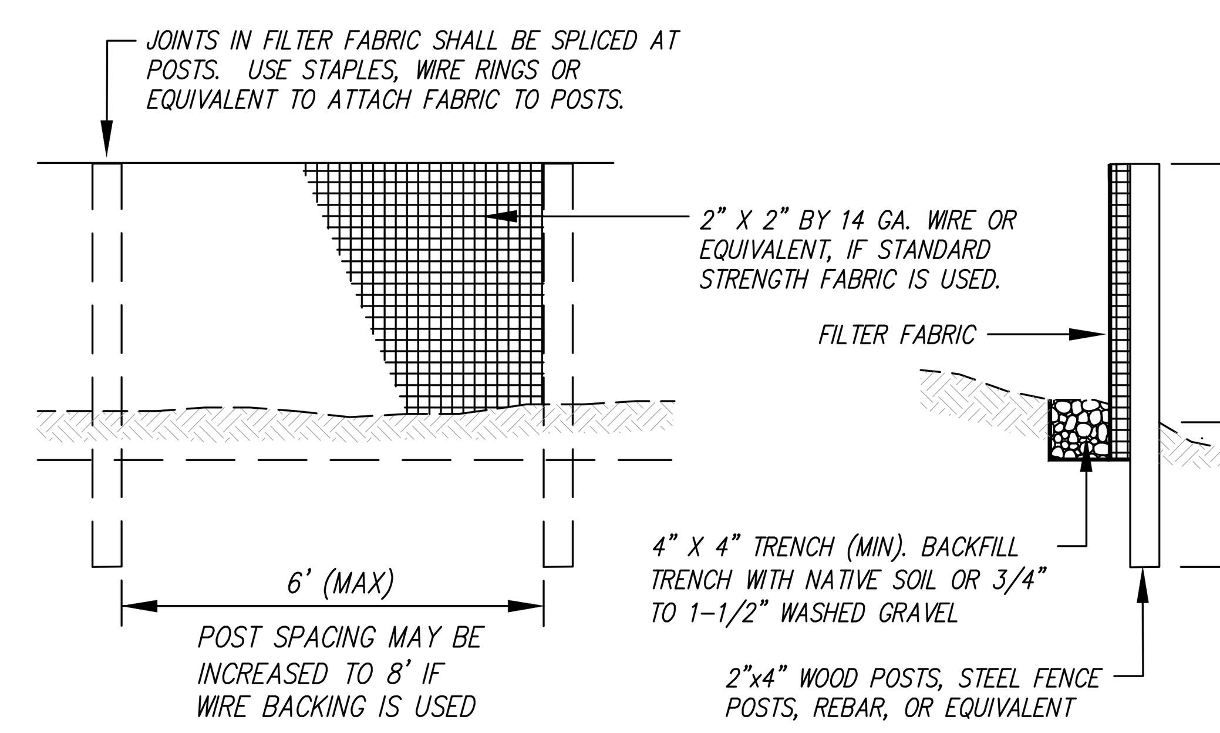


NOTES:

1. PER KING COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (KCRDCS), DRIVEWAYS SHALL BE PAVED TO EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY.
2. IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD.

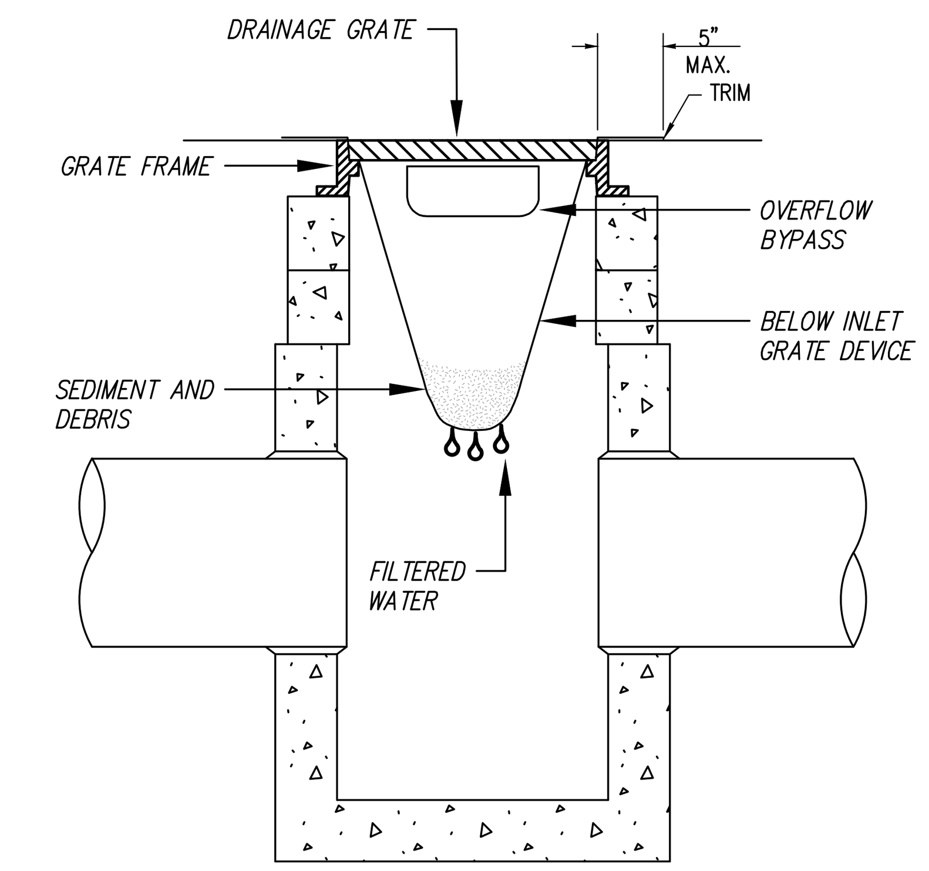
1 / C2.0 **CONSTRUCTION ENTRANCE**
SCALE: NTS

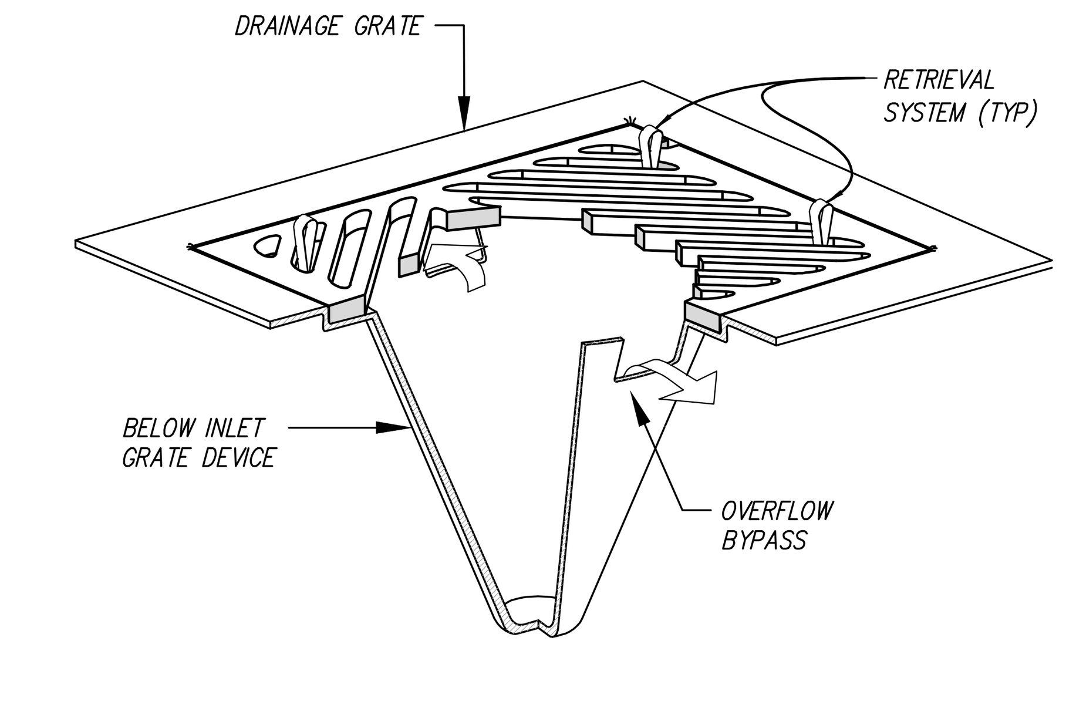


NOTE:

1. SILT FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOURS WHENEVER POSSIBLE

2 / C2.0 **SILT FENCE**
SCALE: NTS

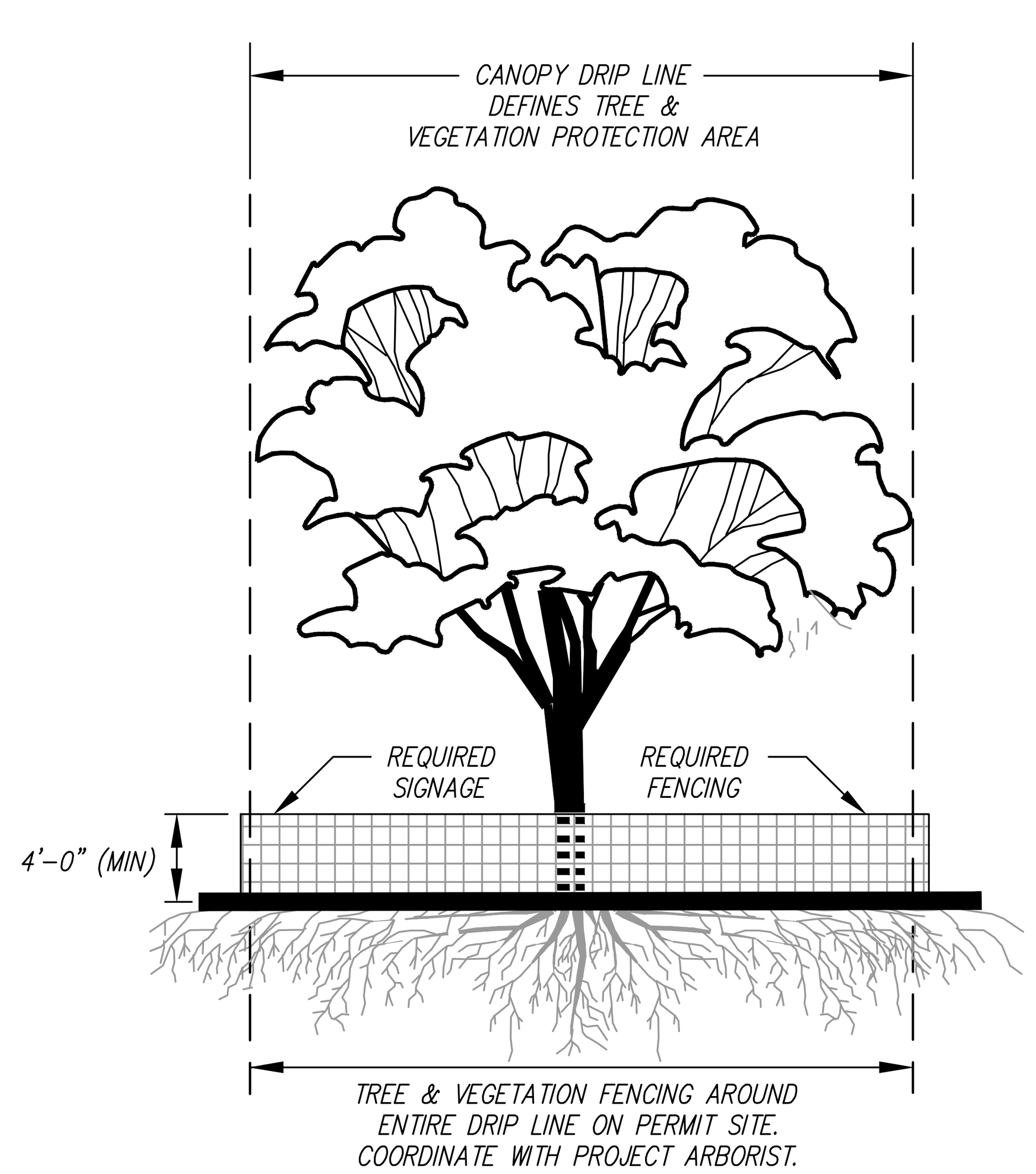




NOTES:

1. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
2. THE BIGD SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
3. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BIGD WITHOUT SPILLING THE COLLECTED MATERIAL.
4. PERFORM MAINTENANCE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION 8-01.3(15).

3 / C2.0 **CATCH BASIN INLET PROTECTION**
SCALE: NTS



TREE PROTECTION FENCING AND SIGN

1. CHAIN LINK, WIRE MESH, OR SIMILAR OPEN RIGID MATERIAL (NO PLYWOOD)
2. MUST BE INSTALLED PRIOR TO DEMOLITION OR GROUND DISTURBANCE
3. KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION
4. NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA: MATERIAL STORAGE/STOCKPILING, PARKING, EXCAVATION, DUMPING, OR WASHING
5. MODIFICATIONS OF THESE REQUIREMENTS BY APPROVAL OF SDCI PLANNER ONLY
6. IF ROOTS GREATER THAN 2 INCH FOUND OUTSIDE OF FENCING, PROTECT BY HAND EXCAVATION AND, IF NECESSARY, CUT CLEANLY AND KEEP MOIST
7. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

VEGETATION PROTECTION

1. ORANGE MESH OR SIMILAR OPEN MATERIAL
2. MINIMIZE CONSTRUCTION ZONE
3. PROTECT VEGETATION OUTSIDE CONSTRUCTION ZONE WITH FENCING AS SHOWN
4. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

4 / C2.0 **TREE & VEGETATION PROTECTIVE FENCE**
SCALE: NTS

Arborist Report
Asdourian: 5300 Butterworth Rd, Mercer Island, WA 98040 — 3.13.2023

Appendix F **Tree Protection Specifications**

The following is a list of protection measures that must be employed before, during and after construction to ensure the long-term viability of retained trees.

1. **Project Arborist:** The project arborists shall at minimum have an International Society of Arboriculture (ISA) Certification and ISA Tree Risk Assessment Qualification.
2. **Tree Protection Zone (TPZ):** The city of Mercer Island requires a tree protection zone (TPZ) congruent with the Recommend Limits of Disturbance (RLOD) established by the project arborist. The RLOD must be consistent with current ISA BMPs. In some cases, the TPZ may extend outside tree protection fencing. Work within the TPZ must be approved and monitored by the project arborist.
3. **Tree Protection Fencing:** Tree protection shall consist of 6-foot chain-link fencing installed at the TPZ as approved by the project arborist. Fence posts shall be anchored into the ground or bolted to existing hardscape surfaces.
   a. Where trees are being retained as a group the fencing shall encompass the entire area including all landscape beds or lawn areas associated with the grove.
   b. Per arborist approval, TPZ fencing may be placed at the edge of existing hardscape within the TPZ to allow for staging and traffic.
   c. Where work is planned within the TPZ, install fencing at edge of TPZ and move to limits of disturbance at the time that the work within the TPZ is planned to occur. This ensures that work within the TPZ is completed to specification.
   d. Where trees are protected at the edge of the project boundary, construction limits fencing shall be incorporated as the boundary of tree protection fencing.
4. **Access Beyond Tree Protection Fencing:** In areas where work such as installation of utilities is required within the TPZ, a locking gate will be installed in the fencing to facilitate access. The project manager or project arborist shall be present when tree protection areas are accessed.
5. **Tree Protection Signage:** Tree protection signage shall be affixed to fencing every 20 feet. Signage shall be fluorescent, at least 2' x 2' in size, with 3" tall text. Signage will note: "Tree Protection Area – Do Not Enter: Entry into the tree protection area is prohibited unless authorized by the project manager." Signage shall include the contact information for the project manager and instructions for gaining access to the area.
6. **Filter / Silt Fencing:** Filter / silt fencing within the TPZ of retained trees shall be installed in a manner that does not sever roots. Install so that filter / silt fencing sits on the ground and is weighed in place by sandbags or gravel. Do not trench to insert filter / silt fencing into the ground.
7. **Monitoring:** The project arborist shall monitor all ground disturbance at the edge of or within the TPZ, including where the TPZ extends beyond the tree protection fencing.
8. **Soil Protection:** No parking, foot traffic, materials storage, or dumping (including excavated soils) are allowed within the TPZ. Heavy machinery shall remain outside of the TPZ. Access to the tree protection area will be granted under the supervision of the project arborist. If project arborist allows, heavy machinery can enter the area if soils are protected from the load. Acceptable methods of soil protection include applying 3/4-inch plywood over 4 to 6 inches of wood chip mulch or use of AlturnaMats® (or equivalent product approved by the project arborist). Retain existing paved surfaces within or at the edge of the TPZ for as long as possible.
9. **Soil Remediation:** Soil compacted within the TPZ of retained trees shall be remediated using pneumatic air excavation according to a specification produced by the project arborist.
10. **Canopy Protection**: Where fencing is installed at the limits of disturbance within the TPZ, canopy management (pruning or tying back) shall be conducted to ensure that vehicular traffic does not

Tree Solutions Inc., Consulting Arborists — Page 10

Arborist Report
Asdourian: 5300 Butterworth Rd, Mercer Island, WA 98040 — 3.13.2023

damage canopy parts. Exhaust from machinery shall be located five feet outside the dripline of retained trees. No exhaust shall come in contact with foliage for prolonged periods of time.

11. **Duff/Mulch:** Apply 6 inches of arborist wood chip mulch or hog fuel over bare soil within the TPZ to prevent compaction and evaporation. TPZ shall be free of invasive weeds to facilitate mulch application. Keep mulch 1 foot away from the base of trees and 6 inches from retained understory vegetation. Retain and protect as much of the existing duff and understory vegetation as possible.
12. **Excavation:** Excavation done at the edge of or within the TPZ shall use alternative methods such as pneumatic air excavation or hand digging. If heavy machinery is used, use flat front buckets with the project arborist spotting for roots. When roots are encountered, stop excavation, and cleanly sever roots. The project arborist shall monitor all excavation done within the TPZ.
13. **Fill:** Limit fill to 1 foot of uncompacted well-draining soil, within the TPZ of retained trees. In areas where additional fill is required, consult with the project arborist. Fill must be kept at least 1 foot from the trunks of trees.
14. **Root Pruning:** Limit root pruning to the extent possible. All roots shall be pruned with a sharp saw making clean cuts. Do not fracture or break roots with excavation equipment.
15. **Root Moisture:** Root cuts and exposed roots shall be immediately covered with soil, mulch, or clear polyethylene sheeting and kept moist. Water to maintain moist condition until the area is back filled. Do not allow exposed roots to dry out before replacing permanent back fill.
16. **Hardscape Removal:** Retain hardscape surfaces for as long as practical. Remove hardscape in a manner that does not require machinery to traverse newly exposed soil within the TPZ. Where equipment must traverse the newly exposed soil, apply soil protection as described in section 8. Replace fencing at edge of TPZ if soil exposed by hardscape removal will remain for any period of time.
17. **Tree Removal:** All trees to be removed that are located within the TPZ of retained trees shall not be ripped, pulled, or pushed over. The tree should be cut to the base and the stump either left or ground out. A flat front bucket can also be used to sever roots around all sides of the stump, or the roots can be exposed using hydro or air excavation and then cut before removing the stump.
18. **Irrigation:** Retained trees with soil disturbance within the TPZ will require supplemental water from June through September. Acceptable methods of irrigation include drip, sprinkler, or watering truck. Trees shall be watered three times per month during this time.
19. **Pruning:** Pruning required for construction and safety clearance shall be done with a pruning specification provided by the project arborist in accordance with American National Standards Institute ANSI-A300 2017 Standard Practices for Pruning. Pruning shall be conducted or monitored by an arborist with an ISA Certification.
20. **Plan Updates:** All plan updates or field modification that result in impacts within the TPZ or change the retained status of trees shall be reviewed by the senior project manager and project arborist prior to conducting the work.
21. **Materials:** Contractor shall have the following materials onsite and available for use during work in the TPZ:
    - **Sharp and clean bypass hand pruners**
    - **Sharp and clean bypass loppers**
    - **Sharp hand-held root saw**
    - **Reciprocating saw with new blades**
    - **Shovels**
    - **Trowels**
    - **Clear polyethylene sheeting**
    - **Burlap**
    - **Water**

Tree Solutions Inc., Consulting Arborists — Page 11

5 / C2.0 **TREE PROTECTION SPECIFICATIONS**
(PER ARBORIST REPORT BY TREE SOLUTIONS, INC.)

CALL 48 HOURS BEFORE YOU DIG 811

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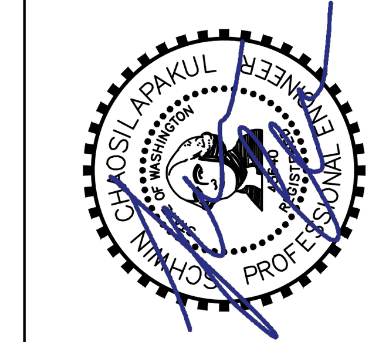
R#	DATE	DESCRIPTION	BY



11/22/23

CIT□ OF MERCER ISLAND
BUILDING PERMIT

TESC DETAILS

PATRICK HARRON & ASSOCIATES, LLC
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2310□	CC
DWN. BY:	CHK. BY:
CC	SC

ASDOURIAN RESIDENCE

ASDOURIAN RESIDENCE
□300 BUTTERWORTH RD
MERCER ISLAND, WA □80□0

DATE: 11□22□23
SCALE: AS SHOWN
DRAWING NO. C2.1
3 OF □

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ASDOURIAN RESIDENCE

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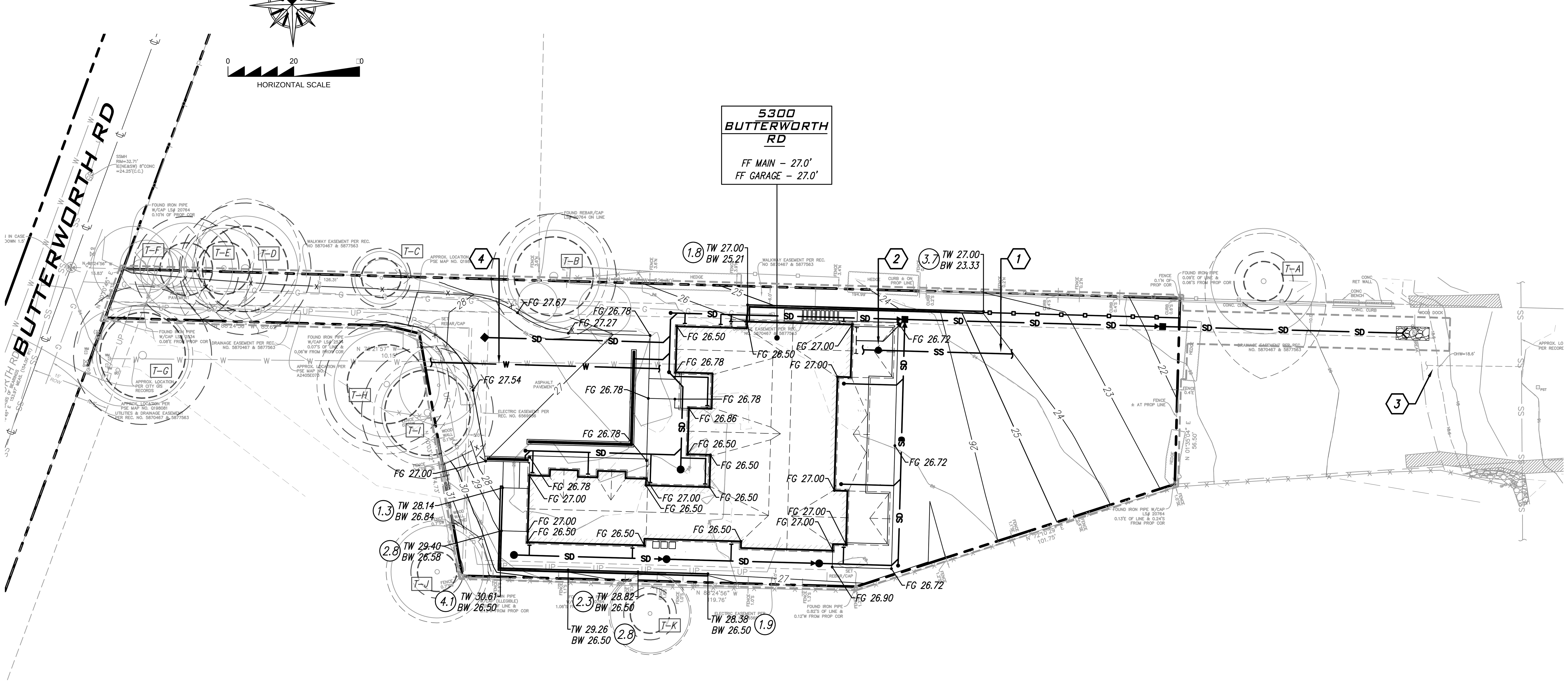

GRADING & UTILITY PLAN

SCALE: 1"=20'

UTILITY CALLOUTS:

1. INSTALL 6" PVC SANITARY SIDE SEWER @ 2.0% (MIN), PER CITY OF MERCER ISLAND STD. PLAN NO. S–3 AND S–18 (SEE DETAIL 1 AND 2, SHEET C3.3 AND UTILITY NOTE 2).
2. INSTALL SANITARY SEWER CLEANOUT, PER CITY OF MERCER ISLAND STD. PLAN NO. S–19, TYP (SEE DETAIL 3, SHEET C3.3).
3. EXISTING 6" SIDE SEWER SERVICE (SS–LL–07248) FOR 5300 BUTTERWORTH RD, PER CITY OF MERCER ISLAND GIS.
4. SEE UTILITY NOTE 1.

UTILITY NOTES:

1. THE EXISTING WATER METER IS 3/4", PER CITY OF MERCER ISLAND GIS. SIZES OF WATER SERVICE (SERVICE FROM MAIN TO METER, METER, AND SERVICE FROM METER TO BUILDING) TO BE VERIFIED FOR ADEQUATE CAPACITY TO SUPPORT DOMESTIC AND FIRE DEMANDS (BY OTHERS).
2. LOCATE THE EX. SIDE SEWER AND UTILIZE IF LOCATION AND ELEVATION WORKS WITH THE PROPOSED PLAN (COORDINATE WITH PUBLIC WORKS INSPECTOR FOR RE–USE). THE EX. SIDE SEWER CONDITION MUST BE VIDEOED FOR INSPECTION AND COORDINATED WITH THE PUBLIC WORKS INSPECTOR.

CALL 48 HOURS BEFORE YOU DIG 811

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1–800–424–5555 OR 811 (CELL) A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

R#	DATE	DESCRIPTION	BY

11/22/23

CIT[illegible] OF MERCER ISLAND BUILDING PERMIT

GRADING [illegible] UTILIT[illegible] PLAN

PATRICK HARRON & ASSOCIATES, LLC
Ci[illegible] Engineering [illegible] P[illegible]nning
1[illegible]00 Inter[illegible]n A[illegible]e. S, S[illegible]ite 2[illegible], Se[illegible]tt[illegible]e, WA [illegible]8168
P[illegible]one [illegible]206.6[illegible]
We[illegible]

PROJ. NO.	DSN. BY:
2310[illegible]	CC
DWN. BY: CC	CHK. BY: SC

ASDOURIAN RESIDENCE

ASDOURIAN RESIDENCE
[illegible]300 BUTTERWORTH RD
MERCER ISLAND, WA [illegible]80[illegible]0

DATE: 11[illegible]22[illegible]23

SCALE: AS SHOWN

DRAWING NO. C3.0

[illegible] OF [illegible]

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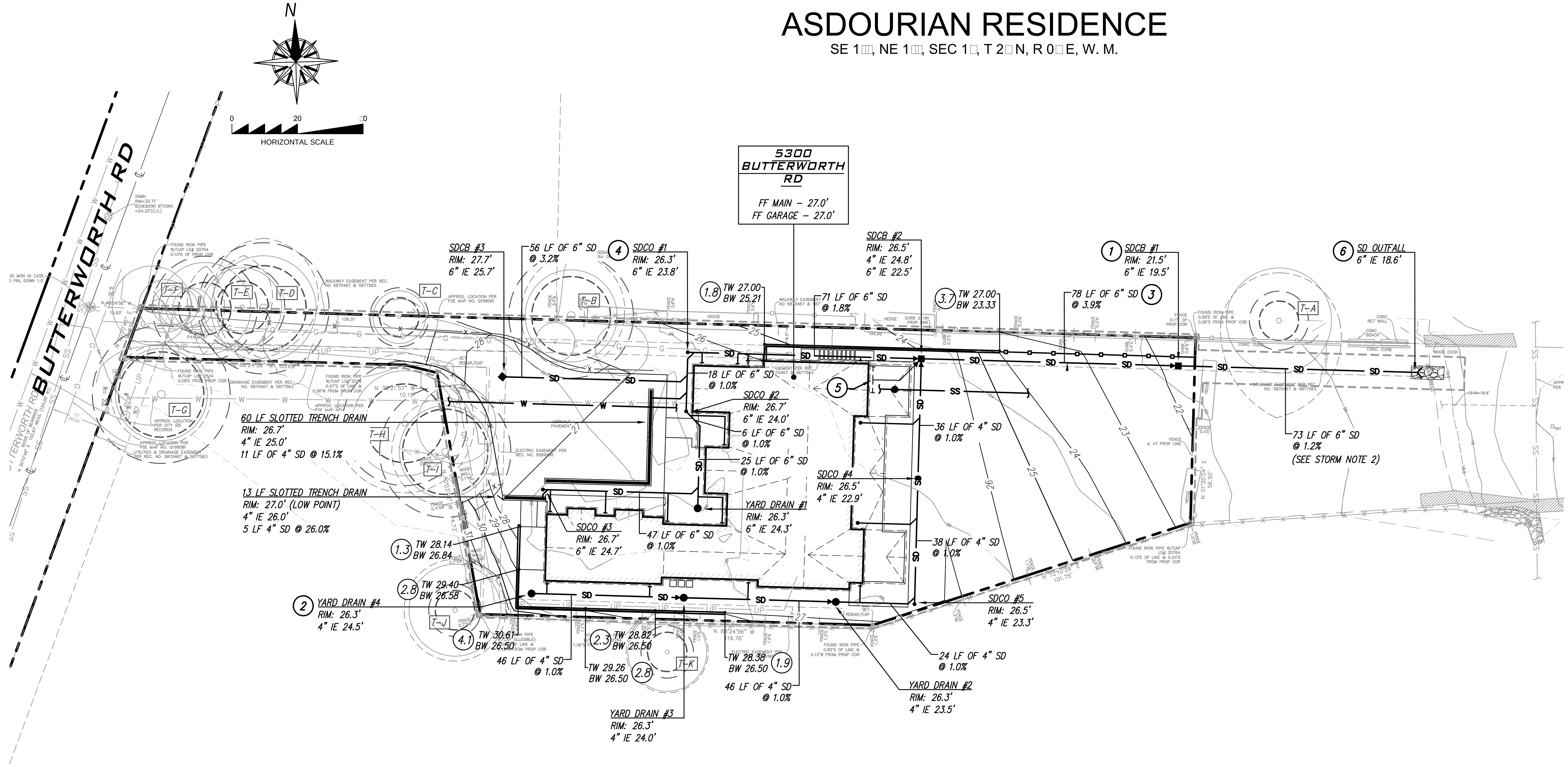
ASDOURIAN RESIDENCE

SE 1□, NE 1□, SEC 1□, T 2□N, R 0□E, W. M.



STORM DRAINAGE PLAN
SCALE: 1"=20'

STORM DRAINAGE CALLOUTS:

1. INSTALL STORM DRAIN CATCH BASIN TYPE 1, PER WSDOT STD. PLAN NO. B-5.20-03, TYP (SEE DETAIL 1, SHEET C3.2).
2. INSTALL STORM DRAIN AREA DRAIN, PER WSDOT STD. PLAN NO. B-10.70-02, TYP (SEE DETAIL 2, SHEET C3.2).
3. INSTALL STORM DRAIN, PER WSDOT STD. PLAN NO. B-55.20-03, TYP (SEE DETAIL 3, SHEET C3.2 AND STORM DRAINAGE NOTE 2).
4. INSTALL STORM DRAIN CLEANOUT, PER CITY OF MERCER ISLAND STD. PLAN NO. S-19, TYP (SEE DETAIL 4, SHEET C3.2).
5. INSTALL PERFORATED FOOTING DRAIN AROUND ENTIRE BUILDING FOUNDATION (4" IE 25.0'). 18 LF 4" SD AT 1.0%. CONNECT TO SDCB #2.
6. PROPOSED STORM DRAINAGE OUTFALL LOCATION (6" IE 18.6').

STORM DRAINAGE NOTES:

1. SOILS OF DISTURBED PERVIOUS AREAS TO BE AMENDED, TYP.
2. DIRECTIONAL BORING FOR INSTALLATION OF STORM LINE UNDER TREE ROOT SYSTEM IF REQUIRED. COORDINATE WITH PROJECT ARBORIST.

CALL 48 HOURS BEFORE YOU DIG 811

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R#	DATE	DESCRIPTION	BY

11/22/23

CIT□ OF MERCER ISLAND BUILDING PERMIT

STORM DRAINAGE PLAN

PATRICK HARRON & ASSOCIATES, LLC
Ci□il Engineering □ P□nning
1□00 Inter□r□n A□e. S, S□ite 2□□, Se□ttle, WA □8168
P□one □206.6□□.6□□
We□ □□□ □tric□□ □rron.co□

PROJ. NO.	DSN. BY:
2310□	CC
DWN. BY: CC	CHK. BY: SC

ASDOURIAN RESIDENCE

ASDOURIAN RESIDENCE
□300 BUTTERWORTH RD
MERCER ISLAND, WA □80□0

DATE: 11□22□23
SCALE: AS SHOWN
DRAWING NO. C3.1
□ OF □

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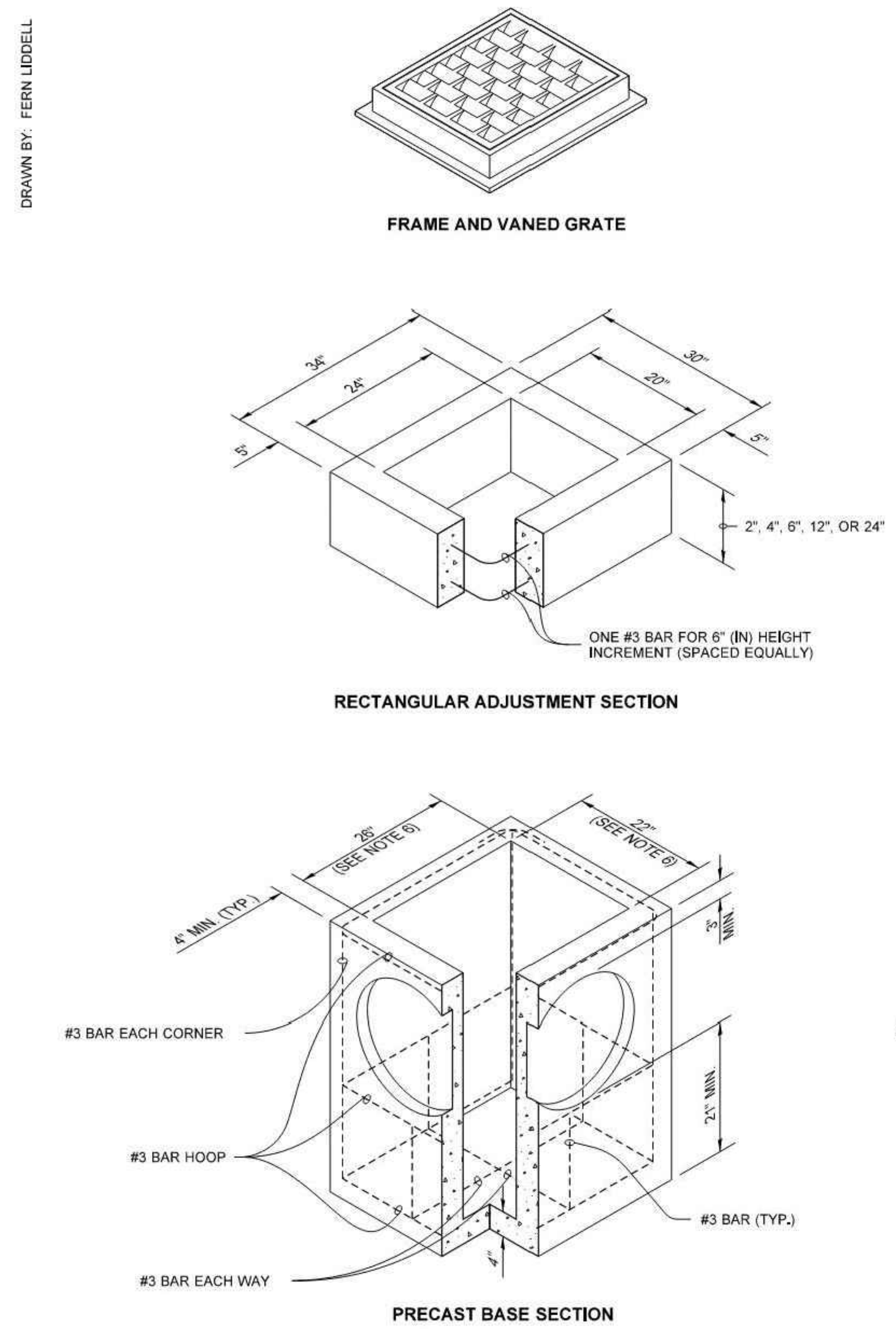
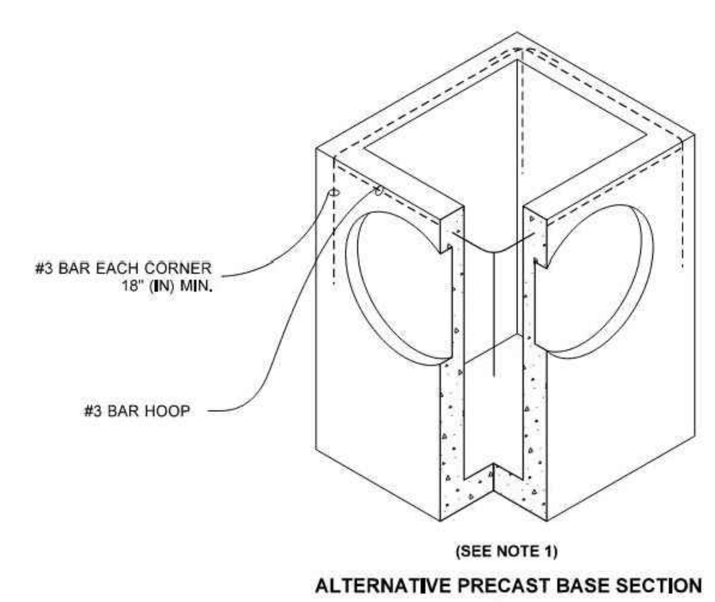
ASDOURIAN RESIDENCE

SE 1, NE 1, SEC 1, T 2 N, R 0 E, W. M.



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

* CORRUGATED POLYETHYLENE STORM SEWER PIPE



NOTES

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" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) 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 Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
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.

Julie Heilman 2020.09.01 07:52:50 -07'00'

CATCH BASIN TYPE 1

STANDARD PLAN B-5.20-03

SHEET 1 OF 1 SHEET

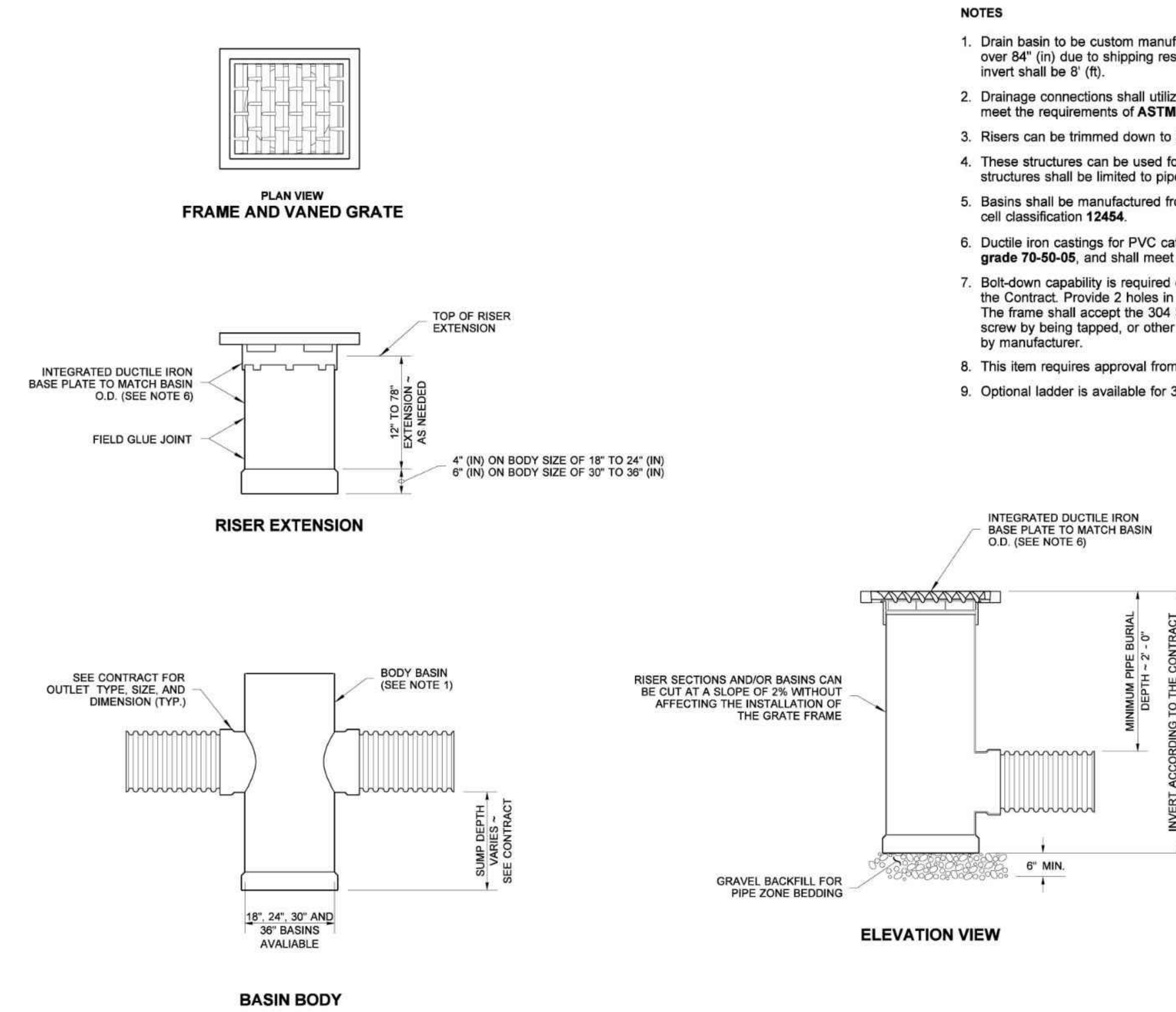
APPROVED FOR PUBLICATION

Roark, Steve — Digitally signed by Roark, Steve Date: 2020.09.09 09:45:23 -07'00'

STATE DESIGN ENGINEER

Washington State Department of Transportation

1 / C3.1 — *CATCH BASIN TYPE 1* — SCALE: NTS



NOTES

1. Drain basin to be custom manufactured according to plan details. Risers are needed for basins over 84" (in) due to shipping restrictions. The maximum depth from finished grade to the lowest invert shall be 8' (ft).
2. Drainage connections shall utilize flexible elastometric seals conforming to **ASTM F477** and shall meet the requirements of **ASTM D3212.**
3. Risers can be trimmed down to 3" (in) extension without interfering with the installation of the frame.
4. These structures can be used for Type 1, Type 1L, and Type 2 structures. Usage for the Type 2 structures shall be limited to pipe size use only.
5. Basins shall be manufactured from PVC pipe stock meeting the requirements of **ASTM D1784**, cell classification **12454**.
6. Ductile iron castings for PVC catch basins shall conform to the requirements of **ASTM A536**, **grade 70-50-05**, and shall meet the proof load testing requirements of **AASHTO M 306**.
7. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC × 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
8. This item requires approval from HQ Hydraulics before use on a project.
9. Optional ladder is available for 36" diameter catch basin.

Aug 17, 2021

CATCH BASIN - PVC

STANDARD PLAN B-10.70-02

SHEET 1 OF 1 SHEET

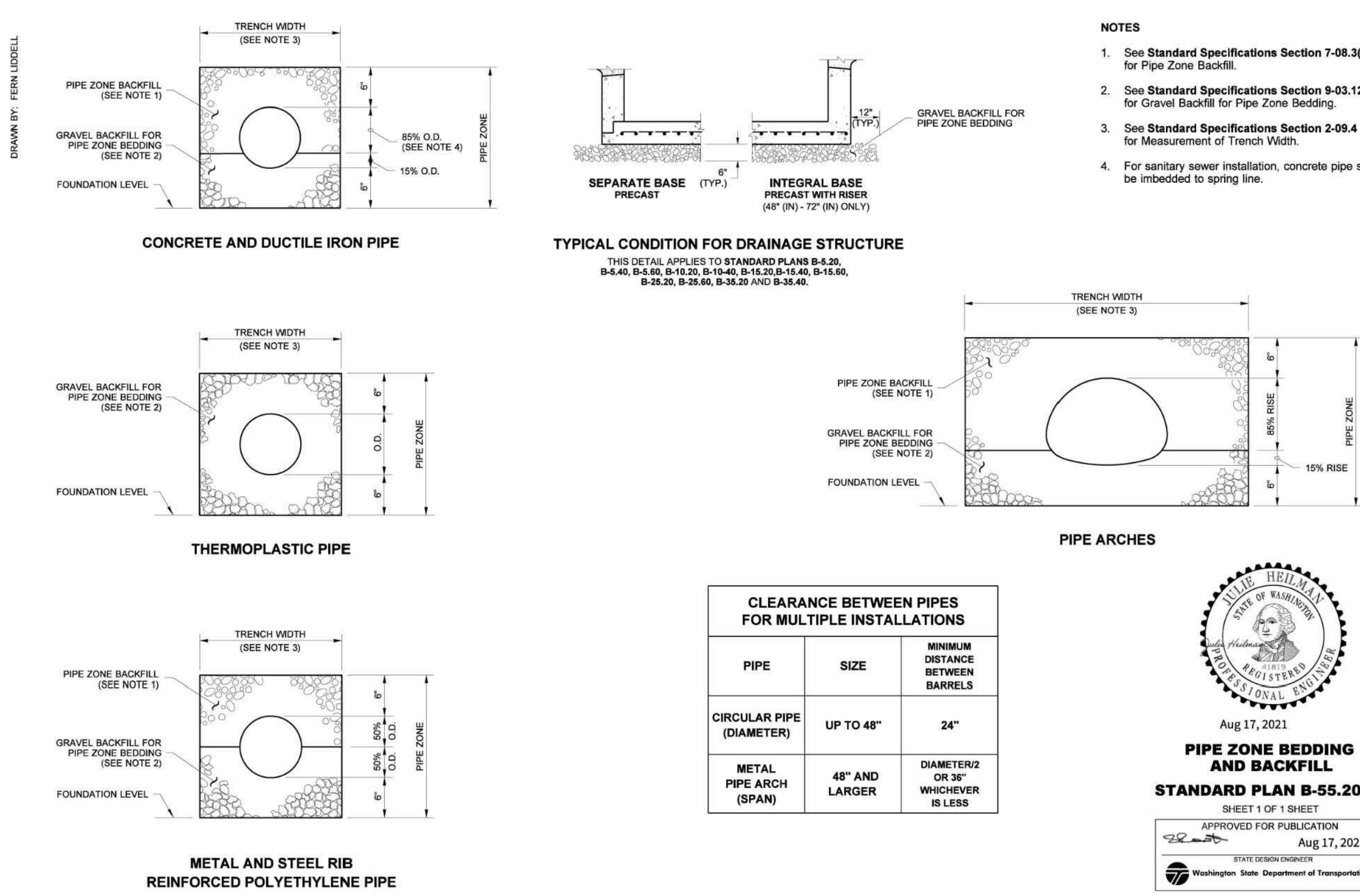
APPROVED FOR PUBLICATION

Aug 17, 2021

STATE DESIGN ENGINEER

Washington State Department of Transportation

2 / C3.1 — *AREA DRAIN* — SCALE: NTS



NOTES

1. See **Standard Specifications Section 7-08.3(3)** for Pipe Zone Backfill.
2. See **Standard Specifications Section 9-03.12(3)** for Gravel Backfill for Pipe Zone Bedding.
3. See **Standard Specifications Section 2-09.4** for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be imbedded to spring line.

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS		
PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	UP TO 48"	24"
METAL PIPE ARCH (SPAN)	48" AND LARGER	DIAMETER/2 OR 36" WHICHEVER IS LESS

Aug 17, 2021

PIPE ZONE BEDDING AND BACKFILL

STANDARD PLAN B-55.20-03

SHEET 1 OF 1 SHEET

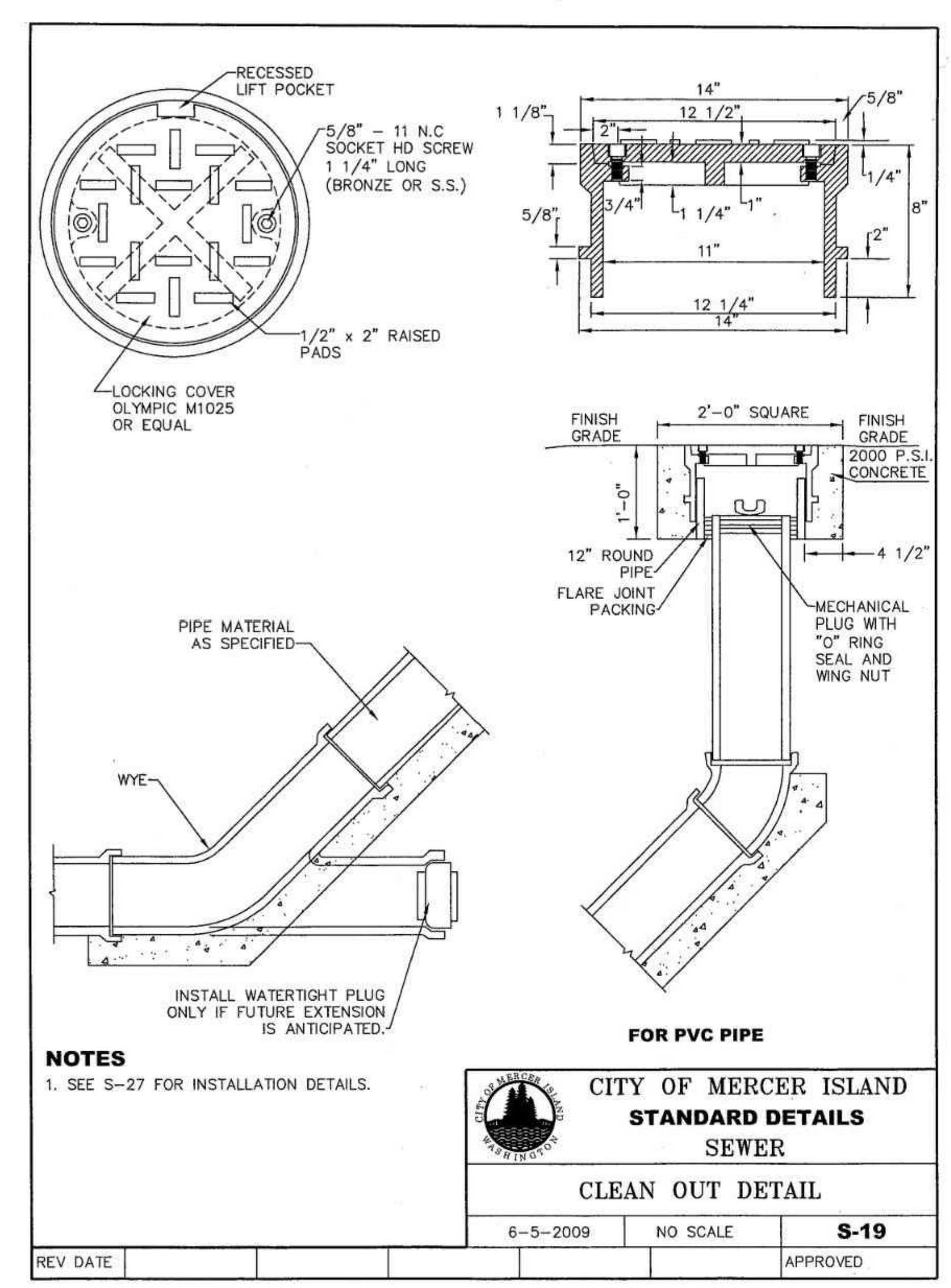
APPROVED FOR PUBLICATION

Aug 17, 2021

STATE DESIGN ENGINEER

Washington State Department of Transportation

3 / C3.1 — *STORM TRENCH* — SCALE: NTS



4 / C3.1 — *S-19* — SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG 811

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R#	DATE	DESCRIPTION	BY

11/22/23

CITY OF MERCER ISLAND BUILDING PERMIT

STORM DRAINAGE DETAILS

PATRICK HARRON & ASSOCIATES, LLC
Civil Engineering Planning
Seattle, WA 98168
Phone 206.6

PROJ. NO. 2310 — DSN. BY: CC — DWN. BY: CC — CHK. BY: SC

ASDOURIAN RESIDENCE

ASDOURIAN RESIDENCE, 300 BUTTERWORTH RD, MERCER ISLAND, WA

DATE: 11/22/23 — SCALE: AS SHOWN — DRAWING NO. C3.2 — 6 OF

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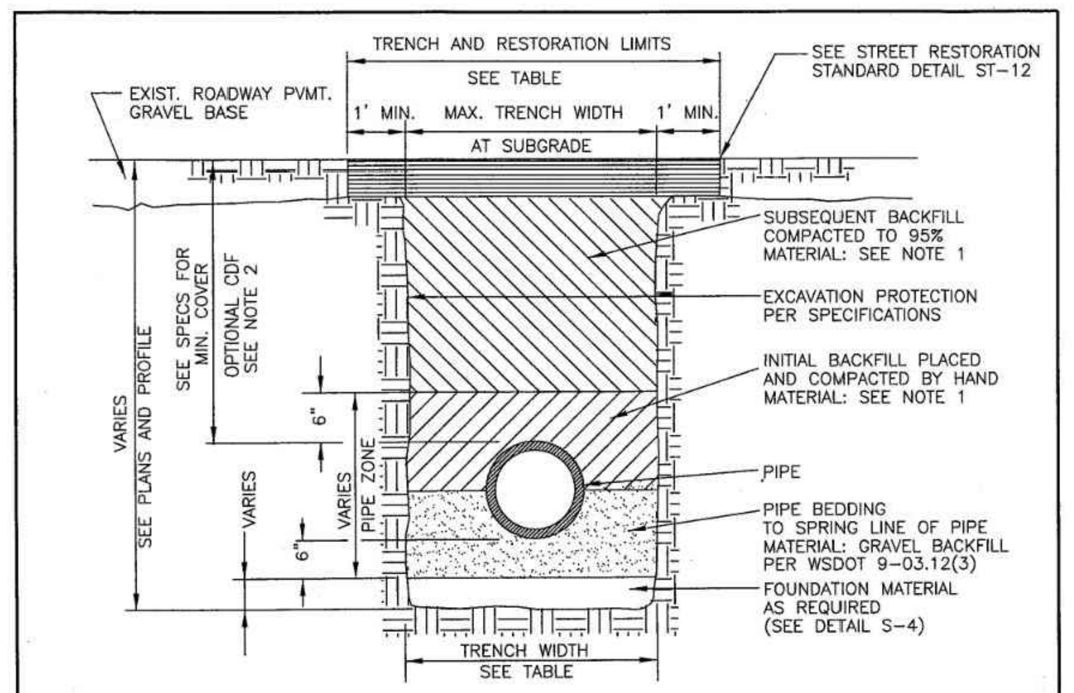
ASDOURIAN RESIDENCE

SE 1/4, NE 1/4, SEC 1, T 2 N, R 0 E, W. M.



NOTES

1. ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19, COMPACTED IN 6" LIFTS.
2. CDF FOR BACKFILL MAY BE REQUIRED BY CITY ENGINEER WHEN PROPER COMPACTION AROUND EXISTING UTILITIES MAY NOT BE POSSIBLE. CDF SHALL BE PER WSDOT 2-09.3(1)E.
3. SEE S-4 FOR PIPE BEDDING DETAILS.

TRENCH WIDTH

PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH	MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
SIDE SEWER	2'-0"	2'-0"	6'-0"
4" OR 6"	2'-2"	3'-0"	8'-0"
8"	2'-4"	4'-0"	8'-0"
10"	2'-6"	4'-0"	8'-0"
12"	2'-8"	4'-6"	8'-6"

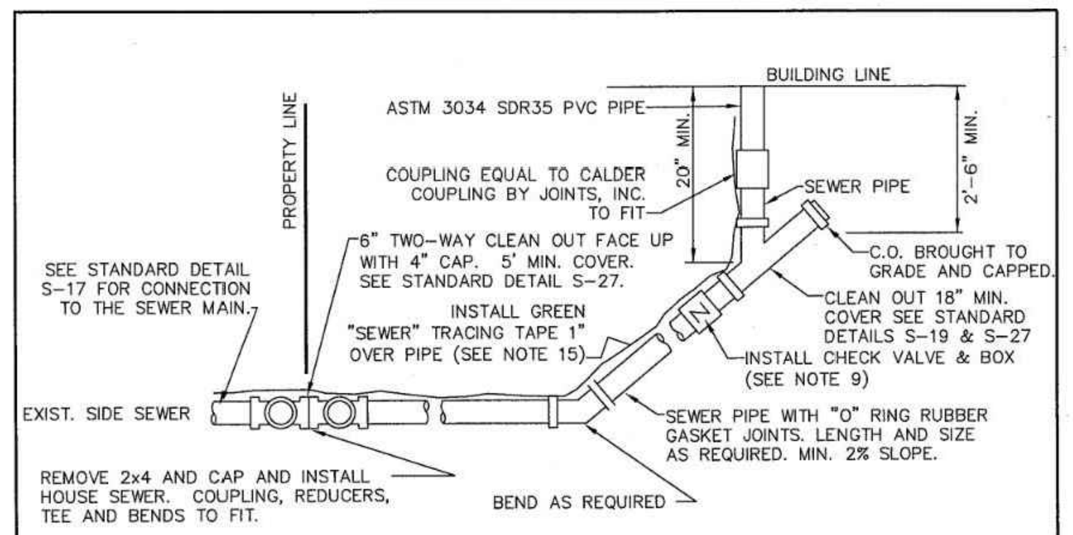
CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

SEWER TRENCH DETAIL

6-5-2009 | NO SCALE | **S-3**

REV DATE | APPROVED

1 S-3 C3.0 SCALE: NTS



BUILDING CONNECTION

NOTES

1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. ALL HOUSE PLUMBING OUTLETS MUST BE CONNECTED TO THE SEWER. NO DOWN SPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
4. 18" MINIMUM COVERAGE OVER PIPE.
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH 1/8 BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 4" SEWER PIPE MINIMUM SIZE ON PROPERTY. 2% MINIMUM GRADE.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT SEWER ORDINANCES.
8. ALL CONSTRUCTION REQUIRES A PLAN SHOWING PROPERTY AND DIMENSIONS AND COMPLETION OF SIDE SEWER APPLICATION AND MAINTENANCE AGREEMENT, AS NEEDED.
9. BACK WATER VALVE (CHECK VALVE) IS REQUIRED:
   A. IF CONNECTED TO A SHARED SIDE SEWER.
   B. IF CONNECTION AT HOUSE IS LOWER THAN BOTH UPSTREAM AND DOWNSTREAM MANHOLE.
   C. SEE S-23 & S-24 FOR LAKE LINE REQUIREMENTS.
10. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER & ALL BENDS, C.O. ETC., IN RELATION TO THE HOUSE IS REQUIRED AFTER INSPECTION & INSTALLATION. SEE STANDARD DETAIL S-38 FOR A TYPICAL "AS BUILT".
11. THE MINIMUM PIPE SIZE FOR SIDE SEWERS SHALL BE:
    6" – WITHIN THE PUBLIC RIGHT-OF-WAY.
    4" – SINGLE FAMILY RESIDENCES.
    6" – 2 TO 6 SINGLE FAMILY RESIDENCES.
    6" – BUILDINGS OTHER THAN SINGLE FAMILY RESIDENCES.
12. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

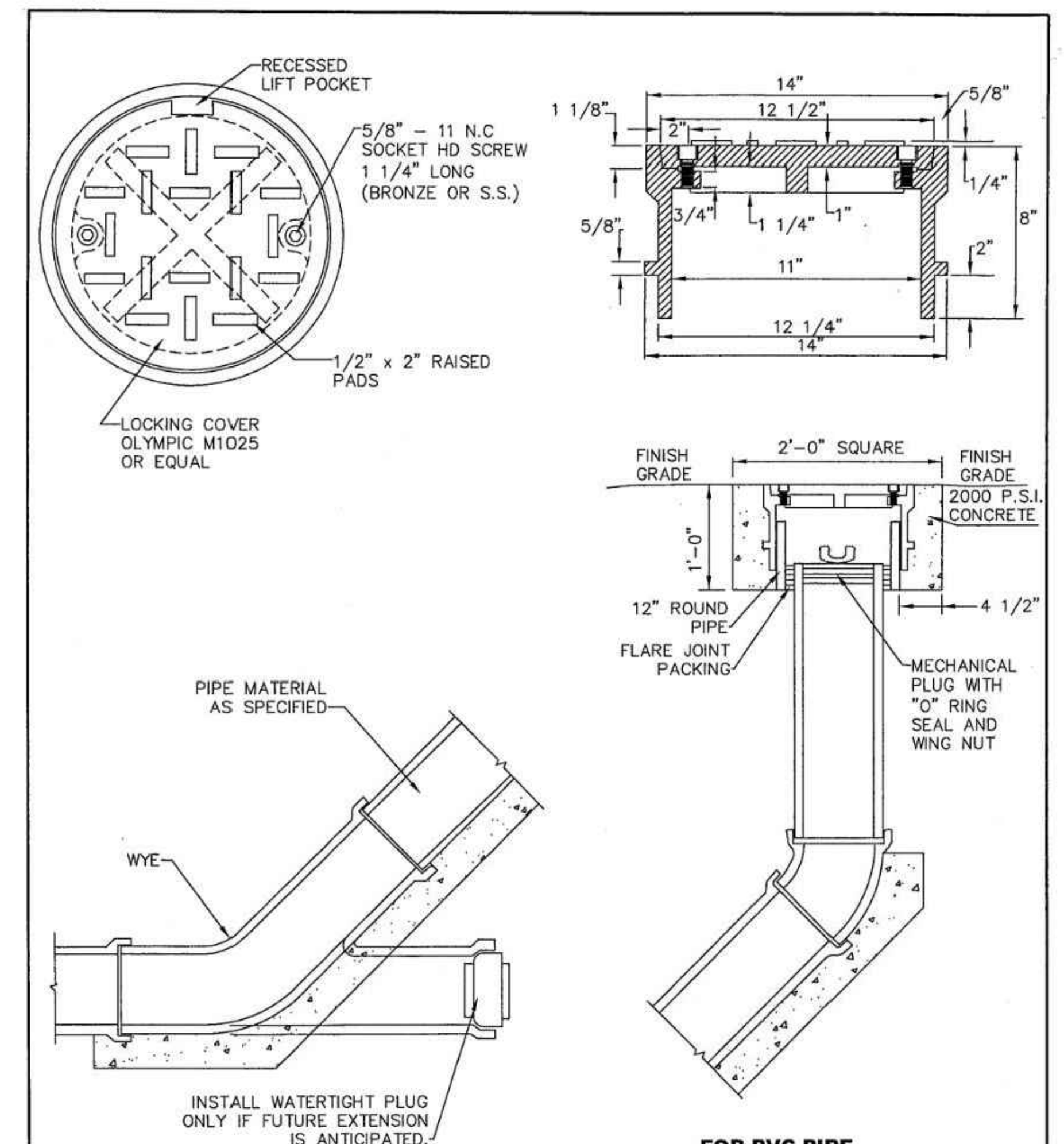
CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

HOUSE SEWER CONNECTION

6-5-2009 | NO SCALE | **S-18**

REV DATE | APPROVED

2 S-18 C3.0 SCALE: NTS



NOTES

1. SEE S-27 FOR INSTALLATION DETAILS.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

CLEAN OUT DETAIL

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

REV DATE | APPROVED

3 S-19 C3.0 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG 811

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R#	DATE	DESCRIPTION	BY

11/22/23

CITY OF MERCER ISLAND
BUILDING PERMIT

UTILITY DETAILS

PATRICK HARRON & ASSOCIATES, LLC
Civil Engineering & Planning

PROJ. NO. 2310 | DSN. BY: CC
DWN. BY: CC | CHK. BY: SC

ASDOURIAN RESIDENCE

ASDOURIAN RESIDENCE
300 BUTTERWORTH RD
MERCER ISLAND, WA

DATE: 11/22/23
SCALE: AS SHOWN
DRAWING NO. C3.3

WALL PARTITION T PES

N.T.S. SEE STRUCTURAL SHEETS FOR SHEARWALLS.

T PICAL E TERIOR WALL
E TERIOR WALL FINISH o 2
LA ERS 60 BLDG. PAPER o 1 2"
CD PL WOOD o 2 6 WOOD
STUDS AT 16" O.C. 1 2"
G PSUM WALLBOARD AT INTERIOR R-21
BATT INSULATION E CEPT AROUND GARAGE.

T PICAL INTERIOR PARTITION
U.N.O. ALL INTERIOR WALL SHALL BE 2
WOOD STUDS 16" O.C. 1 2" G PSUM
WALLBOARD EACH SIDE.

1HR. FIRE RATED WALL
8" TH GWB, T PE O 2 6 WD STUDS 16"
O.C. PANELS NAILED * O.C.-1 8" CEM CTD
NAILS- OINTS E P OR FIN - PERIM CAUL ED-
UL DES U30 U31 - OINTS FIN

FALSE WOOD WALL BUILD-OUT
WOOD FRAMED FALSE WALL ATTACHED TO
STRUCT. WALL, W 1 2" CD PL WOOD STUCCO
SIDING O REQ D UNDERLA MENTS

1 MAIN FLOOR PLAN

SCALE 1 " 1 -0"

STURMAN ARCHITECTS
9 103rd Avenue NE Suite 203
Bellevue, WA 98004
TEL 425.457.7003

REGISTERED ARCHITECT BRADLE STURMAN STATE OF WASHINGTON

ASDOURIAN RESIDENCE
PERMIT SET
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

MAIN FLOOR PLAN

REVISIONS

DRAWN B E
CHEC ED B B S

SHEET **A2.0**

SCALE IF SHEET IS LESS THAN 2 " 36", IT IS A REDUCED PRINT REDUCE SCALE ACCORDINGL

PERMIT SET 11 30 23

PLOT DATE 11 30 2023

WALL PARTITION T PES

N.T.S. SEE STRUCTURAL SHEETS FOR SHEARWALLS.

T PICAL E TERIOR WALL
E TERIOR WALL FINISH o 2
LA ERS 60 BLDG. PAPER o 1 2"
CD PL WOOD o 2 6 WOOD
STUDS AT 16" O.C. 1 2"
G PSUM WALLBOARD AT INTERIOR R-21
BATT INSULATION E CEPT AROUND GARAGE.

T PICAL INTERIOR PARTITION
U.N.O. ALL INTERIOR WALL SHALL BE 2
WOOD STUDS 16" O.C. 1 2" G PSUM
WALLBOARD EACH SIDE.

1HR. FIRE RATED WALL
8" TH GWB, T PE O 2 6 WD STUDS 16"
O.C. PANELS NAILED * O.C.-1 8" CEM CTD
NAILS- OINTS E P OR FIN - PERIM CAUL ED-
UL DES U30 U31 - OINTS FIN

FALSE WOOD WALL BUILD-OUT
WOOD FRAMED FALSE WALL ATTACHED TO
STRUCT. WALL, W 1 2" CD PL WOOD STUCCO
SIDING O REQ D UNDERLA MENTS

POCHE LEGEND

AREA OF ROOF BELOW

AREA OF CEILING HEIGHT GREATER THAN 12

PLAN NOTES

1. MAIN RESIDENCE WHOLE HOUSE VENTILATION FAN LOCATED IN LAUNDR ROOM. FAN WILL BE 0 CFM RUNNING CONTINUOUSL . INTA E IS LOCATED IN HEAT PUMP. FRESH AIR INTA E DAMPERS TO BE INTERLOC ED WITH E HAUST FAN.

3. ATTIC ACCESS PER IRC R80 . THE ACCESS OPENING WILL BE REQUIRED TO BE A MIN. SI E WHICH ALLOWS REMOVAL OF LARGEST APPLIANCE, SHALL BE LOCATED LESS THAN 20 FEET FROM APPLIANCES, SHALL BE PROVIDED WITH A CONTINUOUS SOLID FLOORING NOT LESS THAN 2 INCHES WIDE, SHALL BE PROVIDED WITH A LUMINAIRE CONTROLLED B A SWITCH LOCATED AT THE ACCESS OPENING, SHALL HAVE A RECEPTACLE OUTLET LOCATED AT OR NEAR THE APPLIANCES, PER IRC M130 .1.3 M130 .1.3.1.

1 UPPER FLOOR PLAN

SCALE 1 " 1 -0"

NON-STRUCT FALSE WALL BUMP-OUT
LINE OF MAIN FLOOR BELOW
EGRESS
REC ROOM
HDWD.
CEILING RIDGE ABOVE
REC ROOM CEILING 12
AREA 131 SF 2 6 . SF
CLOSET
TUB SHOWER
90 CFM
BATH-2
TILE
LINEN
CLO-2
CARPET
BED-2
CARPET
CEILING RIDGE ABOVE
BED-2 CEILING 12
AREA 10 SF 2 2 SF
ATTIC ACCESS W PULL DOWN STAIR. SEE PLAN NOTES
FURRED WALL FOR BLIND POC ET
NON-STRUCT FALSE WALL BUMP-OUT
GUARDRAIL
SLOPE 1 " FT
ROOF DEC
TEMP.
SAFET GLASS GUARDRAIL W CONTINUOUS TOP RAIL 36" ABOVE FINISH FLOOR INSTALLED PER MANUFACTURER S REQS, TO RESIST 200 FORCE IN AN DIRECTION, T P.
INTERNAL DRAIN W 2" ABS OR PVC DRAIN PIPE, TIGHTLINE THRU DOWNSPOUT IN COLUMN TO STORMWATER S STEM, T P.
OVERFLOW DRAIN LOCATED 2" ABOVE ROOF DRAIN. 3" ABS OR PVC PIPE TO DA LIGHT BELOW SOFFIT, T P
ROOF BELOW
OPEN TO BELOW
AREA OF TWO STOR SPACE INCLUDED IN UPPER FLOOR GFA
STAIRS CEILING 12
AREA 103 SF 2 1. SF
CEILING RIDGE ABOVE
HANDRAIL
185 *
T 11" 1" NOSING
DN
SMO E CARBON MONO IDE DETECTOR, HARDWIRED W BATTER BAC UP, PER IRC SECTION R31
CLO-3
CARPET
APPRO LOC. ABOVE IN CONDITIONED ATTIC OF 1 OF 2 AIR SOURCE CENTRALL DUCTED HEAT PUMP WITH MIN. HSPF OF 11. ,000 BTU HOUR MA EQUIP. DUCTS TO BE LOCATED IN CONDITIONED SPACE
BED-3
CARPET
LINEN
BATH-3
TILE
SHOWER W CURB
BUILT-INS
OFFICE-2
HDWD.
LINE OF MAIN FLOOR BELOW
BUILT-OUT WOOD COLUMNS BELOW W INTERIOR POST ROOF DRAIN DOWNSPOUT, T P.
SAFET GLASS GUARDRAIL W CONTINUOUS BASE SHOE TOP RAIL 36" ABOVE FINISH FLOOR INSTALLED PER MANUFACTURER S REQS, TO RESIST 200 FORCE IN AN DIRECTION, T P.
E ERCISE
HDWD.
PRIMAR VEST.
HDWD.
PRIMAR BATH
TILE
LINEN MA E UP
VESSEL TUB
CURBLESS SHOWER
PRIMAR BEDROOM
HDWD.
CEILING RIDGE ABOVE
PRIMAR CEILING 12
AREA 1 SF 2 2 SF
DIRECT VENT GAS FIREPLACE. VENTED FROM TOP OF UNIT UP THRU ROOF. EQUIP. WILL BE ERO-CLEARANCE UNIT
FURRED WALL FOR BLIND POC ET
MEDIA ROOM
CARPET
AV EQUIP. ABOVE
ATTIC ACCESS W PULL DOWN STAIR. SEE PLAN NOTES
TRA CEILING ABOVE
ELEVATOR
CLOSET
LAUNDR
TILE
BATH-
TILE
90 CFM
WHOLE HOUSE VENTILATION FAN
HER CLOSET
HDWD.
HIS CLOSET
HDWD.
D W
REF
APPRO LOC. ABOVE IN CONDITIONED ATTIC OF 1 OF 2 AIR SOURCE CENTRALL DUCTED HEAT PUMP WITH MIN. HSPF OF 11. ,000 BTU HOUR MA EQUIP. DUCTS TO BE LOCATED IN CONDITIONED SPACE

SCALE IF SHEET IS LESS THAN 2 " 36" IT IS A REDUCED PRINT REDUCE SCALE ACCORDINGL

PERMIT SET 11 30 23

STURMAN ARCHITECTS
9 103rd Avenue NE Suite 203
Bellevue, WA 98004
TEL 425.457.7003

REGISTERED ARCHITECT BRADLE STURMAN STATE OF WASHINGTON

ASDOURIAN RESIDENCE
PERMIT SET
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

UPPER FLOOR PLAN

REVISIONS

DRAWN B E
CHEC ED B B S

SHEET
A2.1

PLOT DATE 11 30 2023

VAR ING ROOF PITCHES

THERE ARE THREE ROOF PITCHES IN THIS PRO ECT. FOR EACH PITCH, THERE IS A DIFFERENT EAVE OVERHANG DIMENSION TO ENSURE ALIGNMENT OF TOP OF FASCIA.

3. 12 EAVE - . "
12 EAVE "
11 12 EAVE 6"

THERE ARE ALSO TWO ROOF RA E CONDITIONS.

T PICAL RA E 6"
RA E FALSE WALL BUILD-OUTS 12"
SEE A6.0 FOR DETAILS

POCHE LEGEND

MAIN FLOOR ROOF

UPPER FLOOR ROOF

AREA OF OVERFRAMING

1 ROOF PLAN

SCALE 1 " 1-0"

T PICAL EAVE 11 12 PITCH

T PICAL RA E

LONGER RA E TO ACCOMMODATE FALSE WALL BUMP-OUT BELOW

OVERFRAMING SHOWN W HATCH PATTERN

SLOPE CHANGE

ALL ROOFS INSULATED WITH SPRA FOAM

OVERFLOW DRAIN LOCATED 2" ABOVE ROOF DRAIN. 3" ABS OR PVC PIPE TO DA LIGHT BELOW SOFFIT, T P

INTERNAL DRAIN W 2" ABS OR PVC DRAIN PIPE. TIGHTLINE THRU DOWNSPOUT IN COLUMN TO STORMWATER S STEM, T P.

SAFET GLASS GUARDRAIL W CONTINUOUS BASE SHOE TOP RAIL 36" ABOVE FINISH FLOOR INSTALLED PER MANUFACTURER S REQS, TO RESIST 200 FORCE IN AN DIRECTION, T P.

T PICAL EAVE 3. 12 PITCH

T PICAL EAVE 12 PITCH

SOLAR PANEL LA OUT PER NORTHWEST ELECTRIC SOLAR SHOWN POCHED

MINIMUM 3600 WH TO BE PROVIDED TO COMPL WITH CREDIT. FOR EACH 1200 WH OF ELECTRICAL GENERATION PROVIDED B SOLAR, 1 CREDIT WILL BE GIVEN, UP TO 3 CREDITS

SCALE IF SHEET IS LESS THAN 2 " 36", IT IS A REDUCED PRINT REDUCE SCALE ACCORDINGL

PERMIT SET 11 30 23

STURMAN ARCHITECTS
9 103rd Avenue NE Suite 203
Bellevue, WA 98004
TEL 425.457.7003

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PERMIT SET
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

ROOF PLAN

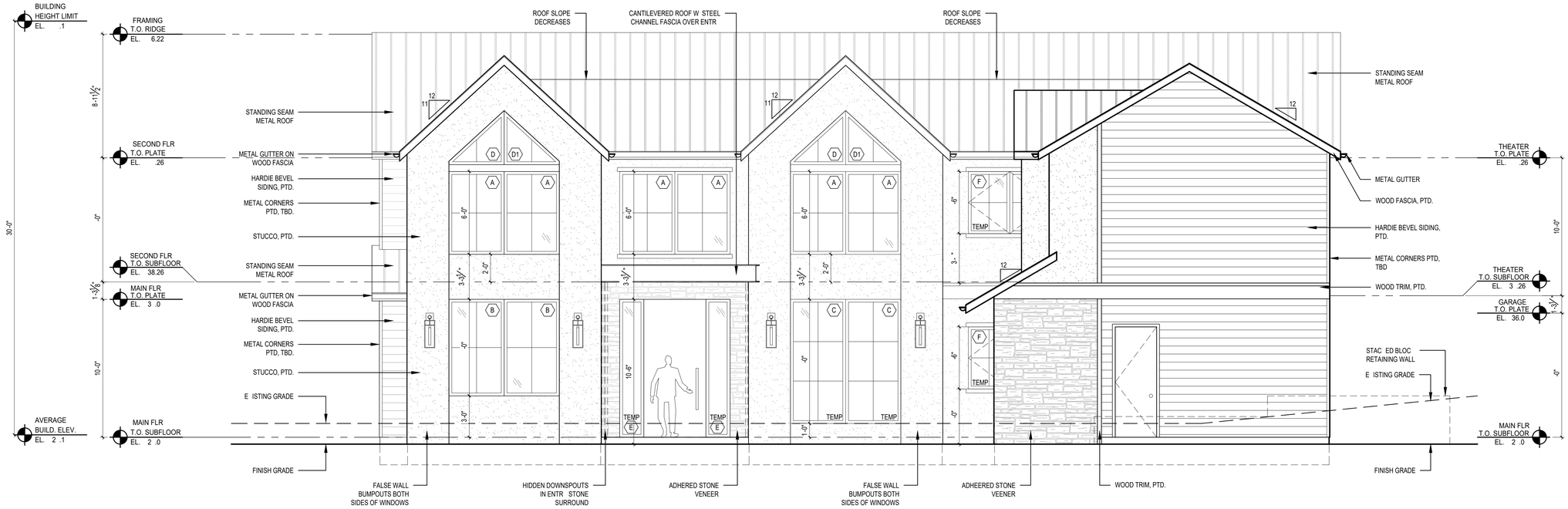
REVISIONS

DRAWN B E

CHEC ED B B S

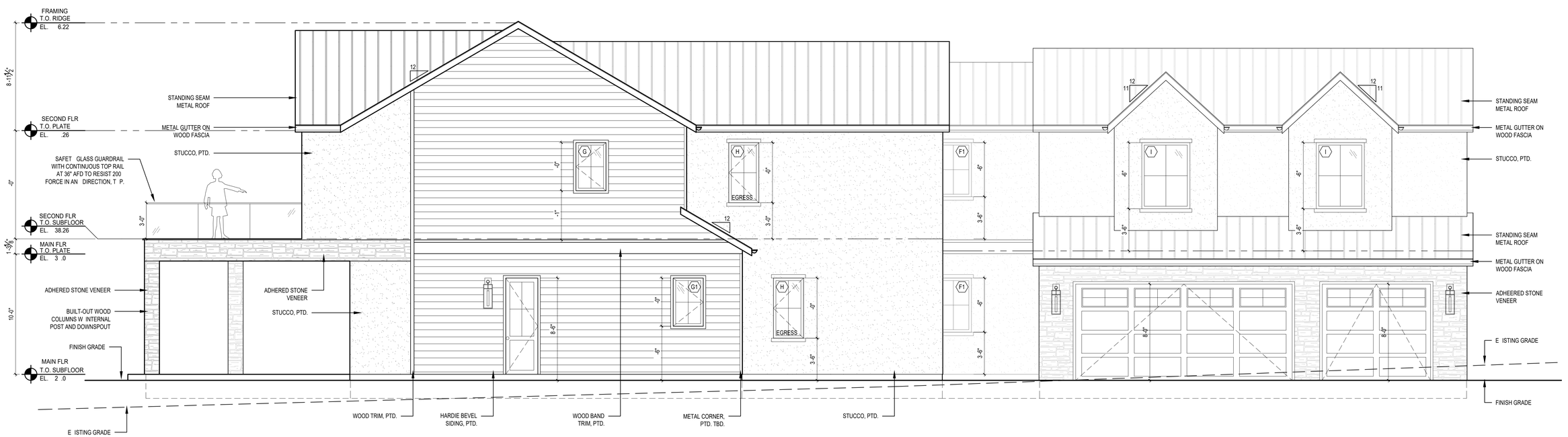
SHEET **A2.2**

PLOT DATE 11 30 2023



1 WEST EXTERIOR ELEVATION

SCALE 1 " 1 -0"



2 NORTH EXTERIOR ELEVATION

SCALE 1 " 1 -0"

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EXTERIOR ELEVATIONS

REVISIONS

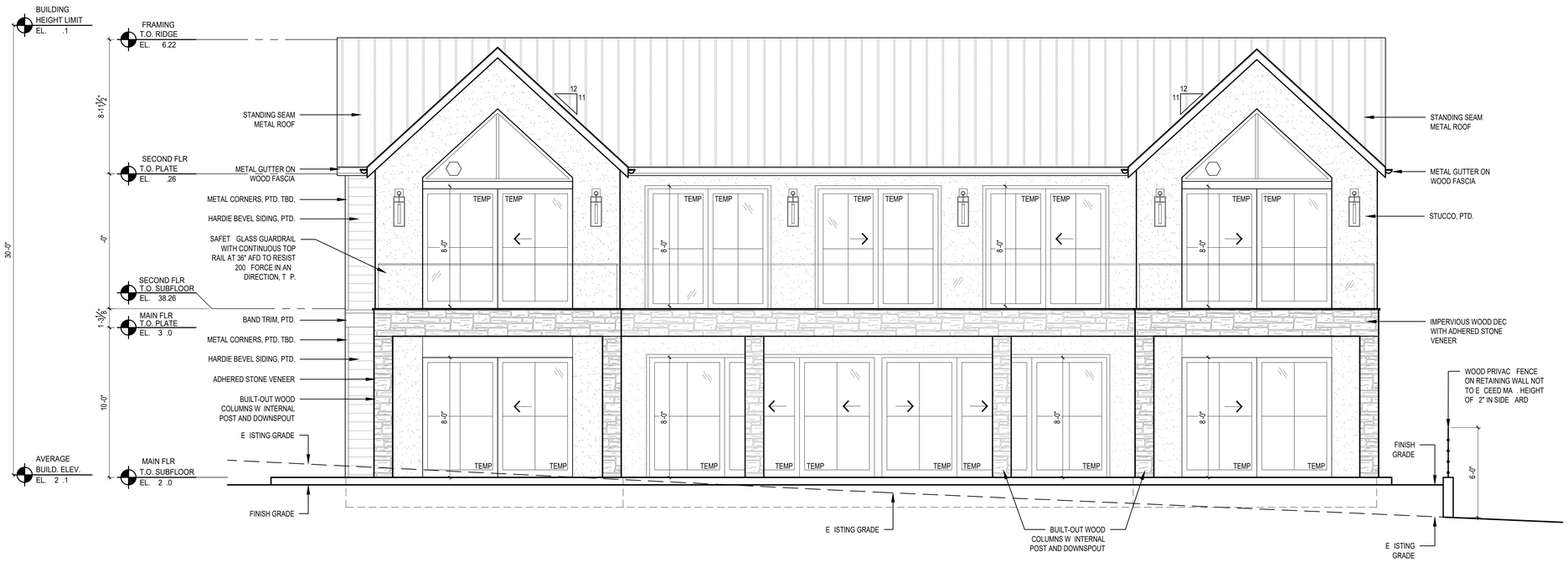
DRAWN B E

CHEC ED B B S

SHEET

A3.0

PLOT DATE 11 30 2023



3 EAST EXTERIOR ELEVATION

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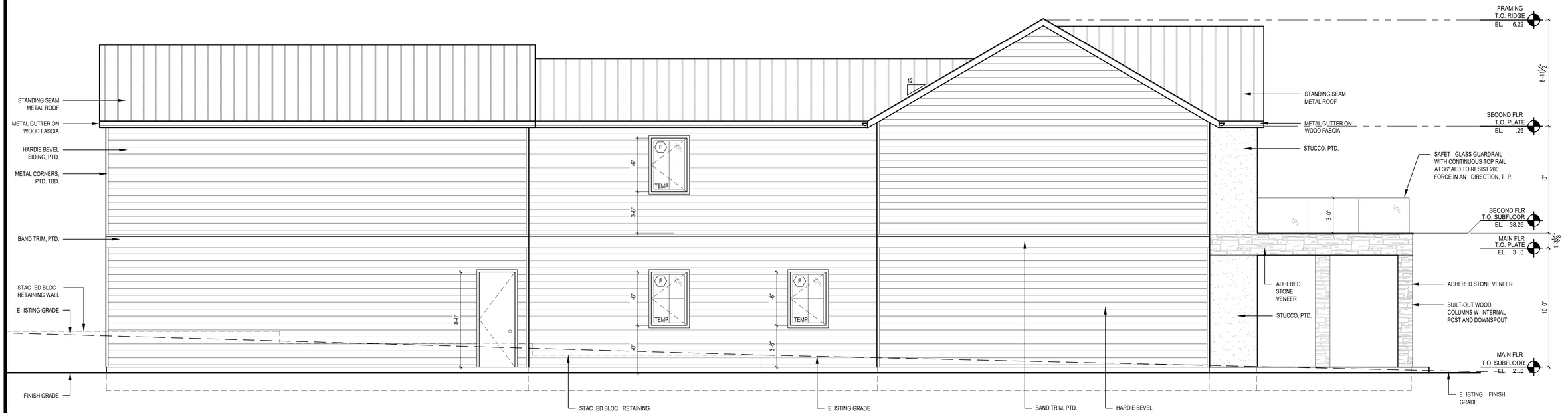

4 SOUTH EXTERIOR ELEVATION

SCALE 1 " 1 -0"

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EXTERIOR ELEVATIONS

REVISIONS

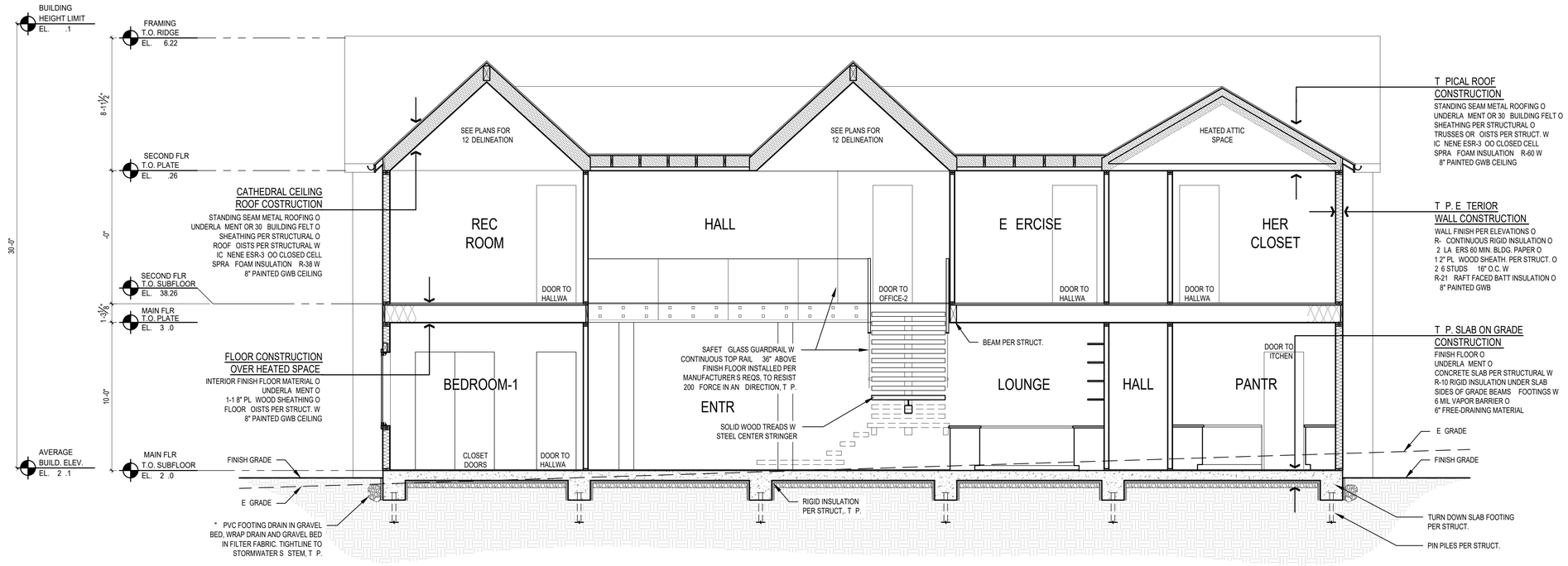
DRAWN B E

CHEC ED B B S

SHEET

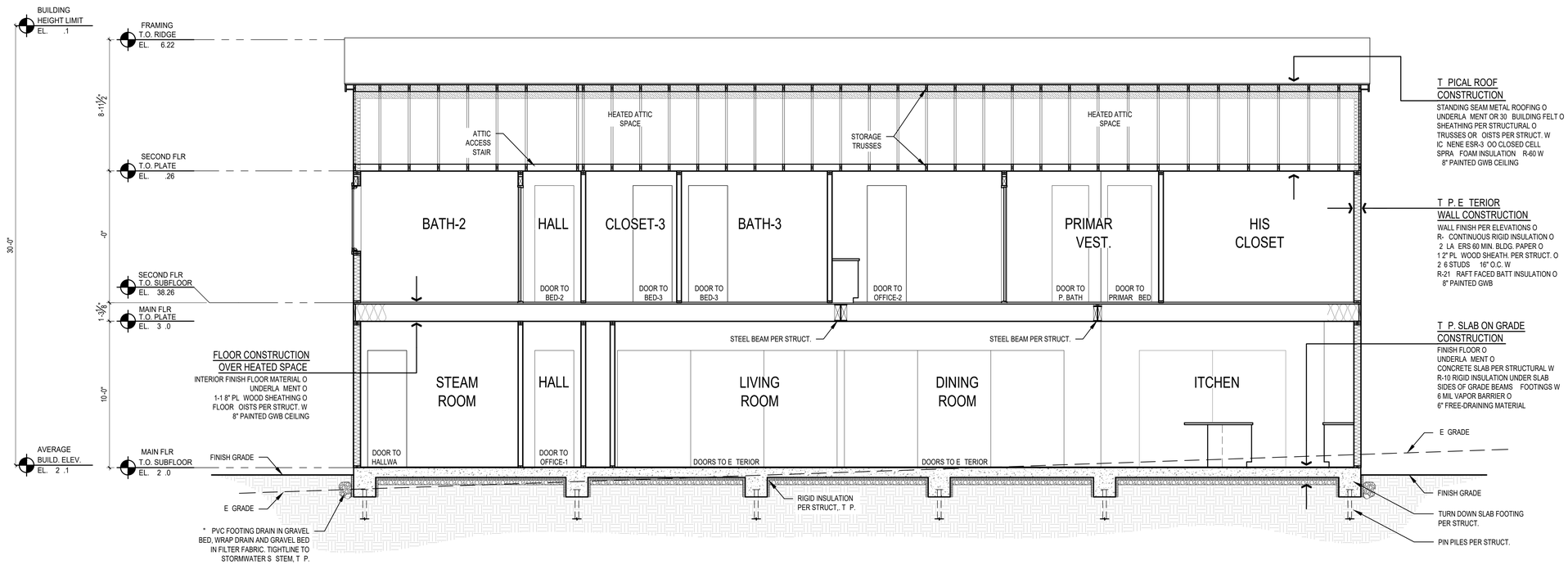
A3.1

PLOT DATE 11 30 2023



1 BUILDING SECTION

SCALE 1 " 1 -0"



2 BUILDING SECTION

SCALE 1 " 1 -0"

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BUILDING SECTIONS

REVISIONS

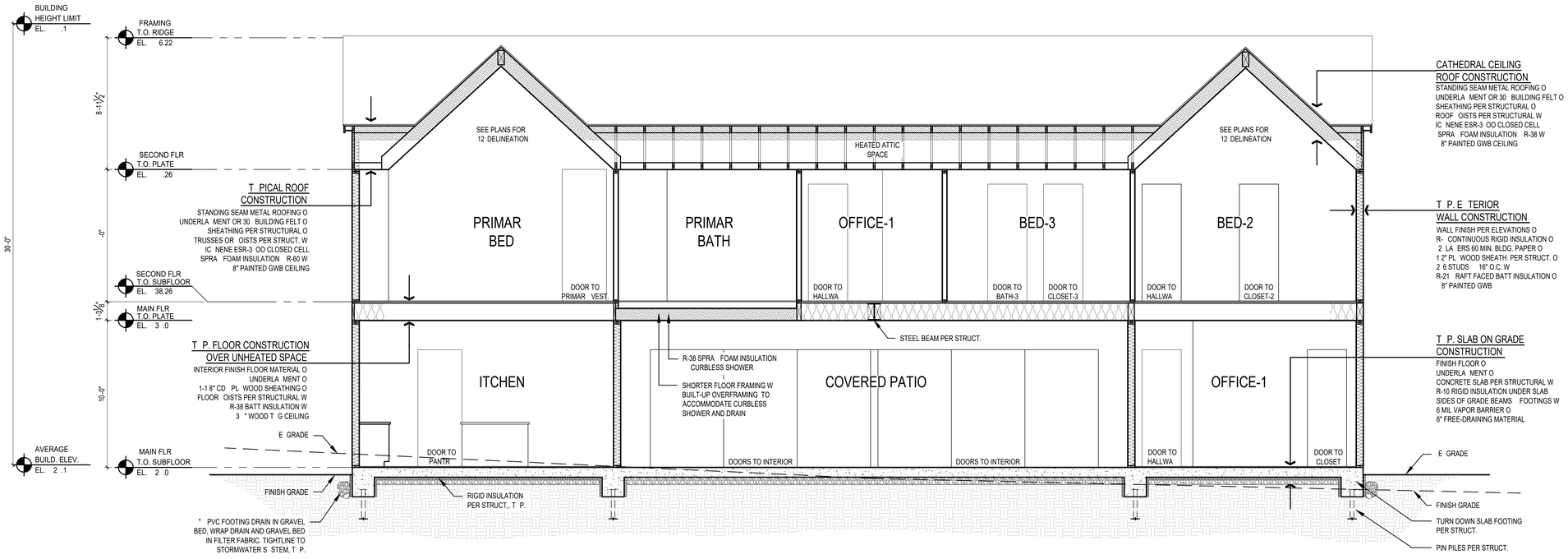
DRAWN B E

CHEC ED B B S

SHEET

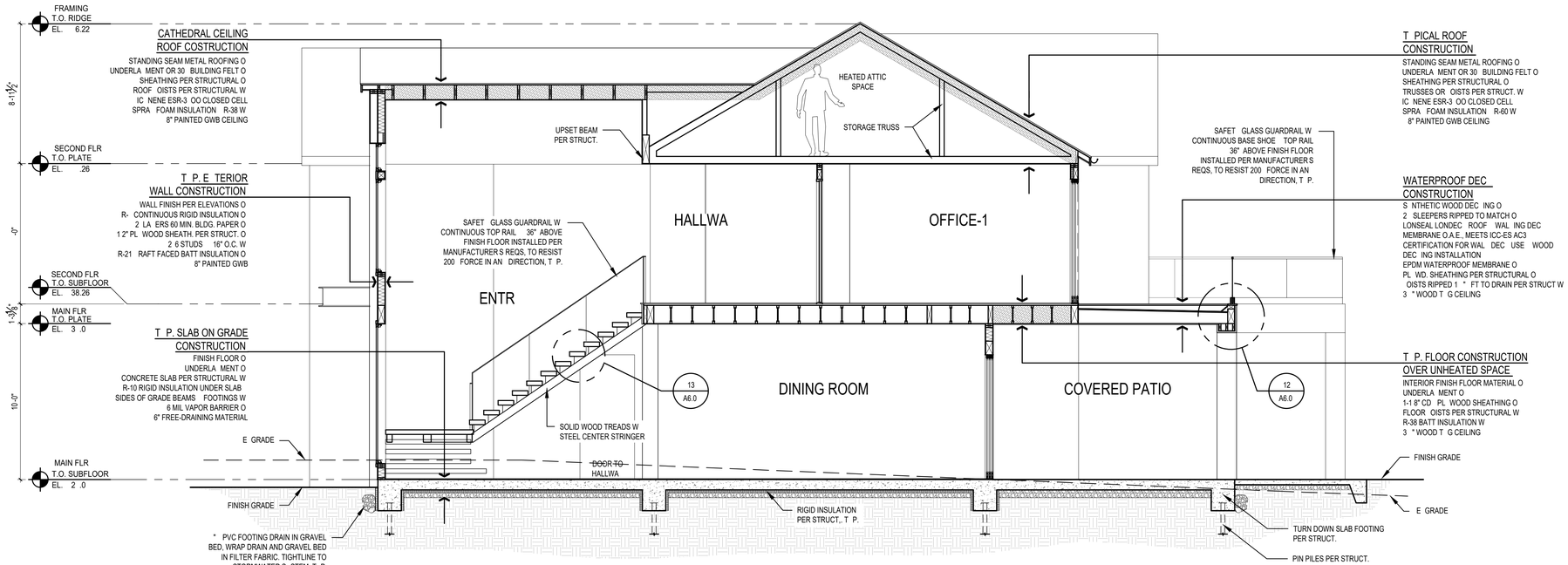
A4.0

PLOT DATE 11 30 2023



3 BUILDING SECTION

SCALE 1 " 1 -0"



4 BUILDING SECTION

SCALE 1 " 1 -0"

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PERMIT SET 11 30 23

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ASDOURIAN RESIDENCE

PERMIT SET

5300 BUTTERWORTH RD

MERCER ISLAND, WA 98040

BUILDING SECTIONS

REVISIONS

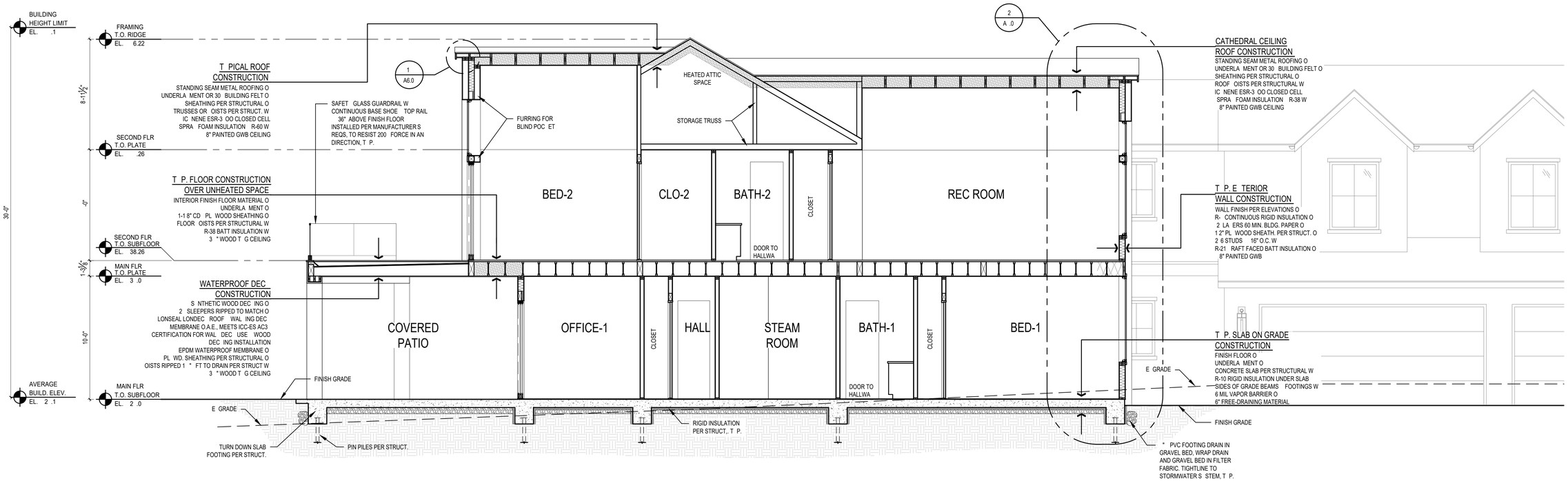
DRAWN B E

CHEC ED B B S

SHEET

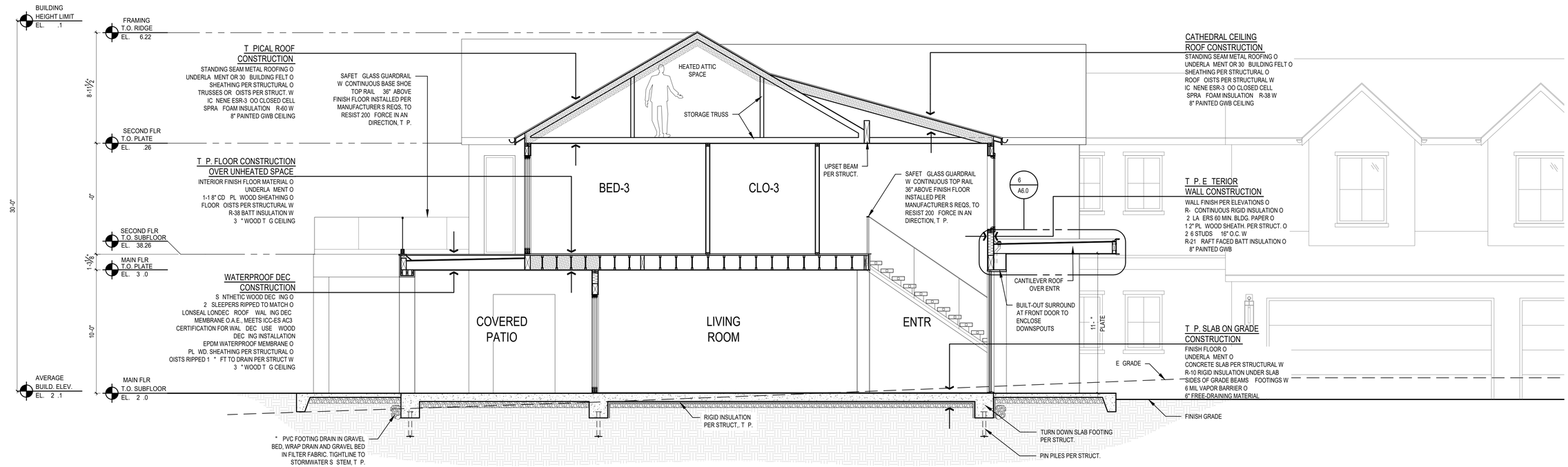
A4.1

PLOT DATE 11 30 2023



5 BUILDING SECTION

SCALE 1 " 1 -0"



6 BUILDING SECTION

SCALE 1 " 1 -0"

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MERCER ISLAND, WA 98040

BUILDING SECTIONS

REVISIONS

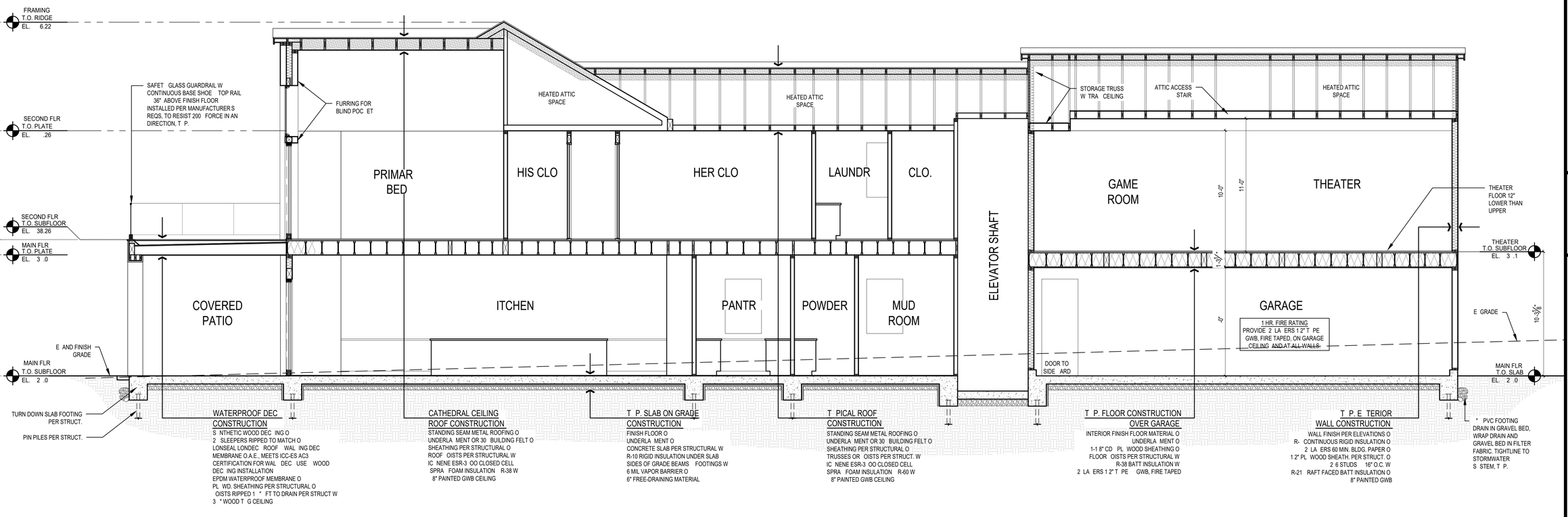
DRAWN B E

CHEC ED B B S

SHEET

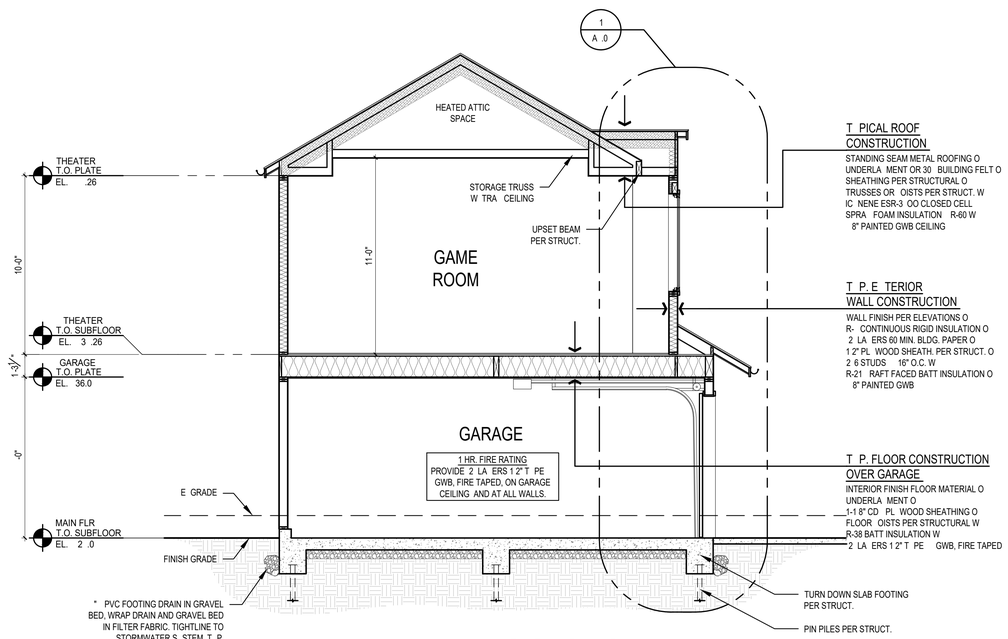
A4.2

PLOT DATE 11 30 2023



7 BUILDING SECTION

SCALE 1 " 1 -0"



8 BUILDING SECTION

SCALE 1 " 1 -0"

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BUILDING SECTIONS

REVISIONS

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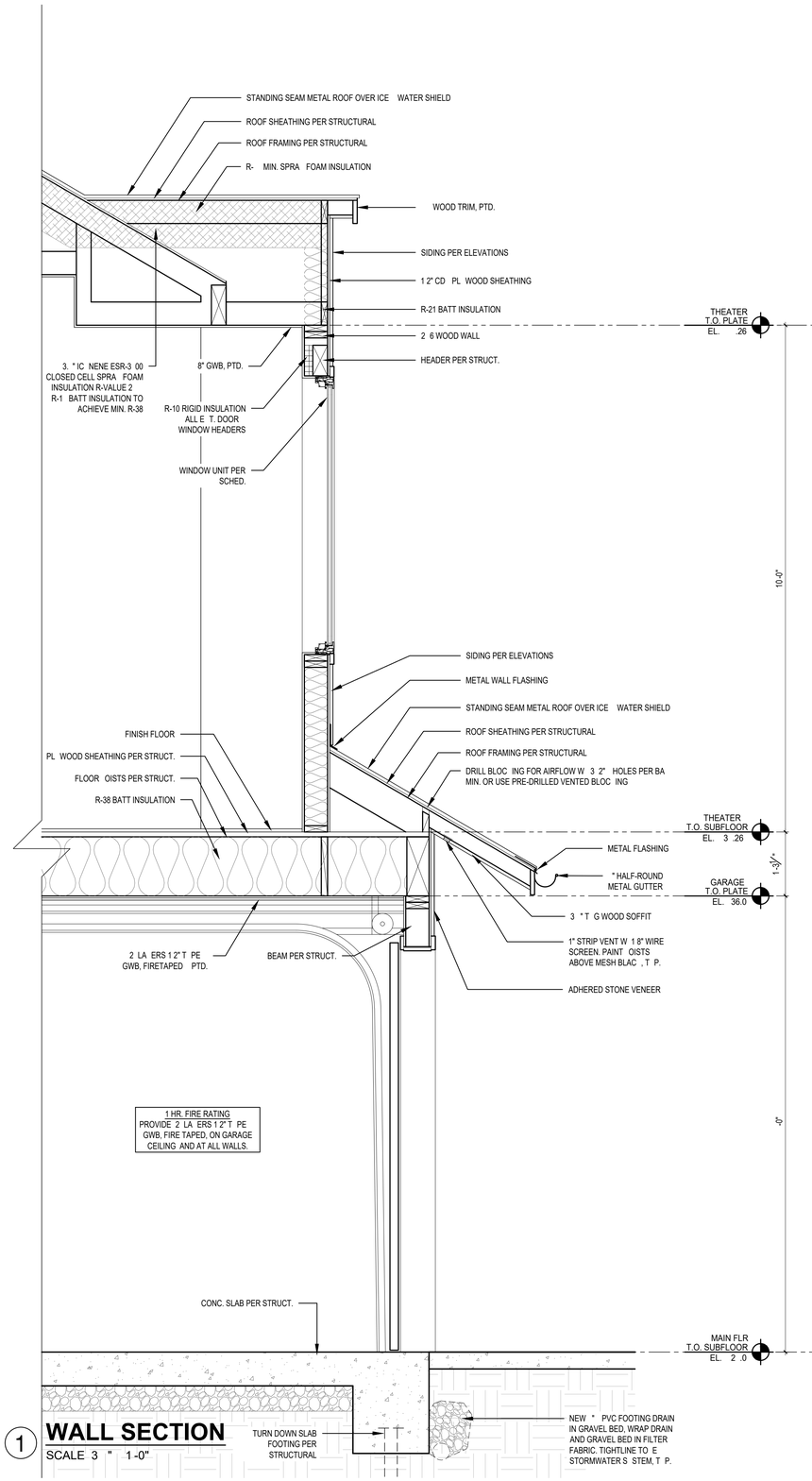
SHEET **A4.3**

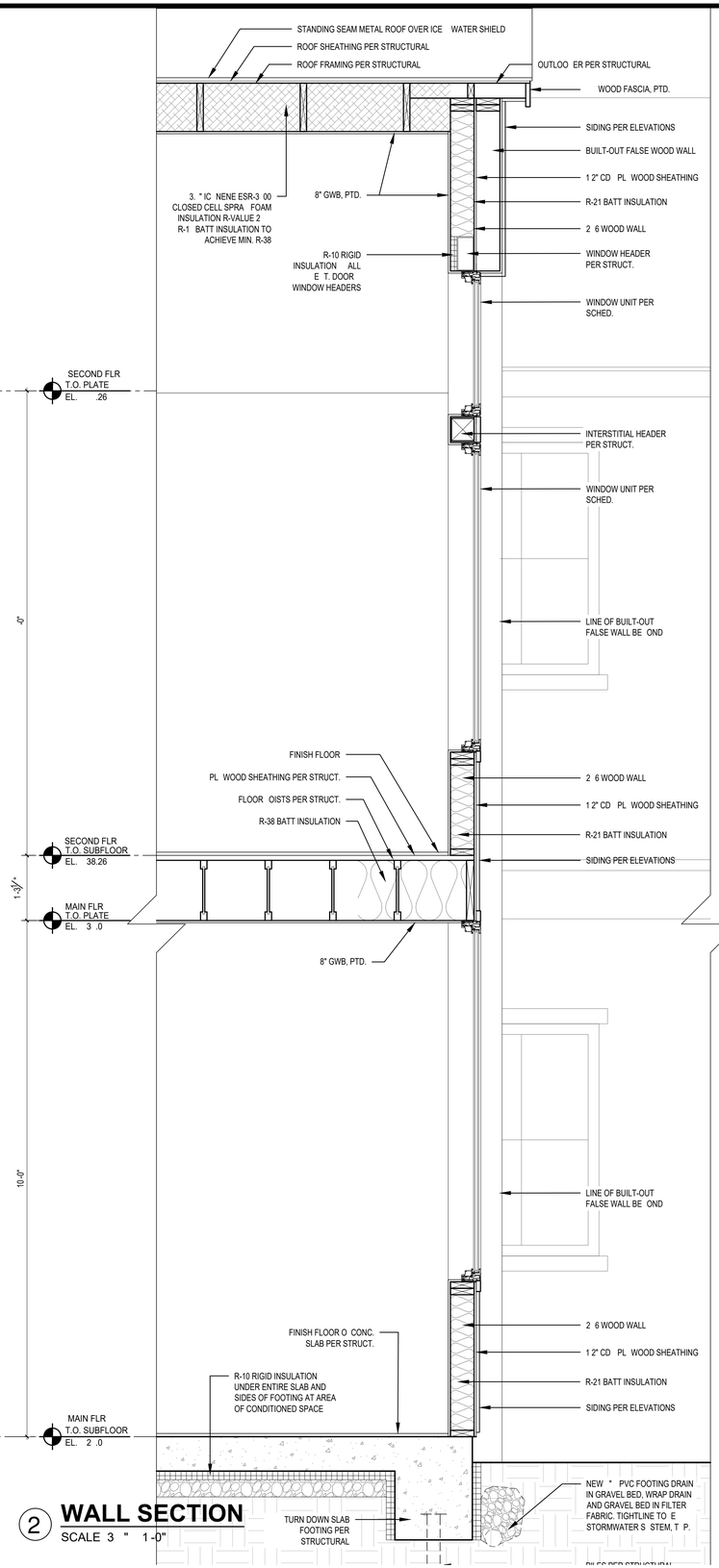
PLOT DATE 11 30 2023

SCALE IF SHEET IS LESS THAN 2 " 36", IT IS A REDUCED PRINT REDUCE SCALE ACCORDINGL

PERMIT SET 11 30 23



1 **WALL SECTION**
SCALE 3 " 1-0"



2 **WALL SECTION**
SCALE 3 " 1-0"

WINDOW SCHEDULE - ASDOURIAN

TAG.	DESCRIPTION	R.O. SI E WIDTH	R.O. SI E HEIGHT	TEMP.	QT.	AREA SF	U-VAL MIN.	GLA ING	REMAR S NOTES
A	FI ED	-0"	6 -0"		6		0.28	LOW E CLEAR	
B	FI ED	-0"	-0"		2		0.28	LOW E CLEAR	
C	FI ED	-0"	-0"		2		0.28	LOW E CLEAR	TEMPERED GLASS
D	FI ED R	-0"	3 -11"		2		0.28	LOW E CLEAR	TRIANGLE WINDOW
D1	FI ED L	-0"	3 -11"		2		0.28	LOW E CLEAR	TRIANGLE WINDOW
E	FI ED	1 - "	10 -0"		2		0.28	LOW E CLEAR	TEMPERED GLASS, SIDE LIGHT
F	CASEMENT	3 -0"	-6"				0.28	LOW E CLEAR	TEMPERED GLASS
F1	FI ED	3 -0"	-6"				0.28	LOW E CLEAR	
G	CASEMENT	2 -6"	-0"		2		0.28	LOW E CLEAR	
H	CASEMENT	2 -6"	-0"		2		0.28	LOW E CLEAR	EGRESS
I	FI ED	-0"	-6"		2		0.28	LOW E CLEAR	
	FI ED	10 -0"	-0"		2		0.28	LOW E CLEAR	TRIANGLE WINDOW
	FI ED	2 -6"	8 -0"		1		0.28	LOW E CLEAR	TEMPERED GLASS

DOOR SCHEDULE - ASDOURIAN

DOOR NO.	LOCATION	SI E WIDTH	SI E HEIGHT	DOOR T PE	TEMP. GLASS	DOOR TH.	U-VAL MIN.	REMAR S
MAIN FLOOR								
101	ENTR	-6"	10 - 0"	PIVOT		1-3 "	0.28	
102	BEDROOM-2	2 -8"	8 - 0"	SW		1-3 "		
103	BEDROOM-2 CLOSET	PR 2 -8"	8 - 0"	SW		1-3 "		
10	BATH-1	2 -8"	8 - 0"	SW		1-3 "		
10	STEAM ROOM	2 -8"	8 - 0"	SW		1-3 "		
106	STEAM ROOM	2 -8"	8 - 0"	SW		1-3 "		
10	HALL CLOSET	PR 2 - "	8 - 0"	SW		1-3 "		
108	E T HALL	2 -8"	8 - 0"	SW		1-3 "	0.28	
10	HALL CLOSET	PR 2 -8"	8 - 0"	SW		1-3 "		
110	OFFICE-1	2 -8"	8 - 0"	SW		1-3 "		
111	OFFICE-1 CLOSET	2 -8"	8 - 0"	SW		1-3 "		
112	OFFICE-1	10 -0"	8 - 0"	SLIDE		1-3 "	0.28	TEMPERED GLASS
113	LIVING ROOM	1 -0"	8 - 0"	MULTI		1-3 "	0.28	TEMPERED GLASS
11	DINING ROOM	1 -0"	8 - 0"	MULTI		1-3 "	0.28	TEMPERED GLASS
11	ITCHEN	-0"	8 - 0"	FI ED		1-3 "	0.28	TEMPERED GLASS
116	ITCHEN	10 -0"	8 - 0"	SLIDE		1-3 "	0.28	TEMPERED GLASS
11	POWDER	2 -6"	8 - 0"	SW		1-3 "		
118	MUD ROOM	3 -0"	8 - 0"	POC ET		1-3 "		
11	ELEVATOR	3 -0"	8 - 0"	SW		1-3 "		
120	GARAGE	3 -0"	8 - 0"	SW		1-3 "		20 MIN FIRERATED, SELF-CLOSING
121	GARAGE	18 -0"	8 - 0"	OVER		1-3 "		
122	GARAGE	-0"	8 - 0"	OVER		1-3 "		
123	GARAGE	3 -0"	8 - 0"	SW		1-3 "		
12	MECHANICAL	3 -0"	8 - 0"	SW		1-3 "		
12	GARAGE	3 -0"	8 - 0"	SW		1-3 "		
UPPER FLOOR								
201	REC ROOM	2 -8"	8 - 0"	SW		1-3 "		
202	REC ROOM CLOSET	2 -8"	8 - 0"	SW		1-3 "		
203	HALL CLOSET	2 -8"	8 - 0"	SW		1-3 "		
20	BATH-2	2 -8"	8 - 0"	SW		1-3 "		
20	HALL CLOSET	PR 2 -8"	8 - 0"	SW		1-3 "		
206	BEDROOM-2	2 -8"	8 - 0"	SW		1-3 "		
20	BEDROOM-2 CLOSET	2 -8"	8 - 0"	POC ET		1-3 "		
208	BEDROOM-2	10 -0"	8 - 0"	SLIDE		1-3 "	0.28	TEMPERED GLASS
20	BEDROOM-3	2 -8"	8 - 0"	SW		1-3 "		
210	BEDROOM-3 CLOSET	2 -8"	8 - 0"	SW		1-3 "		
211	BATHROOM-3	2 -8"	8 - 0"	SW		1-3 "		
212	BEDROOM-3	8 -0"	8 - 0"	SLIDE		1-3 "	0.28	TEMPERED GLASS
213	OFFICE-2	2 -8"	8 - 0"	SW		1-3 "		
21	OFFICE-2	8 -0"	8 - 0"	SLIDE		1-3 "	0.28	TEMPERED GLASS
21	PRIMAR VESTIBULE	PR 2 -6"	8 - 0"	SW		1-3 "		
216	PRIMAR BATH	2 -8"	8 - 0"	SW		1-3 "		
21	PRIMAR BATH	2 -8"	8 - 0"	SW		1-3 "		
218	PRIMAR BATH	8 -0"	8 - 0"	FI ED		1-3 "	0.28	TEMPERED GLASS
21	HER CLOSET	2 -8"	8 - 0"	SW		1-3 "		
220	HIS CLOSET	2 -8"	8 - 0"	SW		1-3 "		
221	PRIMAR BEDROOM	10 -0"	8 - 0"	SLIDE		1-3 "	0.28	TEMPERED GLASS
222	E ERCISE	2 -8"	8 - 0"	SW		1-3 "		
223	LAUNDR	3 -0"	8 - 0"	SW		1-3 "		
22	HALL CLOSET	3 -0"	8 - 0"	SW		1-3 "		
22	MEDIA ROOM	3 -0"	8 - 0"	SW		1-3 "		
226	ELEVATOR	3 -0"	8 - 0"	SW		1-3 "		
22	BATH-	2 -8"	8 - 0"	SW		1-3 "		

WINDOW DOOR SCHEDULE NOTES

1. CONTRACTOR TO VERIF ALL GLA ING SI ING, AND DOOR DIMENSIONS IN FIELD PRIOR TO ROUGH FRAMING ORDERING OF GLA ING WINDOW DOOR MATERIALS. REVIEW SI ES AND AN DISCREPANCIES W ARCHITECT.

2. ALL GLA ING TO BE "LOW E", INSULATED GLASS UNLESS NOTED OTHERWISE.

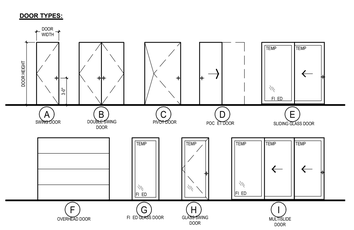
3. ALL OPERABLE WINDOWS TO HAVE SCREENS.

. GLA ING INDOORS AND OR WITHIN 2 " OF A DOOR TO BE TEMPERED. SEE E TERIOR ELEVATION FOR TEMP. GLASS LOCATION EGRESS WINDOWS.

. 2018 WSEC VIAQ RESIDENTIAL PRESCRIPTIVE OPTION 3 ADOPTED. GLA ING AREA INDICATED UNLIMITED. SEE ENERG NOTE AT A1.0 SHEET FOR DETAILS.

6. ALL WINDOWS AND DOORS WITHOUT A BUG ARE E ISTING TO REMAIN.

DOOR TYPES:



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WALL SECTIONS DOOR AND WINDOW SCHEDULES

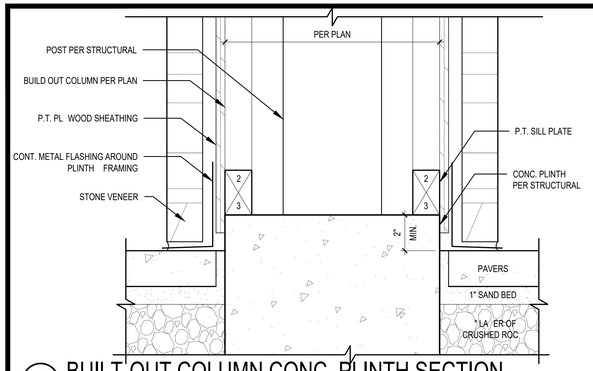
REVISIONS

DRAWN B E

CHEC ED B B S

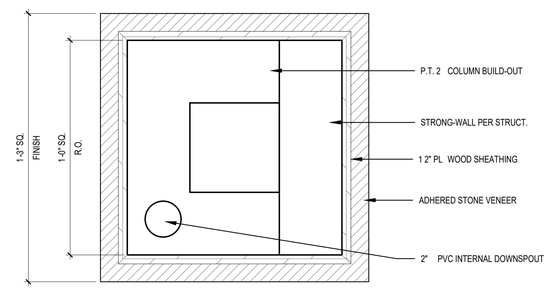
SHEET **A5.0**

PLOT DATE 11 30 2023



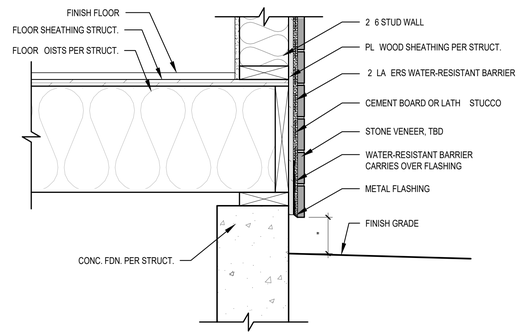
1 BUILT-OUT COLUMN CONC. PLINTH SECTION

SCALE 3" 1 -0"



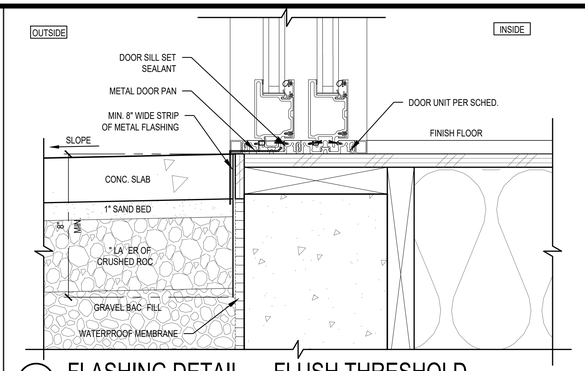
2 BUILT-OUT E TERIOR COLUMN PLAN

SCALE 3" 1 -0"



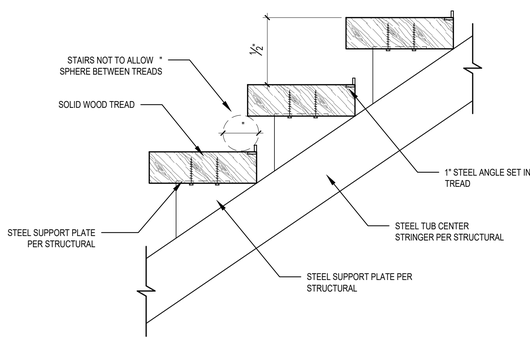
3 T P. STONE VENEER AT STUD WALL

SCALE 1 1 2" 1 -0"



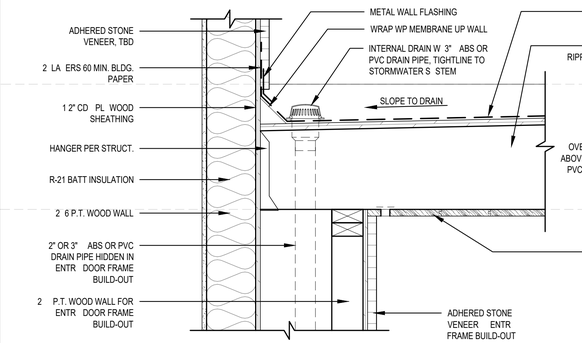
FLASHING DETAIL FLUSH THRESHOLD

SCALE 3" 1 -0"



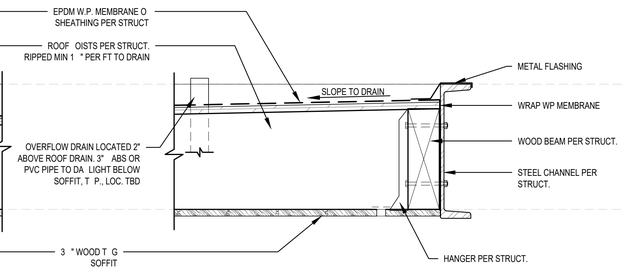
T P. WINDOW HEAD DETAIL

SCALE 3" 1 -0" SIM. AT WINDOW AMB



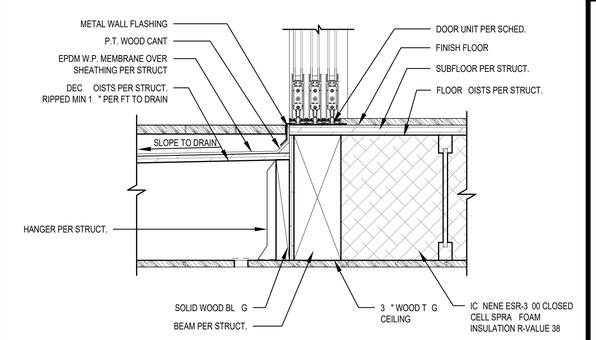
6 ENTR ROOF DETAIL HOUSE

SCALE 1-1 2" 1 -0"



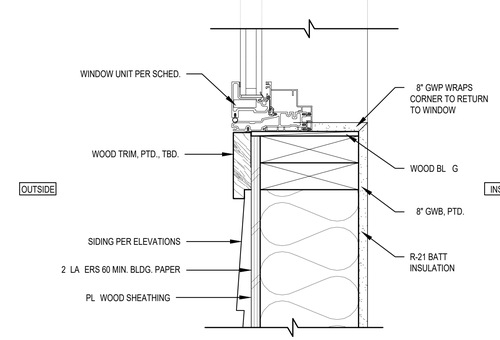
ENTR ROOF FASCIA DETAIL

SCALE 1-1 2" 1 -0"



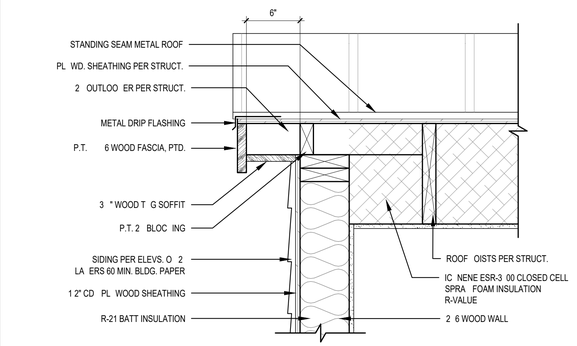
8 THRESHOLD DEC SECTION DETAIL

SCALE 1-1 2" 1 -0"



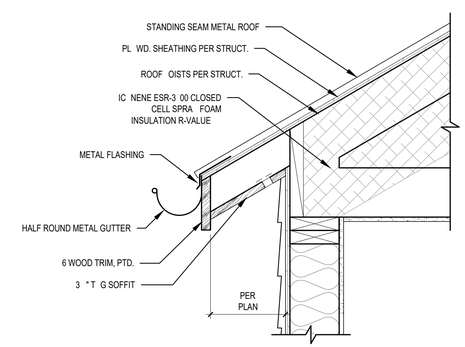
T P. WINDOW SILL DETAIL

SCALE 3" 1 -0"



10 T PICAL RA E DETAIL

SCALE 1-1 2" 1 -0"



11 T PICAL EAVE DETAIL

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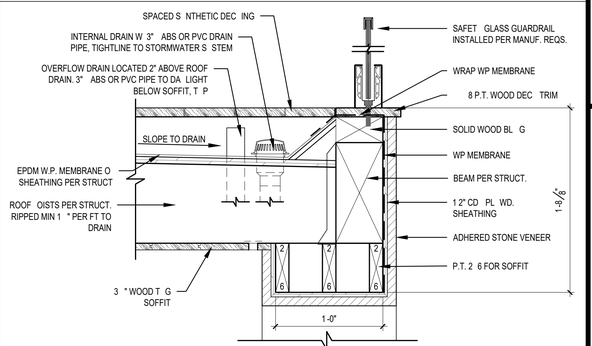
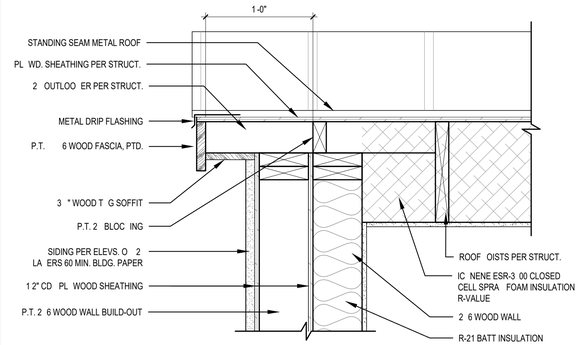


12 DEC FASCIA GUARDRAIL ATTACHMENT

SCALE 1-1 2" 1 -0"

13 T P. INTERIOR STAIR DETAIL

SCALE 1-1 2" 1 -0"

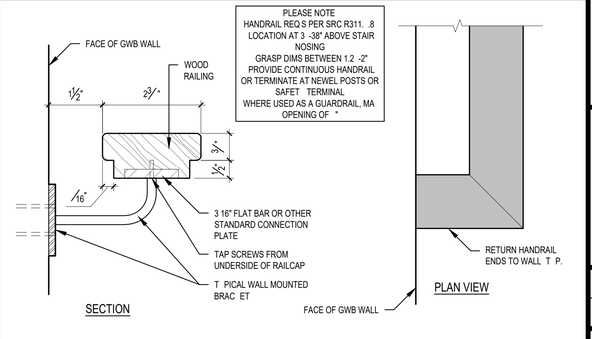


1 RA E DETAIL E T. WALL BUILD-OUTS

SCALE 1-1 2" 1 -0"

1 NOT USED

SCALE 1-1 2" 1 -0"



16 HANDRAIL DETAIL

SCALE 6" 1 -0"

SCALE IF SHEET IS LESS THAN 2 " 36", IT IS A REDUCED PRINT REDUCE SCALE ACCORDINGL

PERMIT SET 11 30 23

STURMAN ARCHITECTS
9 103rd Avenue NE Suite 203
Bellevue, WA 98004
TEL 425.457.7003

REGISTERED ARCHITECT BRADLE STURMAN STATE OF WASHINGTON

ASDOURIAN RESIDENCE
PERMIT SET
5300 BUTTERWORTH RD
MERCER ISLAND, WA 98040

ARCHITECTURAL DETAILS

REVISIONS

DRAWN B E

CHEC ED B B S

SHEET **A6.0**

PLOT DATE 11 30 2023

GENERAL NOTES

1.0 GENERAL

1.1 Construction shall conform to the 2018 INTERNATIONAL RESIDENTIAL CODE and all other requirements of authorities having jurisdiction.

1.2 These drawings are the property of O.G. Engineering, PLLC ("Engineer"). These drawings and the information contained herein shall not be used for completion of or revisions to this project by others, extensions of this project or any other project without Engineer's express written permission.

1.3 Refer to Architectural Plans for all dimensions and elevations not shown. Do not scale drawings. The contractor shall verify all pertinent dimensions and existing conditions prior to beginning construction. Conflicts, differences in information, and omissions in drawings shall be brought to the attention of the Engineer for resolution prior to construction. Changes from the drawings shall be made only with the prior approval of the Engineer. All work is subject to review and approval by the local building department. All work shall conform to all permit and building department requirements. All details shall be considered typical at similar conditions. Details shall be used where applicable, unless otherwise noted. Details intend to show concepts that may not exactly match specific site conditions. All work shown on these drawings is new unless noted as existing.

1.4 The contractor shall be solely responsible for jobsite and construction safety and compliance with all current safety regulations. Jobsite visits performed by the Engineer do not include a review of the adequacy of the contractor's safety measures. The Engineer has no authority to exercise any control over any construction contractor or their employees in connection with their work or any health or safety precautions. Only the final, permanent structure is shown on these drawings. The contractor shall be solely responsible for the means and methods of construction, including but not limited to construction sequencing and providing all necessary shoring, bracing and other temporary supports during construction. The contractor shall be solely responsible for obtaining all necessary independent engineering reviews of all temporary conditions and support systems during construction.

1.5 Utility information is not shown on these drawings. The contractor shall be solely responsible for locating and protecting utilities prior to and during construction. The contractor shall be solely responsible for all damage to utilities resulting from their work, and all damage to utilities shall be repaired solely at the contractor's expense.

1.6 All waterproofing and drainage information shown on these drawings is for illustrative purposes only. Waterproofing and drainage are the design responsibility of others.

2.0 DESIGN BASIS – BUILDING STRUCTURES

2.1 Vertical Loads (psf, U.O.N.)	Dead	Live	Snow
Truss Roof	18[1]	20[2]	25
Stick-Framed Roof	13		25
Roof Deck	18	60	
Upper Floor	14	40	
Main Floor	110[3]	40	
Patio	110[3]	60	
Garage	110[3]	3000 lbs (point load)	

[1]Includes 4psf for solar-ready zones.
[2]At attic spaces where occurs.
[3]Includes weight of concrete slab.

2.2 Seismic Design Data (per the 2018 IBC)
Risk Category: II
Importance Factor: Ie=1.0
Site Coordinates: 47.5559°N, 122.2098°W
Mapped Spectral Response Acceleration: Ss=1.44, S1=0.50
Site Class: E (used Fa = 1.2 for Site Class C per ASCE 7-16 Section 11.4.8 exception 1)
Spectral Response Coefficients: Sds=1.15
Seismic Design Category: D
Main Seismic Force-Resisting System: Wood Structural Panel Shear Walls
Response Modification Factor: R=6.5
Seismic Response Coefficient: Cs=0.18
Redundancy Factor: ρ=1.0
Over-strength Factor: Ω=2.5
Analysis Procedure Used: Equivalent Lateral Force Procedure

2.3 Wind Design Data (per the 2018 IBC)
Risk Category: II
Basic Wind Speed: 98 mph
Exposure Category: C
Topographic Factor: 1.00 (Per Mercer Island Wind Load Map)

3.0 INSPECTIONS

The construction work shall be inspected as required by the IRC Section R106. The contractor is solely responsible for understanding the requirements of and coordinating all inspections, observations and testing and ensuring that all work is performed to the satisfaction of the inspector.

4.0 FOUNDATIONS

4.1 New foundations have been designed in accordance with recommendations in the Geotechnical Report. The design basis is as follows:
* Allowable Vertical Pin Pile Capacities:
4" Pile 10 tons
* Sliding Resistance:
Passive Pressure 250 pcf

4.2 All site preparation, grading, earthwork and site drainage, including but not limited to sub-grade preparation, pile installation and testing, foundation and retaining wall excavations, structural fill specifications, compaction requirements, and site drainage installation, shall be performed in accordance with the Geotechnical Report prepared by the Geotechnical Engineer, Geotech Consultants, Inc., dated March 7th, 2023. The Geotechnical Report is part of the construction documents and a copy may be obtained from the Geotechnical Engineer's office. The contractor shall notify Geotech Consultants, Inc. (425-747-5618) in advance of any earthwork operations and Geotech Consultants, Inc. should be present to observe and test, as necessary, the earthwork and foundation installation phases of the project.

5.0 MATERIALS

5.1 Wood:

5.1.1 All 2x & 3x sawn lumber shall be Hem Fir grade number 2, except sill plates which shall be Doug Fir grade number 2 or better, and all 4x and larger lumber shall be Doug Fir grade number 1, U.O.N. Mudsills and all sawn lumber in contact with concrete, masonry, ground, exposed to weather or moisture, shall be P.T. Preservative retention levels in P.T. wood shall meet the requirements of the applicable use category in accordance with AWPA U1-16, and shall not exceed those required to comply with AWPA Use Category UC4A. Do not use wood treated with ACZA. Field-cut ends, notches and drilled holes of P.T. wood shall be treated in the field in accordance with AWPA M4. P.T. is not required at naturally decay-resistant (i.e. redwood, cedar etc.) sawn lumber members.

5.1.2 Engineered Wood Framing Members and I-Joists shall be TrusJoist® or approved equal. 'PSL' denotes Parallam 2.2E for beams and 1.8E for posts. 'LSL' denotes Timberstrand 1.55E for members with depth equal to or greater than 9¼", and 1.3E for members with depth less than 9¼". 'LVL' denotes Microllam 2.0E. 'TJI' denotes TJI I-joists.

5.1.3 Glulam framing members shall be DF/DF, stress class 24F-1.8E, combination symbol 24F-V8, U.O.N.

5.1.4 All wood framing members shall have 19% maximum moisture content at time of installation.

5.2 Concrete:

Hardrock, normal-weight concrete with a minimum 28-day compressive strength of 3,000 psi. Slump range shall be 3-5 inches. Maximum aggregate size shall be 1". Maximum water/cement ratio shall be 0.5. Concrete exposed to weather shall be air-entrained with total air content between 5%-7% of total concrete volume.

5.3 Reinforcing Steel Bars:

ASTM A615, Grade 60

5.4 Post-Installed Dowels & Anchors into Existing Concrete & CMU

Epoxy: Simpson SET-3G (Installed & inspected per ICC No. ESR-4057)

5.5 Bolts and Threaded Rods:

5.5.1 Threaded Rod: ASTM F1554 Grade 36

5.5.2 Sill Anchor Bolts: ASTM A307
Bent bar "J" anchor bolts shall have a hook with a 90-degree bend with an inside diameter of three bolt diameters, plus an extension of one and one half bolt diameters at the free end.

5.5.3 Bolts in Timber Connections: ASTM A307

5.5.4 Bolts in Steel Connections: ASTM A325-N (High-Strength)

5.6 Structural Steel:

Wide Flange (W):	A992 (Fy = 50 ksi)
Rectangular Tube (HSS):	A500 Gr. B (Fy = 46 ksi)
Plate and Bar:	A36 (Fy = 36 ksi)

6.0 CONCRETE CONSTRUCTION

6.1 Concrete elements shall be constructed in single continuous pours, without construction joints, unless otherwise approved by the Engineer. Reinforcement shall be the longest lengths practical. Splices in rebar are not allowed in footings or walls less than 20 feet long. Lap splices shall be staggered at least 2 ft. in adjacent bars. Where reinforcement or anchor edge distances are noted on the drawings as "clear", the distance shall be taken from the face of reinforcement or anchor to edge of concrete. Cast-in-place reinforcement and anchor bolts shall be installed prior to concrete placement and shall not be "wet-set" into freshly poured concrete.

6.2 Reinforcement installation details, including rebar bends, hooks, splices and development lengths shall be in accordance with the requirements of IRC Section R608.5.4, U.O.N. Concrete materials, forms, mixing and delivery shall be in accordance with the requirements of the IRC Section R404.1.3.3.

6.3 Concrete Coverage over Reinforcing Steel

Unless otherwise noted, maintain the minimum concrete cover to face of reinforcement or anchors as follows:

1) 3" Where concrete is cast against and permanently exposed to earth except slab on grade.
2) 2" Where concrete is exposed to earth but formed, or exposed to weather.
3) 1½" Where concrete is not exposed to earth or weather.

7.0 WOOD CONSTRUCTION

7.1 General Framing

Connections not specified on these drawings shall conform to the IRC fastening schedule, refer to Table R602.3(1). Depth of all posts in walls shall match stud depth, U.O.N. Block floor joist space solid under posts and cripple studs supporting headers and continue support to foundation. Face nail all plies of multi-ply studs with 10d@6"o.c. Obtain approval from engineer prior to ripping or creating notches or holes in framing members, U.O.N. Install double joists below all interior walls parallel to floor joists and solid blocking below all interior walls perpendicular to floor joists, U.O.N. All beams shall be continuous across supports unless explicitly shown as multiple pieces. Install full depth blocking between framing members over supports, unless otherwise noted. Intall 2x4 blkg btwn adjacent joists/rafters/ trusses @24"o.c. over interior partitions. All flush beams framing into walls shall continue to back edge of supporting dbl top plate; stop rim joist each side of beam where occurs.

7.2 Engineered Wood Framing

See TrusJoist "Installation Guide for Floor and Roof Framing" (TJ-9001)for allowable holes in engineered wood beams. Grade stamp info must be maintained on ripped engineered wood members; refer to TrusJoist Technical Bulletin TB-305 for requirements pertaining to re-sawn engineered wood.

7.3 Fasteners

Nails specified on these drawings are common nails, U.O.N. Fasteners in contact with P.T. wood, exposed to weather or in contact with ground shall be hot-dipped galvanized per IRC Section 317.3, or shall have equivalent corrosion resistance. Dissimilar metals & coatings shall not be in contact. Bolt holes shall be a minimum of 1/32" to a maximum of 1/16" larger than the bolt diameter. Bolts shall not be forcibly driven, and shall be tightened to the snug-tight condition. Install standard cut washers under all bolt heads and nuts bearing against wood.

7.4 Connectors

Connectors specified on these drawings are manufactured by the SIMPSON STRONG-TIE® Company. Refer to latest catalog for information not specifically noted herein. Connectors in contact with P.T. wood, exposed to weather or in contact with ground shall be ZMAX or HDG galvanized. All connectors shall receive the maximum number of fasteners, U.O.N. Dissimilar metals & coatings shall not be in contact. Shim gaps in connectors for different framing sizes with plywood as required.
Non-field-adjustable hangers specified as sloped or skewed shall be manufactured sloped or skewed.

7.5 Wood Structural Panels

WSPs shall bear the APA trademark and shall meet the requirements of the latest edition of USDOC PS1 or PS2. Use 10d common wire nails to fasten panels with 1½" minimum penetration into framing at all panel edge and field nailing, U.O.N. Nails shall be located at least ⅜" from panel ends and edges. Stagger nails at adjoining panel edges. Drive nail heads flush with panel surface. Maintain ⅛" gap between all adjoining panel edges. Center interior panel joints on framing members or blocking. Provide ⅛" space between untreated panel and concrete or masonry. Minimum panel dimension shall be 2'-0". Panel storage and handling during transport and construction shall be in accordance with APA recommendations and shall protect the panels from prolonged exposure to moisture from rain, snow, ground or other sources. WSPs permanently exposed to weather shall be exterior grade.

7.6 Shear Walls and Exterior Wall Sheathing

7.6.1 Shear walls are noted on the plans. Shear walls shall be sheathed with ½" APA RATED SHEATHING, EXPOSURE 1 WSPs with a span rating of 32/16, U.O.N. Panels shall not be less than 4'-0" x8'-0", except at boundaries and changes in framing. Panels shall be laid with strength axis vertical. Install 2x blkg under all unsupported panel edges; all panel edges shall be supported by and fastened to min. 2x common studs or blocking, U.O.N. on shear wall schedule. Edge nail panels to posts within shear walls. Install double stud or min. 4x post at the ends of all shear walls. Provide solid blocking under double studs & posts between floors and continue support to foundation. See shear wall schedule for more information.

7.6.2 WSP Wall Nailing, U.O.N.:

Panel Edge Nailing: 10d@6"o.c. maximum.
Intermediate (Field) Nailing: 10d@12"o.c. maximum.

7.6.3 All new exterior walls not called out as shear walls shall be sheathed on their exterior face with ½" APA RATED SHEATHING, EXPOSURE 1 WSPs with a span rating of 32/16 and nailing per note 7.6.2., U.O.N. All other fasteners & requirements shall conform to the shear wall schedule for wall type ①.

7.7 Holdowns and Tiedown Straps

Holdowns and tiedown straps shall be attached to double studs or min. 4x posts, U.O.N. See latest Simpson Catalog for additional requirements not noted herein. See holdown schedule for anchor bolt sizes and additional specifications. Refer to note 7.1 for nailing and framing requirements at holdown/tiedown posts. Install solid post at shear wall corners or intersections where holdowns/tiedowns occur. All holdowns/tiedowns shall have the maximum number of fasteners.

7.8 Sill Anchor Bolts

There shall be a minimum of two sill anchor bolts per piece with one bolt located not more than 12" or less than 4½" from each end of each piece. Holes in sills for bolts shall not be oversized. Sill anchor bolts shall be ⅝"ø with 7" min. embed. into concrete. Sill anchor bolts into existing concrete shall be all-thread rod, drill and epoxy. See shear wall schedule for spacing of sill anchor bolts in shear walls. Maximum sill anchor bolt spacing at non-shear-walls shall be 6'-0"o.c. at interior walls and 4'-0"o.c. at exterior walls. All sill anchor bolts at shear walls and mudsills shall be installed with 0.229"x3"x3" steel plate washers. Edge of sill anchor bolt plate washers shall be located ½" max. from inside face of wall sheathing or rim joist where occurs.

7.9 Floor and Roof Sheathing

7.9.1 Wood structural panel sheets at floors and roofs shall be laid with strength axis perpendicular to supports and continuous over two or more spans, unless otherwise noted on drawings. Stagger adjacent panels 4'-0"o.c. lengthwise.

7.9.2 Unless otherwise noted, typical roof sheathing shall be unblocked ⅜" APA RATED SHEATHING, EXPOSURE 1 WSPs with a span rating of 40/20. Panels shall be fastened to framing members with 10d nails @6"o.c. at all supported panel edges and 10d nails @12"o.c. intermediate (field) nailing. Install 'PSCL' sheathing clips (one mid-way between each support) at all unsupported panel joints.

7.9.3 Unless otherwise noted, typical floor sheathing shall be unblocked 1⅛" APA RATED STURD-I-FLOOR EXPOSURE 1 WSPs with a span rating of 60/32 and T&G edges. Panels shall be fastened to framing members with 10d nails @6"o.c. at all supported panel edges and 10d nails @12"o.c. field nailing. Glue sheathing to all supports (including blocking) with ¼" minimum beads of approved adhesive meeting APA specification AFG-01.

7.10 Metal-Plate-Connected Wood Trusses

7.10.1 The design, manufacture and installation of trusses shall be in accordance with the requirements of ANSI/TPI 1 and the IRC Section R502.11.

7.10.2 Trusses, structural fascia, their connections to other trusses/fascias, and truss eave blocking are the design responsibility of the supplier, and shall be designed by a civil or structural engineer licensed in the State of Washington ("Truss Designer"). Trusses shall be designed to support the following specific unfactored loads in addition to their self-weight, in addition to any loads specifically indicated on plan:

Vertical Roof Loads - Top Chord
*Dead: 14 psf (Does not include truss self-weight)
*Snow: 25 psf
*Wind: -25 psf (uplift)

Vertical Ceiling Loads - Bottom Chord
*Dead: 5 psf (Does not include truss self-weight)
*Non-Attic Live: 10 psf (Non-concurrent with other live loads)
*Attic Live 20 psf (Concurrent with other live loads)

7.10.3 Drag trusses shall be designed for the following unfactored seismic drag loads:

1) Top Chord Uniform Drag Load: a uniform drag load acting longitudinally along the entire top chord length with a magnitude equal to the total drag load indicated on plan divided by the total top chord length.

2) Bottom Chord Uniform Drag Load: a uniform drag load acting horizontally along on the interface between the drag truss bottom chord and the shear wall below (where occurs on plan) with a magnitude equal to the total drag load indicated on plan divided by the length of that interface.

3) Bottom Chord Concentrated Drag Load: a horizontal concentrated load acting at the location at which the drag truss bottom chord is attached via a strap or other connector (where occurs on plan) to the adjacent collector element, with a magnitude equal to the total drag load indicated on plan.

7.10.4 Trusses shall not rely on interior walls for support, U.O.N.; trusses shall be designed to span between exterior bearing walls.

7.10.5 Trusses shall be braced to provide lateral stability and prevent rotation in accordance with the SBCA BCSI "Guide to Good Practice for Handling, Installing and Bracing of Metal-Plate-Connected Wood Trusses". Bracing shall be designed and specified by the truss designer.

7.10.6 Trusses and their connections shall not be notched, cut, spliced or otherwise altered or damaged in any way without the prior written consent of both the E.O.R. and truss designer.

7.10.7 Truss design drawings and calculations, prepared by a civil or structural engineer licensed in the State of Washington in accordance with the IRC Section R502.11.4, shall be submitted to the contractor, architect, engineer and local building official for review and acceptance prior to fabrication, and shall be provided with the shipment of trusses to the job site.

7.10.8 Attach top plates of interior, non-bearing partition walls to truss bottom chords with 'STC' clips, leaving a ¼" to ½" vertical gap between bottom of truss and top of plate. Attach adjacent gypsum board ceiling to top plate with 'DS' clips. Do not fasten gypsum board ceiling to truss bottom chord within 16" of top plate.

8.0 STRUCTURAL STEEL

Steel fabrication and erection shall be in accordance with "Specification for Structural Steel Buildings" (AISC 360-10). Welding shall be in accordance with "Structural Welding Code – Steel" (AWS D1.1) Specifications. Minimum tensile strength of weld metal shall be 70 ksi, U.O.N. Welding electrodes shall be as recommended by their manufacturer for the position and other conditions of actual use. All welding shall be performed by AWS Certified Welders. Bolt holes shall be drilled or punched. Bolt holes shall be standard, and hole size shall be 1/16" larger diameter than the nominal size of bolt used, U.O.N. Bolts shall be installed snug-tight, U.O.N. All steel framing and fasteners exposed to weather or in contact with ground shall be hot-dipped galvanized after fabrication to meet the requirements of ASTM 153. Upon completion of erection; touch-up, de-slag, clean and apply zinc-rich primer to exposed welds or other unprotected markings incurred during the transportation, handling or erection process. Dissimilar metals & coatings shall not be in contact. All steel surfaces that are not galvanized shall be painted with manufacturer's standard rust-prohibitive primer and paint. No penetrations shall be made through steel framing except as specifically indicated on these structural drawings or with the prior written permission of the engineer.

ABBREVIATIONS

@	AT
ADJ.	ADJACENT
ALT.	ALTERNATE
ARCH.	ARCHITECT
A.T.R.	ALL-THREAD ROD
B.F.	BALLOON-FRAMED
BLKG	BLOCKING
BLW.	BELOW
BM	BEAM
BOTT.	BOTTOM
C.I.P.	CAST-IN-PLACE
C.J.	CONSTRUCTION JOINT
CL	CENTERLINE
CLR.	CLEAR
CONT.	CONTINUOUS
CSK.	COUNTERSINK
ø	DIAMETER
DBL.	DOUBLE
DF	DOUGLAS FIR
DIM	DIMENSION
D.J.	DOUBLE JOIST
D.R.	DOUBLE RAFTER
E.J.	EXPANSION JOINT
ELEV.	ELEVATION
EMBED.	EMBEDMENT
ENGR.	ENGINEER
E.N.	EDGE NAILING
E.O.R.	ENGINEER OF RECORD
EQ.	EQUAL
E/W	EACH WAY
(E)	EXISTING
F.J.	FLOOR JOIST
F.N.	FIELD NAILING
FTG	FOOTING
G.L.	GRID LINE
GLB	GLULAM BEAM
G.C.	GENERAL CONTRACTOR
H.D.G.	HOT-DIPPED GALVANIZED
HDR	HEADER
HF	HEM FIR
IBC	2018 INTERNATIONAL BUILDING CODE®
INV.	INVERTED
IRC	2018 INTERNATIONAL RESIDENTIAL CODE®
K.D.	KILN-DRIED LUMBER
LOCN	LOCATION
MAX.	MAXIMUM
MANUF.	MANUFACTURER
M.B.	MACHINE BOLT
MIN.	MINIMUM
NSFC	NOT SHOWN FOR CLARITY
N.T.S.	NOT TO SCALE
o/	OVER
o.c.	ON CENTER
O/H	OPPOSITE HAND
OPNG	OPENING
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PT	PRESSURE-PRESERVATIVE-TREATED
QUAD.	QUADRUPLE
REQ'D	REQUIRED
RFT	RETROFIT
R.R.	ROOF RAFTER
R.W.	REDWOOD
S.A.D.	SEE ARCHITECTURAL DRAWINGS
S.O.G.	SLAB ON GRADE
SIM.	SIMILAR
SQ.	SQUARE
STD	STANDARD
S.W.S.	SHEAR WALL SCHEDULE
T.B.D.	TO BE DETERMINED
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TYP.	TYPICAL
TRPL.	TRIPLE
T.O.	TOP OF
U.O.N.	UNLESS OTHERWISE NOTED
U/S	UNDERSIDE
u/	UNDER
V.I.F.	VERIFY IN FIELD
W.R.C.	WESTERN RED CEDAR
W.P.	WATERPROOFING
WSP	WOOD STRUCTURAL PANEL

PERMIT SET

REV.	DATE	DESCRIPTION
	11-01-23	PERMIT SET

PROJECT: NEW SINGLE-FAMILY DWELLING
5300 Butterworth Road
Mercer Island, WA 98040

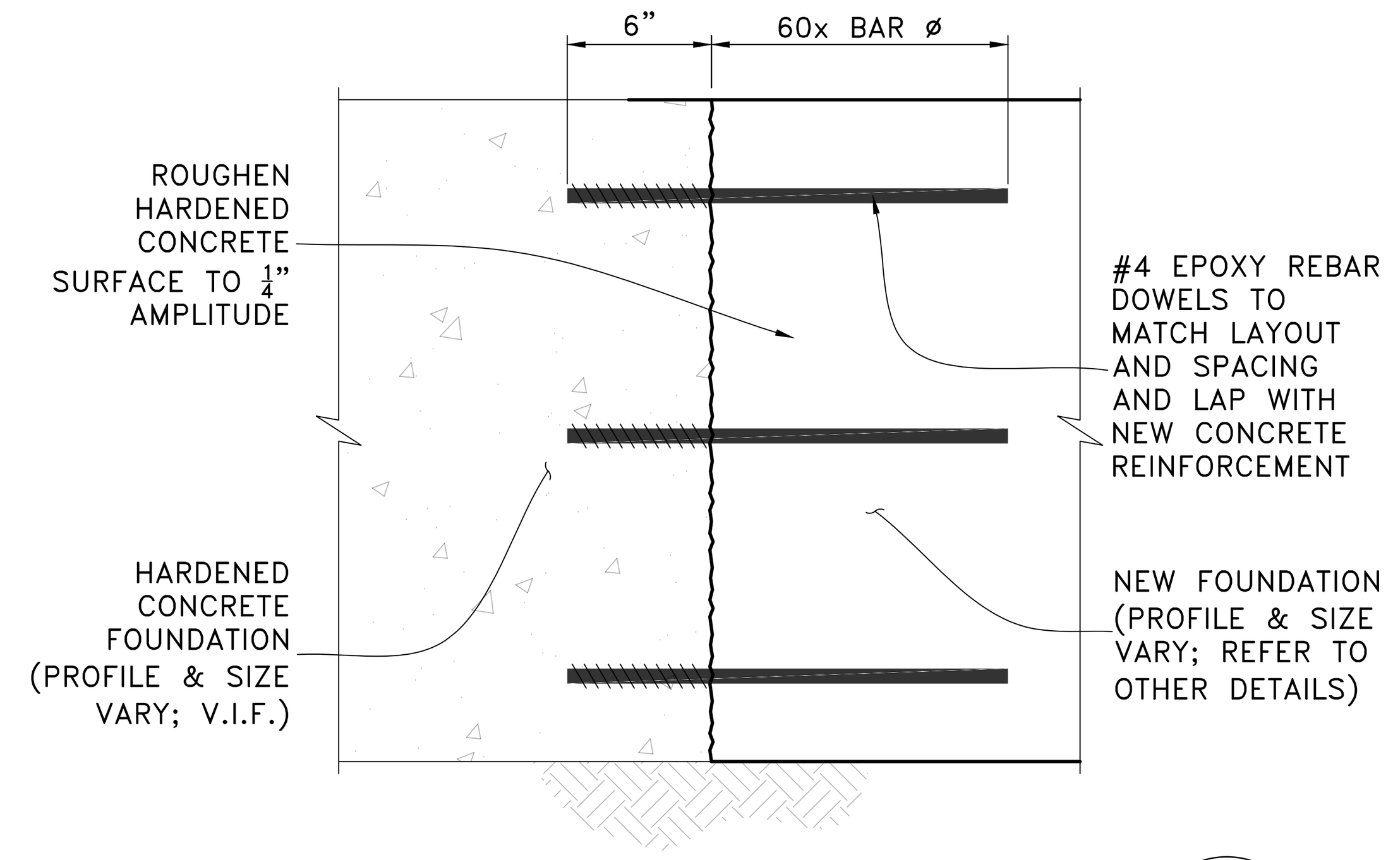
CLIENT: Ryan & Ashley Asdourian
5300 Butterworth Road
Mercer Island, WA 98040

OWEN REMICK GOULD STATE OF WASHINGTON 52797 STRUCTURAL ENGINEER PROFESSIONAL ENGINEER
ENGINEER OF RECORD

O.G. ENGINEERING, PLLC
3201 1st Ave S, Suite 101, Seattle, WA 98134
(206) 290-4608
owen@ogengineer.com

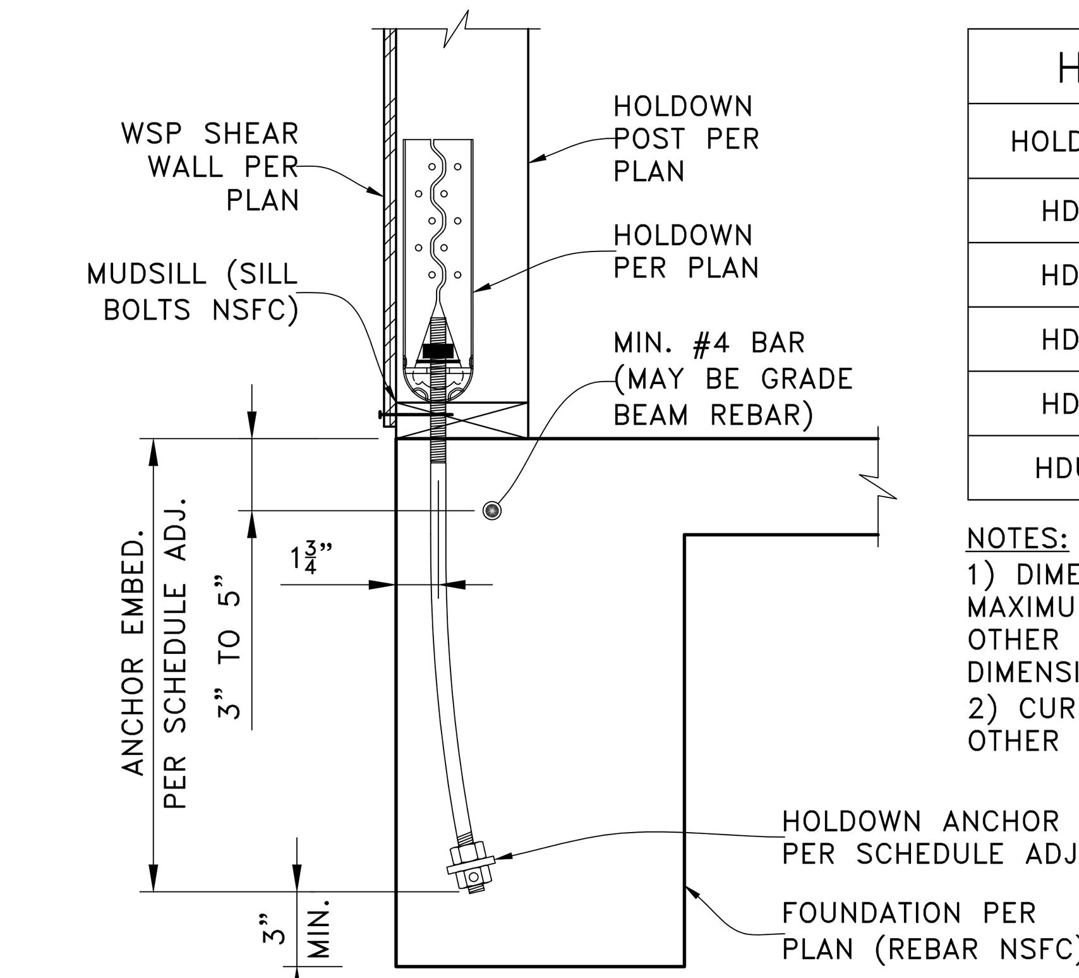
SHEET TITLE: GENERAL NOTES

SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S1



TYPICAL FRESH TO HARDENED CONCRETE (A / –)

SCALE: NTS

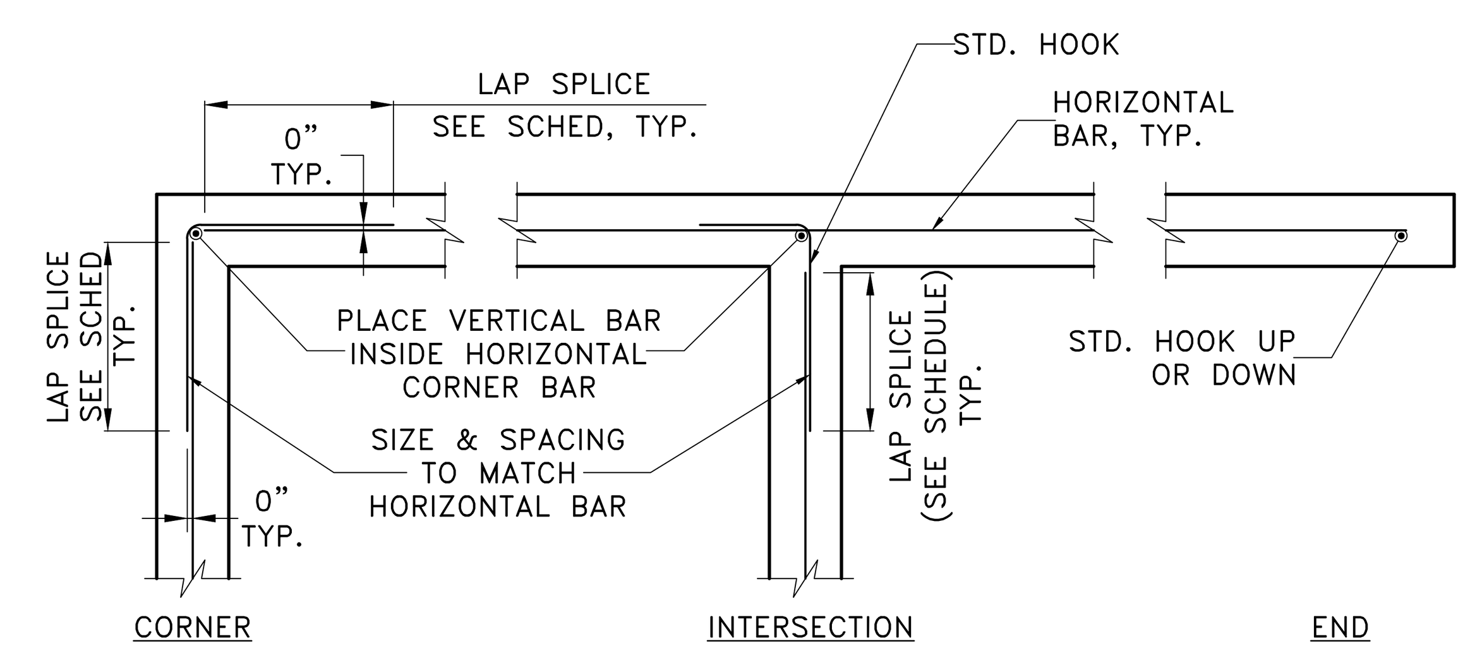


HOLDOWN SCHEDULE		
HOLDOWN	ANCHOR	ANCHOR EMBEDMENT
HDU2	SB⅝x24	18"
HDU4	SB⅝x24	18"
HDU5	SB⅝x24	18"
HDU8	SB⅞x24	18"
HDU11	SB1x30	24"

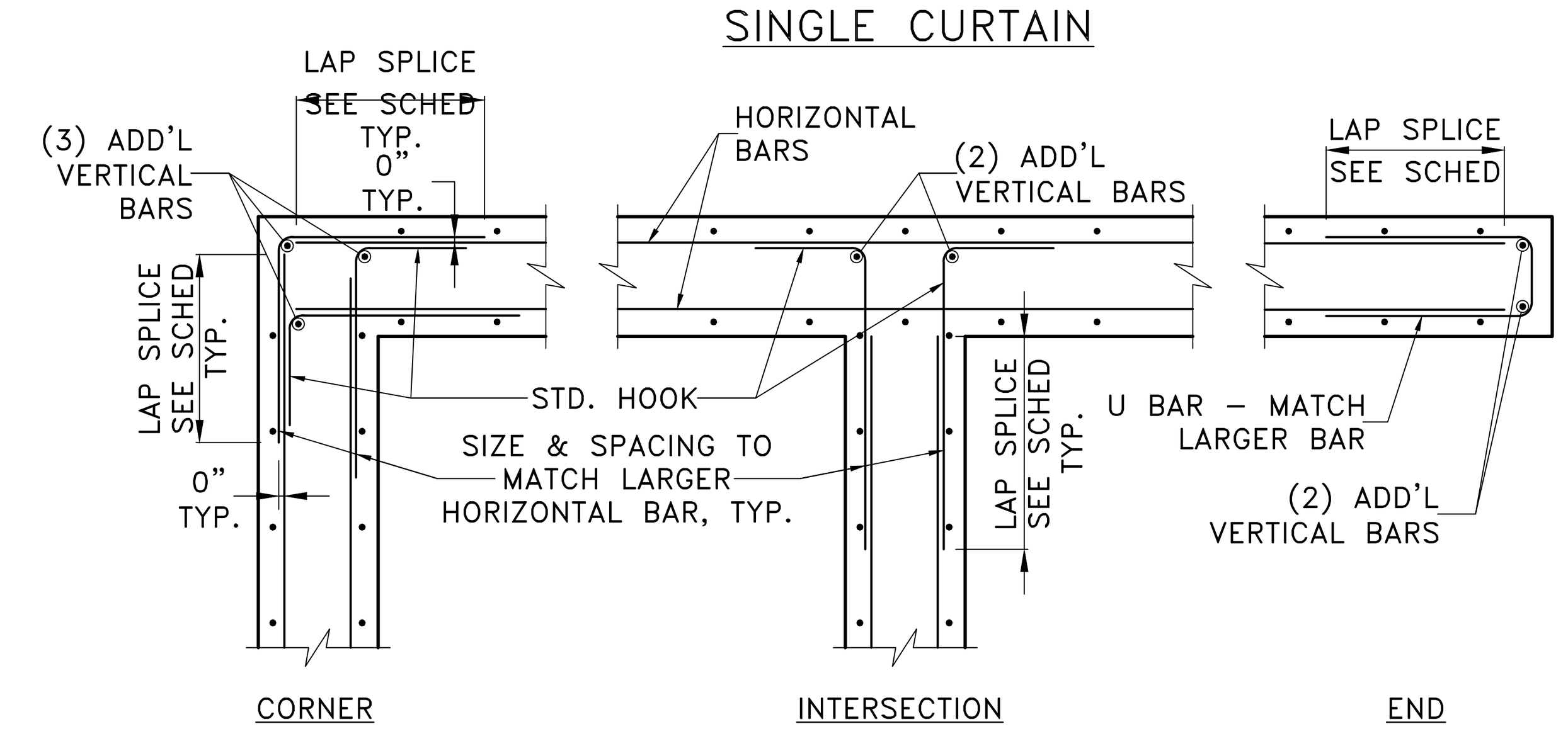
NOTES:
1) DIMENSIONS SHOWN HEREIN ARE MINIMUMS/ MAXIMUMS FOR HOLDOWN ANCHORS; REFER TO OTHER DETAILS FOR ACTUAL FOOTING DIMENSIONS.
2) CURB REQUIRED ONLY WHERE OCCURS ON OTHER DETAILS FOR CLEARANCE FROM GRADE.

TYPICAL HOLDOWN AT FOUNDATION (B / –)

SCALE: NTS



SINGLE CURTAIN



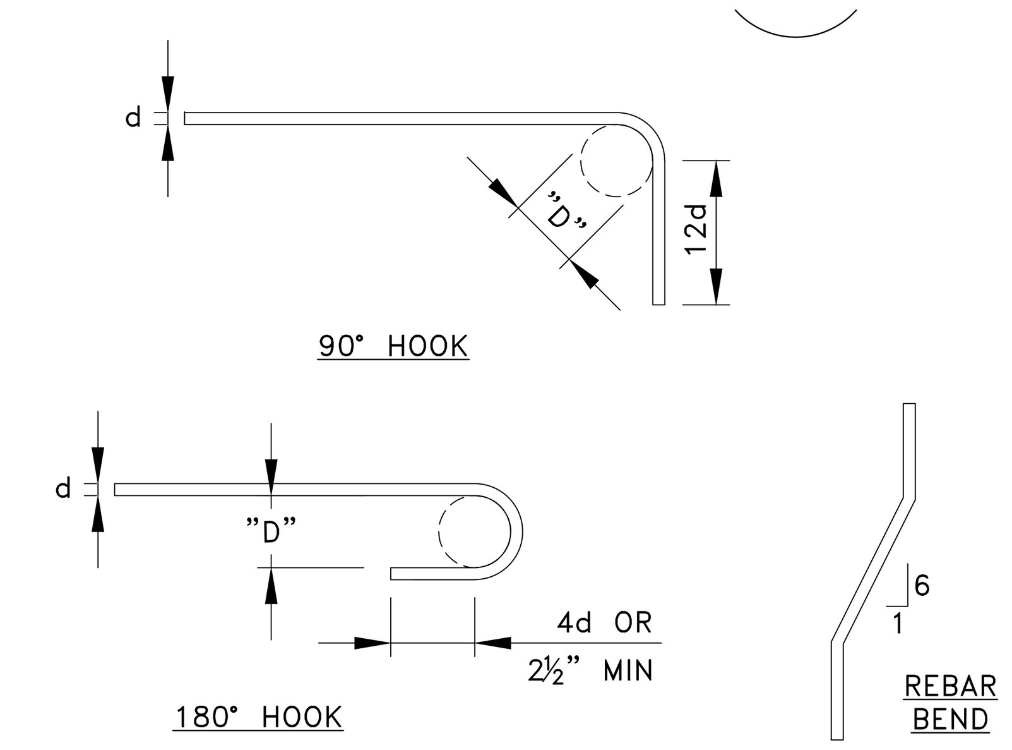
DOUBLE CURTAIN

TYPICAL CONCRETE WALL & FOOTING CORNERS, INTERSECTIONS & ENDS (E / –)

SCALE: NTS

BAR SIZE	"D" (IN.)
#3	2¼
#4	3
#5	3¾
#6	4½
#7	5¼
#8	6
#9	9½
#10	10¾
#11	12

NOTE:
ALL BENDS SHALL BE MADE COLD

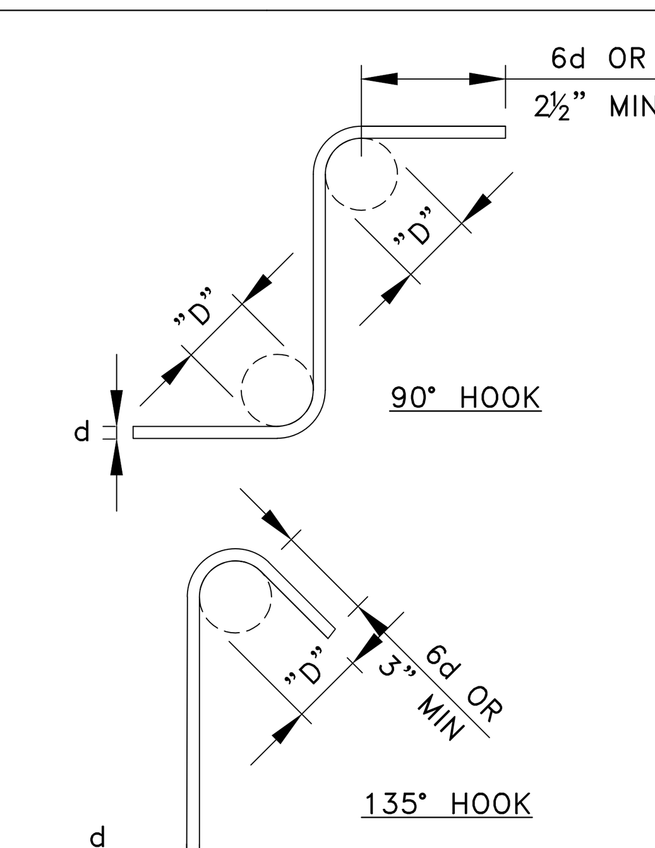


TYPICAL REINFORCEMENT BENDS (F / –)

SCALE: NTS

BAR SIZE	"D" (IN.)
#3	1½
#4	2
#5	2½

NOTE:
ALL BENDS SHALL BE MADE COLD



TYPICAL TIE & STIRRUP HOOKS (G / –)

SCALE: NTS

BAR SIZE	STRAIGHT BAR DEVELOPMENT LENGTH (Ld), INCHES	LAP SPLICE LENGTH, INCHES	HOOKED BAR DEVELOPMENT LENGTH (Ldh), INCHES
#3	17	22	9
#4	22	29	11
#5	28	36	14
#6	33	43	17

MODIFICATION FACTORS:
THE LENGTHS NOTED ABOVE SHALL BE MULTIPLIED BY THE FOLLOWING FACTORS AS APPLICABLE:
- 1.3 FOR TOP BARS (MORE THAN 12" CONC. CAST BELOW)
- 1.3 FOR LIGHT WEIGHT CONCRETE
- 1.5 FOR BARS WITH LESS THAN 2 BAR DIAMETERS CLEAR SPACING OR FOR BARS WITH LESS THAN 1 BAR DIAMETER OF CONCRETE COVER
- 1.5 FOR EPOXY COATED BARS U.O.N.

THE MODIFICATION FACTORS NOTED ABOVE SHALL BE COMBINED WHEN MULTIPLE CONDITIONS OCCUR. FOR EXAMPLE, FOR TOP BARS IN LIGHT WEIGHT CONCRETE, THE SPLICE LENGTH NOTED ABOVE SHALL BE MULTIPLIED BY 1.3x1.3=1.69

NOTES:
1. SPLICES OF REINFORCEMENT SHALL BE STAGGERED AT LEAST 2'-0"
2. SPLICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION
3. TOP BAR FACTOR DOES NOT APPLY TO BARS IN WALLS
4. HOOKED BAR DEVELOPMENT LENGTH APPLIES TO BARS TERMINATING IN A STANDARD HOOK (REFER TO OTHER DETAILS).

TYPICAL DEVELOPMENT LENGTH & LAP SPLICE SCHEDULE – CONCRETE (L / –)

SCALE: NTS

PERMIT SET

REV.	DATE	DESCRIPTION
	11-01-23	PERMIT SET

PROJECT: NEW SINGLE-FAMILY DWELLING
5300 Butterworth Road
Mercer Island, WA 98040

CLIENT: Ryan & Ashley Asdourian
5300 Butterworth Road
Mercer Island, WA 98040

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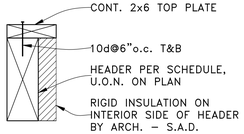
SHEET TITLE: TYPICAL DETAILS

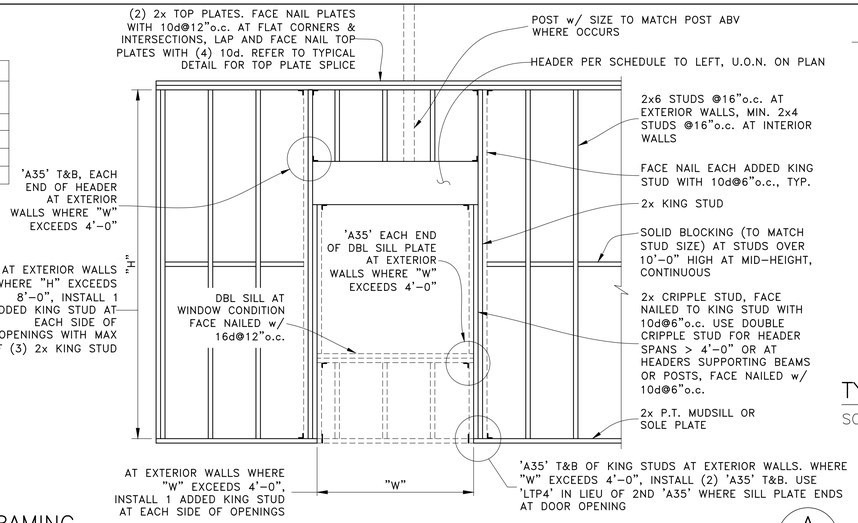
BUILDING DEPARTMENT APPROVAL STAMP:

SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S2

HEADER SCHEDULE, U.O.N.	
"W" MAX. OPENING	MIN. HEADER
4'–0"	4x6
6'–0"	4x8
8'–0"	4x10
10'–0"	4x12

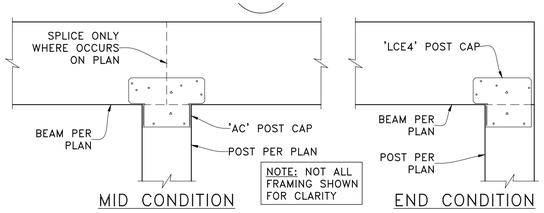


EXTERIOR HEADER @ 2x6 WALLS



TYPICAL STUD WALL FRAMING — A

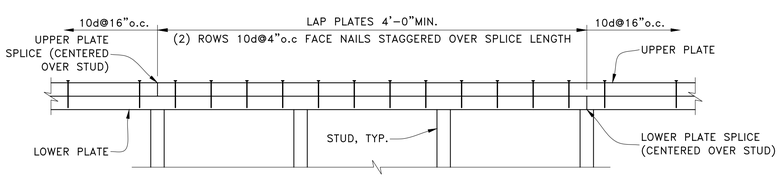
SCALE: NTS



MID CONDITION END CONDITION

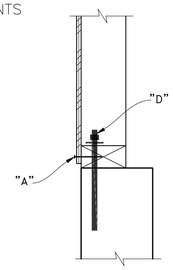
BEAM TO ISOLATED POST — E

SCALE: NTS

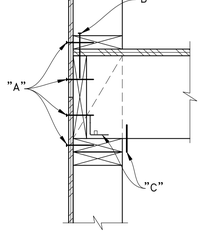


TYPICAL DOUBLE TOP PLATE SPLICE — D

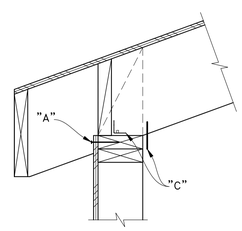
SCALE: NTS



FOUNDATION LEGEND



UPPER FLOOR LEGEND



ROOF LEGEND

SHEAR WALL SCHEDULE (1/2" SHEATHING–RATED WOOD STRUCTURAL PANELS)							
SHEAR WALL MARK	CAPACITY (PLF)	EDGE NAILING "A"	FIELD NAILING[2]	FRAMING AT ADJOINING PANEL EDGES	SOLE PLATE FASTENERS "B"	FRAMING CLIPS "C"	SILL ANCHOR BOLT SPACING – "D"
①	310	10d@6"o.c.	10d@12"o.c.	2x NOMINAL	'SDS25600' @ 8"o.c.[4]	'A34' OR 'LTP4' @ 16"o.c.[5]	4'–0"o.c.[6]
②	460	10d@4"o.c.	10d@12"o.c.	2x NOMINAL	'SDS25600' @ 8"o.c.[4]	'A34' OR 'LTP4' @ 8"o.c.[5]	2'–8"o.c.[6]
③	600	10d@3"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 8"o.c.[4]	'A34' OR 'LTP4' @ 8"o.c.[5]	2'–8"o.c.[6]
④	770	10d@2"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 4"o.c.[4]	'A34' OR 'LTP4' @ 8"o.c.[5]	1'–4"o.c.[6]
DBL SIDED ②	920	10d@4"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 4"o.c.[4]	'A34' OR 'LTP4' @ 4"o.c.[5]	1'–4"o.c.[6]
DBL SIDED ③	1200	10d@3"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 4"o.c.[4]	'A34' OR 'LTP4' @ 4"o.c.[5]	1'–4"o.c.[6]
DBL SIDED ④	1540	10d@2"o.c.[1]	10d@12"o.c.	3x OR 2–2x NOMINAL[3]	'SDS25600' @ 3"o.c.[4]	'A34' OR 'LTP4' @ 4"o.c.[5]	8"o.c.[6]

NOTES

1) STAGGER ROWS OF EDGE NAILING ½" APART. ON DBL SIDED WALLS, STAGGER EDGE NAILS ON PANELS ON OPPOSITE SIDES OF WALL.

2) NAILING TO ALL INTERMEDIATE FRAMING MEMBERS IN FIELD OF PANEL

3) PANEL EDGE NAILING SHALL BE STAGGERED. 2–2x FRAMING MEMBERS SUPPORTING PANEL EDGES SHALL BE FACE NAILED WITH 10d, SPACING TO MATCH PANEL EDGE NAILING, STAGGERED. STAGGER PANEL EDGES IN OPPOSITE PANELS MIN. 2'–0" APART ON DBL SIDED SHEAR WALLS.

4) SCREWS SHALL HAVE MIN. 2" PENETRATION INTO RIM JOIST/ BLOCKING – USE LONGER SCREWS IF NECESSARY.

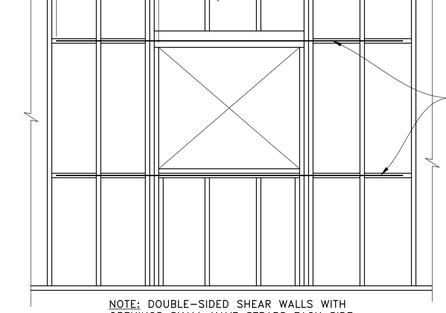
5) FRAMING CLIPS ARE ONLY REQUIRED WHERE SPECIFIED ON FRAMING DETAILS.

6) SEE GENERAL NOTES 7.6 & 7.8 FOR MORE INFORMATION.

7) USE GRADE STRUCTURAL 1 WSPs WHERE 'STRUCT 1' IS NOTED ADJ. TO SHEAR WALL CALLOUTS ON PLAN. INCREASE FREQUENCY OF SOLE PLATE FASTENERS, FRAMING CLIPS & SILL ANCHOR BOLTS BY MIN. 15% AT STRUCT 1 SHEAR WALLS.

SHEAR WALL SCHEDULE (S.W.S.) — H

SCALE: NTS



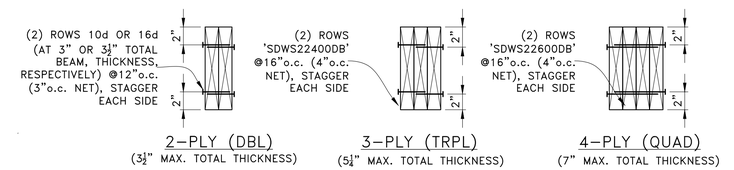
NOTE: DOUBLE–SIDED SHEAR WALLS WITH OPENINGS SHALL HAVE STRAPS EACH SIDE

STRAP PER SCHEDULE BELOW (U.O.N. ON PLAN) – EXTEND MIN. 3'–0" PAST OPENING EACH SIDE (OR TO END OF WALL) OVER 2x4 FLAT BLOCKING BTWN STUDS. PLACE STRAP OVER WALL SHEATHING. PLACE STRAP ON BOTH SIDES OF DBL–SIDED SHEAR WALLS WHERE OCCURS

STRAP SCHEDULE	
SHEAR WALL MARK	STRAP
①	CS20
②	CS16
③	CS16
④	CS14

TYPICAL SHEARWALL STRAP AROUND OPENINGS — B

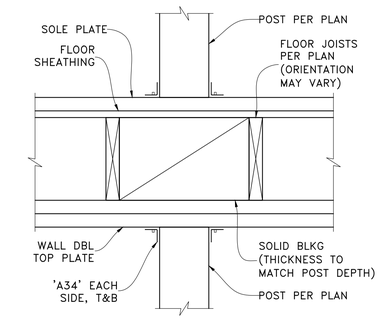
SCALE: NTS



2–PLY (DBL) (3½" MAX. TOTAL THICKNESS)
3–PLY (TRPL) (5¼" MAX. TOTAL THICKNESS)
4–PLY (QUAD) (7" MAX. TOTAL THICKNESS)

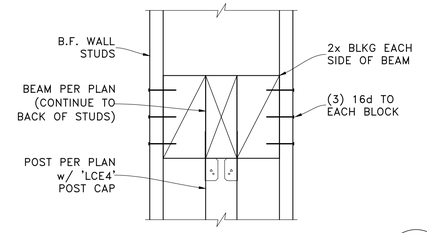
TYPICAL MULTI–PLY BEAM FASTENING — C

SCALE: NTS



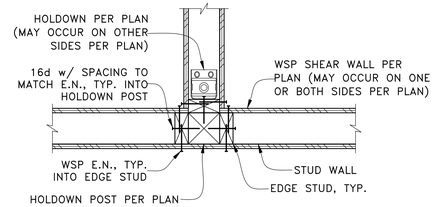
POST IN WALL AT FLOOR — F

SCALE: NTS



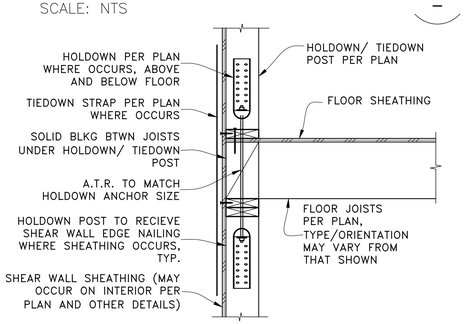
POST IN BALLOON–FRAMED WALL — G

SCALE: NTS



HOLDOWN AT CORNER — I

SCALE: NTS



TYPICAL UPPER FLOOR HOLDOWN OR TIEDOWN STRAP — L

SCALE: NTS

PERMIT SET

REV.	DATE	DESCRIPTION
	11–01–23	PERMIT SET

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5300 Butterworth Road
Mercer Island, WA 98040

CLIENT: Ryan & Ashley Asdourian
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Mercer Island, WA 98040

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SHEET TITLE: TYPICAL DETAILS

SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S3

PLAN LEGEND

PILE	CONCRETE SPREAD FOOTING OR GRADE BEAM w/ PIN PILES PER FOUNDATION SCHEDULE ADJACENT AND NOTES ON THIS PLAN
	STUD WALL ABOVE FLOOR
	WALL OR FOUNDATION BELOW FLOOR
	WINDOW BY ARCH (S.A.D.)
(X) 'L'	½" W.S.P. SHEAR WALL TYPE (X) w/ MIN. LENGTH 'L'. USE GRADE STRUCTURAL 1 SHEATHING WHERE 'STRUCT 1' IS INDICATED ON PLAN & INCREASE SHEAR FASTENERS AND CONNECTORS PER (H / S3) AND DETAIL S.W.S. NOTE 7. REFER TO CALLOUTS ON PLAN
	STEP IN FLOOR
4x4 OR 4x4 BLW	POST ABOVE OR BELOW FLOOR BEARING ON MUDSILL, U.O.N ON PLAN. ALL 'ABUZ' POST BASES SHALL HAVE THE 1" STANDOFF SPACE PACKED SOLID WITH MIN. 7000psi NON-SHRINK, NON-METALLIC GROUT AFTER INSTALLATION, AND SHALL HAVE ⅜" EPOXY ANCHORS w/ 12" EMBED. INTO CONCRETE. REFER TO (E-G / S3)
2-2x HDU2	POST & HOLDOWN OR TIEDOWN STRAP PER (B / S2)
HSS	STEEL RECTANGULAR HSS COLUMN ABOVE FLOOR PER (B / S7)
WSWHXX	SIMPSON STRONG WALL WSWHXX (WHERE XX IS THE PANEL WIDTH) PER ATTACHED MANUFACTURER'S DETAIL SHEET. IN LIEU OF WSWH ANCHOR BOLTS, USE 'SB1x30' ANCHORS w/ 6½" ANCHOR PROJECTION ABOVE T.O. CONCRETE (AS OPPOSED TO THE STANDARD 6" FOR OTHER 'SB' ANCHORS)
SPP	SISTER POSTS w/ 'SDWS22600DB' @12"o.c. CENTERED ON LAP
SWO	STRAP AROUND SHEAR WALL WITH OPENINGS PER (B / S3)

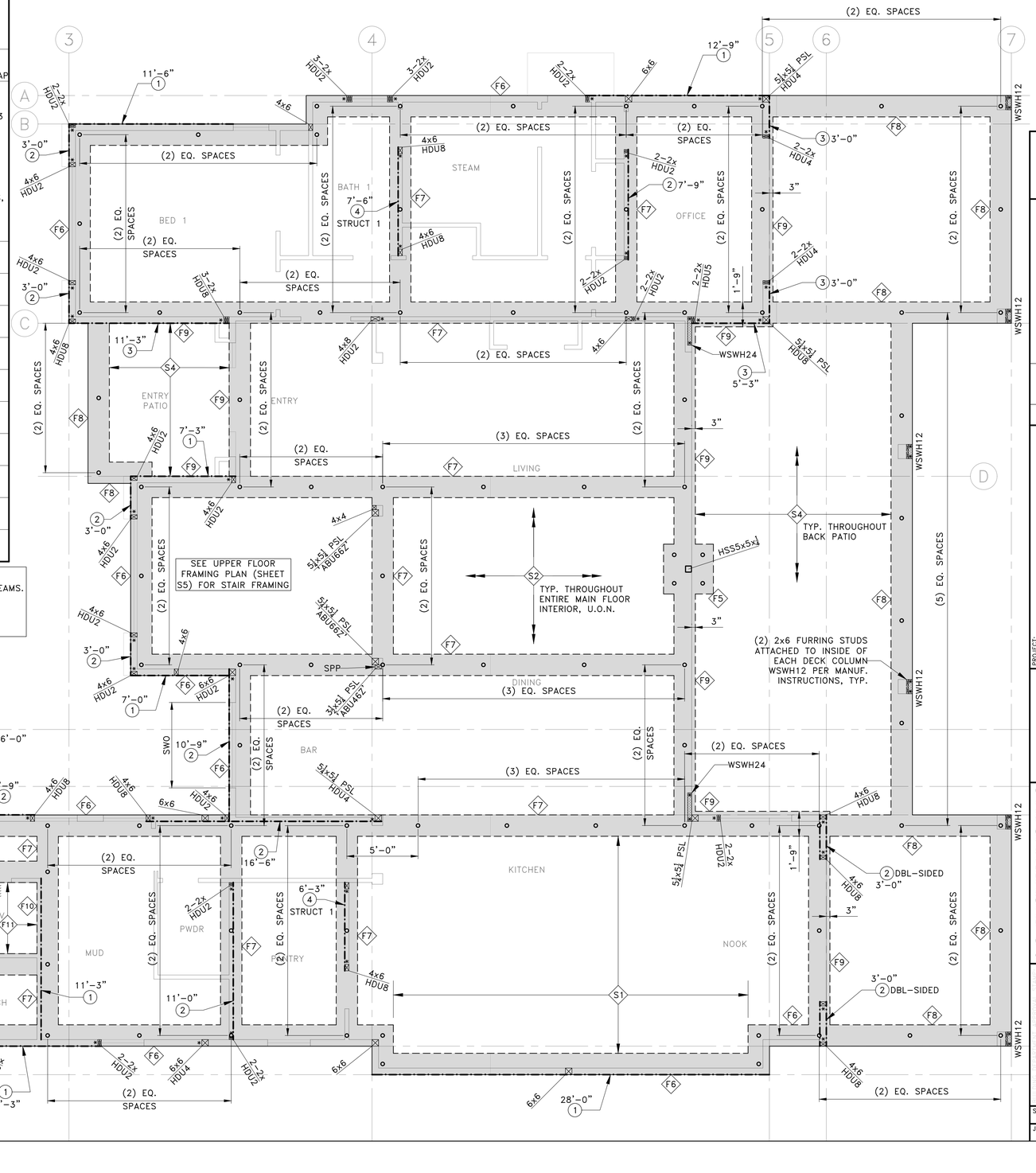
FOUNDATION SCHEDULE

S1	8" LONG-SPAN INTERIOR SUSPENDED SLAB w/ #5@12"o.c. PRIMARY BOTTOM BARS RUNNING IN NORTH/SOUTH DIRECTION	CRACK CONTROL JOINTS IN SUSPENDED SLABS ARE PROHIBITED. SUSPENDED SLABS SHALL HAVE #4 @12"o.c. PRIMARY TOP BARS OVER ALL GRADE BEAMS PLACED PARALLEL TO THE PRIMARY BOTTOM BARS, AND #4@12"o.c. SECONDARY T&B BARS. REFER TO (A / S7) (C / S7)
S2	8" TYPICAL INTERIOR SUSPENDED SLAB w/ #4@12"o.c. PRIMARY BOTTOM BARS RUNNING IN NORTH/SOUTH DIRECTION	
S3	8" GARAGE INTERIOR SUSPENDED SLAB w/ #5@12"o.c. PRIMARY BOTTOM BARS RUNNING IN NORTH/SOUTH DIRECTION	
S4	8" BACK PATIO SUSPENDED SLAB w/ #5@12"o.c. PRIMARY BOTTOM BARS RUNNING IN EAST/WEST DIRECTION	

F5	3'-6"SQ. PILE CAP w/ (4) PIN PILES CENTERED ON HSS COLUMN PER (B / S7)	INTERSECTING GRADE BEAM REBAR CAGE SHALL CONTINUE THROUGH PILE CAP
F6	18"WIDE PERIMETER GRADE BEAM PER (A / S7)	ALL GRADE BEAMS SHALL HAVE (3) #5 T&B LONGITUDINAL BARS, AND #3 CLOSED HOOP TRANSVERSE BARS @12"o.c. ALL GRADE BEAMS HAVE PIN PILES. THERE SHALL BE (1) PILE CENTERED AT EACH GRADE BEAM INTERSECTION & CORNER, AND # OF PILES, CENTERED ON GRADE BEAMS, BETWEEN CORNER/ INTERSECTION PILES IS INDICATED ON PLAN.
F7	18"WIDE INTERIOR GRADE BEAM PER (A / S7)	
F8	18"WIDE BACK PATIO EDGE GRADE BEAM PER (C / S7)	
F9	18"WIDE (U.O.N.) PATIO INTERFACE GRADE BEAM PER (C / S7)	
F10	18"WIDE ELEVATOR PIT GRADE BEAM PER (D / S7)	
F11	8" THICK ELEVATOR PIT SLAB PER (D / S7)	

PLAN NOTES
1) A MIN. 2'-0" WIDE IMPORTED STRUCTURAL FILL LAYER SHALL BE PLACED ALL AROUND THE FOUNDATION PERIMETER. FILL SHALL EXTEND TO THE BOTTOM OF THE GRADE BEAMS.
2) RIGID INSULATION (BY OTHERS, S.A.D.) AROUND THE OUTSIDE OF THE FOUNDATION PERIMETER SHALL HAVE A MIN. COMPRESSIVE RESISTANCE AT YIELD OF 25psi (SUCH AS OWEN'S CORNING FOAMULAR NGX 250 OR APPROVED EQUAL).
3) ALL WALL FRAMING AND SHEATHING MATERIALS LESS THAN 2" ABOVE EXTERIOR SLABS, DRIVEWAYS OR OTHER FLATWORK SHALL BE P.T.

PIN PILE INSTALLATION AND TESTING NOTES
1) PILES SHALL BE FABRICATED FROM 4" SCHEDULE 40 GALVANIZED STEEL PIPE, GRADE ASTM A53. PILE SPLICES SHALL BE MADE WITH COMPRESSION-FITTED SLEEVE COUPLERS (BY FABRICATOR).
2) ALL PILES SHALL BE DRIVEN CONTINUOUSLY TO REFUSAL USING A HYDRAULIC JACKHAMMER, WHICH DETERMINES THE MINIMUM PILE LENGTH AND EMBEDMENT DEPTH. REFUSAL IS DEFINED AS 1 INCH OF PENETRATION IN 10 SECONDS USING AN 1100 LB HAMMER, OR 1 INCH OF PENETRATION IN 4 SECONDS USING A 2000 LB HAMMER.
3) ALL PILES SHALL BE INSTALLED USING A HYDRAULIC IMPACT HAMMER CARRIED ON LEADS THAT ALLOW THE HAMMER TO SIT ON TOP OF THE PILE DURING DRIVING.
4) A TOTAL OF 3% OF THE PILES (ONE PILE MINIMUM, FIVE MAXIMUM) SHALL BE LOAD TESTED TO VERIFY THE DESIGN CAPACITIES. ALL LOAD TESTS SHALL BE PERFORMED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN ASTM D1143. THE MAXIMUM TEST LOAD SHALL BE 20 TONS.
5) THE GEOTECHNICAL SPECIAL INSPECTOR SHALL BE CONTINUOUSLY PRESENT ON SITE DURING PIN PILE INSTALLATION AND LOAD TESTING.



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SHEET TITLE: MAIN FLOOR WALL & FOUNDATION PLAN

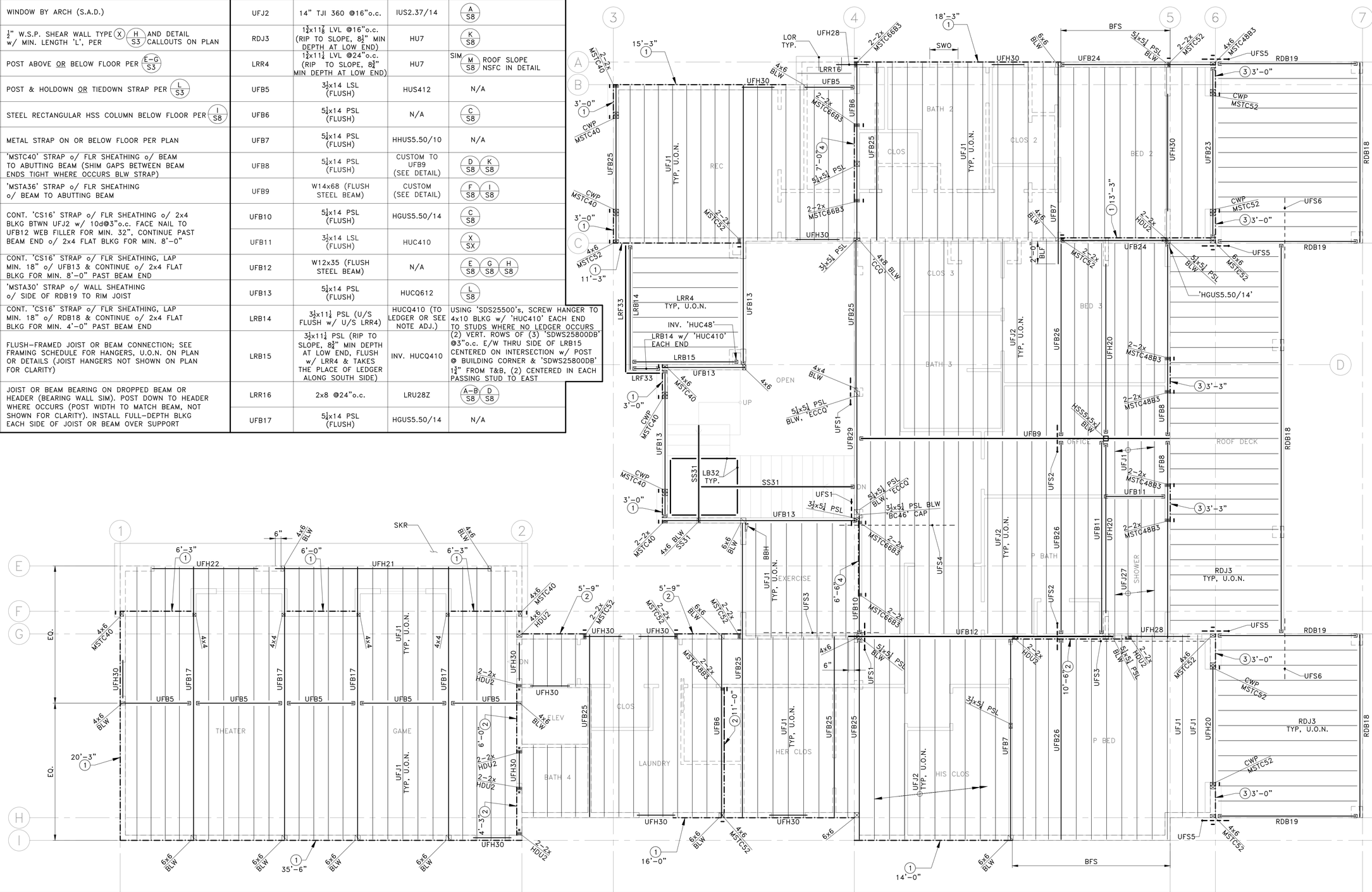
SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S4

PLAN LEGEND
(CONTINUED ON SHEET S5.1)

	STUD WALL ABOVE FLOOR
	WALL BELOW FLOOR
	WINDOW BY ARCH (S.A.D.)
(X) 'L'	½" W.S.P. SHEAR WALL TYPE (X) (H/S3) AND DETAIL w/ MIN. LENGTH 'L', PER CALLOUTS ON PLAN
4x4 OR 4x4 BLW	POST ABOVE OR BELOW FLOOR PER (E-G/S3)
2-2x HDU2 OR 2-2x MSTC28	POST & HOLDOWN OR TIEDOWN STRAP PER (L/S3)
HSS BLW	STEEL RECTANGULAR HSS COLUMN BELOW FLOOR PER (I/S8)
	METAL STRAP ON OR BELOW FLOOR PER PLAN
UFS1	'MSTC40' STRAP o/ FLR SHEATHING o/ BEAM TO ABUTTING BEAM (SHIM GAPS BETWEEN BEAM ENDS TIGHT WHERE OCCURS BLW STRAP)
UFS2	'MSTA36' STRAP o/ FLR SHEATHING o/ BEAM TO ABUTTING BEAM
UFS3	CONT. 'CS16' STRAP o/ FLR SHEATHING o/ 2x4 BLKG BTWN UFJ2 w/ 10d@3"o.c. FACE NAIL TO UFB12 WEB FILLER FOR MIN. 32", CONTINUE PAST BEAM END o/ 2x4 FLAT BLKG FOR MIN. 8'-0"
UFS4	CONT. 'CS16' STRAP o/ FLR SHEATHING, LAP MIN. 18" o/ UFB13 & CONTINUE o/ 2x4 FLAT BLKG FOR MIN. 8'-0" PAST BEAM END
UFS5	'MSTA30' STRAP o/ WALL SHEATHING o/ SIDE OF RDB19 TO RIM JOIST
UFS6	CONT. 'CS16' STRAP o/ FLR SHEATHING, LAP MIN. 18" o/ RDB18 & CONTINUE o/ 2x4 FLAT BLKG FOR MIN. 4'-0" PAST BEAM END
BEAM HANGER	FLUSH-FRAMED JOIST OR BEAM CONNECTION; SEE FRAMING SCHEDULE FOR HANGERS, U.O.N. ON PLAN OR DETAILS (JOIST HANGERS NOT SHOWN ON PLAN FOR CLARITY)
	JOIST OR BEAM BEARING ON DROPPED BEAM OR HEADER (BEARING WALL SIM). POST DOWN TO HEADER WHERE OCCURS (POST WIDTH TO MATCH BEAM, NOT SHOWN FOR CLARITY). INSTALL FULL-DEPTH BLKG EACH SIDE OF JOIST OR BEAM OVER SUPPORT

FRAMING SCHEDULE
(CONTINUED ON SHEET S5.1)

CALLOUT	JOIST/BEAM	HANGER (U.O.N. ON PLAN)	REFER TO DETAIL(S) (OR SEE NOTES BLW)
UFJ1	14" TJI 210 @16"o.c.	IUS2.06/14	(A/S8)
UFJ2	14" TJI 360 @16"o.c.	IUS2.37/14	(A/S8)
RDJ3	1¾x11⅞ LVL @16"o.c. (RIP TO SLOPE, 8¼" MIN DEPTH AT LOW END)	HU7	(K/S8)
LRR4	1¾x11¼ LVL @24"o.c. (RIP TO SLOPE, 8¼" MIN DEPTH AT LOW END)	HU7	SIM. (M/S8) ROOF SLOPE NSFC IN DETAIL
UFB5	3½x14 LSL (FLUSH)	HUS412	N/A
UFB6	5¼x14 PSL (FLUSH)	N/A	(C/S8)
UFB7	5¼x14 PSL (FLUSH)	HHUS5.50/10	N/A
UFB8	5¼x14 PSL (FLUSH)	CUSTOM TO UFB9 (SEE DETAIL)	(D/S8) (K/S8)
UFB9	W14x68 (FLUSH STEEL BEAM)	CUSTOM (SEE DETAIL)	(F/S8) (I/S8)
UFB10	5¼x14 PSL (FLUSH)	HGUS5.50/14	(C/S8)
UFB11	3½x14 LSL (FLUSH)	HUC410	(X/SX)
UFB12	W12x35 (FLUSH STEEL BEAM)	N/A	(E/S8) (G/S8) (H/S8)
UFB13	5¼x14 PSL (FLUSH)	HUCQ612	(L/S8)
LRB14	3½x11¼ PSL (U/S FLUSH w/ U/S LRR4)	HUCQ410 (TO LEDGER OR SEE NOTE ADJ.)	USING 'SDS25500's, SCREW HANGER TO 4x10 BLKG w/ 'HUC410' EACH END TO STUDS WHERE NO LEDGER OCCURS (2) VERT. ROWS OF (3) 'SDWS25800DB' @3"o.c. E/W THRU SIDE OF LRB15 CENTERED ON INTERSECTION w/ POST @ BUILDING CORNER & 'SDWS25800DB' 1¾" FROM T&B, (2) CENTERED IN EACH PASSING STUD TO EAST
LRB15	3½x11¼ PSL (RIP TO SLOPE, 8¼" MIN DEPTH AT LOW END, FLUSH w/ LRR4 & TAKES THE PLACE OF LEDGER ALONG SOUTH SIDE)	INV. HUCQ410	
LRR16	2x8 @24"o.c.	LRU28Z	(A-B/S8) (D/S8)
UFB17	5¼x14 PSL (FLUSH)	HGUS5.50/14	N/A



PLAN LEGEND

(CONTINUED FROM SHEET S5)

BBH	'HDU2' HORIZ. HOLDOWN @ INSIDE OF UFB25 (USE 'SDS25112' SCREWS) w/ $\frac{5}{8}$"ø x4" FULL–THREAD LAG SCREW TO UFB13
BFS	B.F. EXTERIOR WALL STUDS FROM UPPER FLR PAST PRIMARY ROOF TO OVER–FRAMED ROOF. STUDS > 9'–0" TALL SHALL BE $1\frac{3}{4}$x$5\frac{1}{2}$ LVL w/ 'A35' T&B
BLF	(4) ROWS OF (4) 16d FACE NAILS @3"o.c E/W THRU SIDE OF UFB26 TO UFB7
CWP	$3\frac{1}{2}$x$5\frac{1}{4}$ PSL CATHEDRAL WINDOW CRIPPLE POST SISTERED TO $3\frac{1}{2}$x$5\frac{1}{4}$ PSL KING POST w/ 'SDS25600' FACE SCREWS @12"o.c. KING POST SHALL HAVE 'LS50' EACH SIDE, T&B
SKR	GARAGE SKIRT ROOF PER J/S8 (FRAMING NSFC ON PLAN)
SWO	STRAP AROUND SHEAR WALL WITH OPENINGS PER B/S3

FRAMING SCHEDULE

(CONTINUED FROM SHEET S5)

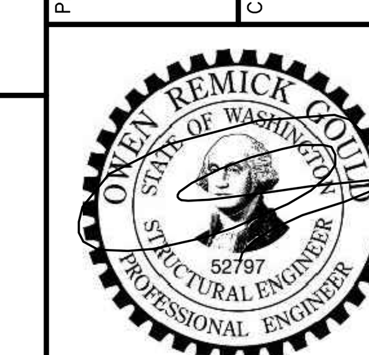
CALLOUT	JOIST/BEAM	HANGER (U.O.N. ON PLAN)	REFER TO DETAIL(S) (OR SEE NOTES BLW)
RDB18	$5\frac{1}{4}$x$11\frac{1}{4}$ PSL (UPSET, U/S FLUSH w/ U/S RDJ3)	HUC610	OUTSIDE FACE OF RDB18 FLUSH WITH OUTSIDE FACE OF WSWH BLW. RDJ3 HANG OFF $1\frac{3}{4}$x$8\frac{1}{2}$ LVL LEDGER SCREWED TO RDB18 PER K/S8 SIM
RDB19	(2) $1\frac{3}{4}$ LVL (RIP $11\frac{7}{8}$" DEEP JOISTS TO SLOPE, $8\frac{1}{2}$" MIN DEPTH, FLUSH)	HUC48	K/S8
UFH20	$5\frac{1}{2}$x$10\frac{1}{2}$ GLB (DROPPED SLIDING DOOR HEADER)	HUC610 (SIX $\frac{1}{8}$"x1" FILLET WELDS TO STEEL POST)	A/S3
UFH21	$5\frac{1}{4}$x14 PSL (FLUSH HEADER)	N/A	UFH22 OVER WALL OPNG BELOW NSFC ON PLAN
UFH22	$5\frac{1}{2}$x9 GLB (DROPPED HEADER)	N/A	A/S3
UFB23	$5\frac{1}{4}$x14 PSL (FLUSH)	MGU5.50/14 (ONE FLANGE CONCEALED)	D/S8 K/S8
UFB24	$5\frac{1}{4}$x14 PSL (FLUSH)	INV. HUCQ612	D/S8
UFB25	$1\frac{3}{4}$x14 LSL (FLUSH)	HU11	B/S8 10d@3"o.c. @ FLR SHEATHING TO FULL–LENGTH OF BEAM
UFB26	$3\frac{1}{2}$x14 LSL (FLUSH)	N/A	B/S8 WHERE LOCATED ABOVE SHEAR WALL, 6"o.c. ELSEWHERE
UFJ27	$9\frac{1}{2}$" TJI 210 @16"o.c.	IUS2.06/9.5	X/SX
UFH28	$3\frac{1}{2}$x9 GLB (DROPPED HEADER)	N/A	A/S3 A/S10 WHERE OCCURS
UFB29	$5\frac{1}{4}$x14 PSL (FLUSH)	N/A	X/SX
UFH30	4x10 (DROPPED HEADER)	N/A	A/S3
SS31	HSS6x6x$\frac{3}{8}$ STAIR STRINGER	SEE DETAILS (TBD)	CJP WELD ALL AROUND AT BENDS. FILLET WELD ALL AROUND TO INTERSECTING SS31. WELDED END PLATE SCREWED TO SIDE OF UFB29. WELDED BASE PLATE EPOXY–BOLTED TO SLAB @ BASE
LB32	L6x4x$\frac{5}{16}$ STAIR LANDING EDGE BEAM	SEE DETAILS (TBD)	FILLET WELD ALL AROUND TO INTERSECTING SS31, BUTT WELD ALL AROUND AT MITERED CORNERS. (2) 'SDWS22500DB' @3"o.c. VERT. SPACING TO EACH PASSING STUD OR POST IN ADJ. WALL WHERE OCCURS
LRF33	C15x33.9 STEEL FASCIA	N/A	ON BACK SIDE OF FASCIA FLANGE, INSTALL (2) STAGGERED ROWS $\frac{1}{2}$"ø WELDED, THRD STUDS THRU–BOLTED TO LRB14 @12"o.c NET (PLACE BTWN RAFTERS), ROWS LOCATED 3" FROM T&B OF LRB14

PERMIT SET

REV.	DATE	DESCRIPTION
	11-01-23	PERMIT SET

PROJECT: **NEW SINGLE–FAMILY DWELLING**
5300 Butterworth Road
Mercer Island, WA 98040

CLIENT: **Ryan & Ashley Asdourian**
5300 Butterworth Road
Mercer Island, WA 98040



ENGINEER OF RECORD

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(206) 290-4608
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SHEET TITLE: **UPPER FLOOR FRAMING LEGEND & SCHEDULE CONTINUED**

BUILDING DEPARTMENT APPROVAL STAMP:

SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S5.1

PLAN LEGEND

	WALL BELOW ROOF
4x4 BLW	POST BELOW ROOF PER (E–G / S3)
	METAL STRAP ON OR BELOW ROOF PER PLAN
OVF	OVER–FRAMING PER (L / S9)
DTT	'HDU2' DRAG TRUSS TIE TO ABUTTING DBL TOP PLATE PER (X / SX)
RS1	'CS16' STRAP o/ ROOF SHEATHING, LAP MIN. 18" o/ DRAG RAFTER & CONTINUE o/ EAVE BLKG FOR MIN. (2) RAFTER BAYS w/ (2) 'A35' @ EACH BLOCK TO TOP PLATE
RS2	'LSTA30' STRAP o/ ROOF SHEATHING o/ T.O. DRAG RAFTER ACROSS RIDGE BEAM
CBW	EXTEND UPSET BEAM 30" PAST POST TO INSTALL (4) 'A35' CLIPS FROM SIDE OF BEAM TO T.O. DBL TOP PLATE BLW
CWP	3½x5¼ PSL CATHEDRAL WINDOW CRIPPLE POST SISTERED TO 3½x5¼ PSL KING POST w/ 'SDS25600' FACE SCREWS @12"o.c. KING POST SHALL HAVE 'LS50' EACH SIDE, T&B
HPA	HEAT PUMP (BY OTHERS) IN ATTIC; S.A.D. FOR EXACT LOCATION AND WEIGHT
HRT	HANG CATHEDRAL CEILING RAFTERS OFF SIDE OF DRAG TRUSS BOTTOM CHORD WITH 'LUS' (DEPTH TO MATCH BOTTOM CHORD)
LOR	LOOKOUT RAFTERS PER (B / S9) (G / S9) (K / S9)
BEAM HANGER	FLUSH–FRAMED RAFTER/JOIST OR BEAM CONNECTION; SEE FRAMING SCHEDULE FOR HANGERS, U.O.N. ON PLAN OR DETAILS (RAFTER/ JOIST HANGERS NOT SHOWN ON PLAN FOR CLARITY)
	RAFTER/JOIST OR BEAM BEARING ON DROPPED BEAM OR HEADER (BEARING WALL SIM). POST DOWN TO HEADER WHERE OCCURS (POST WIDTH TO MATCH BEAM, NOT SHOWN FOR CLARITY). INSTALL FULL–DEPTH BLKG EACH SIDE OF RAFTER/JOIST OR BEAM OVER SUPPORT

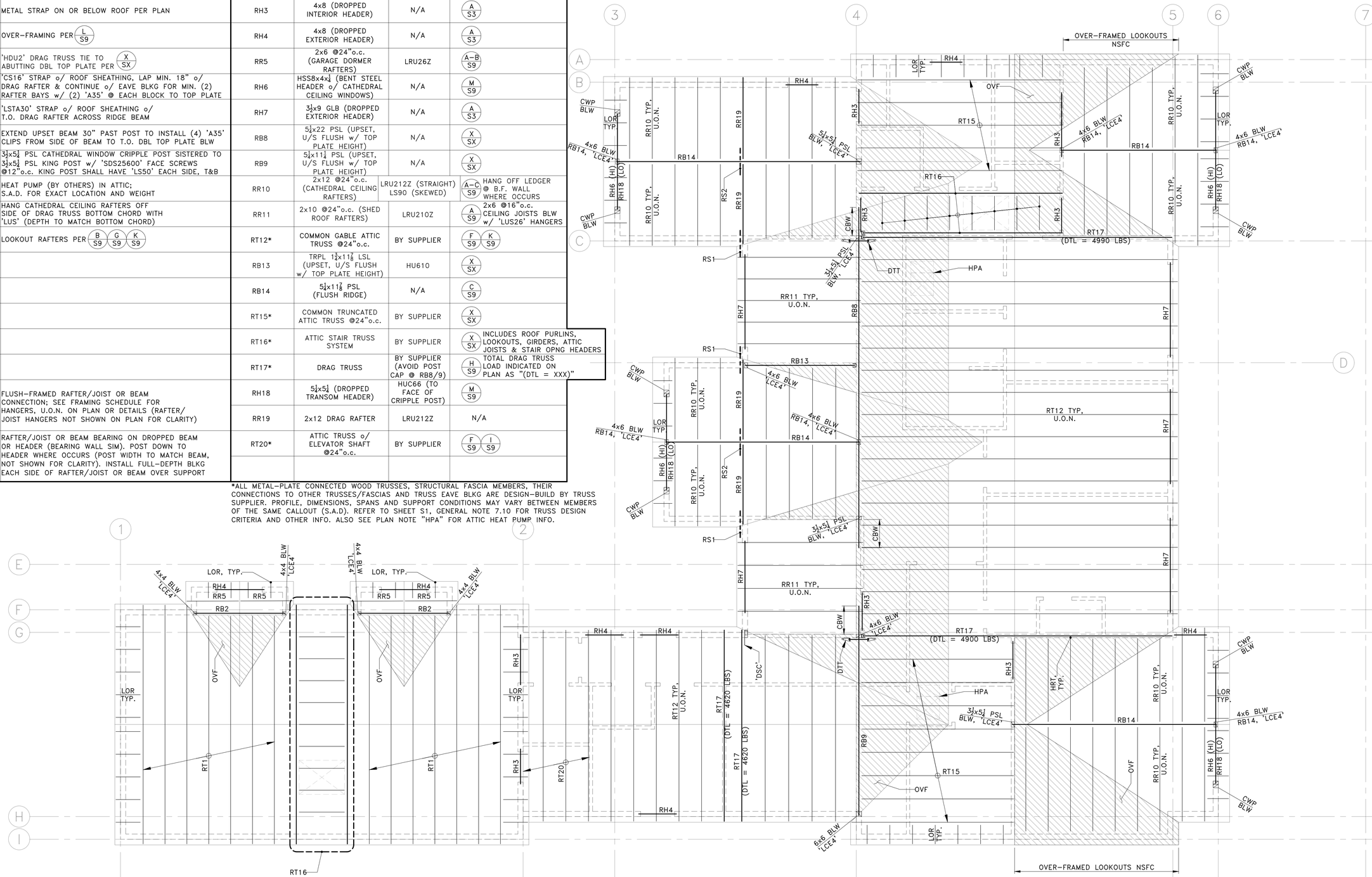
FRAMING SCHEDULE

CALLOUT	JOIST/BEAM	HANGER (U.O.N. ON PLAN)	REFER TO DETAIL(S) (OR SEE NOTES BLW)
RT1*	COMMON ATTIC TRUSS w/ TRAY CEILING @24"o.c.	BY SUPPLIER	SIM (F / S9) (K / S9) SIM
RB2	3½x9½ PSL (UPSET, U/S FLUSH w/ TOP PLATE HEIGHT)	N/A	(X / SX)
RH3	4x8 (DROPPED INTERIOR HEADER)	N/A	(A / S3)
RH4	4x8 (DROPPED EXTERIOR HEADER)	N/A	(A / S3)
RR5	2x6 @24"o.c. (GARAGE DORMER RAFTERS)	LRU26Z	(A–B / S9)
RH6	HSS8x4x¼ (BENT STEEL HEADER o/ CATHEDRAL CEILING WINDOWS)	N/A	(M / S9)
RH7	3½x9 GLB (DROPPED EXTERIOR HEADER)	N/A	(A / S3)
RB8	5¼x22 PSL (UPSET, U/S FLUSH w/ TOP PLATE HEIGHT)	N/A	(X / SX)
RB9	5¼x11¼ PSL (UPSET, U/S FLUSH w/ TOP PLATE HEIGHT)	N/A	(X / SX)
RR10	2x12 @24"o.c. (CATHEDRAL CEILING RAFTERS)	LRU212Z (STRAIGHT) LS90 (SKEWED)	(A–C / S9) HANG OFF LEDGER @ B.F. WALL WHERE OCCURS
RR11	2x10 @24"o.c. (SHED ROOF RAFTERS)	LRU210Z	(A / S9) 2x6 @16"o.c. CEILING JOISTS BLW w/ 'LUS26' HANGERS
RT12*	COMMON GABLE ATTIC TRUSS @24"o.c.	BY SUPPLIER	(F / S9) (K / S9)
RB13	TRPL 1¾x11¼ LSL (UPSET, U/S FLUSH w/ TOP PLATE HEIGHT)	HU610	(X / SX)
RB14	5¼x11⅞ PSL (FLUSH RIDGE)	N/A	(C / S9)
RT15*	COMMON TRUNCATED ATTIC TRUSS @24"o.c.	BY SUPPLIER	(X / SX)
RT16*	ATTIC STAIR TRUSS SYSTEM	BY SUPPLIER	(X / SX) INCLUDES ROOF PURLINS, LOOKOUTS, GIRDERS, ATTIC JOISTS & STAIR OPNG HEADERS
RT17*	DRAG TRUSS	BY SUPPLIER (AVOID POST CAP @ RB8/9)	(H / S9) TOTAL DRAG TRUSS LOAD INDICATED ON PLAN AS "(DTL = XXX)"
RH18	5¼x5¼ (DROPPED TRANSOM HEADER)	HUC66 (TO FACE OF CRIPPLE POST)	(M / S9)
RR19	2x12 DRAG RAFTER	LRU212Z	N/A
RT20*	ATTIC TRUSS o/ ELEVATOR SHAFT @24"o.c.	BY SUPPLIER	(F / S9) (I / S9)

*ALL METAL–PLATE CONNECTED WOOD TRUSSES, STRUCTURAL FASCIA MEMBERS, THEIR CONNECTIONS TO OTHER TRUSSES/FASCIAS AND TRUSS EAVE BLKG ARE DESIGN–BUILD BY TRUSS SUPPLIER. PROFILE, DIMENSIONS, SPANS AND SUPPORT CONDITIONS MAY VARY BETWEEN MEMBERS OF THE SAME CALLOUT (S.A.D). REFER TO SHEET S1, GENERAL NOTE 7.10 FOR TRUSS DESIGN CRITERIA AND OTHER INFO. ALSO SEE PLAN NOTE "HPA" FOR ATTIC HEAT PUMP INFO.

SHEET NOTES

1. S.A.D. FOR EXTENT AND DIMENSIONS OF VAULTED CEILINGS AND ATTIC SPACES



PERMIT SET

REV.	DATE	DESCRIPTION
	11–01–23	PERMIT SET

PROJECT:
NEW SINGLE–FAMILY DWELLING
5300 Butterworth Road
Mercer Island, WA 98040

CLIENT:
Ryan & Ashley Asdourian
5300 Butterworth Road
Mercer Island, WA 98040

OWEN REMICK SCOTT — STATE OF WASHINGTON — 52797 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

ENGINEER OF RECORD

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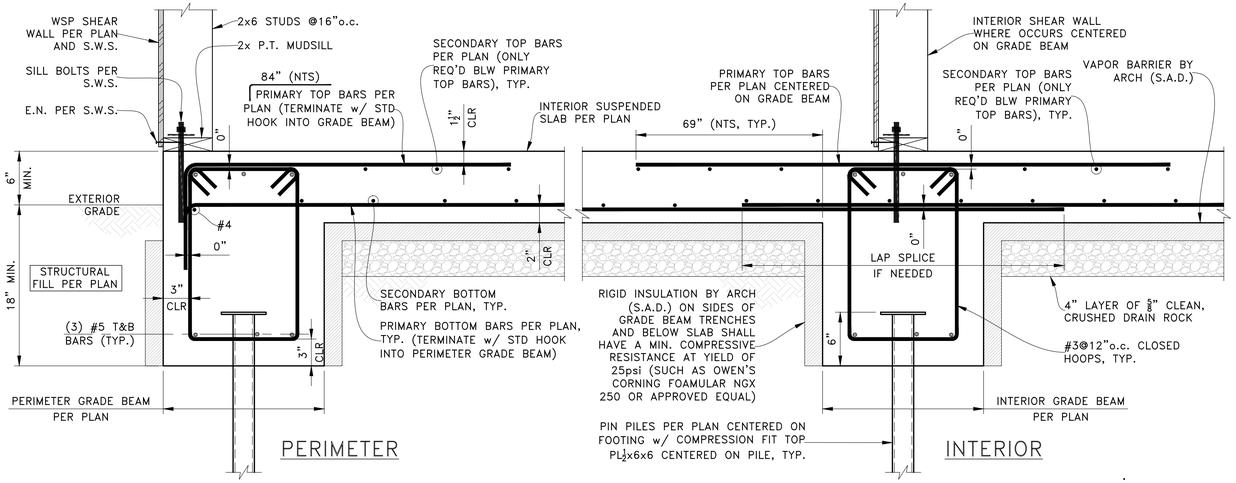
SHEET TITLE:
ROOF FRAMING PLAN

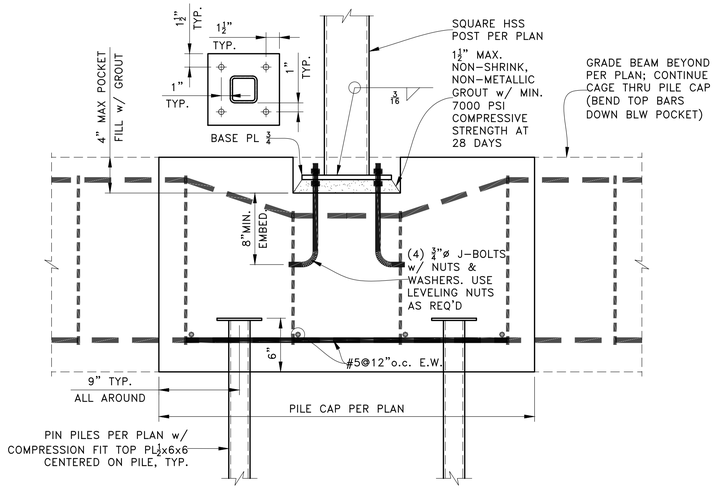
SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S6



TYPICAL GRADE BEAMS AND INTERIOR SUSPENDED SLAB

A

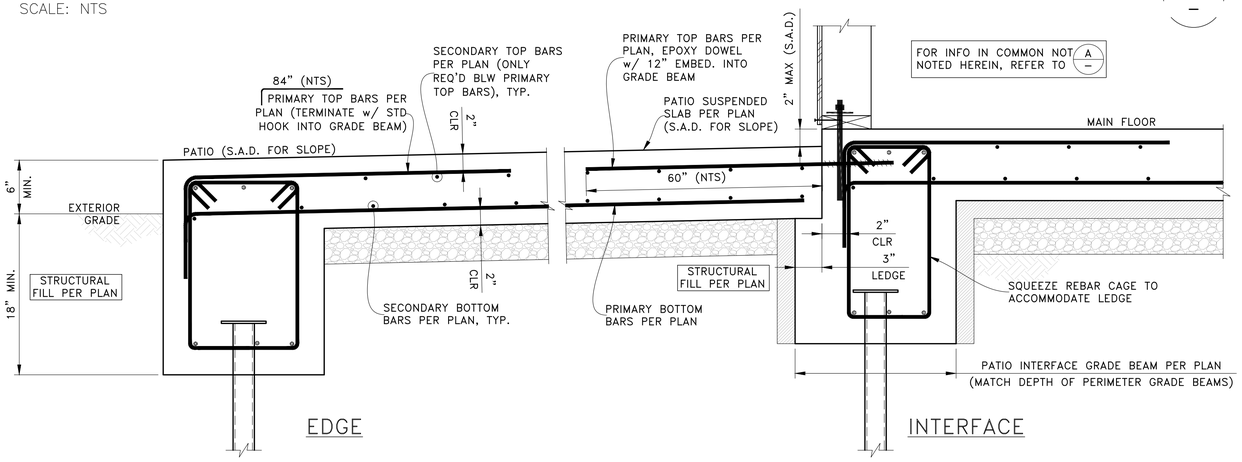
SCALE: NTS



PILE CAP AT STEEL POST

B

SCALE: NTS



PATIO GRADE BEAMS & SUSPENDED SLAB

C

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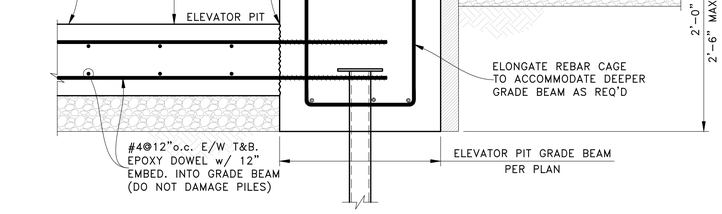

ELEVATOR PIT & GRADE BEAMS

D

SCALE: NTS

PERMIT SET

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	11-01-23	PERMIT SET

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NEW SINGLE-FAMILY DWELLING
5300 Butterworth Road
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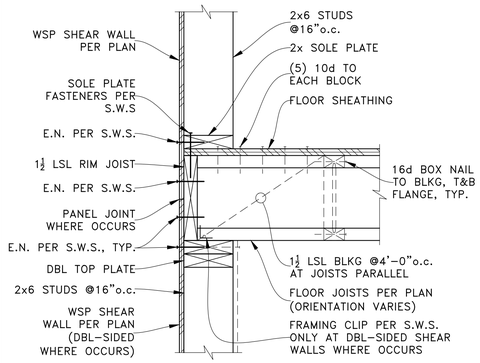
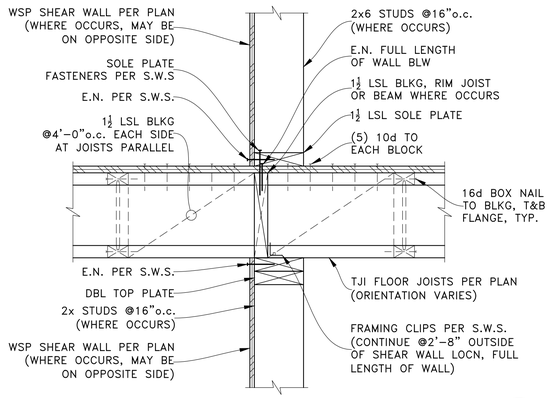
SHEET TITLE:
SECTIONS & DETAILS

SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S7



EXTERIOR WALL AT FLOOR — A

SCALE: NTS



INTERIOR SHEAR WALL AT FLOOR — B

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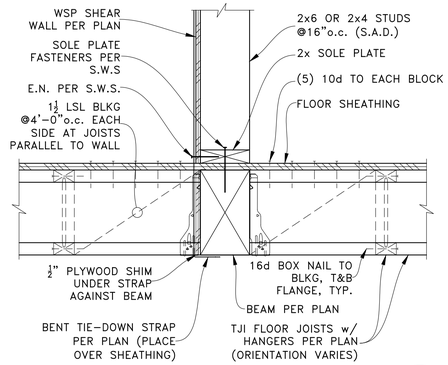
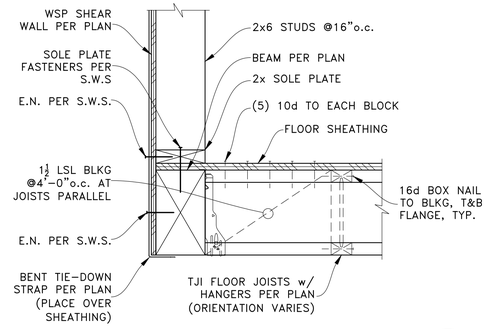


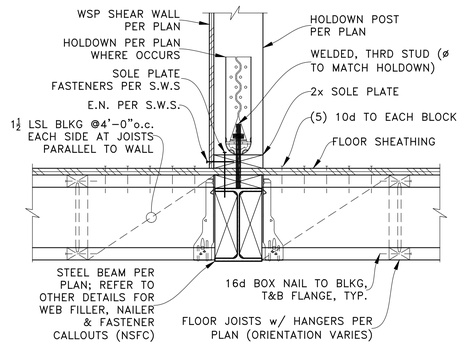
INTERIOR SHEAR WALL ON BEAM — C

SCALE: NTS



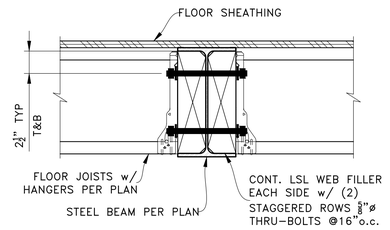
EXTERIOR WALL ON BEAM — D

SCALE: NTS



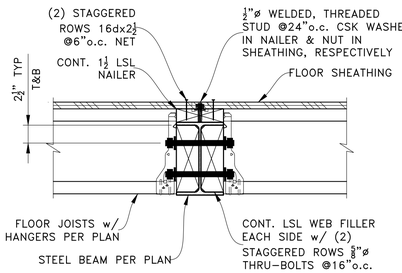
SHEAR WALL ON STEEL BEAM — E

SCALE: NTS



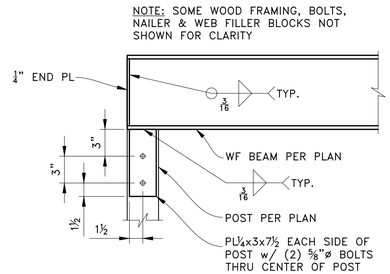
FLUSH STEEL BEAM — F

SCALE: NTS



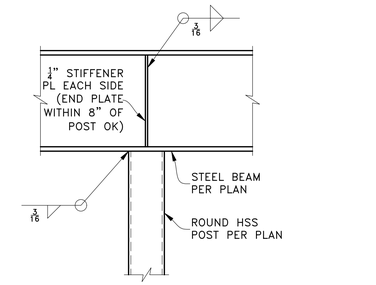
FLUSH STEEL BEAM — G

SCALE: NTS



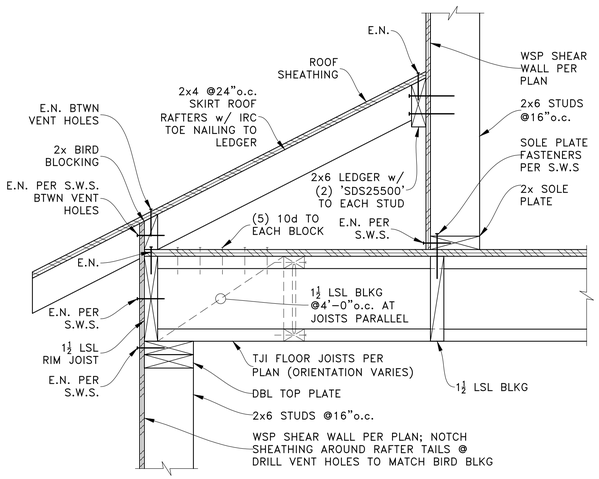
STEEL BEAM TO WOOD POST — H

SCALE: NTS



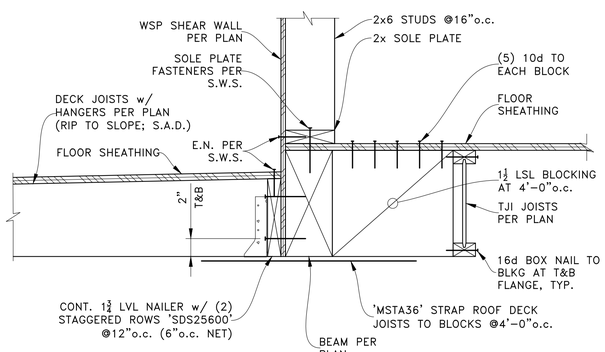
STEEL BEAM TO STEEL POST — I

SCALE: NTS



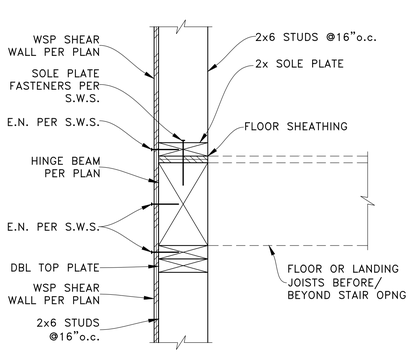
OFFSET EXTERIOR WALL AT SKIRT ROOF — J

SCALE: NTS



ROOF DECK — K

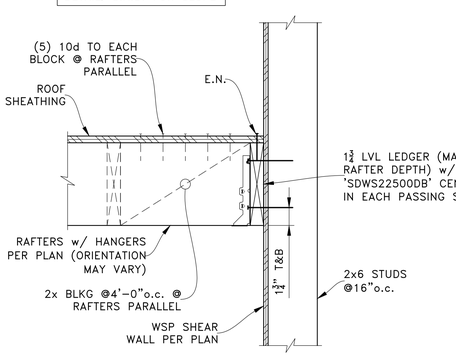
SCALE: NTS



HINGE BEAM — L

SCALE: NTS

NOTE: ROOF SLOPE WHERE OCCURS NSFC IN THIS DETAIL; S.A.D. FOR SLOPE



LEDGER TO EXTERIOR WALL — M

SCALE: NTS

PERMIT SET

REV.	DATE	DESCRIPTION
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PROJECT: NEW SINGLE-FAMILY DWELLING
5300 Butterworth Road
Mercer Island, WA 98040

CLIENT: Ryan & Ashley Asdourian
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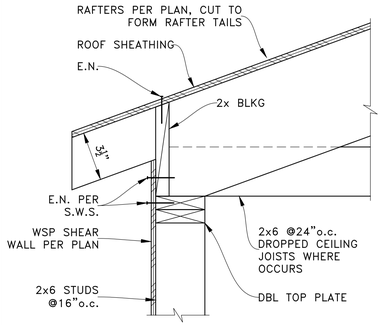
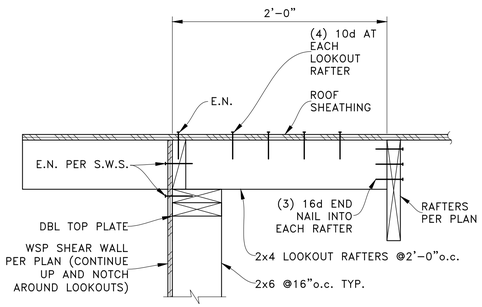
SHEET TITLE: SECTIONS & DETAILS

SCALE: AS NOTED
JOB NO. 23010
SHEET NO. S8



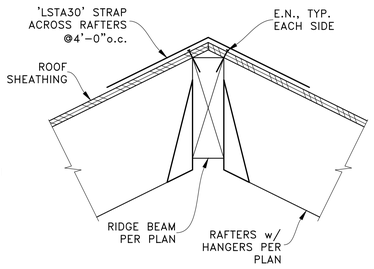
STICK ROOF EAVE — A

SCALE: NTS



STICK ROOF RAKE — B

SCALE: NTS



RIDGE BEAM — C

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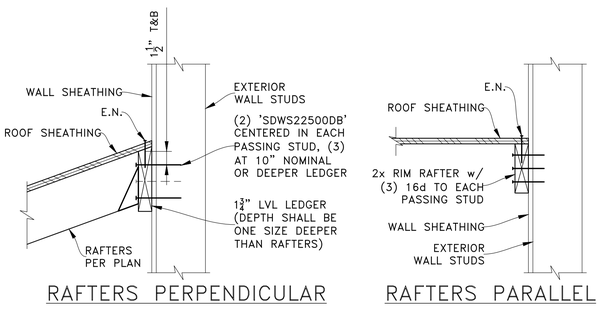
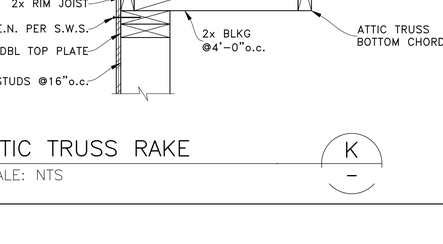


RAFTERS TO EXTERIOR WALL — D

SCALE: NTS



TRUSS ROOF EAVE — F

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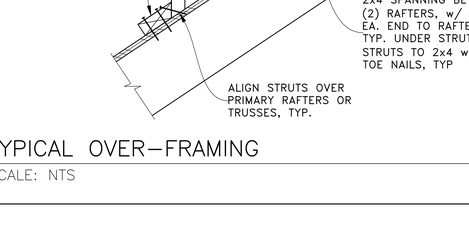

TRUSS ROOF RAKE — G

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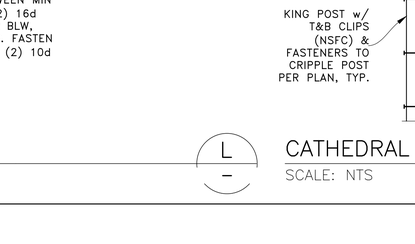
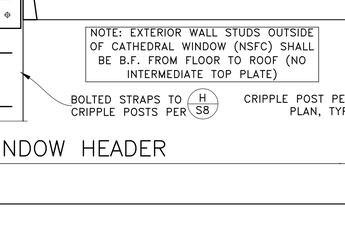


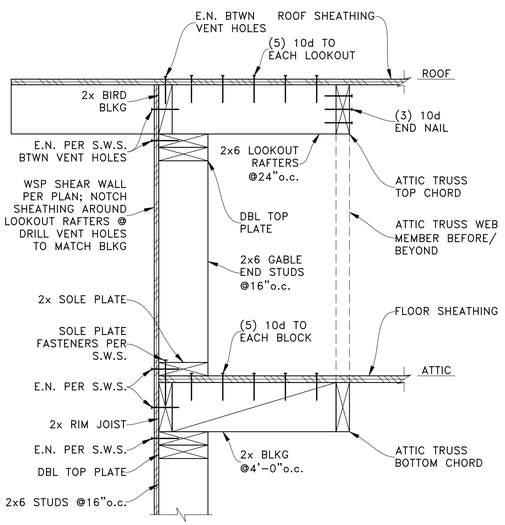
INTERIOR SHEAR WALL AT DRAG TRUSS — H

SCALE: NTS



LOW ROOF TO WALL — I

SCALE: NTS



ATTIC TRUSS RAKE — K

SCALE: NTS

TYPICAL OVER-FRAMING — L

SCALE: NTS

CATHEDRAL WINDOW HEADER — M

SCALE: NTS

PERMIT SET

REV.	DATE	DESCRIPTION
	11-01-23	PERMIT SET

PROJECT:
NEW SINGLE-FAMILY DWELLING
5300 Butterworth Road
Mercer Island, WA 98040

CLIENT:
Ryan & Ashley Asdourian
5300 Butterworth Road
Mercer Island, WA 98040

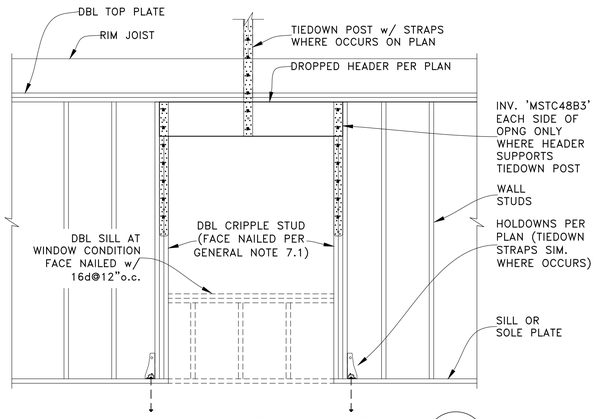
OWEN REMICK COUTTS — STATE OF WASHINGTON — 52797 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

ENGINEER OF RECORD

O.G. ENGINEERING, PLLC
3201 1st Ave S, Suite 101, Seattle, WA 98134
(206) 290-4408
owen@ogengineers.com

SHEET TITLE:
SECTIONS & DETAILS

SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S9



TIEDOWN TO DROPPED HEADER A

SCALE: NTS

PERMIT SET

REV.	DATE	DESCRIPTION
	11-01-23	PERMIT SET

PROJECT:
NEW SINGLE-FAMILY DWELLING
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SHEET TITLE:
SECTIONS & DETAILS

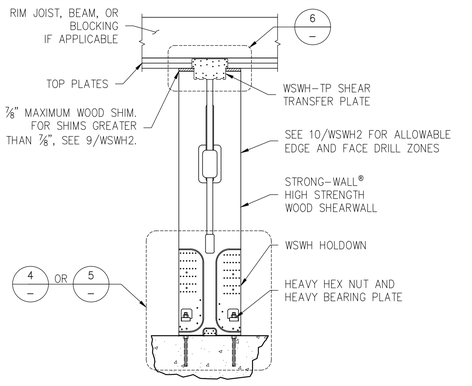
SCALE: AS NOTED
JOB NO. 23010
SHEET. NO. S10

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74½".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

STRONG-WALL® WSWH MODELS 1



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

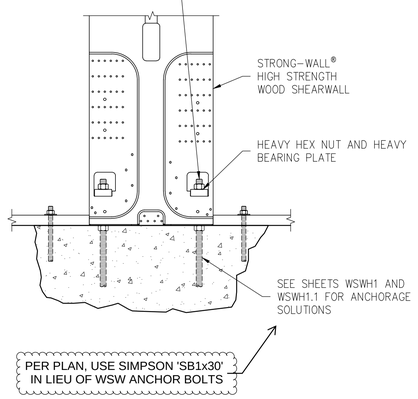
ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSWH ON CONCRETE 2

STANDARD INSTALLATION BASE CONNECTION 4

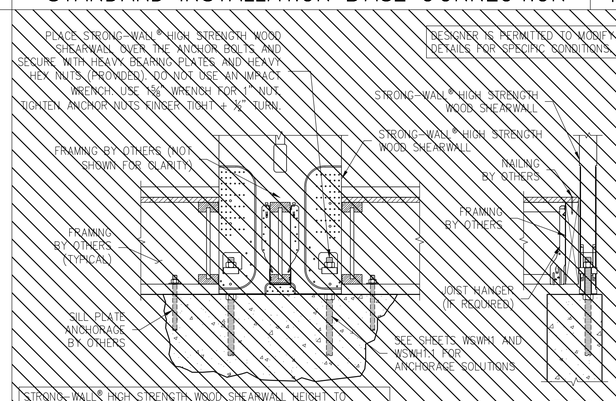
PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅛" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

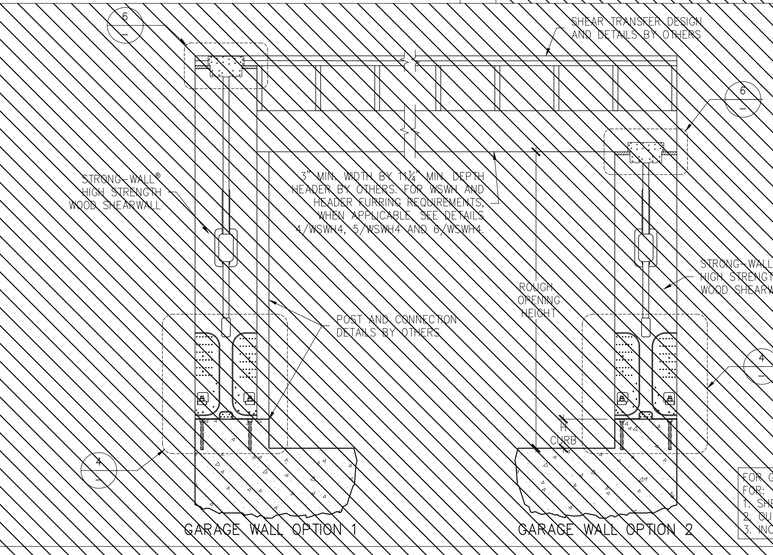


WOOD FLOOR SYSTEM BASE CONNECTION 5

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



ALTERNATE WSWH GARAGE FRONT OPTIONS 3



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-RS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

GARAGE HEADER ROUGH OPENING HEIGHT

MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	3½"	8'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24-x8	85½"	6"	7'-1½"
	93¾"	5½"	8'-2¾"
		6"	8'-3¾"

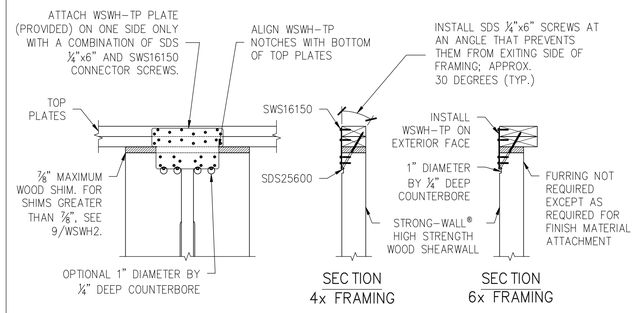
NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74½".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

TOP CONNECTION 6

MODEL NO.	WSWH-TP CONNECTION FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

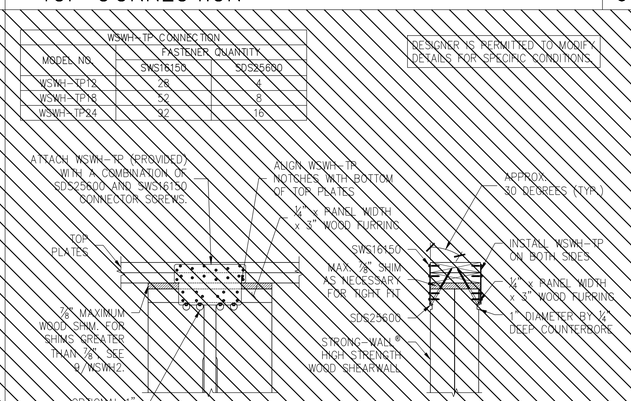
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



BACK-TO-BACK TOP CONNECTION 7

MODEL NO.	WSWH-TP CONNECTION FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



RAKE WALL 8

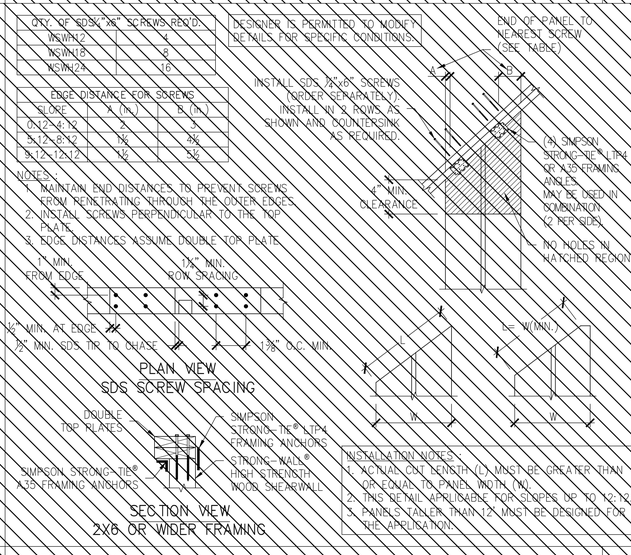
QTY. OF SDS¼"x6" SCREWS REQ'D.

WSWH12	4
WSWH18	8
WSWH24	16

EDGE DISTANCE FOR SCREWS

SLOPE	A (in.)	B (in.)
0:12-4:12	¾	2½
5:12-8:12	1¼	4½
9:12-12:12	1¾	5½

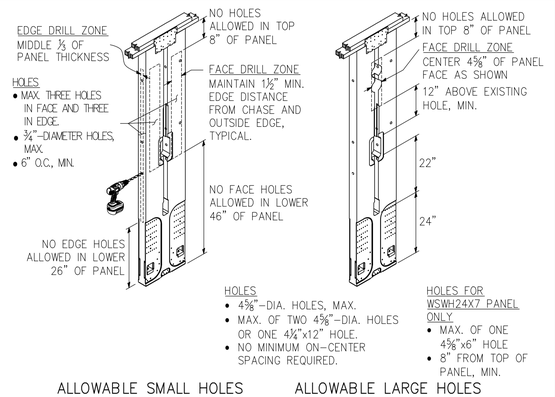
NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.



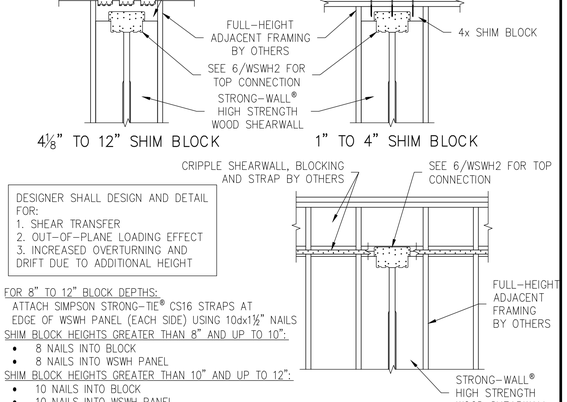
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

TOP OF WALL HEIGHT ADJUSTMENTS 9



TRIM ZONE AND ALLOWABLE HOLES 10



DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS

SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL

NOTES 11

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

NO.	DATE	REVISIONS
0	11-20-2020	FIRST RELEASE - 2018 IBC
1	03-16-2021	2021 IBC REVISIONS

SIMPSON Strong-Tie, Co. Inc.
• 5956 W. Las Positas Blvd.
• Pleasanton, CA 94588
• Tel: (800) 999-5099
• Website: www.strongtie.com

SIMPSON Strong-Tie THERE IS NO EQUAL

STRONG-WALL® WSWH
FRAMING DETAILS
ENGINEERED DESIGNS

SIMPSON Strong-Tie THERE IS NO EQUAL

NAME	
DATE	03-16-2021
SCALE	N.T.S.
CHECKED	
SHEET	WSWH2
OF	SHEETS
JOB NO.	