

- ELEVATION NOTES:**
1. VERIFY SHEAR WALL NAILING & HOLDINGS PER PLAN PRIOR TO INSTALLING SIDING.
  2. MASONRY & WOOD FRAME CHIMNEYS ARE TO BE CONSTRUCTED PER I.R.C. CHAPTER 10.
  3. CAULK ALL EXTERIOR JOINTS & PENETRATIONS.
  4. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER I.R.C. R103.4.
  5. PROVIDE FLASHING AT ROOF PENETRATIONS PER I.R.C. R403.2 & R403.2.1.
  6. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS.
  7. PROVIDE CONTINUOUS GUTTERS & DOWNSPOUTS @ ALL EAVES, TYP.
  8. ADDRESS OR HOUSE NUMBER TO BE POSTED AND PLAINLY VISIBLE FROM THE STREET FRONTAGE. NUMBERS TO BE MIN. 4" HIGH WITH 1/4" WIDE STROKE & CONTRASTING BACKGROUND.
  9. PROVIDE STAIRWAY ILLUMINATION PER I.R.C. R303.7 & R303.8.
  10. SEE SHEET A1 FOR ADDITIONAL NOTES.



PAYMENT OF USE FEE IS DUE TO ARCHITECTS NORTHWEST, INC. PRIOR TO CONSTRUCTION FOR THESE PLANS. THESE PLANS ARE COPYRIGHTED IN ACCORDANCE WITH THE ARCHITECTS ACT OF WASHINGTON. NO METHOD OF ALL OR PORTIONS OF THESE PLANS OR FROM ARCHITECTS NORTHWEST, INC. IS STRICTLY PROHIBITED. THESE DRAWINGS AND PLANS SET FORTH THE DESIGN AND CONSTRUCTION OF THE ABOVE AND SHALL REMAIN THE PROPERTY OF ARCHITECTS NORTHWEST, INC.

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LONG DADU  
 PLAN A911A0-0

DESIGNED BY:	DATE:
MBJ	05/20/25
DRAWN BY:	DATE:
BPS	7/29/25
PROJECT MANAGER:	
MARCUS JENKINS	
REVISED BY:	DATE:
BPS	8/15/25
BPS	12/19/25
LATERAL BY:	DATE:
ZVELT	6/25/25
LATERAL JOB NUMBER:	
25-120	

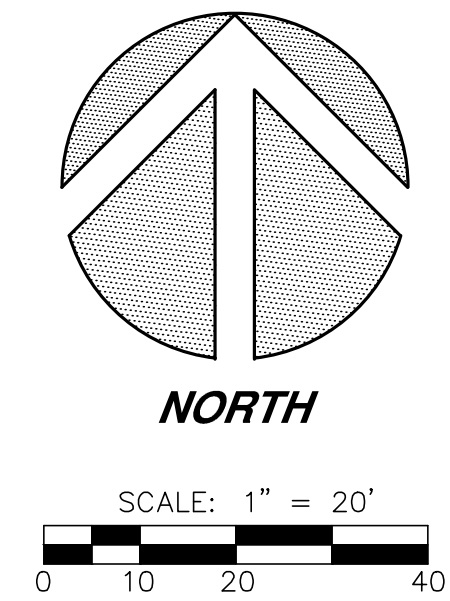
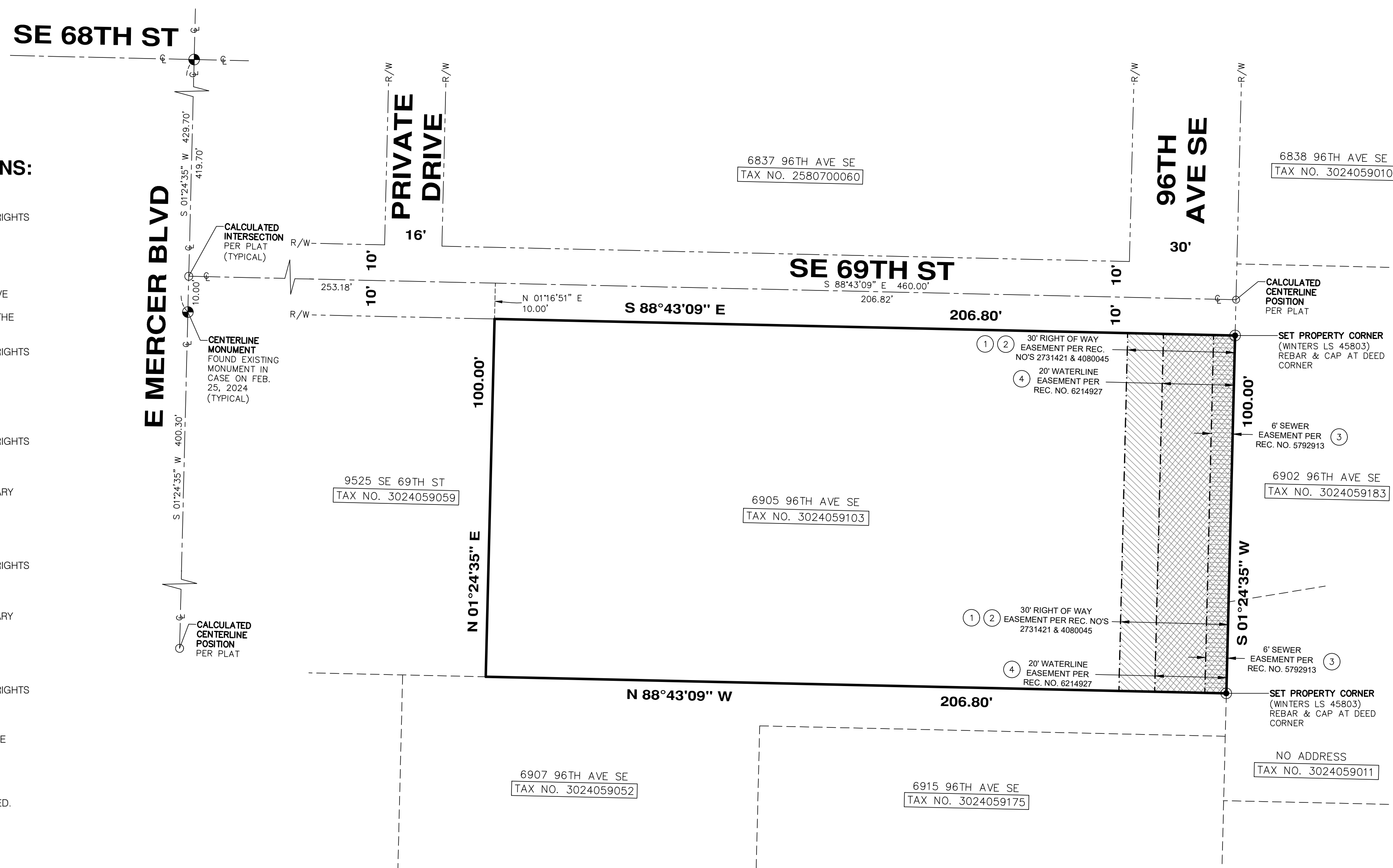
A7  
 A7

ANW JOB NUMBER:  
 250052



**TITLE SCHEDULE B EXCEPTIONS:**

- RELEVANT EXCEPTIONS PER TITLE REPORT (SEE NOTE 6):
- EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
 PURPOSE: RIGHT OF WAY  
 RECORDING NO.: 2731421  
 AFFECTS: THE EAST 30 FEET  
  
 SAID EASEMENT INCLUDES THE RIGHT TO CUT AND REMOVE BRUSH, TREES AND OTHER OBSTRUCTIONS WHICH IN THE OPINION OF THE GRANTEE, INTERFERE WITH THE USE OF THE RIGHT OF WAY.
  - EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
 PURPOSE: RIGHT OF WAY  
 RECORDING NO.: 4080045  
 AFFECTS: THE EAST 30 FEET
  - EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:  
 IN FAVOR OF: MERCER ISLAND SEWER DISTRICT  
 PURPOSE: SEWER PIPE LINES WITH NECESSARY APPURTENANCES  
 RECORDING DATE: SEPTEMBER 30, 1964  
 RECORDING NO.: 5792913  
 AFFECTS: THE EAST 6 FEET
  - EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:  
 IN FAVOR OF: CITY OF MERCER ISLAND  
 PURPOSE: WATER PIPE LINES WITH NECESSARY APPURTENANCES  
 RECORDING DATE: AUGUST 7, 1967  
 RECORDING NO.: 6214927  
 AFFECTS: THE EAST 20 FEET
  - EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:  
 PURPOSE: INSTALLING, MAINTAINING AND REPLACING AS NEEDED DRAINAGE IMPROVEMENTS  
 RECORDING NO.: 20000330000820  
 AFFECTS: PORTION OF SAID PREMISES  
  
 SURVEYORS NOTE: NOT PLOTTABLE, NO FOOTPRINT DEFINED.



**NOTES:**

- THIS SURVEY WAS PERFORMED BY FIELD TRAVERSE USING A 10 SECOND "TOTAL STATION". THIS SURVEY MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC CHAPTER 332-130-090.
- CONTOUR INTERVAL = 1 FT.
- VERTICAL DATUM = NAVD88, AS PER DIRECT OBSERVATIONS USING GPS EQUIPMENT ON FEBRUARY 23RD, 2023.
- HORIZONTAL DATUM = NAD 83/11 (EPOCH 2010).
- PARCEL AREA = 20,680 FT<sup>2</sup>.
- THIS SURVEY IS RELIANT UPON THE INFORMATION CONTAINED WITHIN CHICAGO TITLE COMPANY OF WASHINGTON, TITLE REPORT NO. 0251005-ETU, DATED DECEMBER 1, 2023.
- TREES AS SHOWN HEREON HAVE BEEN MAPPED TO THE BEST OF OUR ABILITY DURING THE COURSE OF THIS SURVEY. HOWEVER, ALL ONSITE TREES THAT COULD AFFECT PROJECT DEVELOPMENT MAY NOT BE SHOWN. THEREFORE, PRIOR TO DESIGN A CERTIFIED ARBORIST SHOULD BE CONSULTED TO VERIFY THE SPECIFIC GENUS, TRUNK DIAMETER, DRIP LINE, LOCATION AND NUMBER OF QUALIFYING TREES UPON THIS SITE.

**DEED DESCRIPTION:**

TAX PARCEL NUMBER: 3024059103

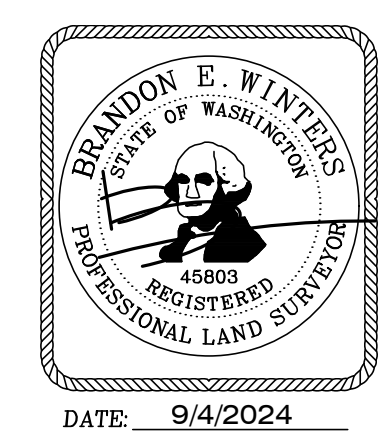
THE EAST 200 FEET OF THE SOUTH 100 FEET OF THE NORTH 530 FEET OF THE EAST 430 FEET OF GOVERNMENT LOT 3, SECTION 30, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON.

TOGETHER WITH THE EAST 6.80 FEET OF THE EAST 100 FEET OF THE WEST 230 FEET OF THE EAST 430 FEET OF THE SOUTH 100 FEET OF THE NORTH 530 FEET OF GOVERNMENT LOT 3, SECTION 30, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

**CONTROL DIAGRAM**

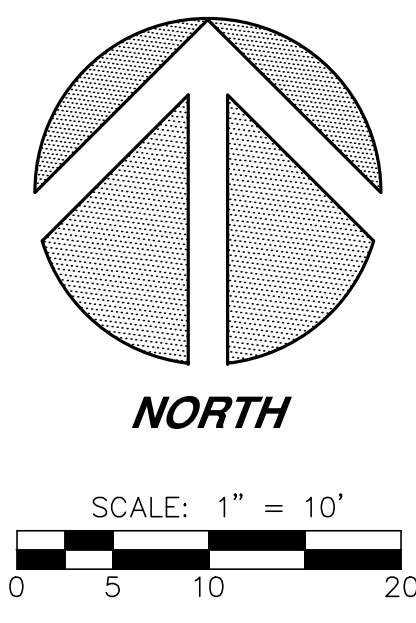
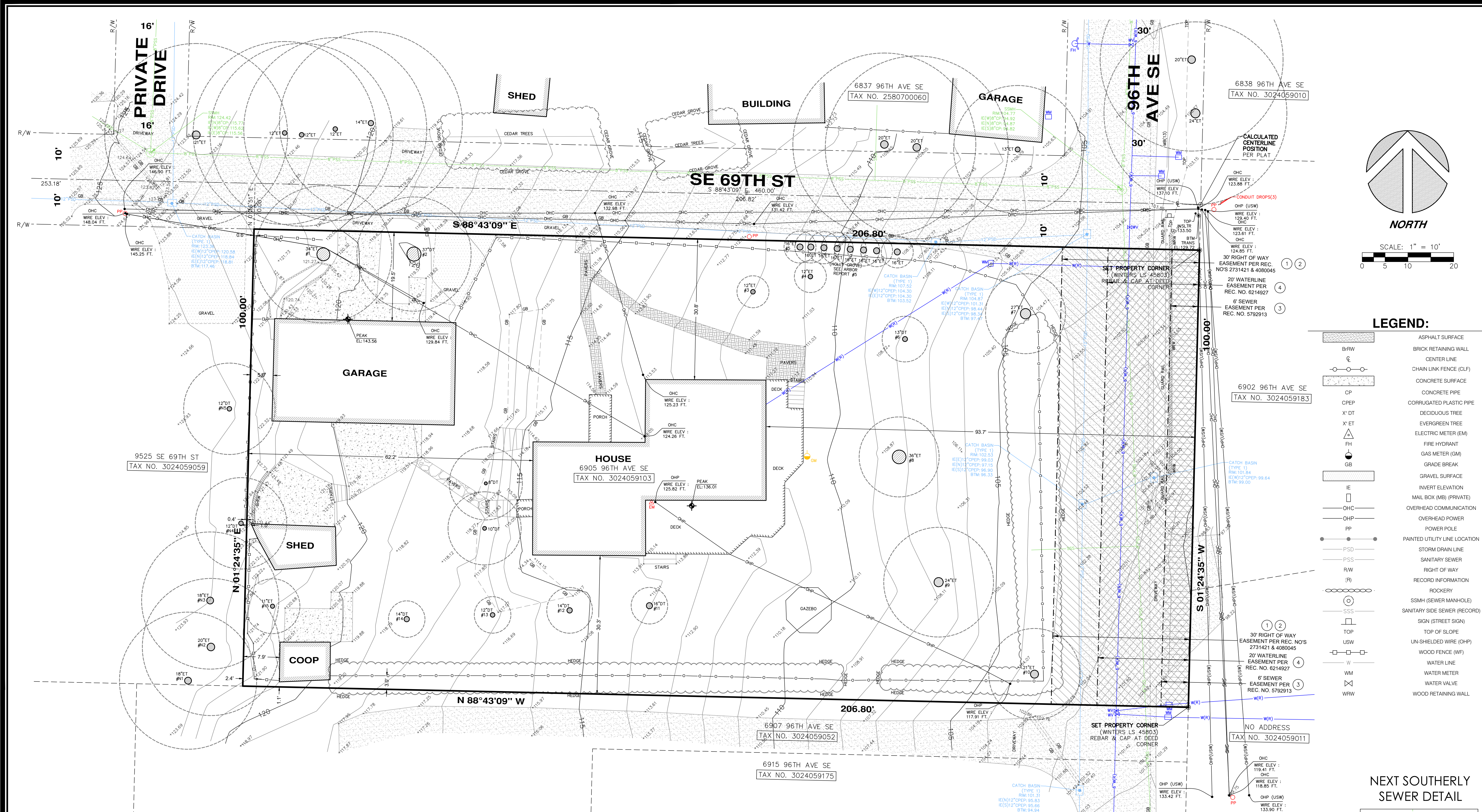
**SHEET 1 OF 2**



**TOPOGRAPHIC SURVEY**  
**6905 96TH AVE SOUTHEAST**  
**MERCER ISLAND, WASHINGTON**

**CHADWICK WINTERS**  
 LAND SURVEYING AND MAPPING  
 1422 N.W. 85TH ST., SEATTLE, WA 98117  
 PHONE: 206.297.0996  
 FAX: 206.297.0997  
 WEB: WWW.CHADWICKWINTERS.COM

PROJECT #: 24-8081
DRAWING: 24-8081 TOPO
CLIENT: TERRY LONG
DATE: 9/04/2024
DRAWN BY: TTB



**LEGEND:**

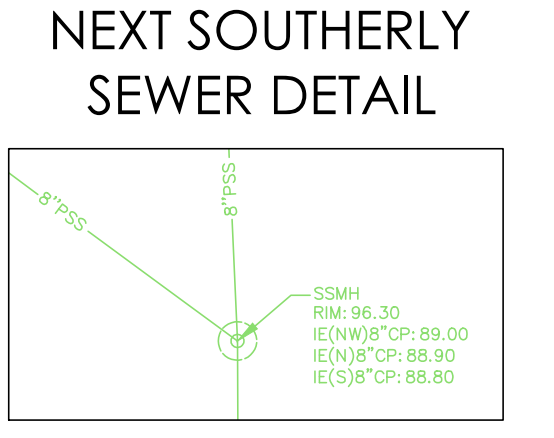
	ASPHALT SURFACE
	BRICK RETAINING WALL
	CENTER LINE
	CHAIN LINK FENCE (CLF)
	CONCRETE SURFACE
	CONCRETE PIPE
	CORRUGATED PLASTIC PIPE
	DECIDUOUS TREE
	EVERGREEN TREE
	ELECTRIC METER (EM)
	FIRE HYDRANT
	GAS METER (GM)
	GRADE BREAK
	GRAVEL SURFACE
	INVERT ELEVATION
	MAIL BOX (MB) (PRIVATE)
	OVERHEAD COMMUNICATION
	OVERHEAD POWER
	POWER POLE
	PAINTED UTILITY LINE LOCATION
	STORM DRAIN LINE
	SANITARY SEWER
	RIGHT OF WAY
	RECORD INFORMATION
	ROCKERY
	SSMH (SEWER MAN-HOLE)
	SANITARY SIDE SEWER (RECORD)
	SIGN (STREET SIGN)
	TOP OF SLOPE
	UN-SHIELDED WIRE (UHP)
	WOOD FENCE (WF)
	WATER LINE
	WATER METER
	WATER VALVE
	WOOD RETAINING WALL

**UNDERGROUND UTILITY NOTE:**

UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS APPROXIMATE ONLY AND IS BASED UPON OBSERVED GROUND EVIDENCE. THE CITY OF MERCER ISLAND GIS DATABASE AND ALSO AS PER TIES TO ABOVE GROUND STRUCTURES. CHADWICK AND WINTERS ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS & LOCATIONS OR ACCEPTS RESPONSIBILITY FOR UNDERGROUND UTILITIES NOT DISCLOSED IN SAID RECORDS. THE FINAL LOCATION OF EXISTING UNDERGROUND UTILITIES IN AREAS CRITICAL TO DESIGN SHOULD BE ESTABLISHED BY CONTACTING THE UTILITY OWNER OR AGENCY. 1-800-424-5555 SHOULD ALWAYS BE CALLED PRIOR TO CONSTRUCTION.

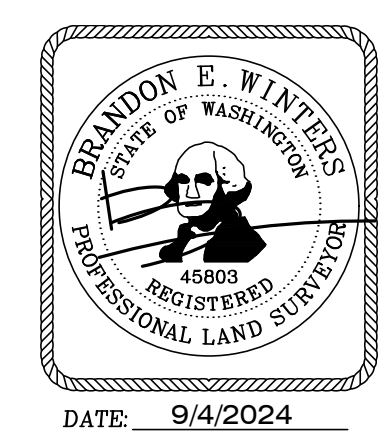
**OVERHEAD POWER LINE NOTE:**

WE HAVE DETERMINED TO THE BEST OF OUR ABILITY THE OVERHEAD HIGH VOLTAGE POWER LINE WHICH IS CLOSEST TO THE PROJECT SITE AND HAVE DISPLAYED ITS HORIZONTAL AND VERTICAL LOCATION HEREON. HOWEVER, ADDITIONAL OVERHEAD SERVICE LINES MAY EXIST WHICH ARE NOT OBVIOUS TO US BY FIELD OBSERVATION AND POTENTIALLY IMPACT PROJECT DESIGN. THEREFORE, PRIOR TO DESIGN AND CONSTRUCTION WE RECOMMEND THAT SEATTLE CITY LIGHT BE CONSULTED REGARDING THE POSSIBLE EXISTENCE OF ADDITIONAL SERVICE LINES NOT DISPLAYED HEREON WHICH SHOULD BE CONSIDERED FOR PROJECT DESIGN.



EXISTING CONDITIONS

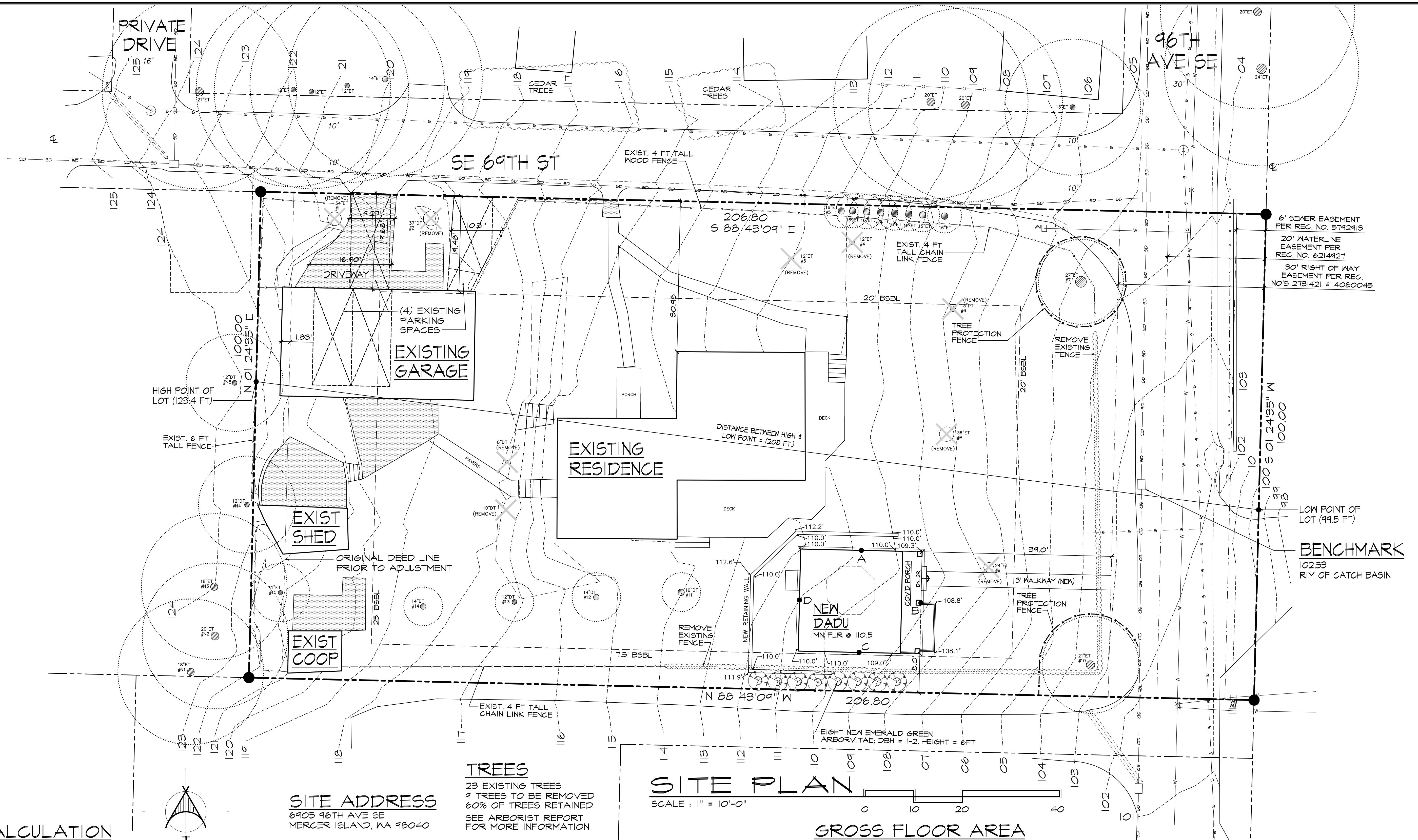
SHEET 2 OF 2



**TOPOGRAPHIC SURVEY**  
**6905 96TH AVE SOUTHEAST**  
**MERCER ISLAND, WASHINGTON**

**CHADWICK WINTERS**  
 LAND SURVEYING AND MAPPING  
 1422 N.W. 85TH ST., SEATTLE, WA 98117  
 PHONE: 206.297.0996  
 FAX: 206.297.0997  
 WEB: WWW.CHADWICKWINTERS.COM

PROJECT #:	24-8081
DRAWING:	24-8081 TOPO
CLIENT:	TERRY LONG
DATE:	9/04/2024
DRAWN BY:	TTB



**SITE PLAN**  
 SCALE: 1" = 10'-0"

**HEIGHT CALCULATION**

MIDPOINT ELEVATION	WALL SEGMENT LENGTH
A = 110.0	a = 25 ft
B = 109.1	b = 21 ft
C = 109.5	c = 25 ft
D = 110.0	d = 21 ft

**ABE CALCULATION**

$$\frac{(110.0)(25) + (109.1)(21) + (109.5)(25) + (110.0)(21)}{25 + 21 + 25 + 21} = 109.66$$

109.66 AVERAGE BUILDING ELEVATION (ABE)  
 +30.00  
 139.66 (MAX. HT. ALLOWED)  
 133.08 (ACTUAL HEIGHT)  
 6.58 (BELOW MAX. HT.)

**LOT COVERAGE**

20680 S.F.	GROSS LOT AREA
17680 S.F.	NET LOT AREA
7,072 S.F.	ALLOWED LOT COVERAGE AREA
40%	ALLOWED LOT COVERAGE %

**EXISTING LOT COVERAGE**

1,306 S.F.	HOUSE
842 S.F.	GARAGE
144 S.F.	SHED
93 S.F.	COOP
322 S.F.	DRIVE
2,762 S.F.	TOTAL

**NEW LOT COVERAGE**

583 S.F.	DADU
3,345 S.F.	TOTAL PROJECT LOT COV'G AREA
18.9%	PROPOSED % LOT COVERAGE AREA

**HARDSCAPE CALCULATIONS**

20680 S.F.	GROSS LOT AREA
17,680 S.F.	NET LOT AREA
3,727 S.F.	AREA BORROWED FROM LOT COVERAGE
5,318 S.F.	ALLOWED HARDSCAPE AREA (9% OF LOT AREA + BORROWED)

**EXISTING HARDSCAPE AREA**

1,579 S.F.	EXISTING HARDSCAPE AREA
25 S.F.	PATIO
10 S.F.	BACK SLAB
119 S.F.	WALK
47 S.F.	RETAINING WALL
201 S.F.	TOTAL NEW HARDSCAPE AREA

**NEW HARDSCAPE AREA**

1,780 S.F.	TOTAL PROJECT HARDSCAPE AREA (10% OF LOT)
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**GROSS FLOOR AREA**

1,100 S.F.	MAIN FLOOR
290 S.F.	UPPER FLOOR
1,390 S.F.	TOTAL
400 S.F.	MAIN LIVING
680 S.F.	UPPER LIVING
460 S.F.	GARAGE
1,540 S.F.	TOTAL
149 S.F.	EXISTING SHED
43 S.F.	EXISTING COOP
3,172 S.F.	TOTAL EXISTING
441 S.F.	MAIN FLOOR
471 S.F.	UPPER FLOOR
412 S.F.	TOTAL
4,084 S.F.	TOTAL EXISTING + NEW

**CUT**  
 13 CU. YDS.  
**LOT SLOPE**  
 23.9 FT / 208 FT = 11.49% SLOPE  
**LOT SIZE**  
 20,680 S.F.  
**ZONING**  
 R8.4

**LEGAL DESCRIPTION**

TAX PARCEL NUMBER: 3024059103  
 THE EAST 200 FEET OF THE SOUTH 100 FEET OF THE NORTH 530 FEET OF THE EAST 430 FEET OF GOVERNMENT LOT 3, SECTION 30, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON.  
 TOGETHER WITH THE EAST 6.80 FEET OF THE EAST 100 FEET OF THE WEST 230 FEET OF THE EAST 430 FEET OF THE SOUTH 100 FEET OF THE NORTH 530 FEET OF GOVERNMENT LOT 3, SECTION 30, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., KING COUNTY, WASHINGTON.  
 SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

NOTE:  
 REFER TO ELEVATIONS ON SHEET A7 IN ARCHITECTURAL PLANS FOR HEIGHT CALC. DIMENSIONS

## ENERGY CODE

2021 WASHINGTON STATE ENERGY CODE / IECC (WSEC)  
ALL CLIMATE ZONES - TABLE R402.1.3  
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT A

	PRESCRIPTIVE	EFFICIENT BUILDING ENVELOPE OPTION 1.2
FENESTRATION U-FACTOR B	0.30	0.25
SKYLIGHT B U-FACTOR	0.50	0.50
CEILING R-VALUE E	60	60
WOOD FRAME WALL R-VALUE	20+5 OR 13+10	20+5 OR 13+10
FLOOR R-VALUE	30	30
BELOW GRADE WALL C1 R-VALUE	10/15/21 INT + 5TB	10/15/21 INT + 10TB
SLAB D2 R-VALUE & DEPTH	10, 4 FT.	10, ENTIRE SLAB

TABLE R402.1.1 FOOTNOTES  
FOR SI: 1 FOOT = 304.8 MM, C1 = CONTINUOUS INSULATION, INT. = INTERMEDIATE FRAMING.

A R-VALUES ARE MINIMUMS, U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE COMPRESSED R-VALUE OF THE INSULATION FROM APPENDIX TABLE A101.4 SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.

B THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS.

C 10/15/21 +5TB MEANS R-10 CONTINUOUS INSULATION ON THE EXTERIOR OF THE WALL, OR R-15 CONTINUOUS INSULATION ON THE INTERIOR OF THE WALL, OR R-21 CAVITY INSULATION PLUS A THERMAL BREAK BETWEEN THE SLAB AND THE BASEMENT WALL AT THE INTERIOR OF THE BASEMENT WALL. 10/15/21 +5TB SHALL BE PERMITTED TO BE MET WITH R-13 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE WALL. +5TB MEANS R-5 THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL.

D R-10 CONTINUOUS INSULATION IS REQUIRED UNDER HEATED SLAB ON GRADE FLOORS. SEE R402.2.4.1.

E FOR SINGLE RAFTER- OR JOIST- VAULTED CEILING, THE INSULATION MAY BE REDUCED TO R-30 IF THE FULL INSULATION DEPTH EXTENDS OVER THE TOP PLATE OF THE EXTERIOR WALL.

F R-15 CONTINUOUS INSULATION INSTALLED OVER AN EXISTING SLAB IS DEEMED TO BE EQUIVALENT TO THE REQUIRED PERIMETER SLAB INSULATION WHEN APPLIED TO EXISTING SLABS COMPLYING WITH SECTION R503.1.1. IF FOAM PLASTIC IS USED, IT SHALL MEET THE REQUIREMENTS FOR THE THERMAL BARRIERS PROTECTING FOAM PLASTICS.

G FOR LOG STRUCTURES DEVELOPED IN COMPLIANCE WITH STANDARD ICC 400, LOG WALLS SHALL MEET THE REQUIREMENTS FOR CLIMATE ZONE 5 OF ICC 400.

H INT. (INTERMEDIATE FRAMING) DENOTES FRAMING AND INSULATION AS DESCRIBED IN SECTION A109.2.2 INCLUDING STANDARD FRAMING 16 INCHES ON CENTER, 70 PERCENT OF THE WALL CAVITY INSULATED AND HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION.

I THE FIRST VALUE IS CAVITY INSULATION, THE SECOND VALUE IS CONTINUOUS INSULATION. THEREFORE, AS AN EXAMPLE, "R13+10" MEANS R-13 CAVITY INSULATION PLUS R-10 CONTINUOUS INSULATION.

J A MAXIMUM U-FACTOR OF 0.32 SHALL APPLY TO VERTICAL FENESTRATION PRODUCTS INSTALLED IN BUILDINGS LOCATED ABOVE 4000 FEET IN ELEVATION ABOVE SEA LEVEL, OR IN WINDBORNE DEBRIS REGIONS WHERE PROTECTION OF OPENINGS IS REQUIRED UNDER SECTION R301.2.2 OF THE INTERNATIONAL RESIDENTIAL CODE.

- A CERTIFICATE COMPLYING WITH 2021 WSEC R403.3 IS REQUIRED TO BE COMPLETED BY THE BUILDER OR APPROVED PARTY AND PERMANENTLY POSTED.
- AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EACH SEPARATE HEATING AND COOLING SYSTEM.
- ALL PERMANENTLY INSTALLED LIGHTING FIXTURES, EXCLUDING KITCHEN APPLIANCES, SHALL CONTAIN ONLY HIGH-EFFICIENCY LIGHTING SOURCES.

## WHOLE HOUSE VENTILATION

WHOLE HOUSE VENTILATION SYSTEM TO BE DESIGNED PER WSEC AMENDMENTS TO 2021 IRC SECTION M1505.4.4.

SEE "WHOLE HOUSE VENTILATION" ON THE SCHEDULE SHEET FOR SELECTED OPTION.

WHOLE-HOUSE MECHANICAL VENTILATION AIRFLOW RATE PER EQUATION 15-1 (M1505.4.5)

VENTILATION QUALITY ADJUSTMENT PER EQUATION 15-2 (M1505.4.5.1)

### IRC TABLE M1505.4.3(2)

INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS A,B

RUN TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	50%	66%	75%	100%
FACTOR	2	1.5	1.3	1.0

- FOR VENTILATION SYSTEM RUN TIME VALUES BETWEEN THOSE GIVEN, THE FACTORS ARE PERMITTED TO BE DETERMINED BY INTERPOLATION.
- EXTRAPOLATION BEYOND THE TABLE IS PROHIBITED.

## MECHANICAL

### GENERAL

SOLID FUEL BURNING APPLIANCES INCLUDE AIRTIGHT STOVES, FIREPLACE STOVES, ROOM HEATERS, FACTORY BUILT FIREPLACES AND FIREPLACE INSERTS. ALL SOLID FUEL BURNING APPLIANCES SHALL COMPLY WITH THE PROVISIONS OF I.R.C. R1006.6

### HEATING

EACH DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A TEMPERATURE OF 68 DEGREES FAHRENHEIT AT A HEIGHT OF 3'-0" ABOVE THE FLOOR AND TWO FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS WHEN THE OUTSIDE TEMPERATURE IS AS SET FORTH IN THE 2021 W.S.E.C.

DEFINITION OF BUILDING THERMAL ENVELOPE FROM THE 2021 WASHINGTON STATE ENERGY CODE:

THE BELOW-GRADE WALLS, ABOVE-GRADE WALLS, FLOORS, CEILING, ROOF, AND ANY OTHER BUILDING ELEMENT ASSEMBLIES THAT ENCLOSE CONDITIONED SPACE OR PROVIDES A BOUNDARY BETWEEN CONDITIONED SPACE AND EXEMPT OR UNCONDITIONED SPACE.

- FUEL BURNING APPLIANCES LOCATED WITHIN THE BUILDING ENVELOPE SHALL OBTAIN AIR FROM OUTDOORS, MEETING THE PROVISIONS OF IRC 6240.1
- FUEL BURNING APPLIANCES LOCATED OUTSIDE THE BUILDING ENVELOPE SHALL MEET THE PROVISIONS OF CHAPTER 24 OF THE 2021 IRC.
- DUCTWORK LOCATION SHALL MEET THE PROVISIONS OF CHAPTER 24 OF THE 2021 IRC.
- COMBUSTION AIR TO MEET THE REQUIREMENTS OF I.R.C. M101.1

ALL WARM AIR FURNACES SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY PER CHAPTER M302 OF THE 2021 IRC.

NO WARM AIR FURNACE SHALL BE INSTALLED IN A ROOM USED OR DESIGNED TO BE USED AS A BEDROOM, BATHROOM, CLOSET OR IN ANY ENCLOSED SPACE WITH ACCESS ONLY THROUGH SUCH ROOM OR SPACE, EXCEPT PER EXCEPTIONS IN IRC 62406.2

LIQUEFIED PETROLEUM GAS BURNING APPLIANCES SHALL NOT BE INSTALLED IN A PIT, BASEMENT OR SIMILAR LOCATION WHERE HEAVIER THAN AIR GASES MIGHT COLLECT. APPLIANCES SO FUELED SHALL NOT BE INSTALLED IN AN ABOVE GRADE UNDER FLOOR SPACE OR BASEMENT UNLESS SUCH LOCATION IS PROVIDED WITH AN APPROVED MEANS FOR REMOVAL OF UNBURNED GAS.

HEATING AND COOLING APPLIANCES LOCATED IN A GARAGE AND WHICH GENERATE A GLOW, SPARK OR FLAME CAPABLE OF IGNITING FLAMMABLE VAPORS SHALL BE INSTALLED WITH THE PILOTS AND BURNERS OR HEATING ELEMENTS AND SWITCHES AT LEAST 18" ABOVE THE FLOOR SURFACE.

FIRE DAMPERS NEED NOT BE INSTALLED IN AIR DUCTS PASSING THROUGH THE WALL, FLOOR OR CEILING SEPARATING A RESIDENCE (R-3 OCCUPANCY) FROM A GARAGE, PROVIDED SUCH DUCTS WITHIN THE GARAGE ARE CONSTRUCTED OF STEEL HAVING A THICKNESS NOT LESS THAN 0.019" (NO. 26 GALVANIZED SHEET GAUGE) AND HAVE NO OPENINGS INTO THE GARAGE.

EVERY APPLIANCE DESIGNED TO BE VENTED SHALL BE CONNECTED TO A VENTING SYSTEM COMPLYING WITH CHAPTER 19 OF THE 2021 IRC.

EVERY FACTORY BUILT CHIMNEY, TYPE L VENT, TYPE B GAS VENT OR TYPE BM GAS VENT SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF ITS LISTING, MANUFACTURERS INSTALLATION INSTRUCTIONS AND THE REQUIREMENTS PER CHAPTER 24 OF THE 2021 IRC.

A TYPE B OR BM GAS VENT SHALL TERMINATE PER CHAPTER 24 OF THE 2021 IRC.

VENT CONNECTORS SHALL BE INSTALLED WITHIN THE SPACE OR AREA IN WHICH THE APPLIANCE IS LOCATED AND SHALL BE CONNECTED TO A CHIMNEY OR VENT IN SUCH A MANNER AS TO MAINTAIN THE CLEARANCE TO COMBUSTIBLES PER SECTION M1603 OF THE 2021 IRC.

### HEATING EQUIPMENT

ALL HEATING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE NATIONAL APPLIANCE ENERGY CONSERVATION ACT (NAECA) AND BE SO LABELED. EQUIPMENT SHALL ALSO COMPLY WITH SECTION M1411 OF THE 2021 IRC

### DUCTWORK

- DUCT SYSTEMS OR FACTORY BUILT AIR DUCTS SHALL BE OF METAL AS SET FORTH BY TABLE 1601.1 OF THE 2021 IRC.
- RECTANGULAR, FLAT, OVAL AND ROUND DUCT JOINTS AND SEAMS SHALL BE AIRTIGHT PER SECTION M1601.4.1 OF THE 2021 IRC.
- INSTALLATION OF DUCTS SHALL COMPLY WITH SECTION M1601.4 OF THE 2021 IRC.
- DUCT INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH SECTION M1601.3 OF THE 2021 IRC.
- FINAL DUCT LEAKAGE AFFIDAVIT IS TO BE PROVIDED TO THE BUILDING INSPECTOR PRIOR TO FINAL INSPECTION. DUCT LEAKAGE AND SEALING REQUIREMENTS IN 2021 W.S.E.C. SECTION R403.3.4 THRU R403.3.6 TO BE MET.
- DUCTS INSULATED TO A MINIMUM R-8 INSULATION IN UNCONDITIONED SPACES PER W.S.E.C. SECTION R403.3.1

## CARPENTRY

### GENERAL

ALL FRAMING SHALL COMPLY WITH THE APPLICABLE SECTION(S) OF THE 2021 IRC/IRC. PRESSURE TREATED WOOD REQUIRED IN LOCATIONS LISTED IN IRC R311.

- MINIMUM VERTICAL CLEARANCE BETWEEN WOOD & CONCRETE STEPS, PORCH SLABS, PATIO SLABS & OTHER SIMILAR HORIZONTAL SURFACES EXPOSED TO THE WEATHER.
- MINIMUM CLEARANCE BETWEEN WOOD AND EARTH.
- MINIMUM CLEARANCE BETWEEN UNTREATED WOODSILLS AND EARTH.
- MINIMUM CLEARANCE BETWEEN FLOOR BEAMS AND EARTH.
- MINIMUM CLEARANCE BETWEEN FLOOR JOISTS AND EARTH.

### LOADING

ROOF	15 PSF DEAD LOAD	+	25 PSF LIVE LOAD	=	40 PSF
ROOF w/ SOLAR PANELS	20 PSF DEAD LOAD	+	25 PSF LIVE LOAD	=	40 PSF
FLOOR TRUSSES	15 PSF DEAD LOAD	+	40 PSF LIVE LOAD	=	55 PSF
FLOOR	10 PSF DEAD LOAD	+	40 PSF LIVE LOAD	=	50 PSF
CEILING	5 PSF DEAD LOAD	+	10 PSF LIVE LOAD	=	15 PSF
DECK	10 PSF DEAD LOAD	+	60 PSF LIVE LOAD	=	70 PSF
INTERIOR PARTITION				=	10 PSF
EXTERIOR PARTITION				=	10 PSF

WOOD BEARING OR OR INSTALLED WITHIN 1/2" OF MASONRY OR CONCRETE TO BE TREATED WITH AN APPROVED PRESERVATIVE. SOLID BLOCKING OF NOT LESS THAN 2x THICKNESS SHALL BE PROVIDED AT ENDS AND AT ALL SUPPORT OF JOISTS AND RAFTERS. ANCHOR BOLTS TO BE PER SHEAR WALL SCHEDULE AND FOUNDATION PLAN. 7" MINIMUM EMBEDMENT. ALL METAL FRAMING ANCHORS AND HANGERS SHOWN ON DRAWINGS SHALL BE STRONG TIE CONNECTORS AS MANUFACTURED BY SIMPSON COMPANY.

PROVIDE FIREBLOCKING IN CONCEALED SPACES OF STUD WALLS & PARTITIONS, INCLUDING FURRED SPACES & PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS.

- VERTICALLY AT THE CEILING & FLOOR LEVELS.
- HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.

PROVIDE FIREBLOCKING AT OTHER LOCATIONS PER 2021 IRC R302.11.

## INSULATION & MOISTURE PROTECTION

### GENERAL

UNLESS NOTED OTHERWISE, INSULATION SHALL CONFORM TO THE WASHINGTON STATE ENERGY CODES. INSULATION BARRIERS TO MAINTAIN 1" CLEAR SPACE ABOVE INSULATION. BARRIERS TO EXTEND 6" ABOVE BATT INSULATION & 12" ABOVE LOOSE FILL INSULATION. INSULATE BEHIND BATHTUBS, SHOWERS, PARTITIONS AND CORNERS. PROVIDE FACE STAPLED BATTS OR FRICTION FIT FACED BATTS. PROVIDE 4 MIL (0.004") POLYETHYLENE VAPOR BARRIER AT WALLS OR USE CLASS II PRIMER. PROVIDE R-10 INSULATION UNDER ELECTRIC WATER HEATERS.

### INFILTRATION CONTROL

- EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, OPENINGS BETWEEN WALLS AND FOUNDATIONS, BETWEEN WALLS AND ROOF AND BETWEEN WALL PANELS, OPENINGS AT PENETRATIONS OF UTILITY SERVICES THROUGH WALLS, FLOORS, AND ROOF, AND ALL OTHERS SUCH OPENINGS IN THE BUILDING ENVELOPE, INCLUDING ACCESS PANELS INTO UNHEATED SPACES, SHALL BE SEALED, CAULKED, GASKETED OR WEATHER-STRIPPED TO LIMIT AIR INFILTRATION.
- ALL EXTERIOR DOORS, OTHER THAN FIRE-RATED DOORS, SHALL BE DESIGNED TO LIMIT AIR INFILTRATION AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION. DOORS BETWEEN RESIDENCE AND GARAGE ARE NOT CONSIDERED "FIRE-RATED" AND MUST MEET THE ABOVE REQUIREMENT.
- ALL EXTERIOR WINDOWS SHALL BE DESIGNED TO ADMIT AIR INFILTRATION INTO OR FROM THE BUILDING ENVELOPE WHICH SHALL BE SUBSTANTIATED BY TESTING TO STANDARD ASTM E 283-T8. SITE BUILT AND MILLWORK SHOP MADE WOODEN SASH ARE EXEMPT FROM TESTING BUT SHALL BE WEATHER-STRIPPED, CAULKED AND MORE TIGHTLY FITTING.
- RECESSED LIGHT FIXTURES TO LIMIT AIR LEAKAGE PER W.S.E.C.

PIPING FOR HOT WATER / STEAM SYSTEMS OF PIPING FOR CONTINUOUSLY CIRCULATING HOT WATER SERVICE IS REQUIRED TO BE INSULATED PER THE W.S.E.C. HOT WATER PIPING SHALL BE INSULATED TO A MINIMUM OF R-3 PER W.S.E.C. R403.5.3. MECHANICAL SYSTEM PIPING SHALL BE INSULATED TO A MINIMUM R-6 PER W.S.E.C. R403.4

### VAPOR BARRIERS / GROUND COVERS

AN APPROVED VAPOR BARRIER SHALL BE PROPERLY INSTALLED IN ROOF DECKS, IN ENCLOSED RAFTER SPACES FORMED WHERE CEILING ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, AND AT EXTERIOR WALLS. INSET STAPLED BATTS WITH A FERM RATINGS LESS THAN ONE MAY BE INSTALLED IF THE VAPOR BARRIER IS TO THE WARM SIDE, STAPLES SHALL BE PLACED NOT MORE THAN 8" O.C. AND GAPS BETWEEN THE FACING AND THE FRAMING SHALL NOT EXCEED 1/16"

VAPOR RETARDERS AT WALLS PER IRC R702.7

A GROUND COVER OF 6 MIL (0.006") BLACK POLYETHYLENE OR EQUIVALENT SHALL BE LAID OVER THE GROUND IN ALL CRAWL SPACES. THE GROUND COVER SHALL BE OVERLAPPED ONE FOOT AT EACH JOINT AND SHALL EXTEND TO THE FOUNDATION WALL.

## DOORS, WINDOWS AND SKYLIGHTS

### GENERAL

THE REQUIRED EGRESS DOOR MAY HAVE A MAXIMUM 1 3/4" STEP ON THE EXTERIOR SIDE FROM TOP OF THE THRESHOLD TO A MINIMUM 36" DEEP LANDING ON THE EXTERIOR SIDE OF THE DOOR. PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING, PER R311.3.1. OTHER EXTERIOR DOORS MAY HAVE A MAXIMUM (2) 1 3/4" STEPS TO A MIN. 36" DEEP LANDING. ALL GLAZING SHALL MEET THE REQUIREMENTS OF THE 2021 W.S.E.C. TABLE R402.1.3 UNLESS NOTED OTHERWISE. ALL SKYLIGHTS AND SKYWALLS SHALL HAVE LAMINATED GLASS UNLESS NOTED OTHERWISE. ALL BEDROOM EMERGENCY EGRESS WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. MINIMUM NET CLEAR OPERABLE WIDTH OF 20" AND A MINIMUM NET CLEAR OPENING HEIGHT OF 24", MAXIMUM HEIGHT FROM FLOOR OF 44" MEASURED FROM THE FINISHED FLOOR TO THE BOTTOM OF THE CLEAR OPENING. OPERABLE WINDOWS WITH A SILL OF MORE THAN 12" ABOVE FINISHED THE GRADE OR SURFACE BELOW, TO BE A MINIMUM OF 24" ABOVE ADJACENT FINISHED FLOOR.

### SAFETY GLAZING LOCATIONS PER 2021 IRC SECTION R308.4

- R308.4.1 GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BI-FOLD DOORS.
- R308.4.2 GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR & THE GLAZING IS EITHER WITHIN 24 INCHES OF EITHER SIDE OF THE DOOR IN THE PLANE OF THE DOOR IN A CLOSED POSITION OR ON A WALL LESS THAN 180 DEGREES FROM THE PLANE OF THE DOOR IN A CLOSED POSITION & WITHIN 24 INCHES OF THE HINGE SIDE OF AN IN-SWINGING DOOR.
- R308.4.3 GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
  - THE EXPOSED AREA OF AN INDIVIDUAL PANEL IS LARGER THAN 4 SQUARE FEET;
  - THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE THE FLOOR;
  - THE TOP EDGE OF THE GLAZING IS MORE THAN 36" ABOVE THE FLOOR; AND
  - ONE OR MORE WALKING SURFACES ARE WITHIN 36" MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.
- R308.4.4 GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE.
- R308.4.5 GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR ADJACENT TO HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.
- R308.4.6 GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES (914 MM) ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS.
- R308.4.7 GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN A 60° HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING.

FOR EXCEPTIONS SEE IRC SECTION R308.4

## GENERAL

PLANS COMPLY WITH THE 2021 INTERNATIONAL RESIDENTIAL CODE.

CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PROVIDE TEMPORARY BRACINGS AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS HAVE BEEN MADE. IT IS THE CONTRACTORS RESPONSIBILITY TO IDENTIFY ALL DISCREPANCIES TO THE ARCHITECT AT THE TIME THEY ARE NOTED. DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS.

### CODES:

- ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION SHALL BE FOLLOWED
- 2021 INTERNATIONAL RESIDENTIAL CODE (IRC) WITH WASHINGTON STATE AMENDMENTS (WSA) EXCEPT CHAPTERS 11 AND 25 THROUGH 42 ARE NOT ADOPTED. APPENDICES F,Q, & U ARE ADOPTED.
  - 2021 INTERNATIONAL BUILDING CODE (IBC) WITH WASHINGTON STATE AMENDMENTS (WSA)
  - 2021 INTERNATIONAL MECHANICAL CODE (IMC) WITH WASHINGTON STATE AMENDMENTS (WSA)
  - 2021 UNIFORM PLUMBING CODE (UPC) WITH WASHINGTON STATE AMENDMENTS.
  - 2021 INTERNATIONAL FIRE CODE WITH WASHINGTON STATE AMENDMENTS.
  - 2021 WASHINGTON STATE ENERGY CODE, RESIDENTIAL PROVISIONS (WSEC).

LOCAL JURISDICTION REQUIRES DWELLING UNIT FIRE SPRINKLER SYSTEM PER IRC APPENDIX U  YES  NO NFPA 13D PLUS (FULL COVERAGE) FIRE SPRINKLER SYSTEM IN COMPLIANCE NFPA

## SITE WORK

### GENERAL

ALL FOOTINGS TO BEAR ON FIRM, UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS. ALL BACK FILL MATERIAL SHALL BE THOROUGHLY COMPACTED. FOUNDATION VENTS SHALL NOT INTERFERE WITH THE DIRECT LOAD PATH OF COLUMNS.

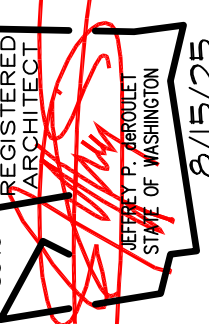
### CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND LOAD (PSF)	WIND DESIGN			SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM		WINTER DESIGN TEMP	ICE BARRIER UNDER-LAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP		
	SPEED (MPH)	TOPO-GRAPHIC EFFECTS	SPECIAL WIND REGION		WIND-BORNE DEBRIS ZONE	FROST LINE DEPTH						TERMITE	
25	110	YES	NO	NO	D2	MODERATE	12'	SLIGHT TO MODERATE	24°	NO	N/A	IIB	59

EQUIVALENT FLUID PRESSURE = 35 P.C.F. (UNRESTRAINED WALLS)  
50 P.C.F. (RESTRAINED WALLS)

## SHEET INDEX

SHEET #	DESCRIPTION
SITE	
A0	SITE PLAN
ARCHITECTURAL	
A1	COVERSHEET
A2	SCHEDULE SHEET
A3	DETAIL SHEET
A4	FOUNDATION PLAN & MAIN FLOOR PLAN
A5	UPPER FLOOR FRAMING PLAN & UPPER FLOOR PLAN
A6	ROOF FRAMING PLAN + BUILDING SECTIONS
A7	EXTERIOR ELEVATIONS
STRUCTURAL	
S1	LATERAL - GENERAL STRUCTURAL NOTES & SCHEDULES
S2	LATERAL - NOTES, SCHEDULES & DETAILS
S3	LATERAL - CONCRETE DETAILS
S4	LATERAL - WOOD DETAILS
S5	LATERAL - SHEAR WALLS & HARDWARE



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LONG DADU PLAN A911A0-0

DESIGNED BY: DATE: MBJ 05/20/25  
DRAWN BY: DATE: BPS 7/24/25  
PROJECT MANAGER: MARCUS JENKINS  
REVISED BY: DATE: BPS 8/15/25

LATERAL BY: DATE: ZVELT 6/25/25  
LATERAL JOB NUMBER: 25-120

A1  
A7

ANW JOB NUMBER: 250052

CLIENT: LONG DADU  
6905 96TH AVE SE  
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1-888-272-4100

**Project Information**  
Long DADU  
6905 96th AVE SE  
Mercer Island, WA 98040

**Contact Information**

**Messages / Comments \*** RESULT: PASS

UA Reduction = 2.45, Proposed UA is better than baseline by 1.2%

Window area is 20% of floor area

\* Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your AUI.

**ANALYSIS SET UP**

What code compliance pathway are you using? U-Factor Compliance Path

Project Building Type? New Construction

Occupancy Type? R3 Single family dwellings and townhouses

Code Version? WSEC 2021

Classification: Small Dwelling Unit - 912 sq. ft.

Baseline Description: Code Baseline - Baseline and proposed window areas are equal.

About Your Selection: Up to 15 sf exempt window and 24 sf exempt door allowable

**RESULTS - Comparison of Baseline and Proposed Design \*\***

Component Performance, R-occupancies	Baseline		Proposed Design	
	U*	UA	U	UA
Doors U =	0.300	0.00	0.300	0.00
Overhead Glazing U =	0.500	0.00	0.300	0.00
Vertical Glazing U =	0.300	179.53.7	0.300	179.53.7
Flat/Vaulted Ceilings U =	0.024	525.12.6	0.026	525.12.6
Wall (above grade) U =	0.056	1,671.93.6	0.054	1,671.90.2
Floors over Crawspace U =	0.029	84.2.4	0.029	84.2.4
Slab on Grade F =	0.540	79.42.5	0.540	79.42.5
Below Grade Wall U =	N/A	0.00	N/A	0.00
Below Grade Slab F =	N/A	0.00	N/A	0.00

\* Values from Table R402.1.2 (Oct 2023)

Baseline UA Total	204.8
Proposed UA Total	202.3
Proposed Credits	5.0
Required Credits	5.0
UA Percent Reduction	1%
UA Reduction	2.5

If the Proposed UA ≤ the Target UA, and the Proposed Credits from Table 406 are ≥ those required in Section R406, then the home meets the WSEC.

\*\* Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your AUI.

**SIMPLE HEATING SYSTEM SIZE**

This heating system sizing is based on the Prescriptive Requirements of the 2021 Washington State Energy Code. This is for heating only. ACCA procedures for sizing cooling systems should be used to determine cooling.

Indoor Design Temperature: 70  
Outdoor Design Temperature: 24  
Design Temperature Difference: 46  
Indoor - Outdoor Design Temp: 46  
Conditioned Floor Area: 912  
Conditioned Volume: 8211

**Glazing**  
Sum of UA from Glazing Schedule: 53.7

**Attic**  
R-60 STD: U-Factor 0.025, Area 161, UA 4.03  
Other: R-49 ADV: U-Factor 0.020, Area 0, UA 0

**Single Rafter or Joist Vaulted Ceilings**  
R-38: U-Factor 0.026, Area 364, UA 9.46  
Other: U-Factor 0, Area 0, UA 0

**Above Grade Walls**  
R-21 INT + R0 (LAP): U-Factor 0.054, Area 1671, UA 90.23  
Other: R-21 INT + R-5ci: U-Factor 0.043, Area 0, UA 0

**Floors**  
R-30: U-Factor 0.029, Area 84, UA 2.44  
Other: R-38: U-Factor 0.025, Area 0, UA 0

**Below Grade Walls**  
R-21 Interior: U-Factor 0.035, Area 0, UA 0  
R-10 Continuous exterior: U-Factor 0.064, Area 0, UA 0  
Other: U-Factor 0, Area 0, UA 0

**Slab Below Grade**  
R-10 Thermal break: F-factor 0.5, Length 0, UA 0  
Other: R-5 Thermal break: F-factor 0.57, Length 0, UA 0

**Slab on Grade**  
R-10 4' perimeter: F-factor 0.54, Length 78.67, UA 42.48  
R-10 Fully insulated: F-factor 0.36, Length 0, UA 0  
Other: F-factor 0, Length 0, UA 0

**Sum of UA**: 202.35

**Envelope Heat Load**: 9308 Btu / Hour  
Sum of UA X Design Temperature Difference

**Air Leakage Heat Load**: 4079 Btu / Hour  
(Volume X 0.6) X Design Outdoor Temp X 0.18)

**Building Design Heat Load**: 13387 Btu / Hour  
Air Leakage + Envelope Heat Loss

**Building and Duct Heat Load**: 13387 Btu / Hour  
Use 1.1 if ducts are located in unconditioned space: Sum of Building Heat Loss X 1.1  
Use 1 if ducts are located in conditioned space: Sum of Building Heat Loss X 1

**Maximum Heat Equipment Output**: 16734 Btu / Hour  
Use 1.4 for forced air furnace: Building & Duct Heat Loss x 1.4  
Use 1.25 for heat pump: Building & Duct Heat Loss x 1.25

**WINDOW, SKYLIGHT & DOOR SCHEDULE**

ROOM	TYPE	DESCRIPTION	U-VAL	QTY	WIDTH	HEIGHT	AREA	UA
EXEMPT DOOR AND WINDOW								
SUM OF ALL GLAZING AREAS FROM BELOW: 179								
SUM OF AREA AND UA FOR HEATING SYSTEM SIZING: 53.7								
EXEMPT DOOR AND WINDOW								
SUM OF AREA AND UA FOR HEATING SYSTEM SIZING ONLY: 0.0								
EXTERIOR DOORS (OPaque)								
SUM OF AREA AND UA: 0.0								
AREA WEIGHTED U = UA/AREA: 0.00								
VERTICAL GLAZING								
SUM OF AREA AND UA: 0.00								
AREA WEIGHTED U = UA/AREA: 0.30								
OVERHEAD GLAZING								
SUM OF AREA AND UA: 0.00								
AREA WEIGHTED U = UA/AREA: 0.00								
VERTICAL GLAZING IN UNHEATED SPACES								
SUM OF VERTICAL GLAZING IN UNHEATED SPACES: 0.00								
OVERHEAD GLAZING IN UNHEATED SPACES								
SUM OF OVERHEAD GLAZING IN UNHEATED SPACES: 0.00								

**PRESCRIPTIVE ENERGY CODE COMPLIANCE**

This project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. In addition, based on the size of the structure, the appropriate number of additional credits are checked.

**ALL CLIMATE ZONES - TABLE R402.1.3**

Fenestration U-Factor*	Prescriptive	U-Factor Path	E.B.E. Option 1.2
Skylight U-Factor*	0.30	0.30	0.25
Wood Frame Wall R-Value*	20+5 or 13+10	0.056	20+5 or 13+10
Floor R-Value	30	0.029	38
Below Grade Wall R-Value*	10/15/21 int + 5TB	0.035	10/15/21 int + 5TB
Slab** R-Value & Depth	10, 4 ft	0.540	10, entire slab

See Table R402.1.2 for U-Factor path footnotes.  
See Table R402.1.3 footnotes included on Sheet A1.

Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 & R406.3 so as to achieve the following minimum number of credits:

1. Small Dwelling Unit: 5.0 credits  
Dwelling units less than 1500 square feet in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building that are greater than 500 square feet of heated floor area but less than 1500 square feet.

2. Medium Dwelling Unit: 8.0 credits  
All dwelling units that are not included in #1 or #3.

3. Large Dwelling Unit: 9.0 credits  
Dwelling units exceeding 5000 square feet of conditioned floor area.

4. Additions 150 square feet to 500 square feet: 2.0 credits

**ENERGY CREDIT SUMMARY TABLES**

Options	Fuel Normalization	Descriptions	Credits	
1		Combustion heating, equipment per Table C403.3.2(5) or (6)	0.0	<input type="checkbox"/>
2		Heat pump with supplemental heating	1.5	<input type="checkbox"/>
3		Electric resistance heat only - forced air or zonal	0.5	<input type="checkbox"/>
4		Heat pump without supplemental heating	3.0	<input checked="" type="checkbox"/>
5		Electric resistance w/ mini-split heat pump or 2kw max capacity	2.0	<input type="checkbox"/>

Options	Energy Credit Option Descriptions	Credits	
1.1	Efficient Building Envelope	0.5	<input type="checkbox"/>
1.2	Efficient Building Envelope	1.0	<input type="checkbox"/>
1.3	Efficient Building Envelope	1.5	<input type="checkbox"/>
1.4	Efficient Building Envelope	2.5	<input type="checkbox"/>
2.1	Air Leakage Control and Efficient Ventilation	1.0	<input type="checkbox"/>
2.2	Air Leakage Control and Efficient Ventilation	1.5	<input type="checkbox"/>
2.3	Air Leakage Control and Efficient Ventilation	2.0	<input type="checkbox"/>
3.1	High Efficiency HVAC	1.0	<input type="checkbox"/>
3.2	High Efficiency HVAC	0.5	<input type="checkbox"/>
3.3	High Efficiency HVAC	0.5	<input type="checkbox"/>
3.4	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.5	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.6	High Efficiency HVAC	1.0	<input type="checkbox"/>
3.7	High Efficiency HVAC	2.0	<input checked="" type="checkbox"/>
3.8	High Efficiency HVAC	1.0	<input type="checkbox"/>
3.9	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.10	High Efficiency HVAC	2.5	<input type="checkbox"/>
3.11	High Efficiency HVAC	0.5	<input type="checkbox"/>
4.1	High Efficiency HVAC Distribution System	0.5	<input type="checkbox"/>
5.1	Efficient Water Heating	0.5	<input type="checkbox"/>
5.2	Efficient Water Heating	0.5	<input type="checkbox"/>
5.3	Efficient Water Heating	0.5	<input type="checkbox"/>
5.4	Efficient Water Heating	1.0	<input type="checkbox"/>
5.5	Efficient Water Heating	1.5	<input type="checkbox"/>
5.6	Efficient Water Heating	2.0	<input type="checkbox"/>
5.7	Efficient Water Heating	2.5	<input type="checkbox"/>
5.8	Efficient Water Heating	2.5	<input type="checkbox"/>
6.1	Renewable Electric Energy (0.5 credits per 600kwh, 4.5 max)	0.0	<input type="checkbox"/>
7.1	Appliance Package	0.5	<input type="checkbox"/>
<b>Total Credits</b>			<b>5.0</b>

**AIR LEAKAGE**

Components of the building thermal envelope as listed in TABLE R402.4.1.1 shall be installed per manufacturer's specifications to limit air leakage rate to not exceed 4 air changes per hour (ACH)

AIR LEAKAGE CALCULATION (maximum blower test CFM)	CFM <sub>50-cfm</sub>	ACTUAL Blower test result
maximum ACH	CFM <sub>50-cfm</sub> = BLDG VOL (ft³) X 4 ACH / 60 min = 547 cfm	cfm

**ROOF VENTILATION**

Standard Truss / Scissor Truss Roof Framing Assembly: UPPER ROOF

Roof Area: 525 s.f.  
Ventilation Required: 525 s.f. x 144 / 300 = 252 s.i. Req'd

Provides between 40% & 50% of the total required ventilation no more than 3 ft below the ridge or the highest point of the space. Remainder to be installed at eave vents.

Upper Roof Ventilation:  
AF50 Roof Jack (10" x 7") = 50.00 s.i. each  
Upper Ventilation MINIMUM = 252 s.i. x 0.4 / s.i. of each vent = 3 vents  
Upper Ventilation MAXIMUM = 252 s.i. x 0.5 / s.i. of each vent = 3 vents  
Provide: 3 -10"x7" roof jacks. Ventilation = 150.00 s.i.  
Ventilation area remainder for eave vents = 102.00 s.i. (Req'd vent-Upper vent)

Eave Ventilation:  
Birdblocking: (3/2.25" dia holes per bay = 5.96 s.i. per l.f. - 25% reduction = 4.47 s.i. per l.f.  
Eave Ventilation Required = 102.00 s.i. / 4.47 s.i. per l.f. = 22.82 l.f.  
Provide Minimum: 23 l.f. birdblocking. Ventilation = 102.81 s.i.  
Minimum Ventilation Provided = 252.81 s.i. IS GREATER THAN: 252 s.i. Req'd

**VAPOR RETARDER**

FLOOR	<input type="checkbox"/> 4 MIL POLY	<input type="checkbox"/> FACE STAPLED BACKED BATTS	<input checked="" type="checkbox"/> PLYWOOD W/ EXT. GLUE
WALL	<input type="checkbox"/> 4 MIL POLY	<input type="checkbox"/> FACE STAPLED BACKED BATTS	<input checked="" type="checkbox"/> CLASS II PRIMER
RM JOIST	<input type="checkbox"/> 4 MIL POLY	<input checked="" type="checkbox"/> FOIL-FACE STAPLED BACKED BATTS	<input type="checkbox"/> CLASS II PRIMER
CEILING	<input type="checkbox"/> 4 MIL POLY	<input type="checkbox"/> FACE STAPLED BACKED BATTS	<input checked="" type="checkbox"/> CLASS II PRIMER

NOTE: CLASS II DEFINED AS PERM RATING GREATER THAN 0.1 AND LESS THAN OR EQUAL TO 1.0

**WHOLE-HOUSE MECHANICAL VENTILATION (PRESCRIPTIVE)**

WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS M1505.4.1 THROUGH M1505.4.4 (WASHINGTON STATE AMENDMENTS)

WHOLE-HOUSE VENTILATION USING EXHAUST FANS (M1505.4.1.2)

WHOLE-HOUSE VENTILATION USING SUPPLY FANS (M1505.4.1.3)

WHOLE-HOUSE VENTILATION SYSTEM, BALANCED (M1505.4.1.4)

WHOLE-HOUSE VENTILATION USING AIR HANDLER INTEGRATED SUPPLY (M1505.4.1.5)

**MECHANICAL VENTILATION AIRFLOW RATE PER EQUATION 15-1 (M1505.4.3)**

39.12 CFM (CONTINUOUS)

**VENTILATION QUALITY ADJUSTMENT PER EQUATION 15-2 (M1505.4.3.1)**

BALANCED & DISTRIBUTED (1.0 COEFFICIENT)

BALANCED & NOT DISTRIBUTED (1.25 COEFFICIENT)

NOT BALANCED & DISTRIBUTED (1.25 COEFFICIENT)

NOT BALANCED & NOT DISTRIBUTED (1.5 COEFFICIENT)

ADJUSTED MECHANICAL VENTILATION AIRFLOW RATE = 58.68 CFM (CONTINUOUS)

**INTERMITTENT OFF OPERATION (M1505.4.3.2)**

RUN-TIME % IN EACH 4-HOUR SEGMENT

50 PERCENT

66 PERCENT

75 PERCENT

100 PERCENT

INTERMITTENT FLOW RATE = 76.284 CFM

**EXHAUST RATES**

WSBC AMENDMENTS TO 2021 IRC SECTION M1505

SYMBOL	LOCATION	MINIMUM FAN REQUIREMENTS
A	Bath, Powder	Minimum 50 cfm intermittent, 20 cfm Continuous (IRC TABLE M1505.4.4(1))
B	Kitchen	INTERMITTENT-OPEN OR ENCLOSED KITCHEN Hood over electric range 65% CE or 160 CFM. Hood over combustion range 80% CE or 250 CFM. CONTINUOUS-ENCLOSED KITCHENS 5 ACH based on kitchen volume.
C	Whole House Fan	Flow rate per WHOLE-HOUSE MECHANICAL VENTILATION schedule

All fans to vent to outside. All other requirements of the 2021 WSEC and the WSBC amendments to the 2021 IRC section M1505 must be met.

**ALARM SCHEDULE**

2021 IRC SECTIONS R314 & R315

SYMBOL	DESCRIPTION	REQUIREMENTS
SA	Smoke Alarm	*110 V interconnected w/ battery backup. *Installed on each floor, in each sleeping room, and outside each separate sleeping area. Installed not less than 3 ft from the door of a bath which contains a tub or shower unless this prevents placement in a required location. *Listed in accordance with UL 217 and to comply with NFPA 72.
SA/CM	Combination Smoke Alarm & Carbon Monoxide Alarm	*Installed on each floor, outside of each separate sleeping area in the immediate vicinity of the bedrooms, and in a bedroom that contains a gas fireplace in the bedroom or adjacent bathroom. *Smoke alarm requirements per above. *Combination smoke & carbon monoxide alarms listed in accordance with UL 217 & UL 2034.
HD	Heat Detector	*A heat detector or heat alarm to be installed in a central location in the garage and per the manufacturer's instructions. * Heat detector shall be interconnected to an alarm installed in the dwelling unit.

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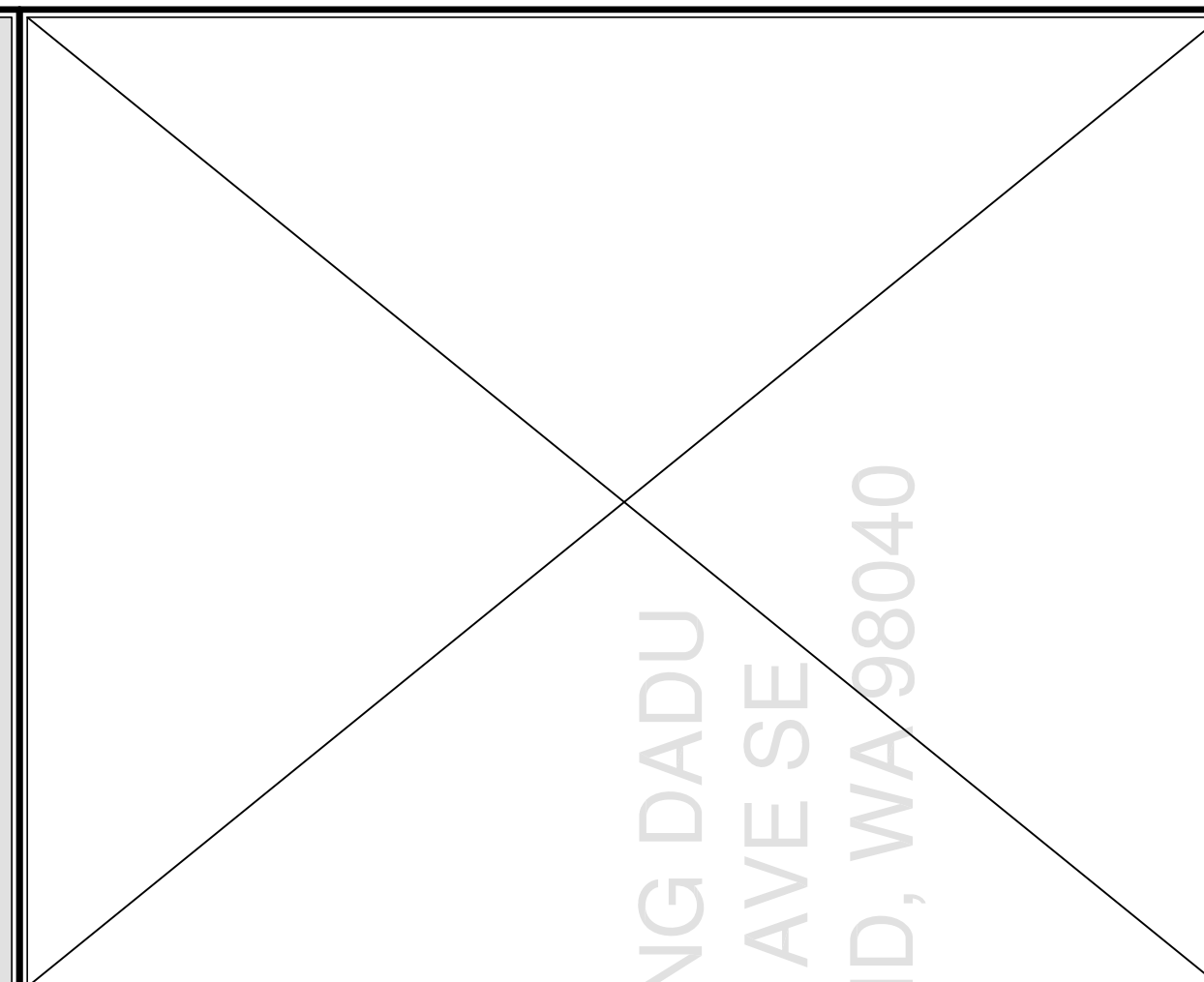
DESIGNED BY: MBJ DATE: 05/20/23  
DRAWN BY: BPS DATE: 1/24/23  
PROJECT MANAGER: MARCUS JENKINS  
REVISED BY: BPS DATE: 8/15/23

LATERAL BY: ZVELT DATE: 6/25/23  
LATERAL JOB NUMBER: 25-120

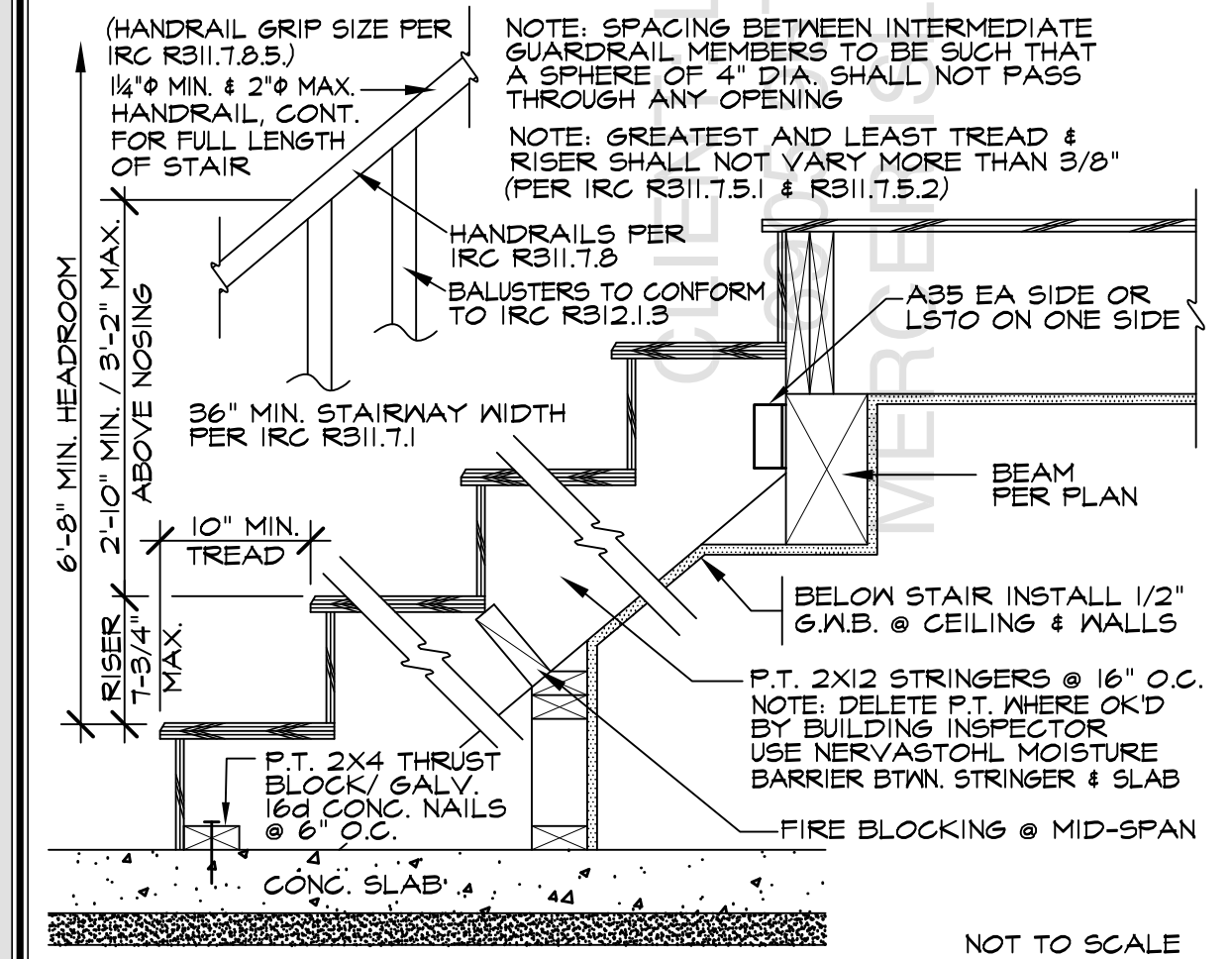
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A7

ANW JOB NUMBER: 250052

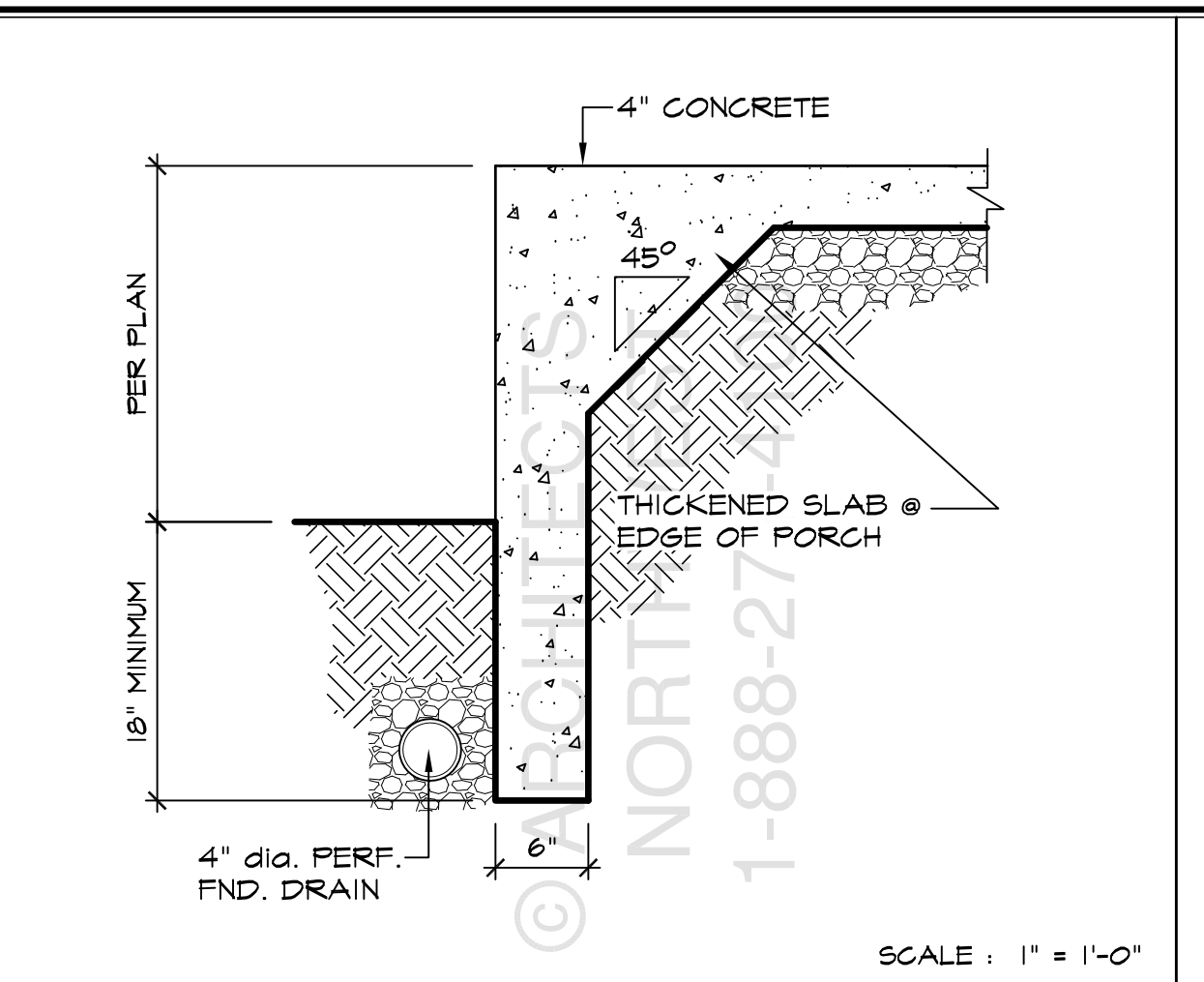
LONG DADU  
PLAN A911AO-0



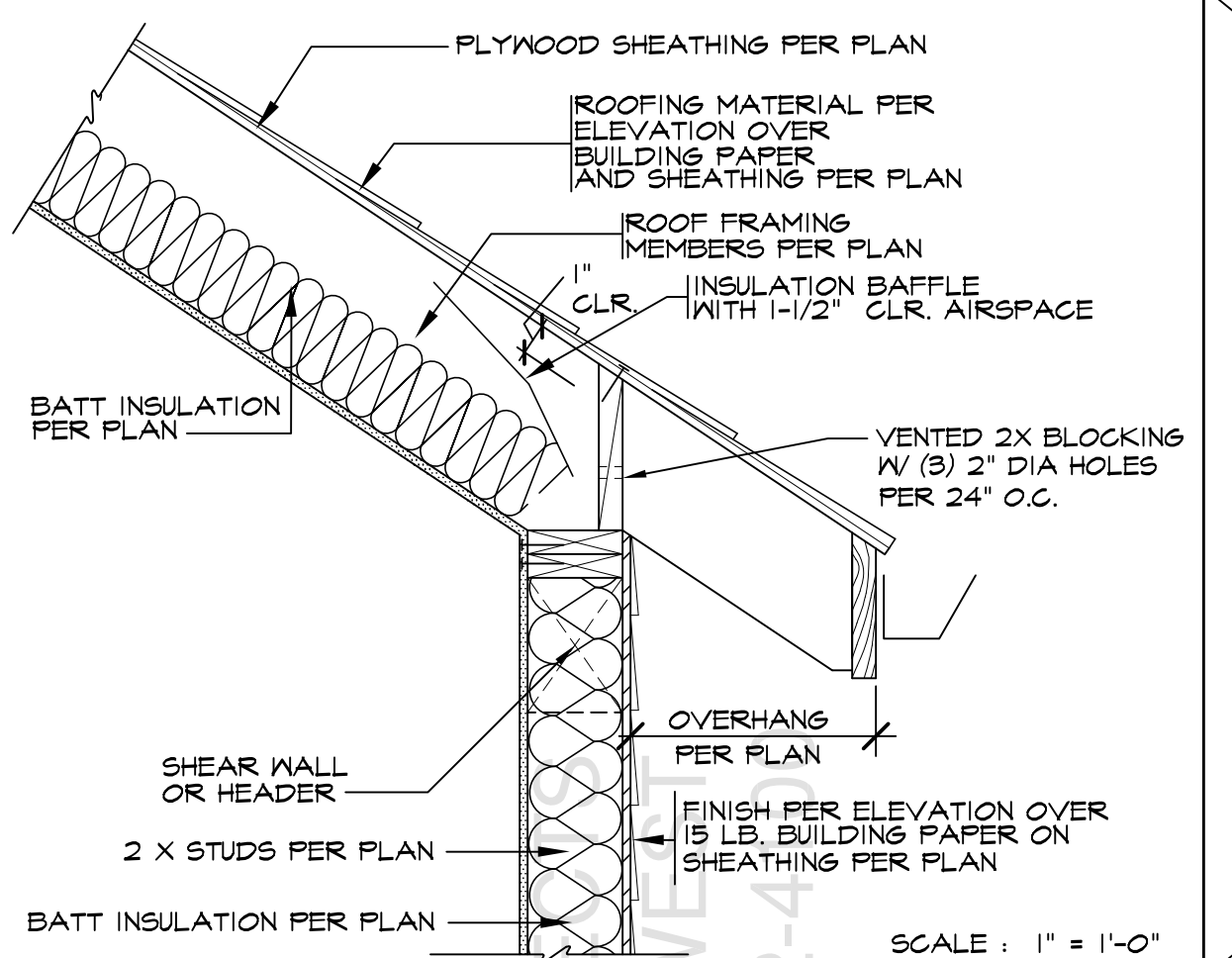
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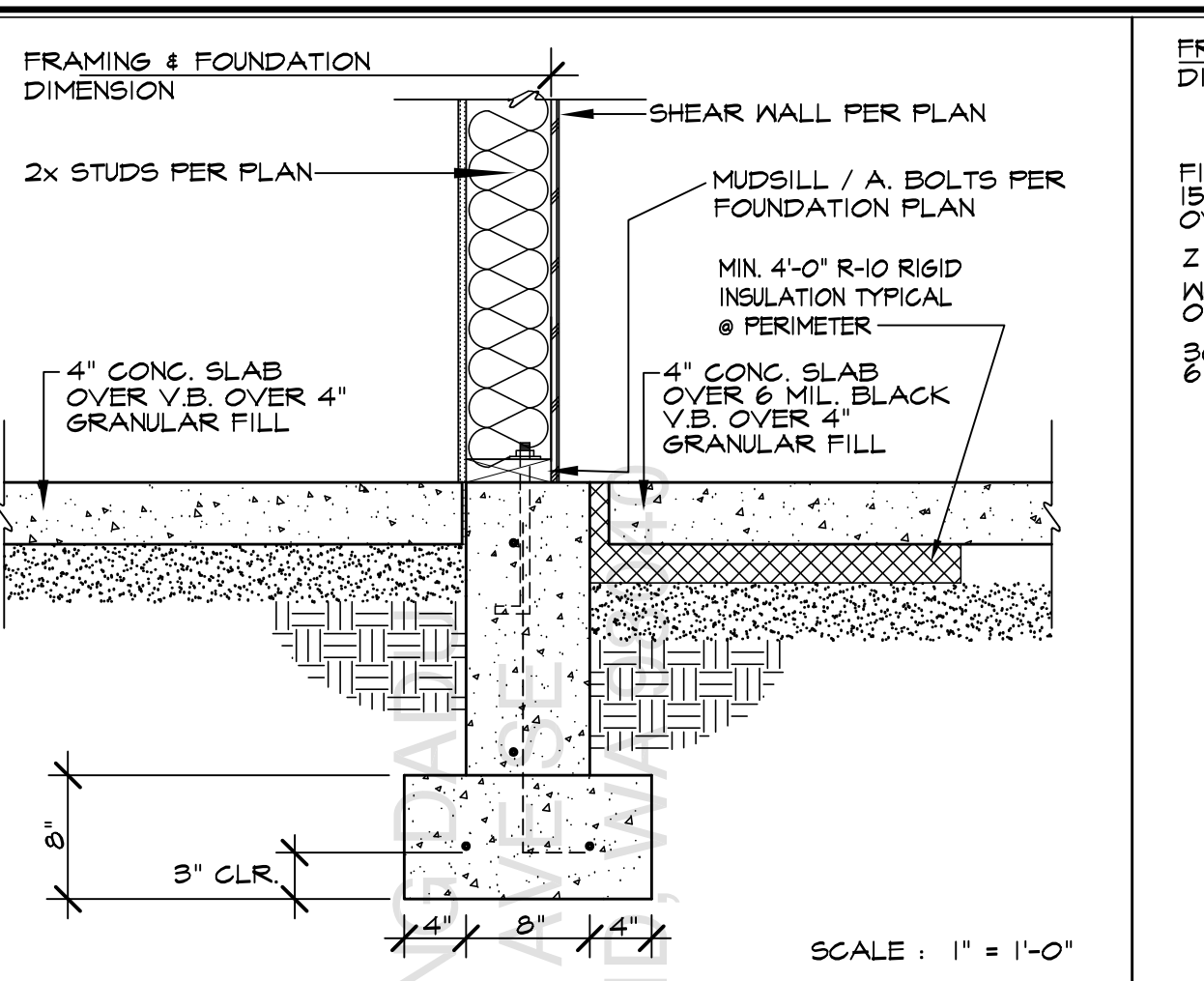
6 INTERIOR STAIR W/ SLAB



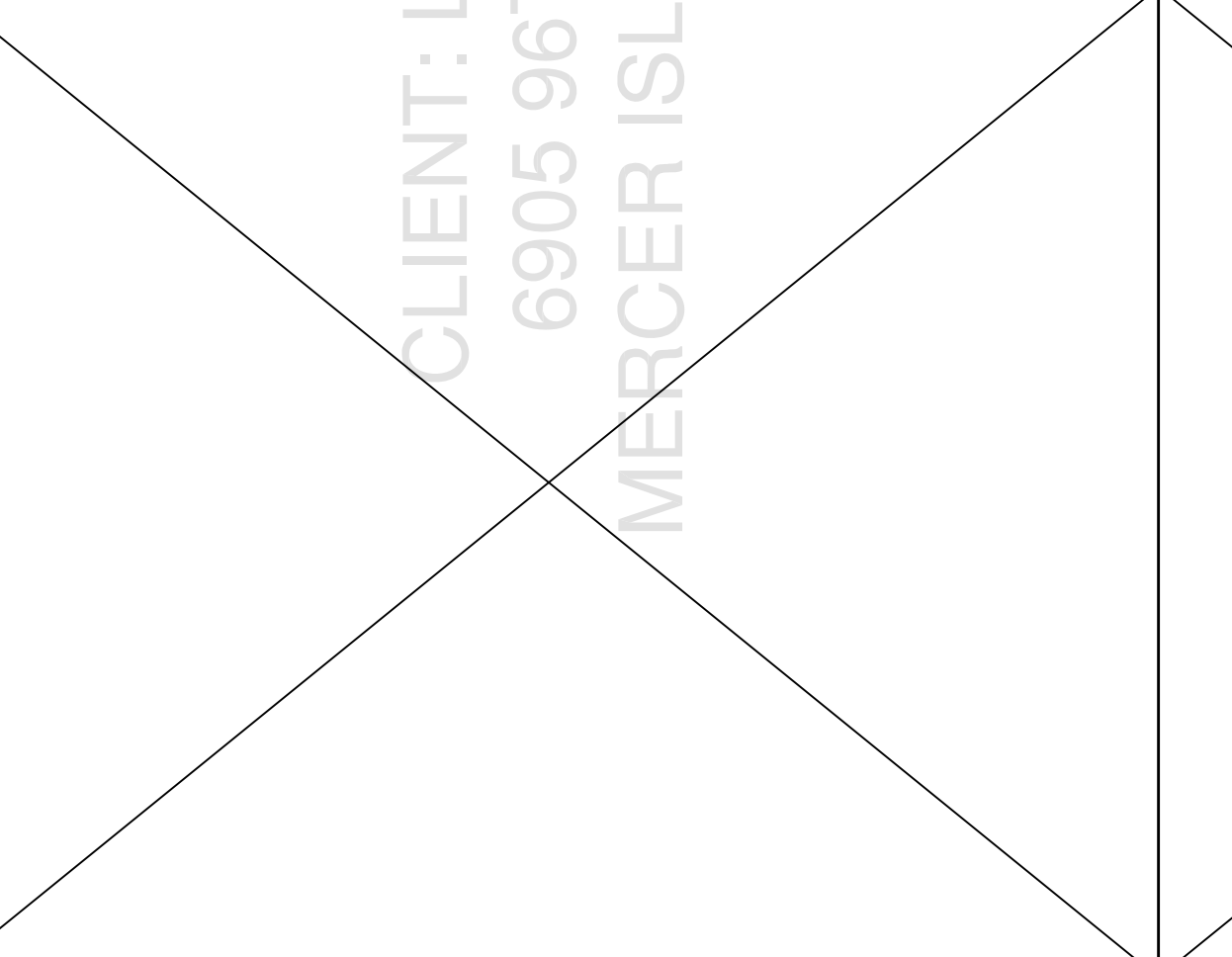
2 FND. WALL PORCH



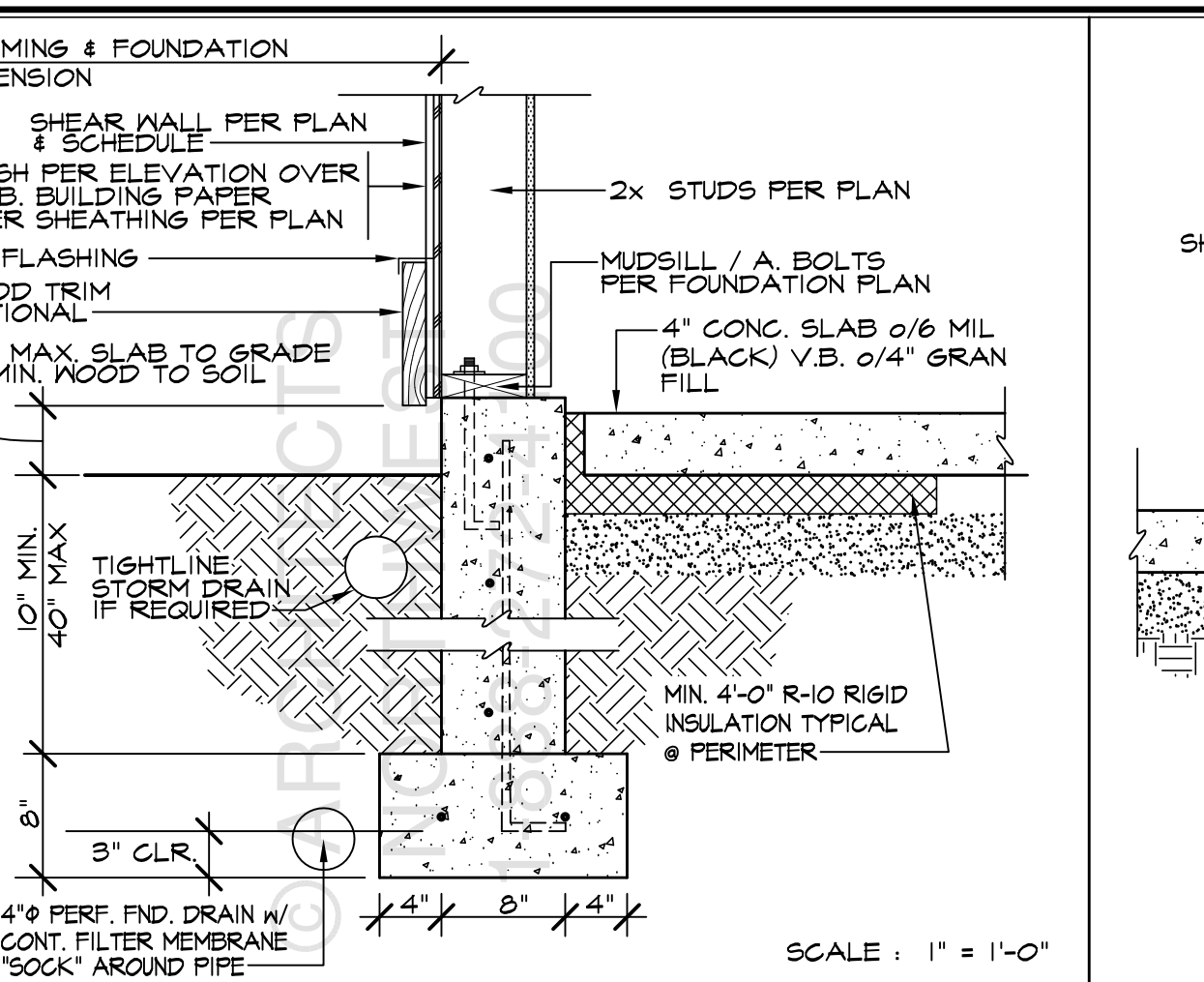
7 VAULTED CEILING & EAVE



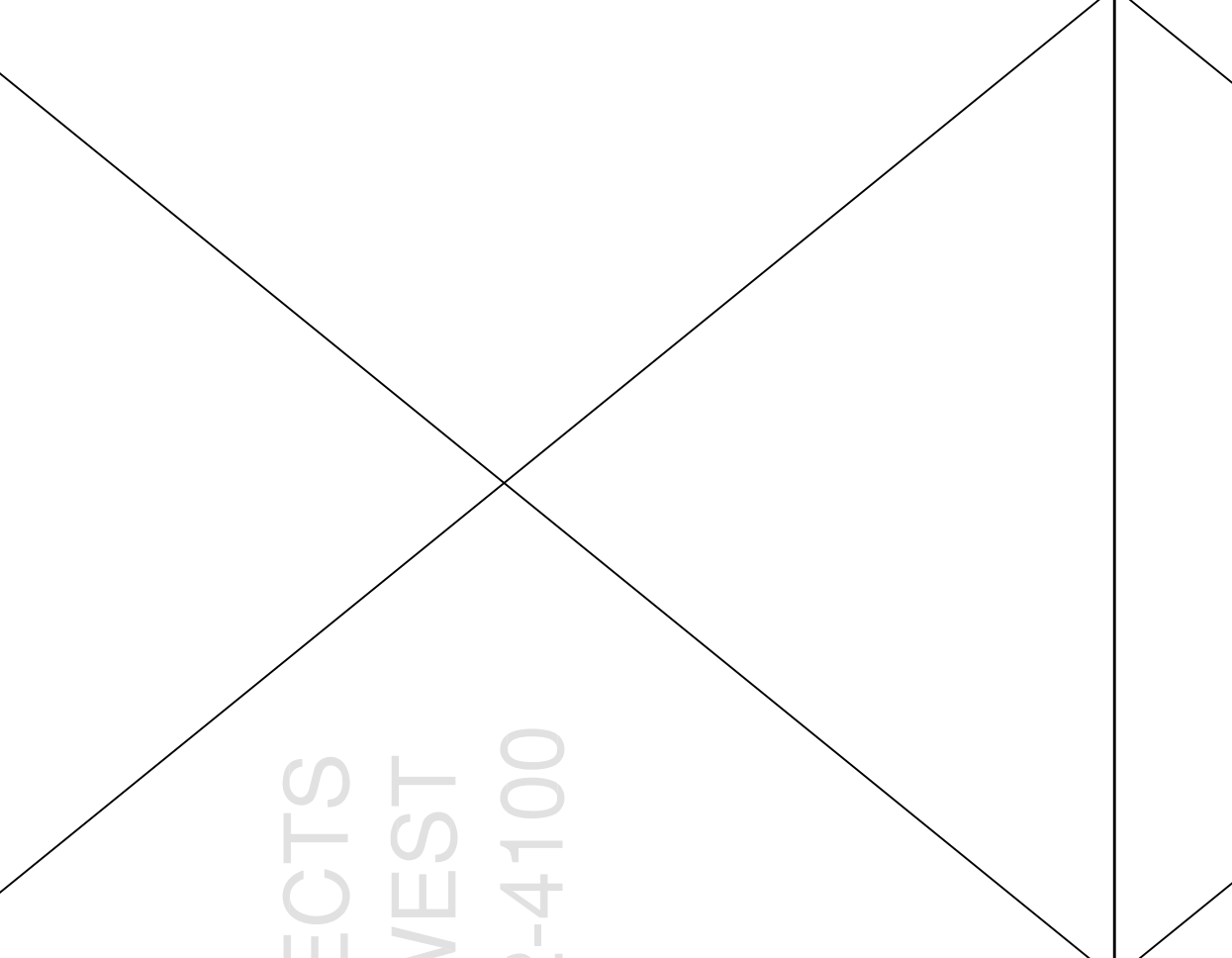
3 8" STEM WALL W/ SLAB



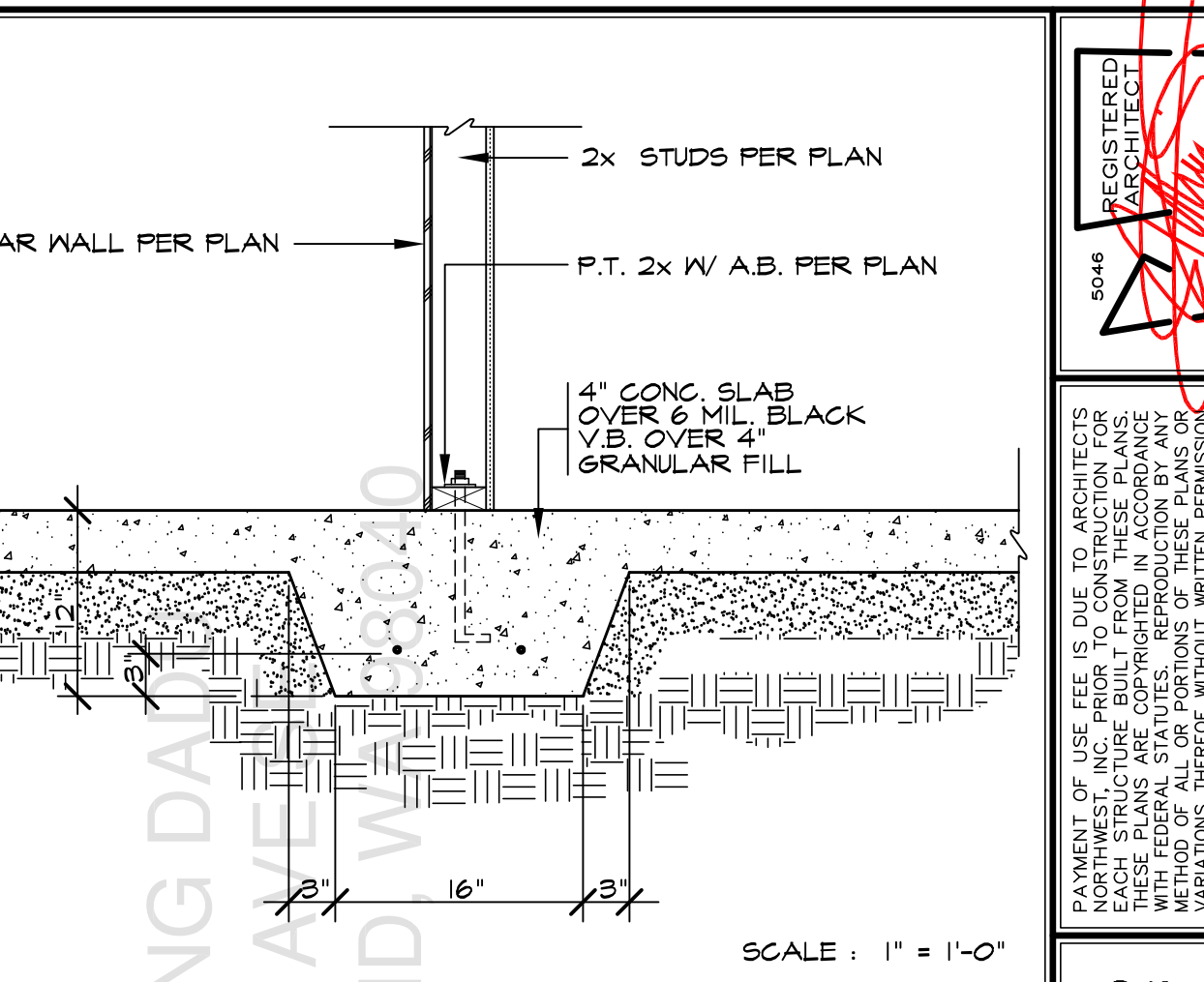
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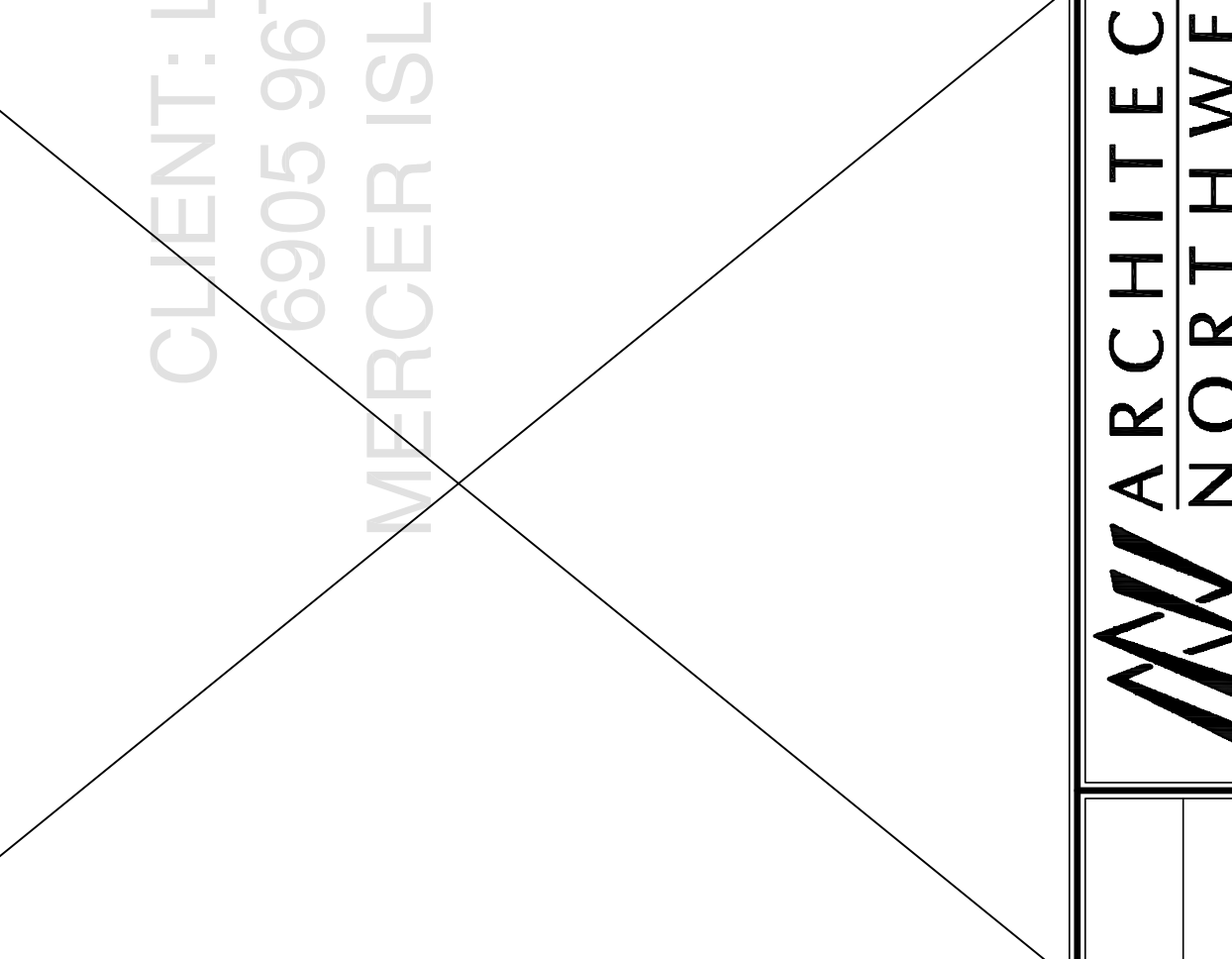
4 8" FND. WALL



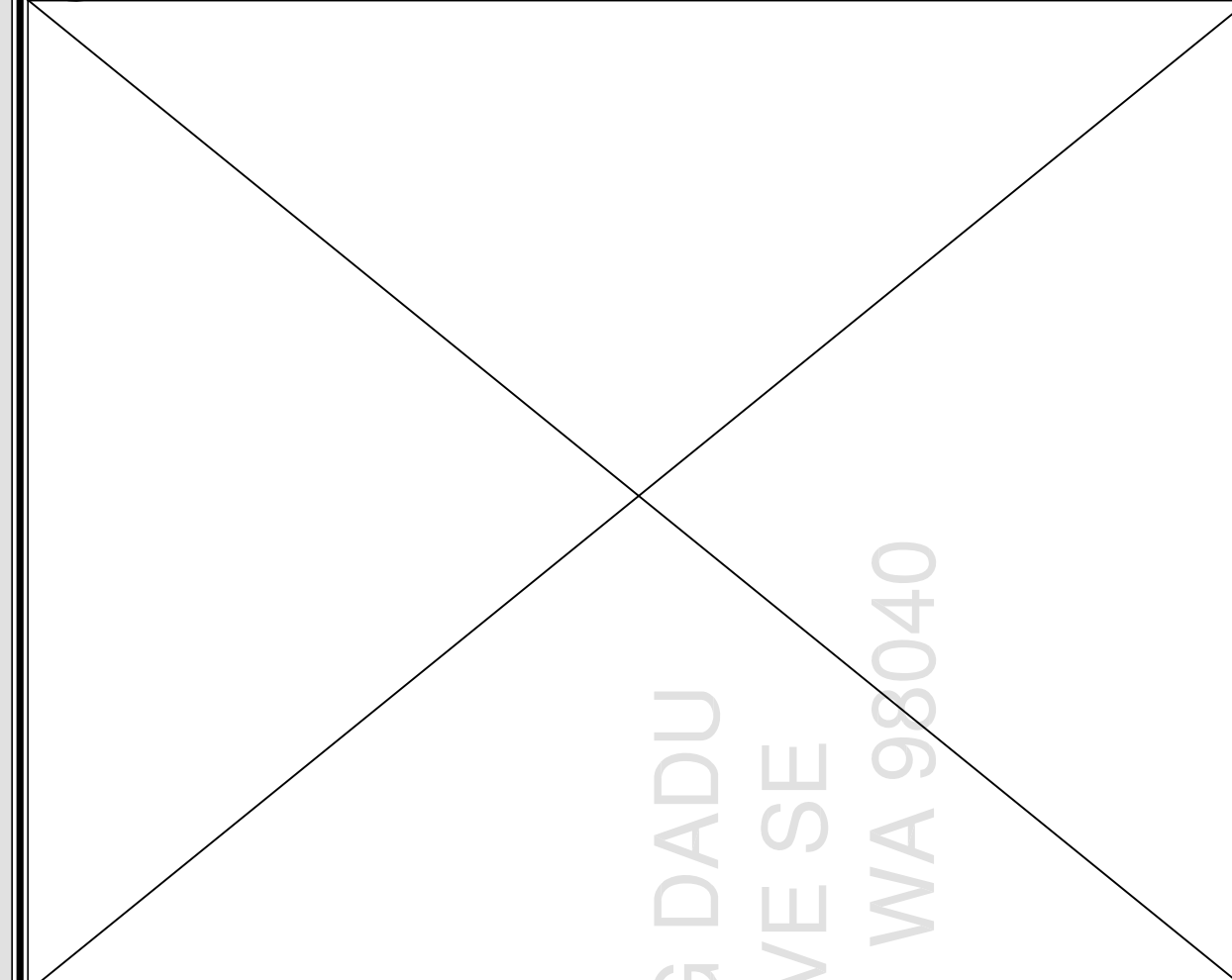
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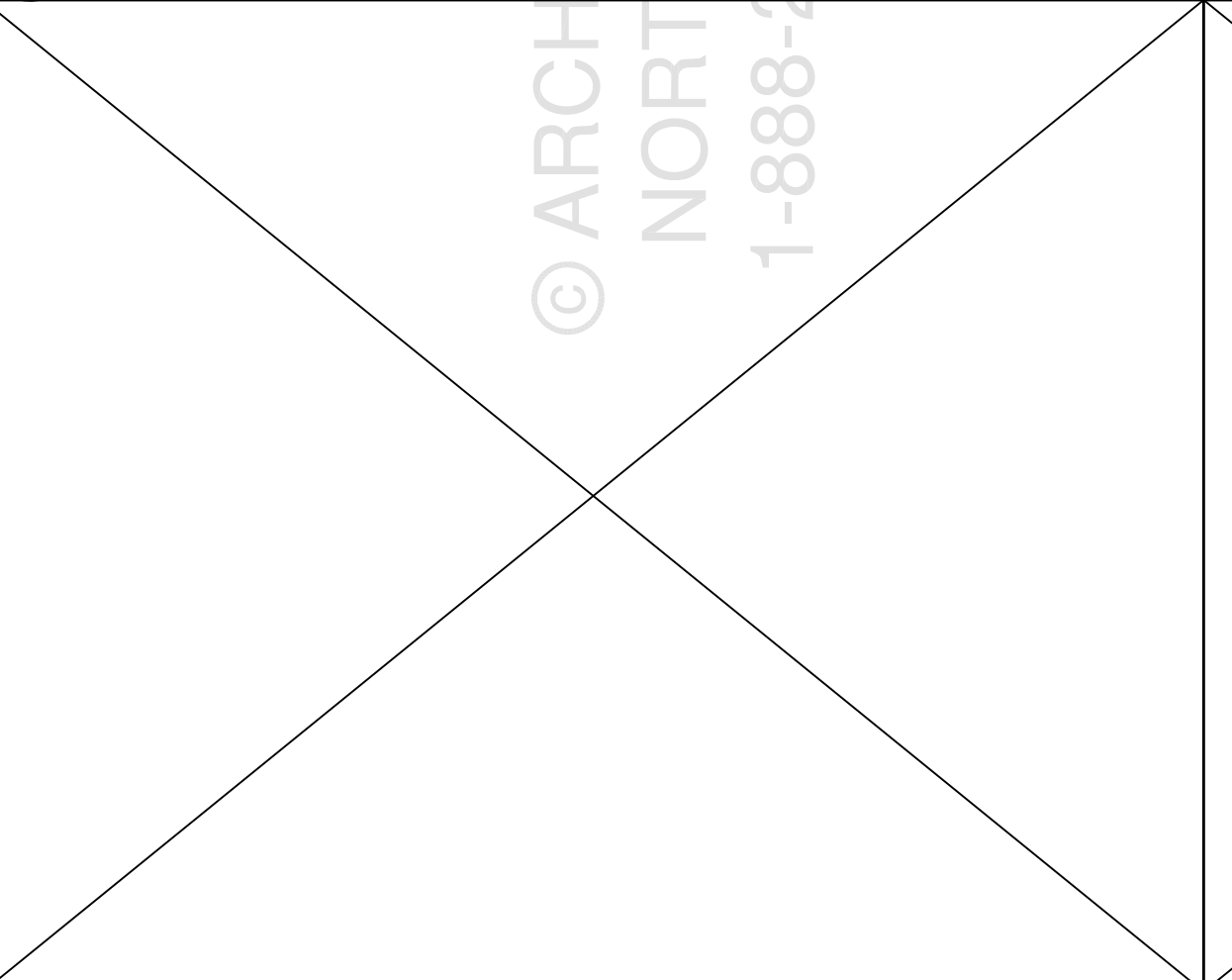
5 THICKENED SLAB



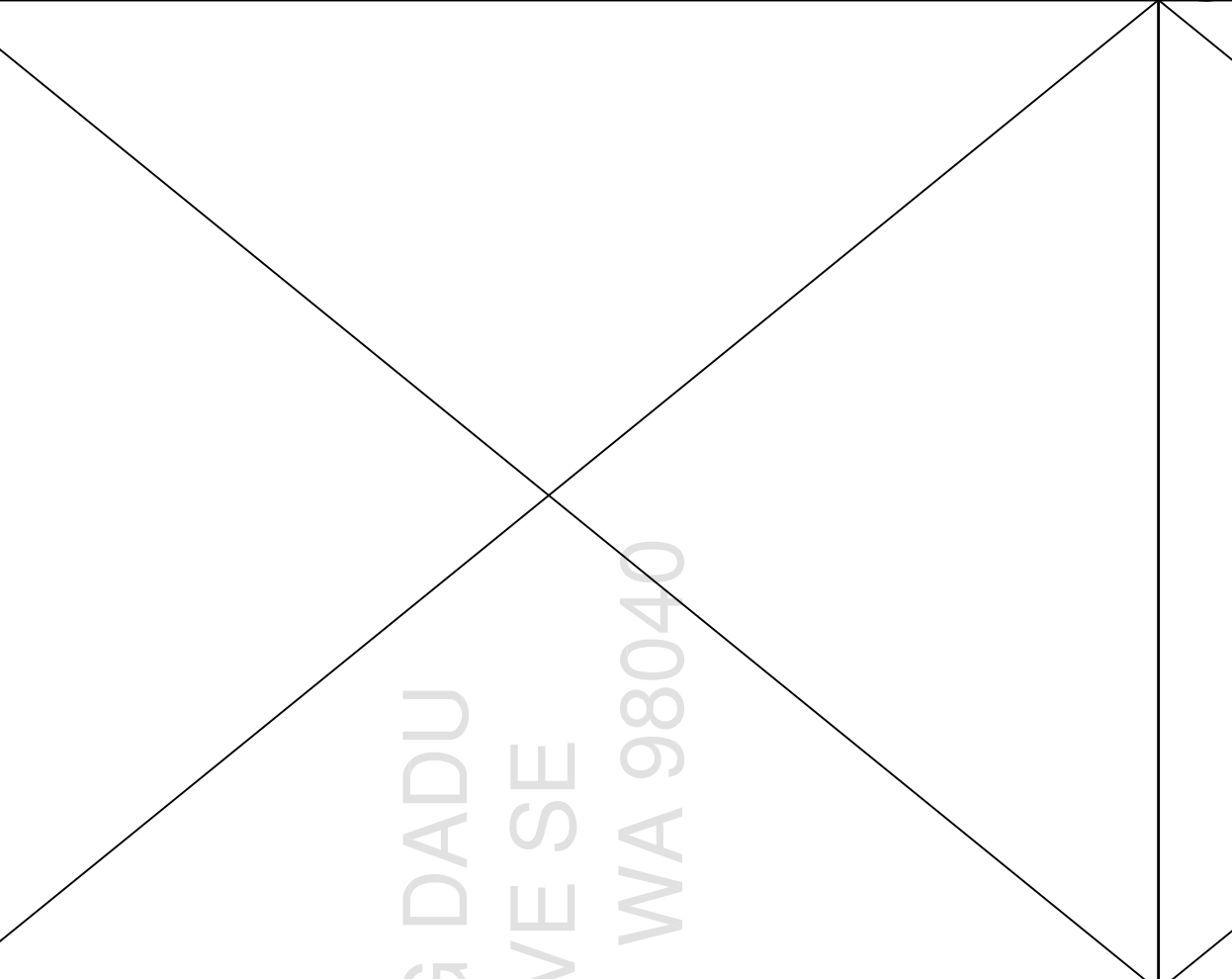
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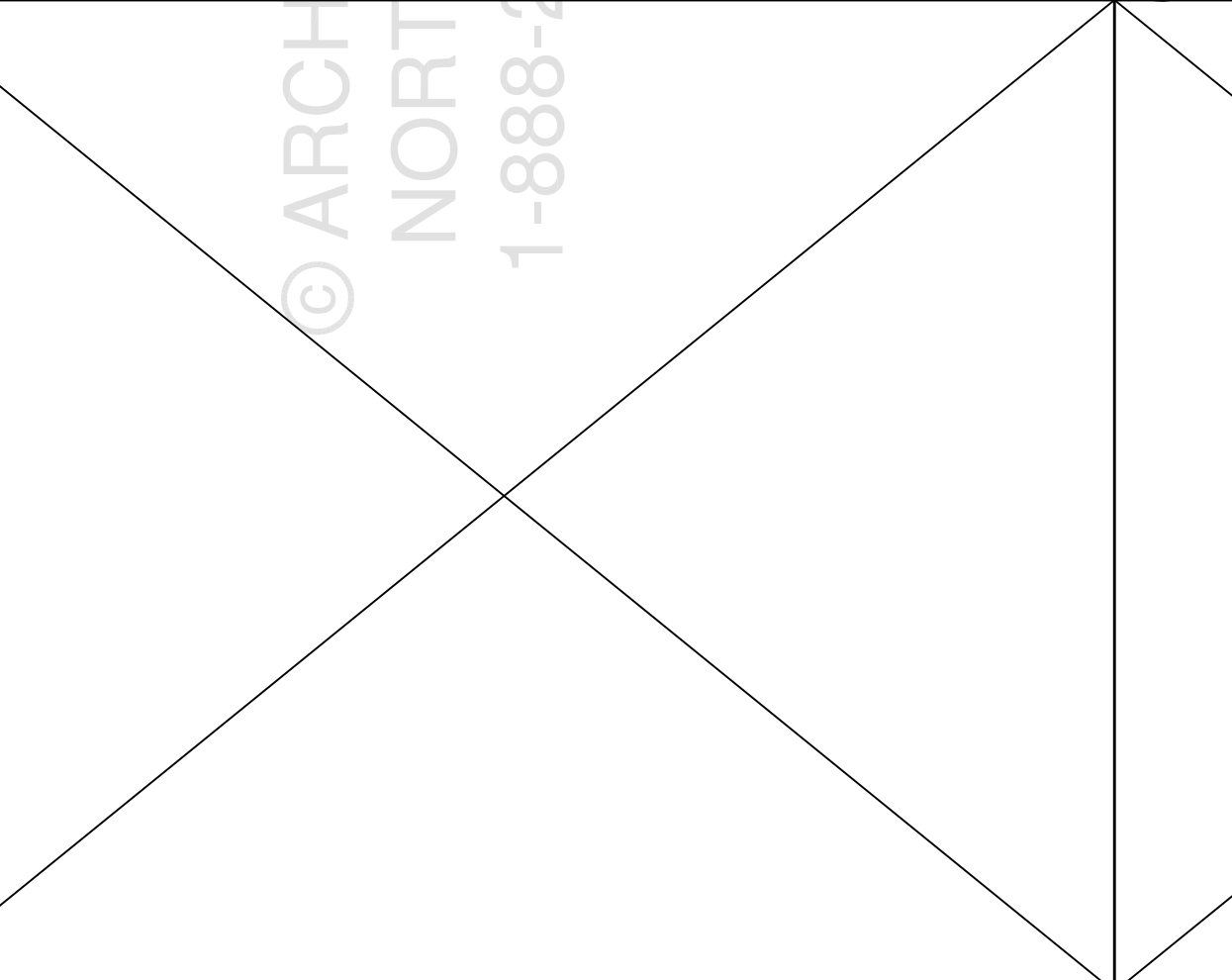
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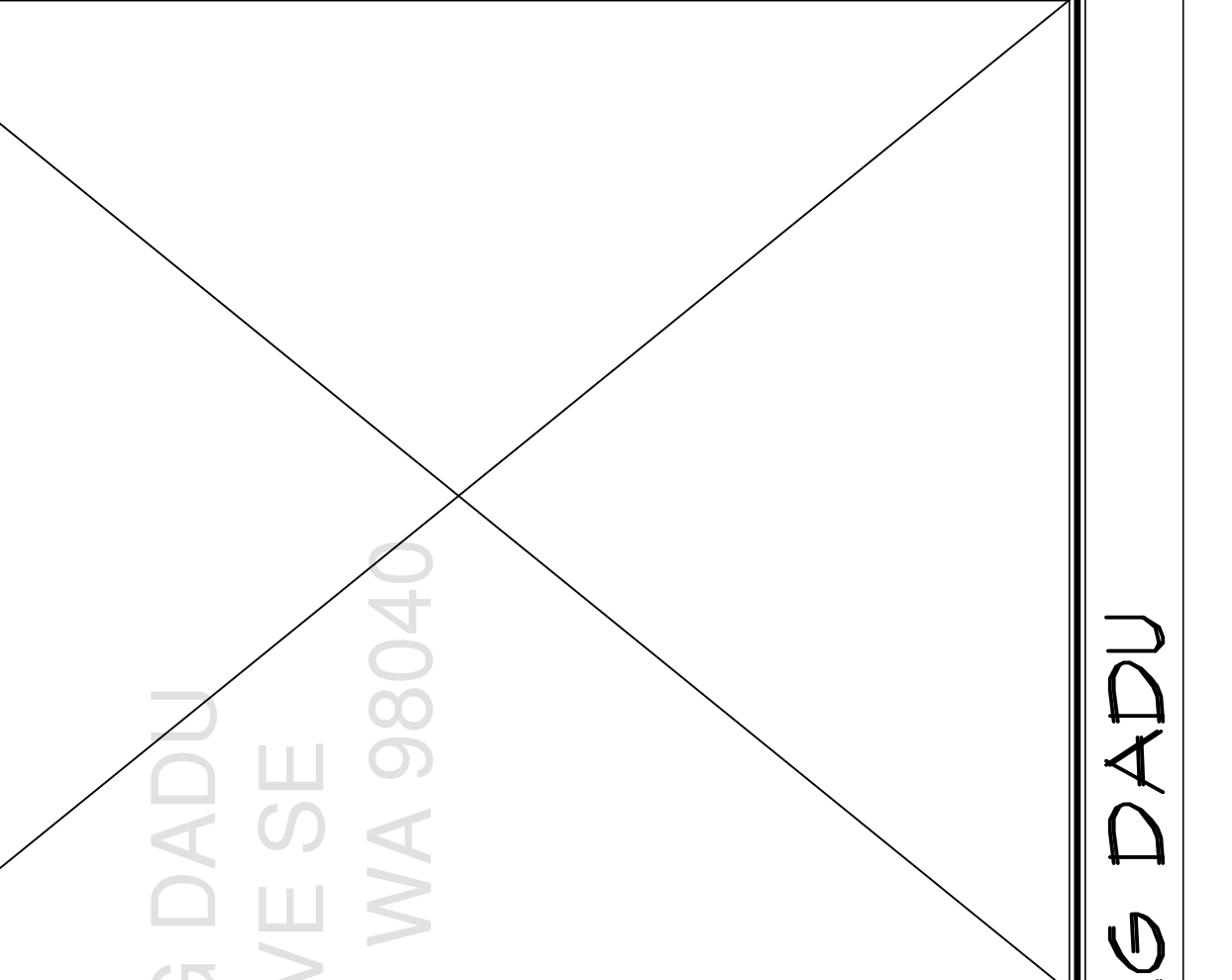
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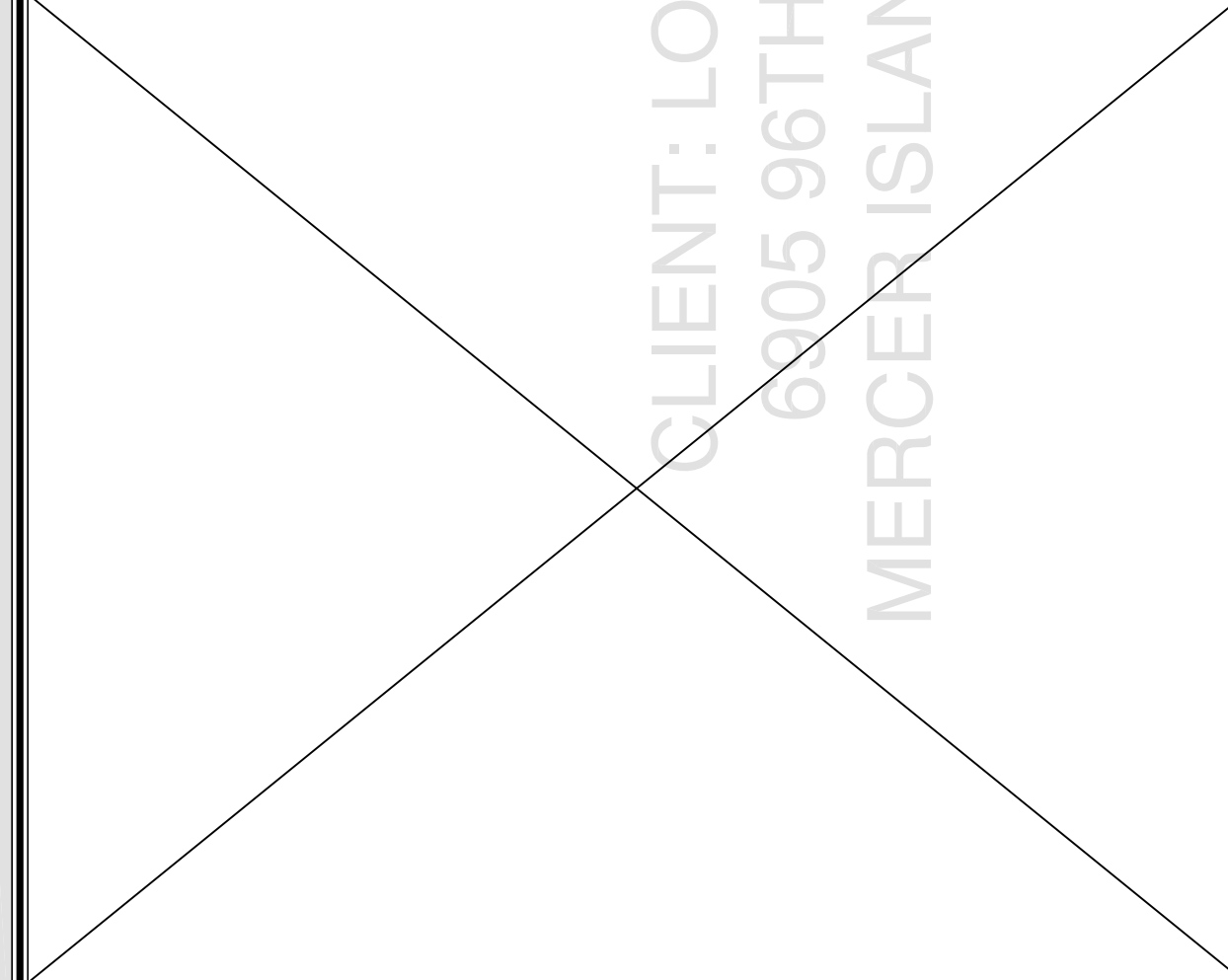
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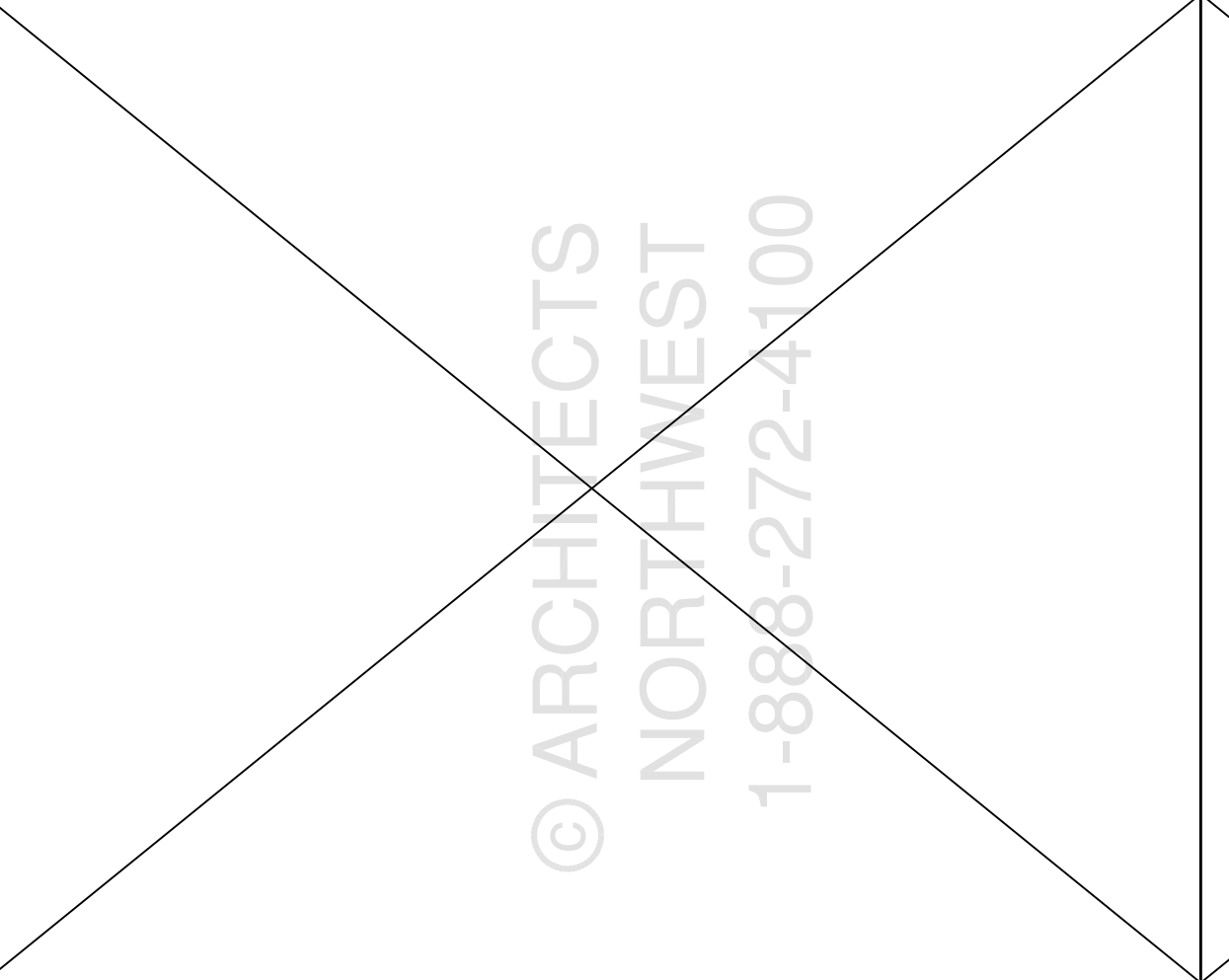
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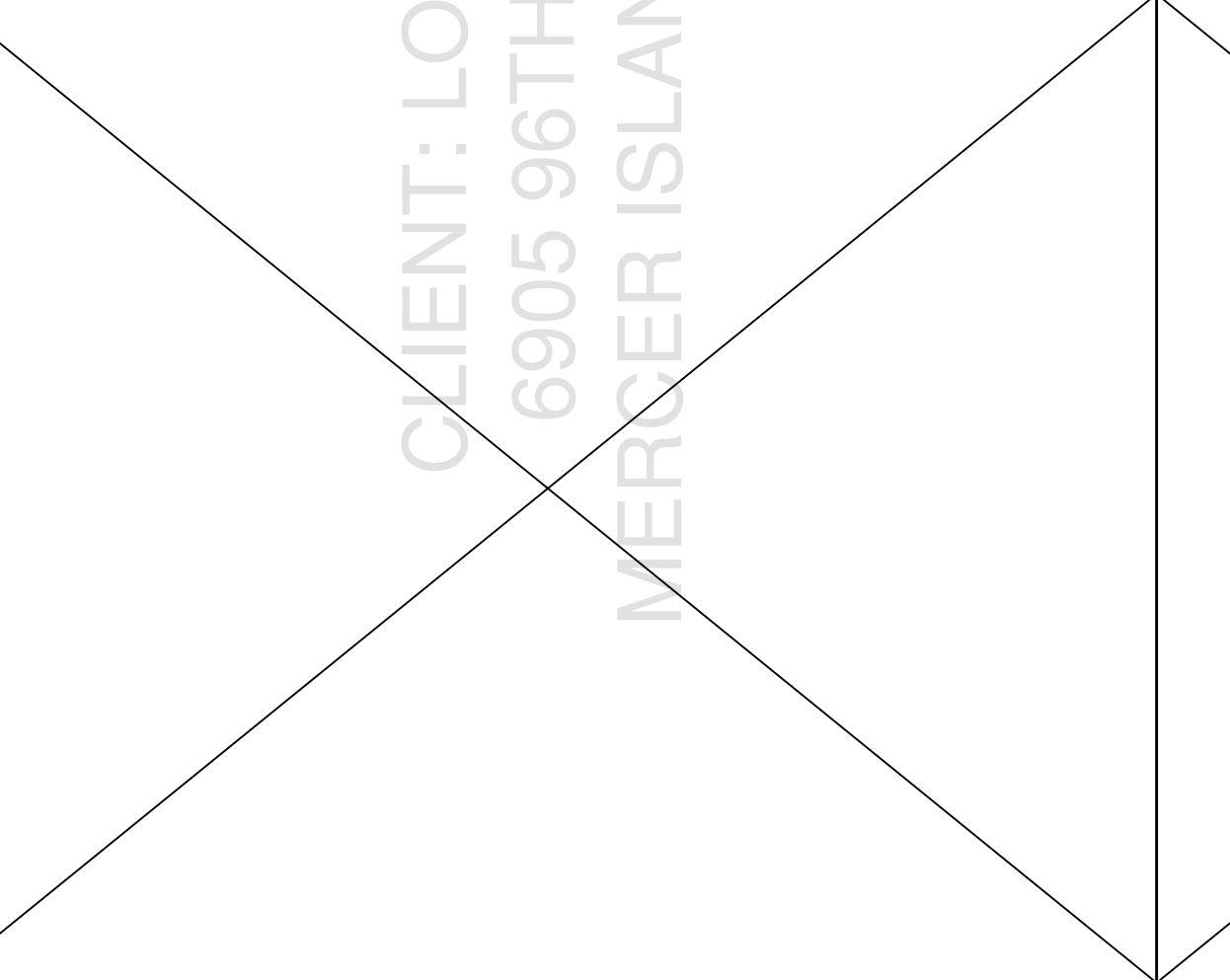
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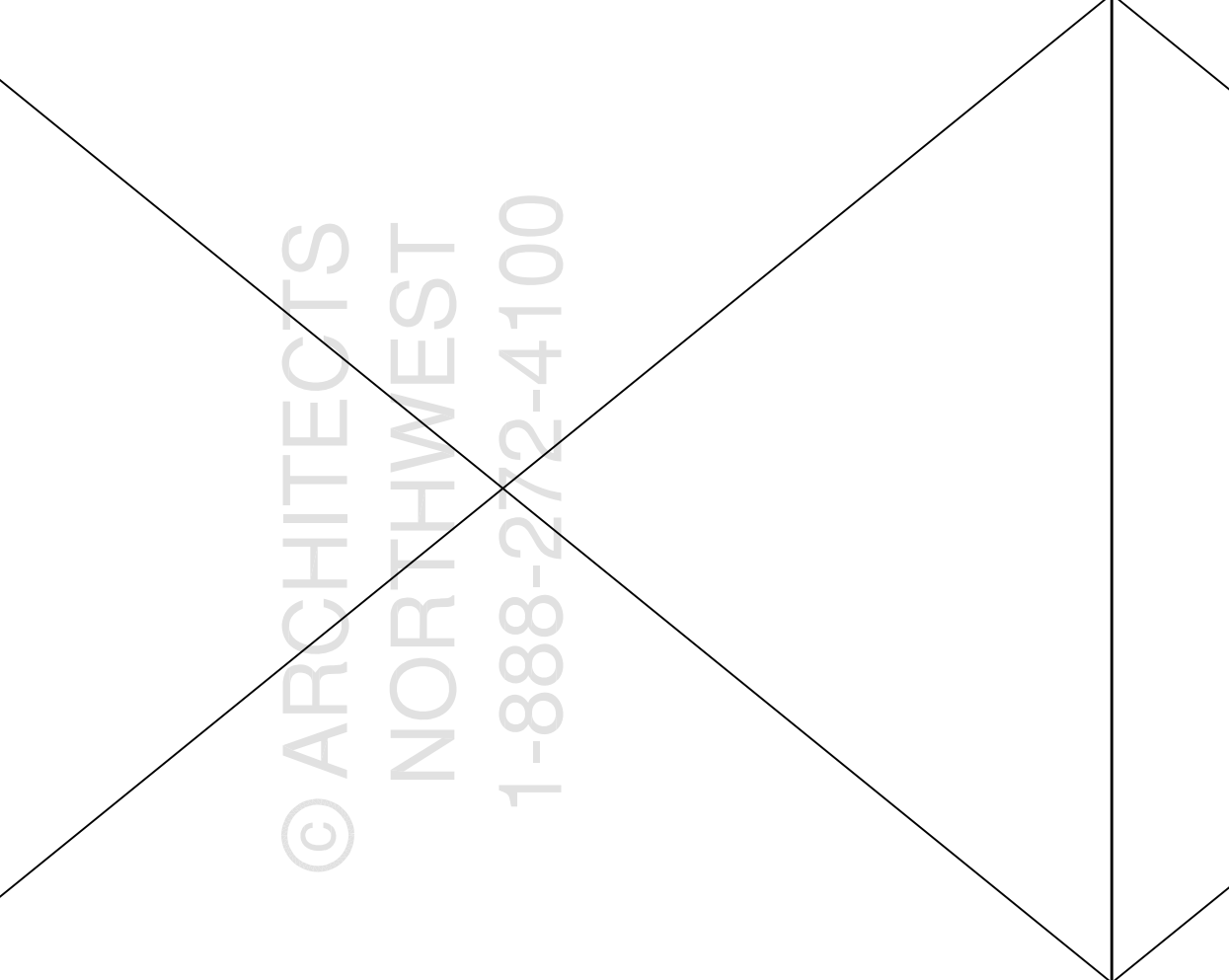
16 NOT USED



17 NOT USED



18 NOT USED



19 NOT USED



20 NOT USED

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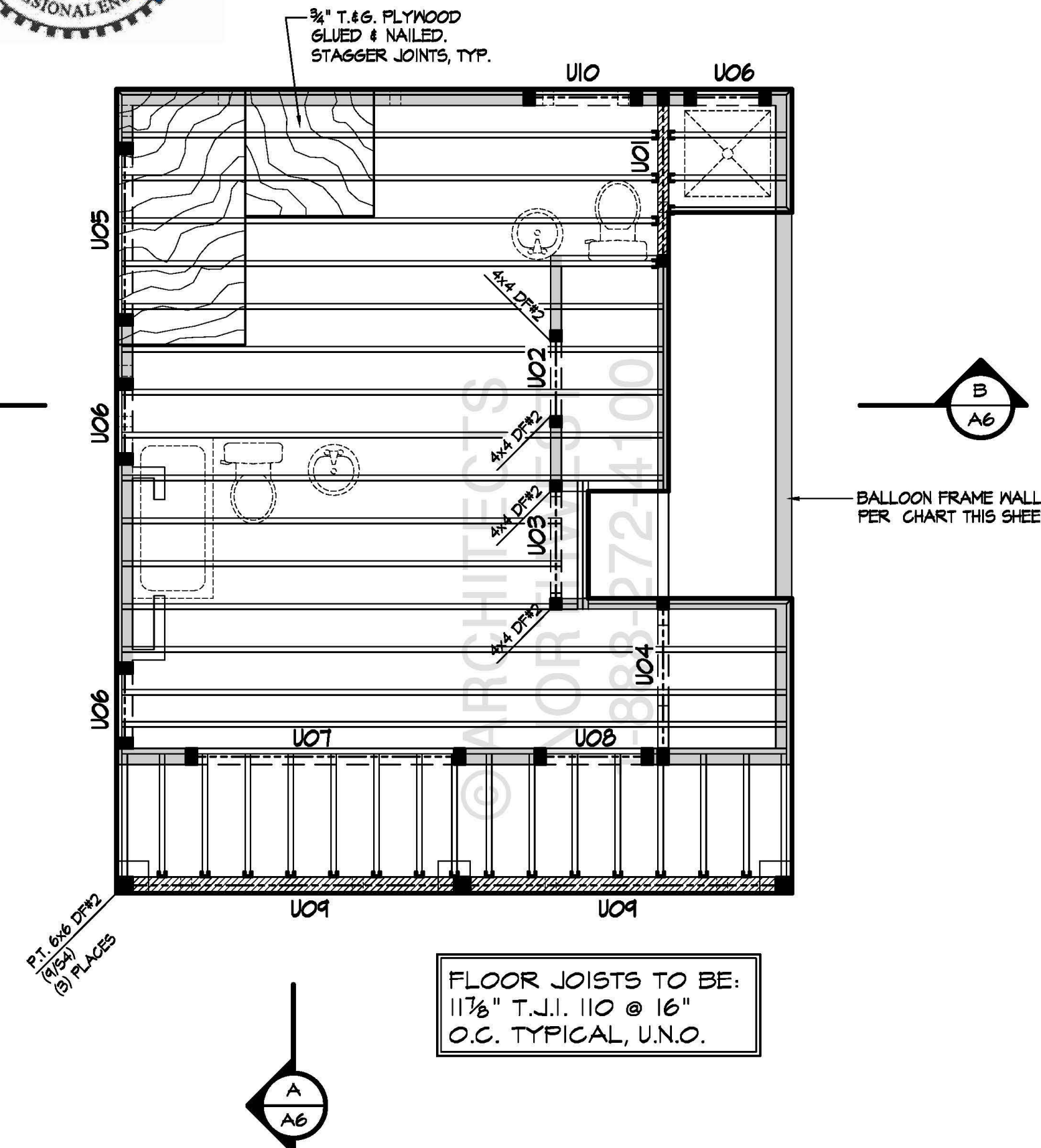
DESIGNED BY: MBJ DATE: 05/20/25  
DRAWN BY: BPS DATE: 7/29/25  
PROJECT MANAGER: MARCUS JENKINS  
REVISED BY: BPS DATE: 8/15/25  
LATERAL BY: ZVELT DATE: 6/25/25  
LATERAL JOB NUMBER: 25-120  
A3  
A7  
ANW JOB NUMBER: 250052



CLIENT: LONG DADU  
6905 96TH AVE SE  
MERCER ISLAND, WA 98040

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UPPER FLOOR BEAM SCHEDULE				
MEMBER	BM SIZE	SPECIES	CONNECTION	COMMENTS
U01	4x10	DF#2	-	BEAM
U02	4x10	DF#2	-	HEADER
U03	4x10	DF#2	-	HEADER
U04	4x10	DF#2	-	HEADER
U05	4x10	DF#2	-	HEADER
U06	4x10	DF#2	-	HEADER
U07	4x10	DF#2	-	HEADER
U08	4x10	DF#2	-	HEADER
U09	6 x 12	DF#2	-	BEAM
U10	4x10	DF#2	-	HEADER



### UPPER FLOOR FRAMING PLAN

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

#### FLOOR FRAMING NOTES:

- CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
- ALL FLOOR JOISTS TO BE 11 3/8" T.J.I. 110 @ 16" ON CENTER UNLESS NOTED OTHERWISE (U.N.O.)
- ALL HEADERS TO BE 4x10 DF#2 W/R-10 RIGID INSULATION @ EXTERIOR WARM WALLS, U.N.O.
- PROVIDE SOLID BLOCKING OVER SUPPORTS.
- PROVIDE FIRE BLOCKING @ ALL PLUMBING PENETRATIONS.
- WINDOW HEADERS @ 6'-0" ABOVE FINISHED FLOOR @ MAIN FLOOR U.N.O.
- BEARING WALLS ARE SHADED.
- PLUMBING AND MECHANICAL FIXTURES ARE DASHED.
- INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
- ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
- SEE SHEET A1 FOR ADDITIONAL NOTES.

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

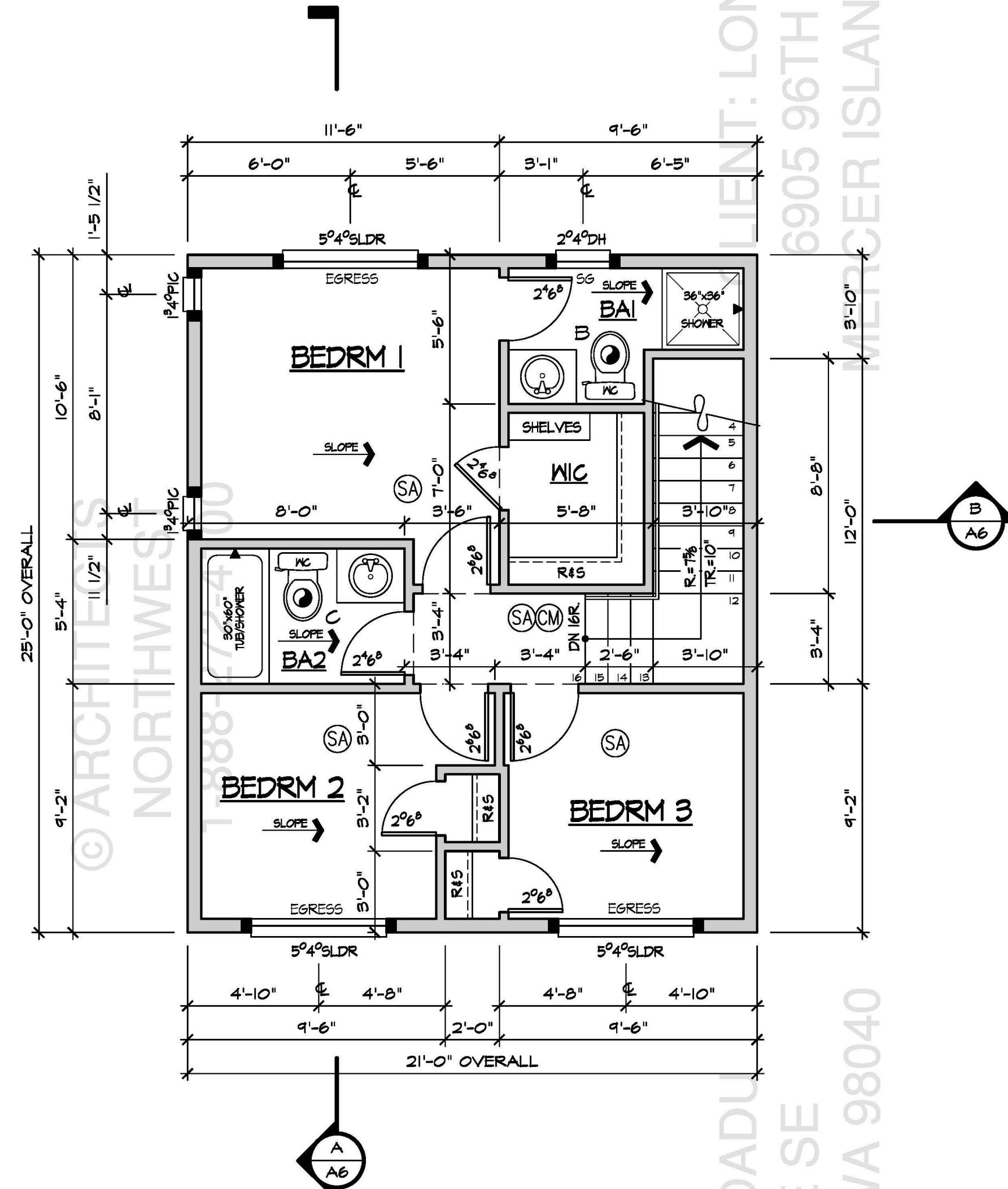
BEAM SCHEDULE	
PLAN VIEW	DESCRIPTION
---	DROPPED BEAM DESIGNATED ON FLOOR PLANS
---	DROPPED BEAM DESIGNATED ON FRAMING PLANS
▨	FLUSH AND TOP FLUSH BEAM DESIGNATED ON FRAMING PLANS
▨	UPSET BEAM DESIGNATED ON FRAMING PLANS

NOTE: USE FULL LENGTH STUDS (BALLOON FRAME) PER THIS TABLE

WALL HEIGHT	FRAMING	BLOCKING
10'-0" OR LESS	2x6 @ 16" O.C.	N/A
10'-4" - 12'-6"	2x6 @ 12" O.C.	1/2 POINTS
12'-7" - 15'-0"	(2) 2x6 @ 16" O.C.	1/2 POINTS
15'-1" - 17'-6"	(2) 2x6 @ 12" O.C.	1/3 POINTS
17'-6" - 20'-2"	1 3/4" x 5 1/2" LVL @ 12" O.C.	1/3 POINTS

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### UPPER FLOOR PLAN

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

#### FLOOR PLAN NOTES:

- CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
- WINDOWS & DOORS ARE SHOWN & NOTED AS NOMINAL SIZES.
- EXTERIOR WALLS TO BE 2x6 STUDS @ 16" O.C. U.N.O.
- INDICATES POINT LOAD SUPPORTED BY (2) STUDS, U.N.O.
- PROVIDE STAIRWAY ILLUMINATION PER I.R.C. R302.7 & R302.8
- SEE SHEET A1 FOR ADDITIONAL NOTES.
- SEE SHEET A2 FOR VENTILATION SCHEDULE.
- SEE SHEET A2 FOR ALARM SCHEDULE.

NOTE: SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

DESIGNED BY: MBJ 05/2025  
DRAWN BY: BPS 7/29/25  
PROJECT MANAGER: MARCUS JENKINS  
REVISED BY: BPS 8/15/25

LATERAL BY: ZVELT 6/25/25  
LATERAL JOB NUMBER: 25-120

A5  
A7

ANW JOB NUMBER: 250052

LONG DADU  
PLAN A911A0-0

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STATE OF WASHINGTON  
8/15/25

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**ROOF UNDERLAYMENT NOTE:**  
ROOFS WITH PITCHES BETWEEN 2:12 AND 4:12 ARE REQUIRED TO HAVE A DOUBLE UNDERLAYMENT PER IRC 905.2.2.

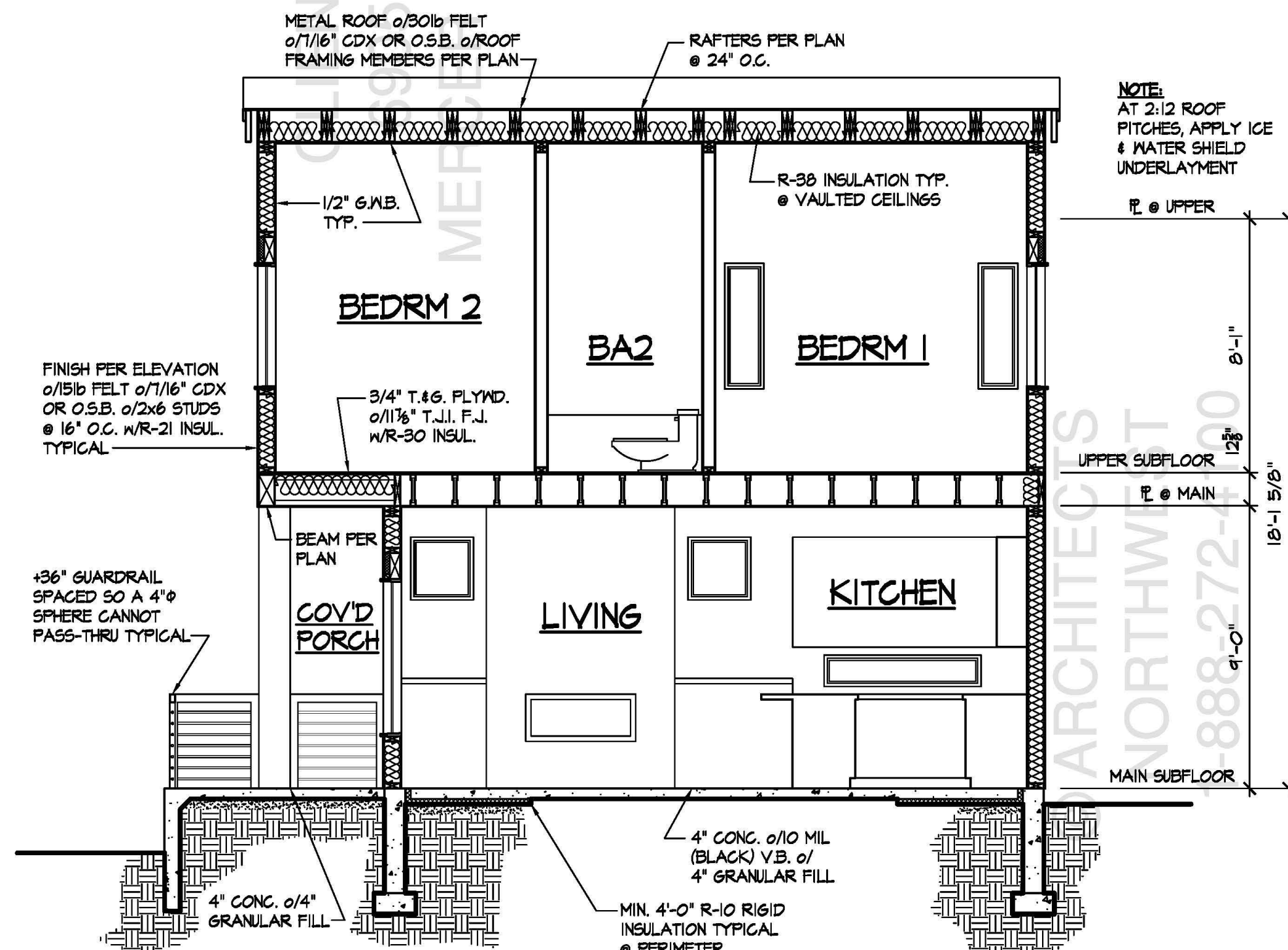
**NOTE:**  
AT 2:12 ROOF PITCHES, APPLY ICE & WATER SHIELD UNDERLAYMENT

**NOTE:**  
AT 2:12 ROOF PITCHES, APPLY ICE & WATER SHIELD UNDERLAYMENT

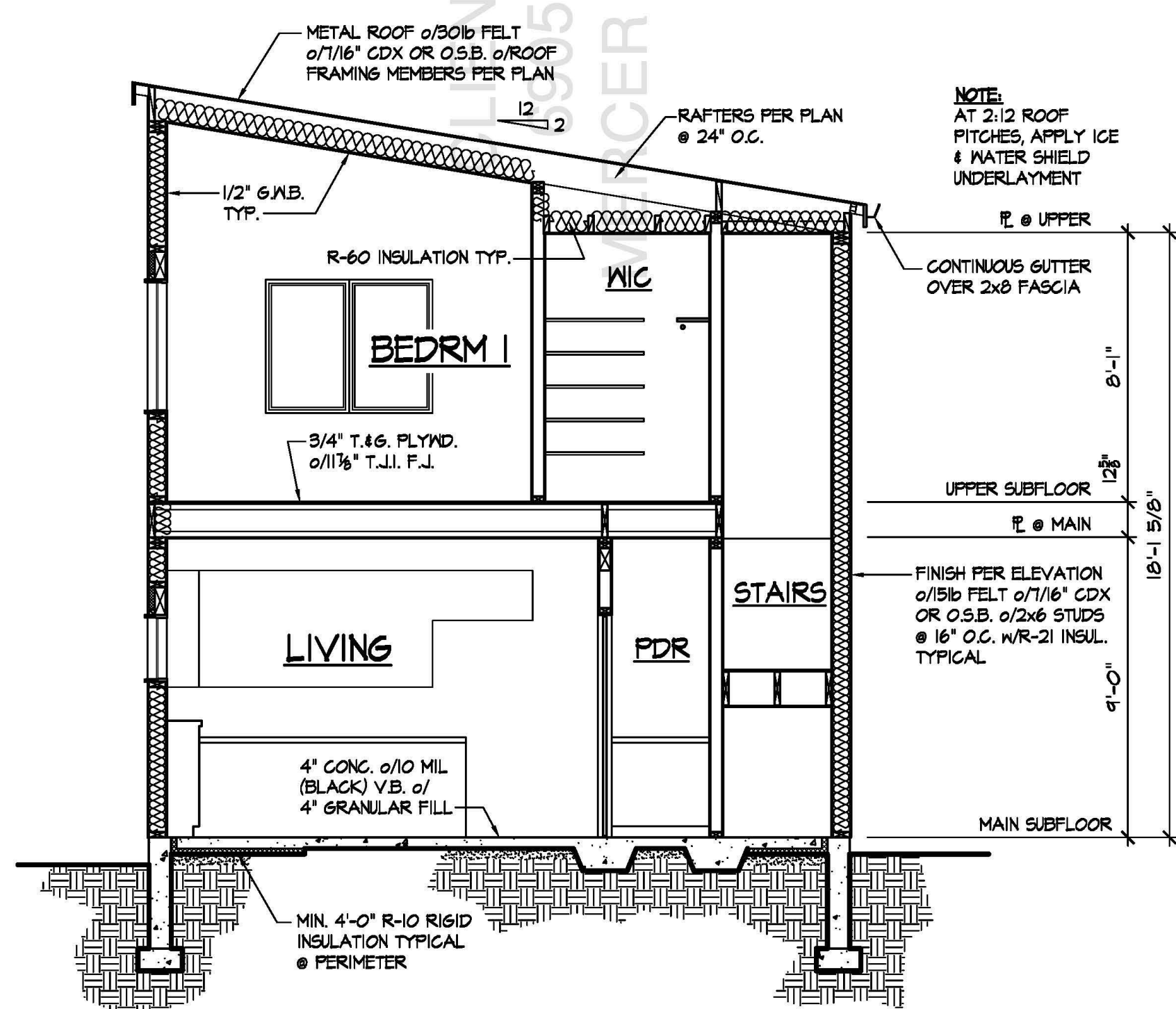
**NOTE:**  
TRUSS HEEL IS THE VERT. DISTANCE BETWEEN THE PLATE AND WHERE THE BOTTOM OF THE TOP CHORD OF THE TRUSS INTERSECTS THE EXTERIOR SIDE OF THE BEARING

**ROOF UNDERLAYMENT NOTE:**  
ROOFS WITH PITCHES BETWEEN 2:12 AND 4:12 ARE REQUIRED TO HAVE A DOUBLE UNDERLAYMENT PER IRC 905.2.2.

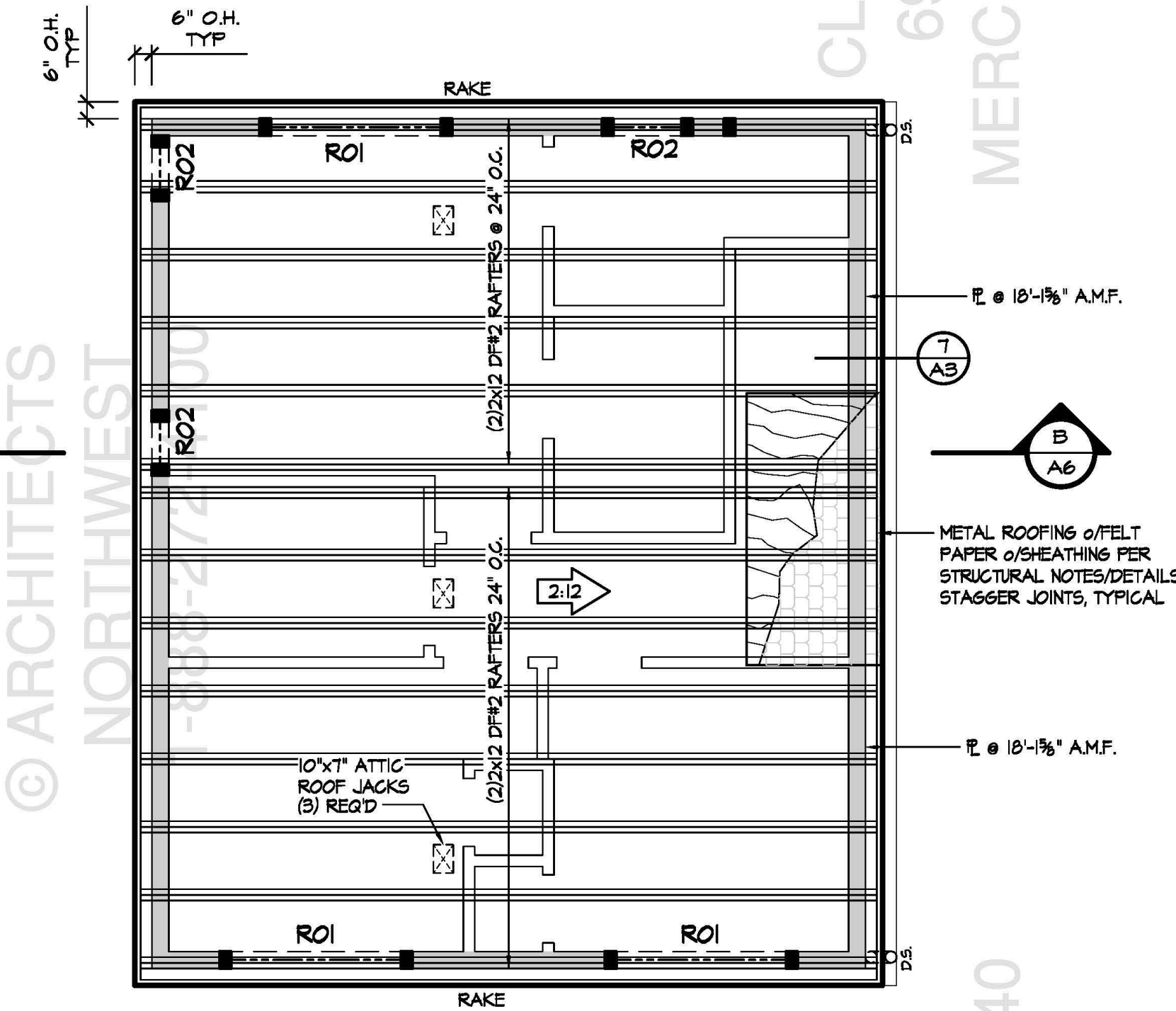
ROOF BEAM SCHEDULE				
MEMBER	BM SIZE	SPECIES	CONNECTION	COMMENTS
RO1	4 x 10	DF#2	-	HEADER
RO2	4 x 10	DF#2	-	HEADER



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



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



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

**ROOF FRAMING NOTES:**

- CONTRACTOR SHALL VERIFY ALL NOTES, DIMENSIONS & CONDITIONS PRIOR TO CONSTRUCTION.
- ALL HEADERS TO BE 4x10 DFR2 w/ R-10 RIGID INSULATION @ EXTERIOR WARM WALLS, U.N.O.
- PROVIDE VENTED BLOCKING OVER SUPPORTS.
- BEARING WALLS ARE SHADED.
- WINDOW HEADERS @ 6'-0" ABOVE FINISHED FLOOR @ MAIN FLOOR U.N.O. WINDOW HEADERS @ 6'-0" ABOVE FINISHED FLOOR @ UPPER FLOOR U.N.O.
- ALL TRUSSES:
  - SHALL CARRY MANUFACTURER'S STAMP.
  - SHALL BE INSTALLED & BRACED TO MANUFACTURER'S SPECIFICATIONS.
  - SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSPECTION.
  - SHALL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPARTMENT APPROVAL OF ENGINEERS CALCULATIONS.
  - TRUSS HANGERS SHALL BE SPECIFIED BY THE TRUSS ENGINEER.
- INDICATES POINT LOAD SUPPORTED BY (2) STUDS U.N.O.
- INSTALL SHEAR WALLS &/OR BLOCKING IN ROOF STRUCTURE BEFORE INSTALLING FINISH ROOFING.
- SEE SHEET A1 FOR ADDITIONAL NOTES.
- SEE SHEET A2 FOR ROOF VENTILATION CALCULATION(S).

**NOTE:** SEE 'S' SHEETS FOR LATERAL INFORMATION & ENGINEERING DETAILS

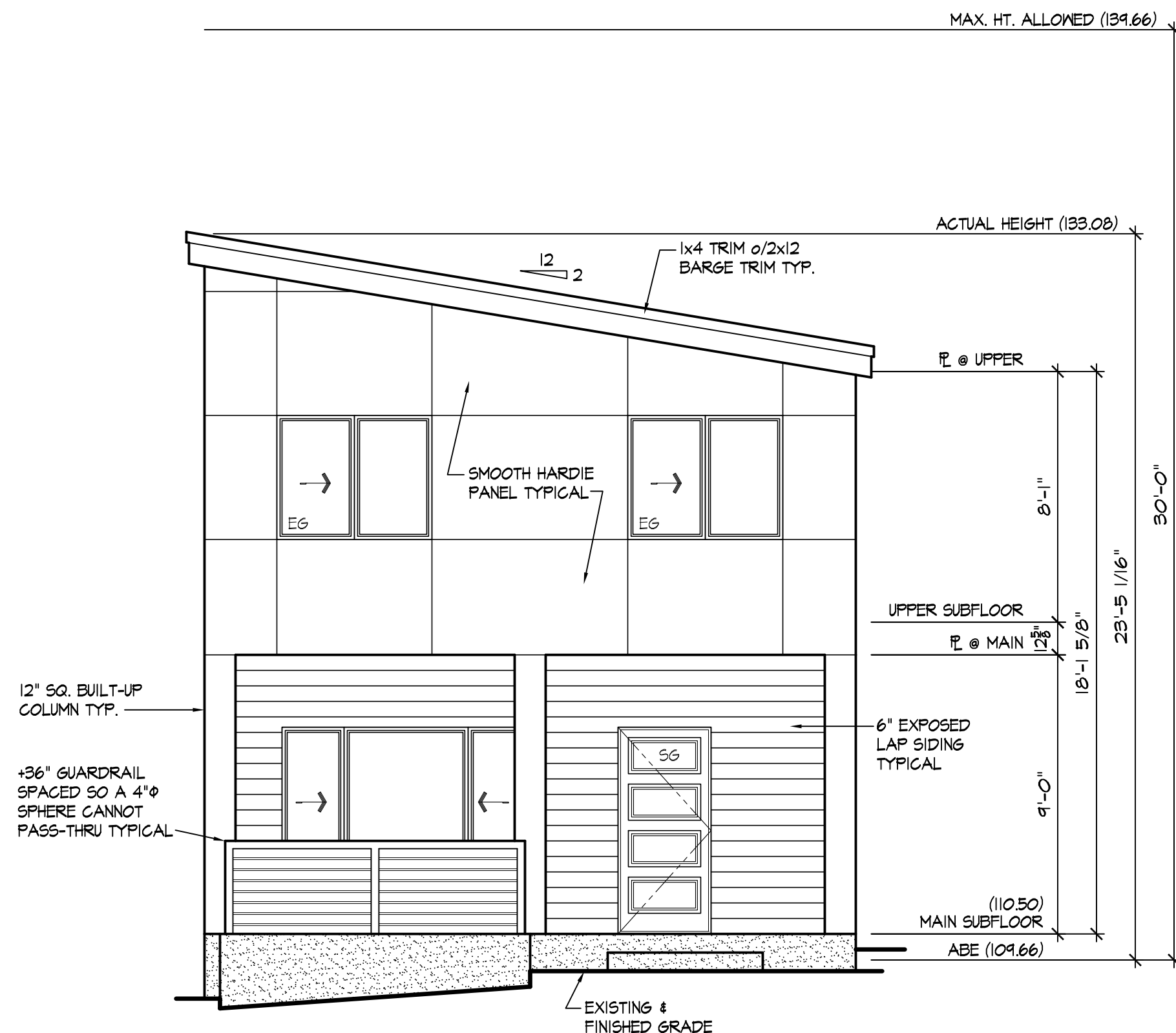
BEAM SCHEDULE	
PLAN VIEW	DESCRIPTION
---	DROPPED BEAM DESIGNATED ON FLOOR PLANS.
---	DROPPED BEAM DESIGNATED ON FRAMING PLANS.
	FLUSH AND TOP FLUSH BEAM DESIGNATED ON FRAMING PLANS.
	UPSET BEAM DESIGNATED ON FRAMING PLANS.

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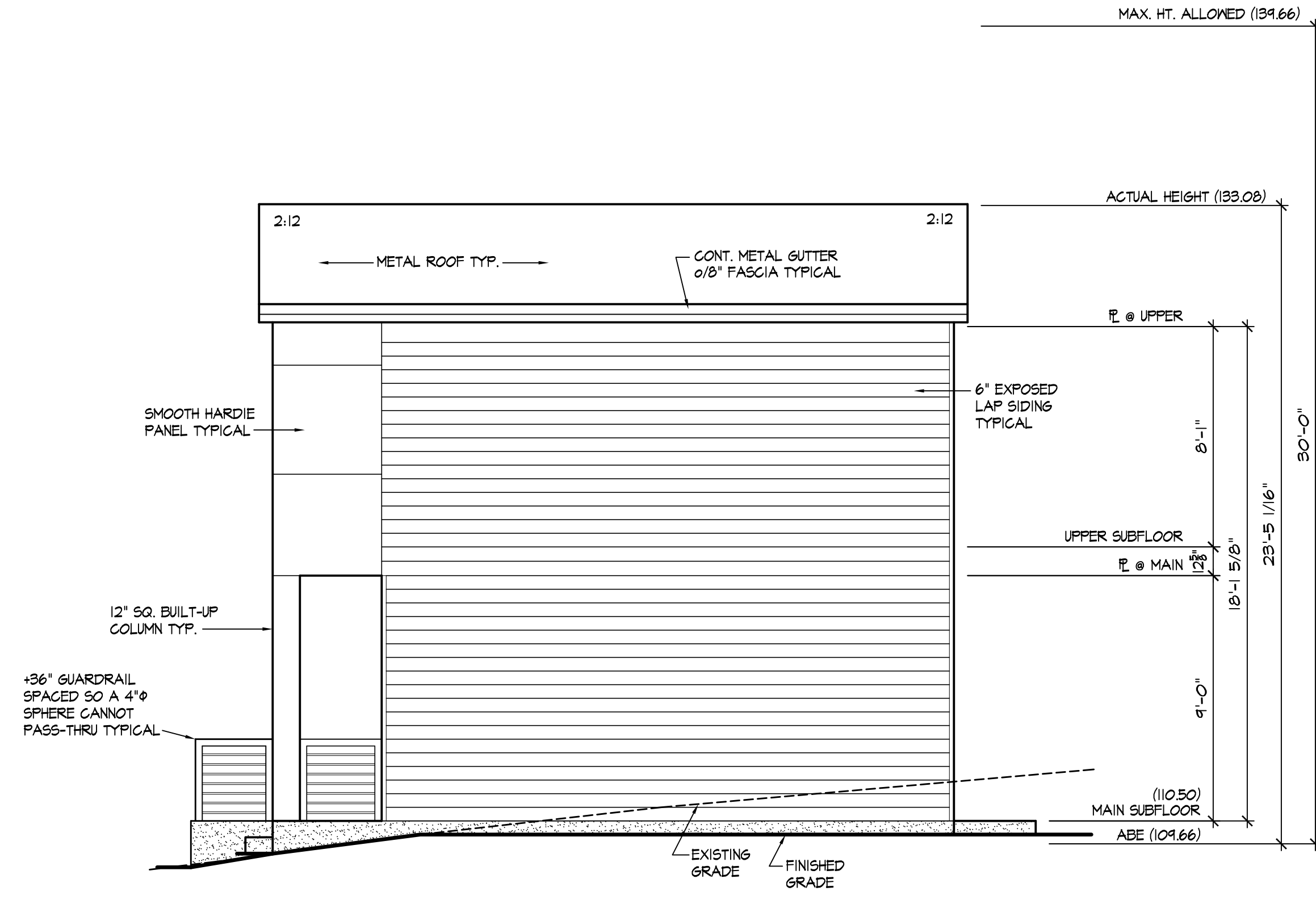
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 PROJECT MANAGER: MARCUS JENKINS  
 REVISED BY: BPS DATE: 8/15/25

LATERAL BY: ZVELT DATE: 6/25/25  
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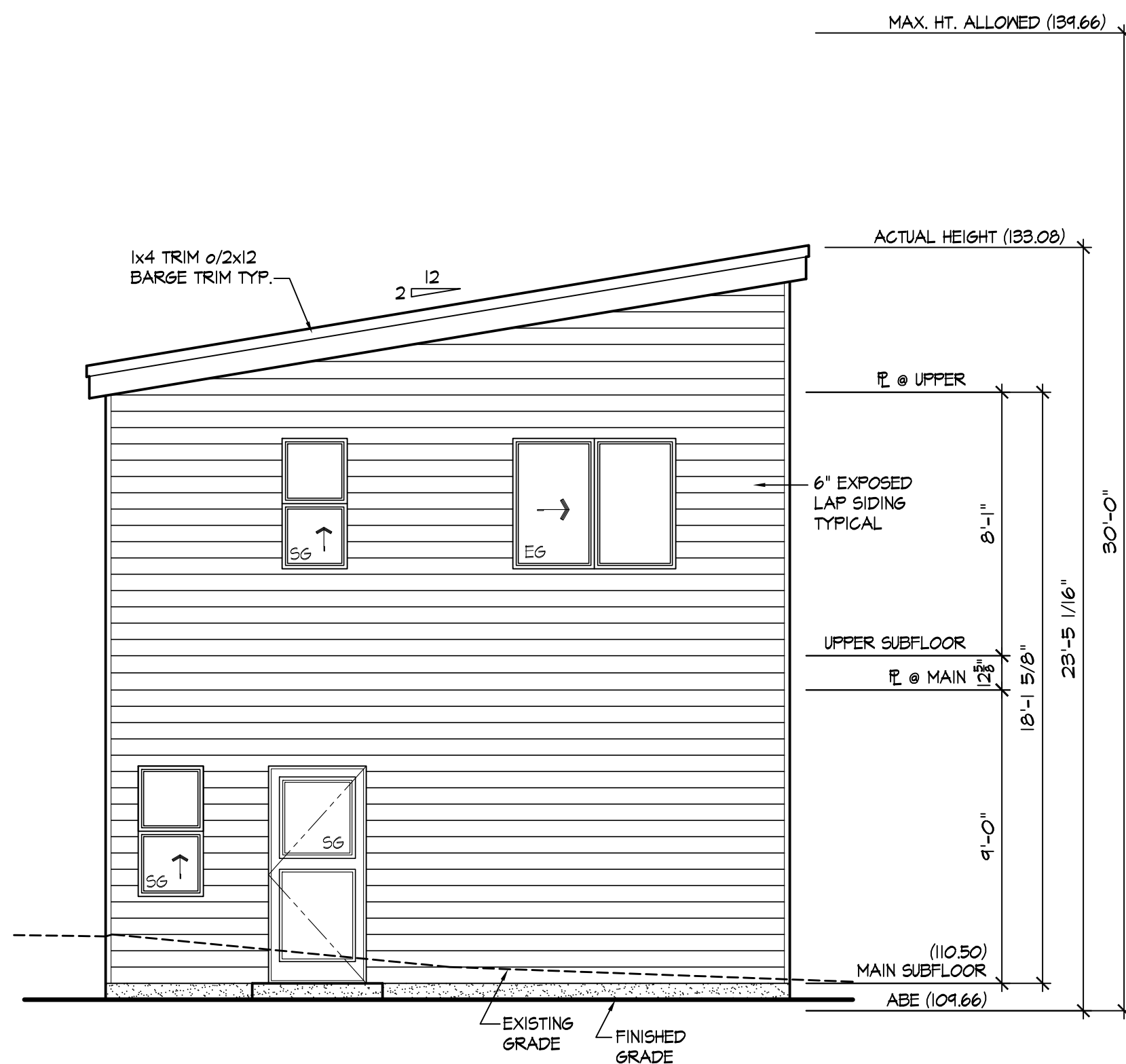
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 ANW JOB NUMBER: 250052



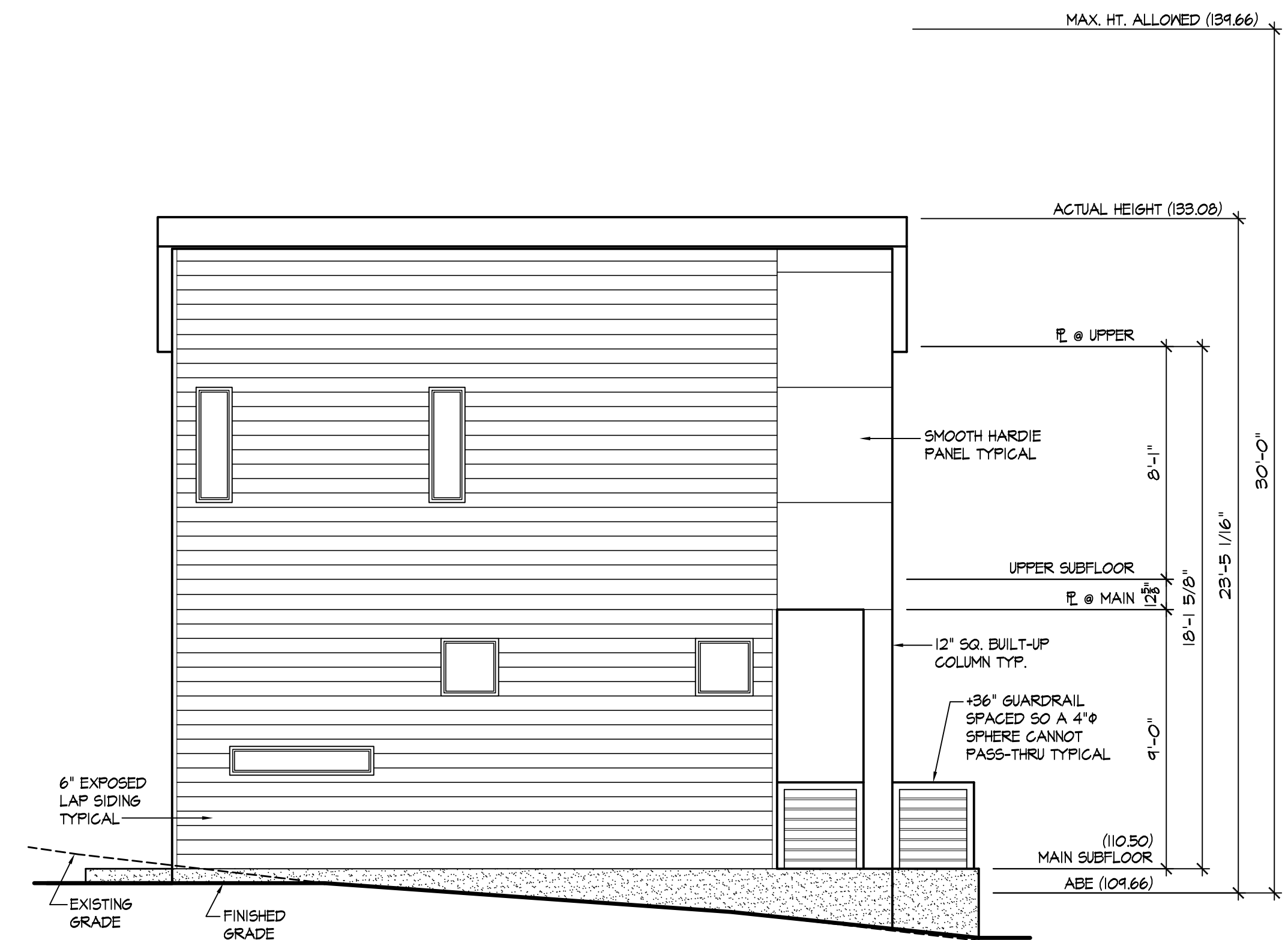
**FRONT ELEVATION**  
SCALE: 1/4" = 1'-0"



**RIGHT ELEVATION**  
SCALE: 1/4" = 1'-0"



**REAR ELEVATION**  
SCALE: 1/4" = 1'-0"



**LEFT ELEVATION**  
SCALE: 1/4" = 1'-0"

- ELEVATION NOTES:**
1. VERIFY SHEAR WALL NAILING & HOLDINGS PER PLAN PRIOR TO INSTALLING SIDING.
  2. MASONRY & WOOD FRAME CHIMNEYS ARE TO BE CONSTRUCTED PER I.R.C. CHAPTER 10.
  3. CAULK ALL EXTERIOR JOINTS & PENETRATIONS.
  4. PROVIDE APPROVED CORROSION RESISTANT FLASHING AT EXTERIOR WALL ENVELOPE PER I.R.C. R103.4
  5. PROVIDE FLASHING AT ROOF PENETRATIONS PER I.R.C. R103.2 & R103.2.1
  6. PROVIDE WEATHER STRIPPING AT ALL EXTERIOR & GARAGE-INTERIOR DOORS.
  7. PROVIDE CONTINUOUS GUTTERS & DOWNSPOUTS @ ALL EAVES, TYP.
  8. ADDRESS OR HOUSE NUMBER TO BE POSTED AND PLAINLY VISIBLE FROM THE STREET FRONTAGE. NUMBERS TO BE MIN. 4" HIGH WITH 1/4" WIDE STROKE & CONTRASTING BACKGROUND.
  9. PROVIDE STAIRWAY ILLUMINATION PER I.R.C. R303.7 & R303.8
  10. SEE SHEET A1 FOR ADDITIONAL NOTES.



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LONG DADU  
**PLAN A911A0-0**

DESIGNED BY: MBJ DATE: 05/20/25  
DRAWN BY: BPS DATE: 7/29/25  
PROJECT MANAGER: MARCUS JENKINS  
REVISED BY: BPS DATE: 8/15/25

LATERAL BY: ZVELT DATE: 6/25/25  
LATERAL JOB NUMBER: 25-120

A7  
A7

ANW JOB NUMBER:  
**250052**



LAP SPLICE $f_c'=3000$ PSI $f_y=40000$ PSI				
BAR SIZE	MISCELLANEOUS BARS		TOP BARS	
	Ld	LAP SPLICE	Ld	LAP SPLICE
#3	12"	16"	16"	21"
#4	15"	20"	20"	26"
#5	20"	26"	26"	34"
#6	24"	31"	31"	41"

LAP SPLICE $f_c'=3000$ PSI $f_y=60000$ PSI				
BAR SIZE	MISCELLANEOUS BARS		TOP BARS	
	Ld	LAP SPLICE	Ld	LAP SPLICE
#3	16"	21"	21"	28"
#4	22"	28"	28"	37"
#5	27"	36"	36"	46"
#6	33"	43"	43"	56"

HOOK BARS						
BAR SIZE	DIA	STANDARD 180 DEGREE HOOK			STANDARD 90 DEGREE HOOK	
		D	A OR G	J	D	A OR G
#3	6db	2 1/4"	5"	3"	2 1/4"	6"
#4	6db	3"	6"	4"	3"	8"
#5	6db	3 3/4"	7"	5"	3 3/4"	10"

- NOTES:
- VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db AND CLEAR COVER > db.
  - DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld.
  - TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON DOCUMENTS AS "TOP BAR".
  - UNO, ALL LAPS SHALL BE MINIMUM CLASS B OR CLASS B (TOP BARS).
  - ALL TABULATED VALUES ARE IN INCHES.

HOLDOWN AT HEADERS					
MSTC48B3	FLR-TO-HDR STRAP (HDR 9 1/4" MIN DEPTH)	(54) 10d COMMON: (12) @ FACE OF HDR, (4) @ BOT OF HDR, (38) @ STUDS	(2)2x STUDS	3,930	3,380
MSTC66B3	FLR-TO-HDR STRAP (HDR 11 1/4" MIN DEPTH)	(56) 10d COMMON: (14) @ FACE OF HDR, (4) @ BOT OF HDR, (38) @ STUDS	(2)2x STUDS	4,440	3,820

SHEATHING PROPERTIES				
LOCATION	THICKNESS	SPAN RATING	PLYWOOD GRADE	EXPOSURE
ROOF	15/32	32/16	C-D	1
FLOOR	23/32 T&G	24 OC	STURD-I FLOOR	1
WALLS	15/32	32/16	C-D	1

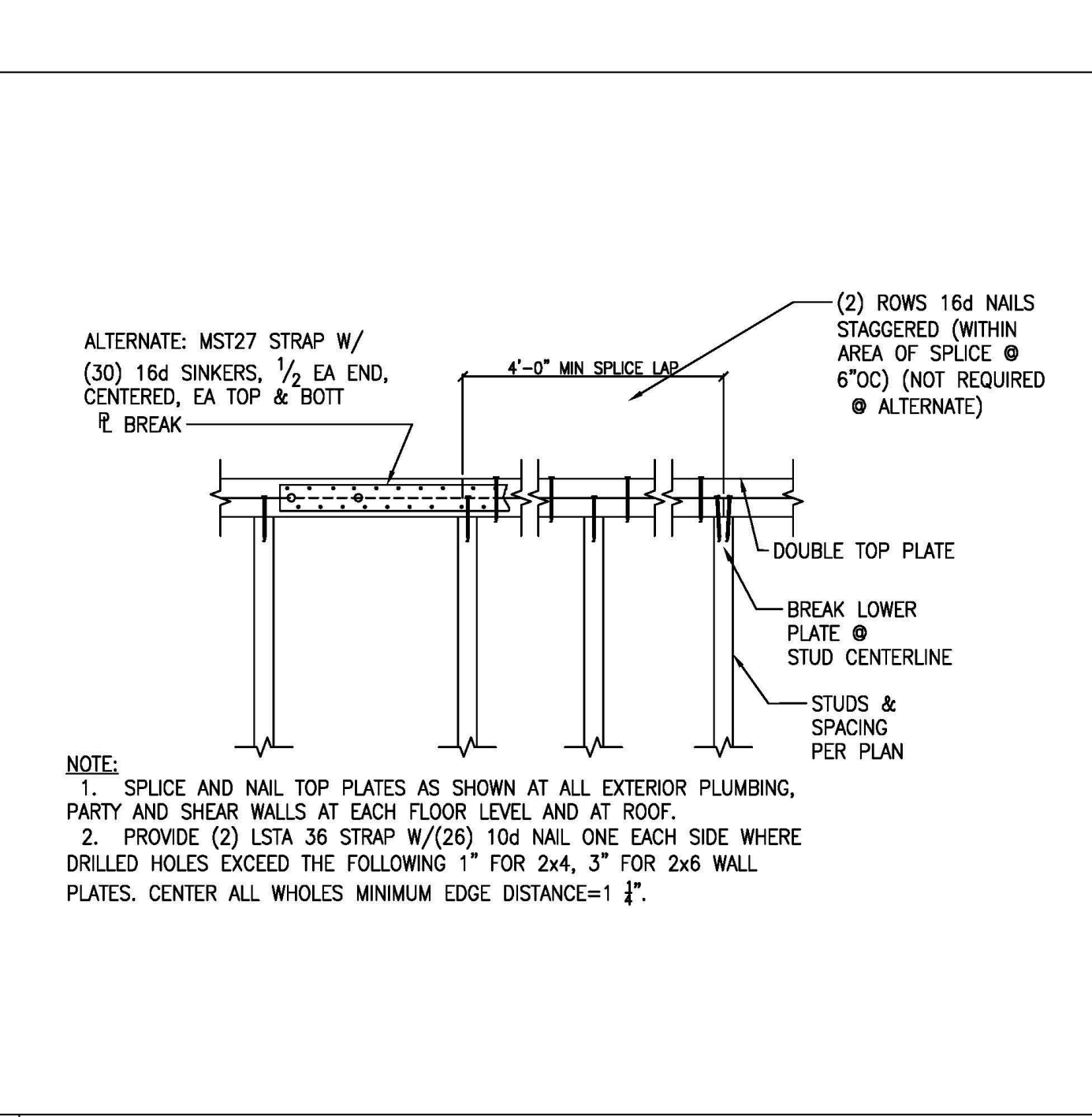
COMMON WIRE NAILS PROPERTIES					
PENNY WEIGHT	8d	10d	12d	16d	20d
DIAMETER (IN)	0.131	0.148	0.148	0.162	0.192
LENGTH (IN)	2 1/2	3	3 1/2	3 1/2	4

NOTES:  
ALL COMMON WIRE AND BOX NAILS SHALL CONFORM TO NOMINAL SIZES SPECIFIED IN ASTM F1667.

SOLID LUMBER PROPERTIES			
MEMBER SIZE	SIZE	SPECIES	GRADE
WALL STUD, BLOCKING	2X4, 3X4, 2X6, 3X6	HEMLOCK-FIR SPURCE-PINE-FIR	NR 2
SILL PLATE	2X4, 3X4, 2X6, 3X6	P.T. HEMLOCK-FIR	NR 2
TOP PLATES	2X4, 3X4, 2X6, 3X6	HEMLOCK-FIR SPURCE-PINE-FIR	NR 2
POST	4X4, 4X6, 4X8	DOUGLAS FIR-LARCH	NR 2
FLOOR JOIST OR ROOF RAFTER	2X8 THROUGH 2X12	HEMLOCK-FIR SPURCE-PINE-FIR	NR 2
BEAM	4X6 THROUGH 4X12	DOUGLAS FIR-LARCH	NR 2
BEAM	6X6 THROUGH 6X12	DOUGLAS FIR-LARCH	NR 1
POST OR TIMBER	6X6, 6X8	DOUGLAS FIR-LARCH	NR 1
LEDGER	2X AND 3X	DOUGLAS FIR-LARCH	NR 2
LEDGER	4X	DOUGLAS FIR-LARCH	NR 1

GLUELAM TIMBER PROPERTIES				
MEMBER	SIZE	SPECIES	COMB	USES
BEAMS	ALL	DF/DF	24F-V4	SIMPLE SUPPORT
BEAMS	ALL	DF/DF	24F-VB	CONTINUOUS OR WITH CANTILEVER END
COLUMNS	ALL	DF	C-D	POST OR TIMBER MEMBER

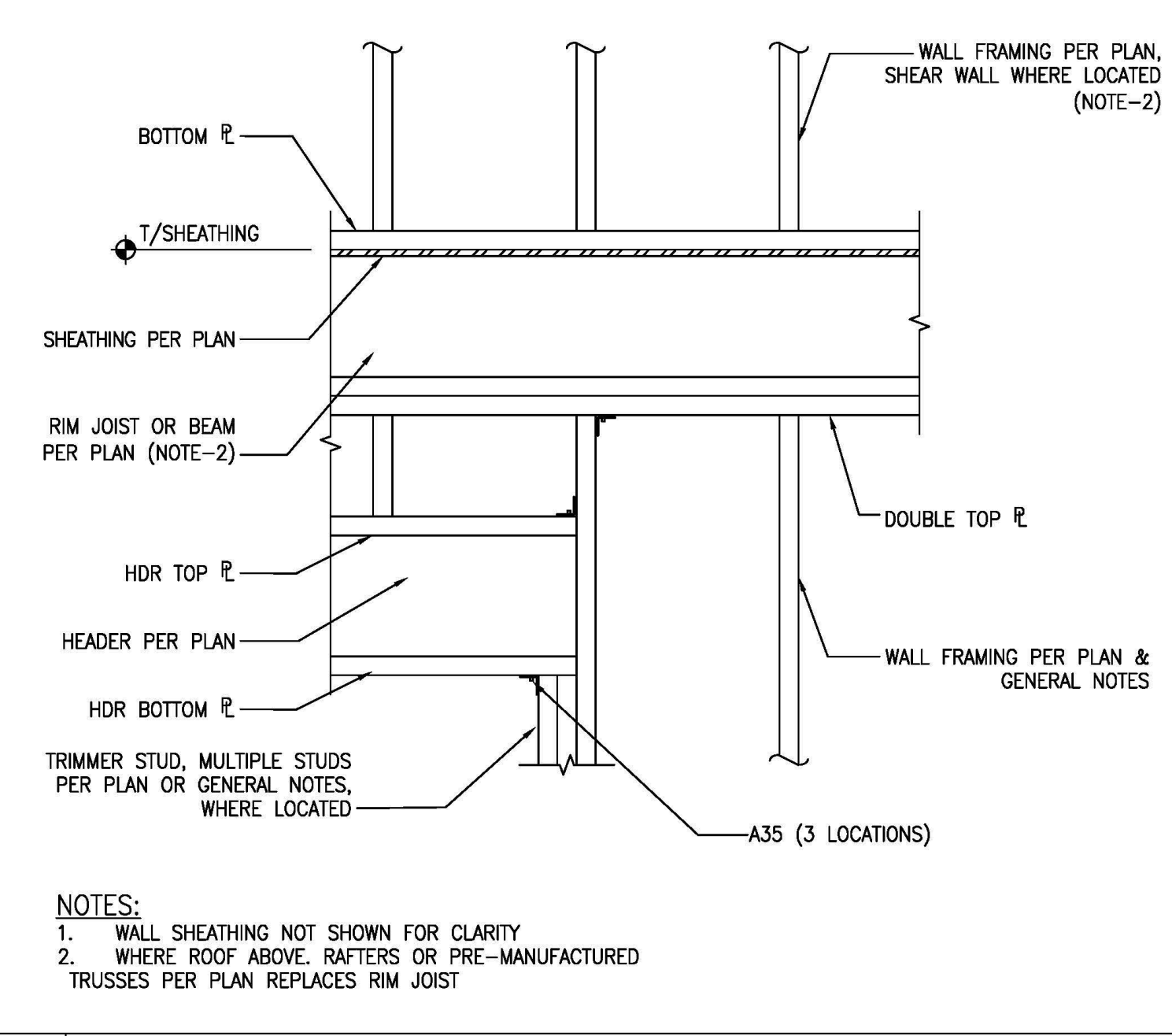
- NOTES:
- USE MINIMUM THICKNESS AND MINIMUM APA RATING.
  - ALL WEATHER EXPOSED MEMBERS TO BE PRESSURE TREATED
  - PRESSURE TREATED WOOD INCLUDES PRESERVATIVE AND FIRE TREATED



3 TYPICAL PLATE SPLICE DETAIL

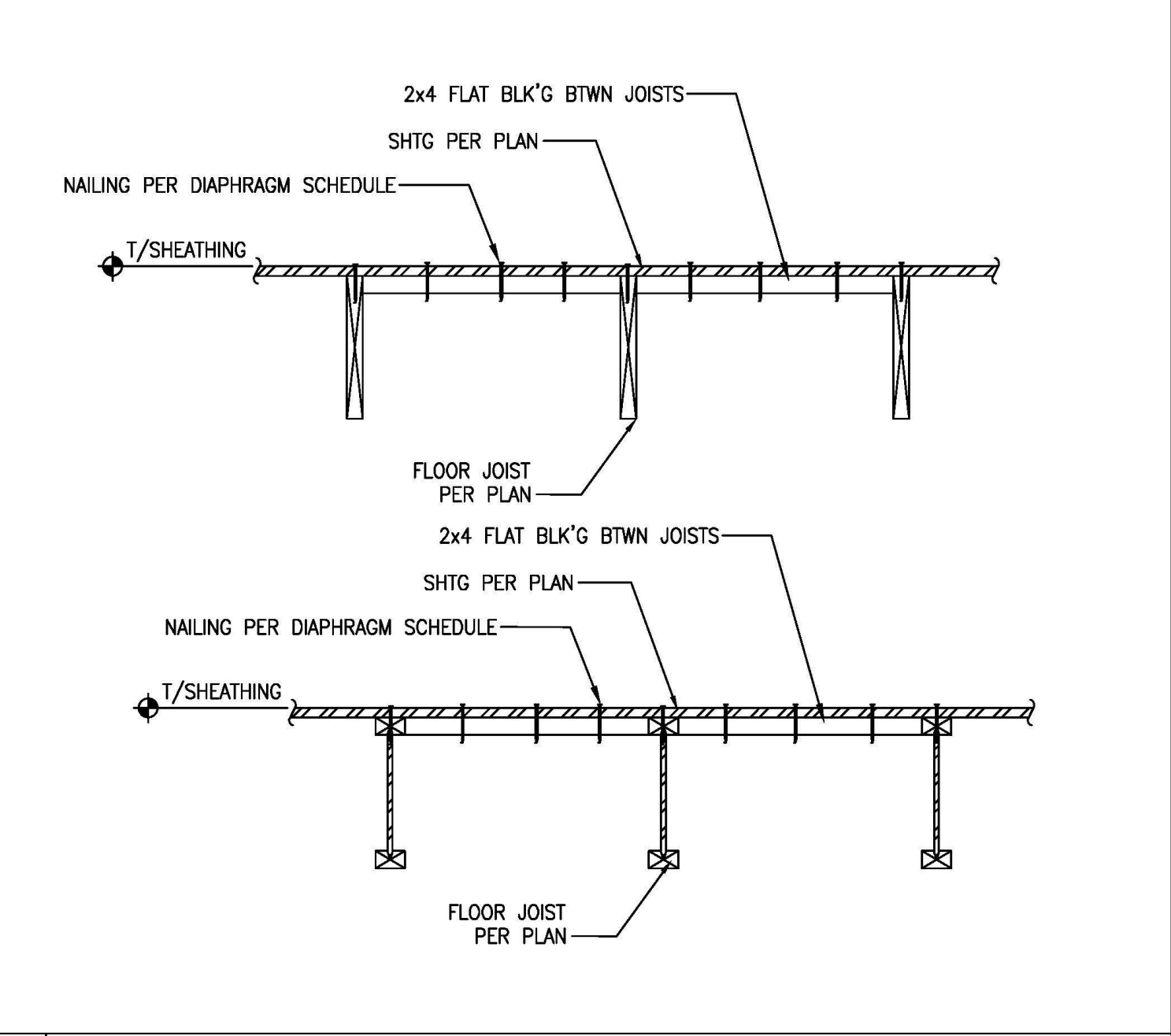
- NOTES:
- 15/32" A.P.A. RATED PLYWOOD OR O.S.B. PANELS SHALL BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY.
  - WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.
  - BLOCKING IS REQUIRED AT ALL UNSUPPORTED PANEL EDGES.
  - PROVIDE SHEAR WALL SHEATHING AND NAILING FOR ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS, ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY WINDOWS, OR DOORWAYS OR AS DESIGNATED ON PLANS. HOLDOWN REQUIREMENTS PER PLANS.
  - MINIMUM RIM BOARD OR BLOCKING WIDTH BELOW WALL SHALL BE 1-1/4" TIMBERSTRAND LSL FOR (1) SIDE WALL SHEATHING AND 3-1/2" TIMBERSTRAND LSL FOR (2) SIDES WALL SHEATHING.
  - SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLDOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN "BUILT-UP" HOLDOWN POSTS. ADDITIONAL INFORMATION PER HOLDOWN SCHEDULE & DETAILS.
  - INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.131"x2 1/2" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.131"x2 1/2" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC. NAILS SHALL BE LOCATED 3/8" MINIMUM FROM PANEL EDGES.
  - "LTPS" SHALL BE ORIENTED LENGTHWISE (HORIZONTAL) AT PLATE TO RIM.
  - BASED ON 0.131"x2 1/2" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING, USE 0.131"x2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.
  - SIMPSON "A35" MAY BE USED IN LIEU OF "LTPS".
  - WHERE JOISTS ARE HUNG FROM MUD SILL, USE P.T. 3x RIPPED TO STEM WALL WIDTH W/COUNTER-SUNK ANCHOR BOLTS PER SHEAR WALL SCHEDULE.
  - WHERE 3x FRAMING AND BLOCKING IS REQUIRED PER THE SHEAR WALL SCHEDULE, (2) 2x FRAMING AND BLOCKING MAY BE USED IN LIEU OF 3x NOTED IN THE SCHEDULE.
  - ANCHOR BOLTS SHALL BE PROVIDED WITH HOT-DIPPED GALVANIZED STEEL PLATE WASHERS 3"x3"x0.229"(MIN). THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED 1 3/8"x1 1/2" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NUT. PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGE OF THE SILL PLATE ON THE SIDE(S) WITH SHEATHING. WHERE SHEAR WALLS ARE SHEATHED ON BOTH SIDES OF 2x6 WALL FRAMING, USE 4.5"x3"x0.229"(MIN) PLATE WASHERS. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.
  - PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO-PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS. ADDITIONAL INFORMATION PER STRUCTURAL NOTES.
  - AT ADJOINING PANEL EDGES, (2) 2x STUDS NAILED TOGETHER MAY BE USED IN PLACE OF SINGLE 3x STUD. DOUBLE 2x STUDS SHALL BE CONNECTED TOGETHER BY NAILING THE STUDS TOGETHER WITH 3" LONG NAILS OF THE SAME SPACING AND DIAMETER AS THE PLATE NAILING.
  - WHERE ABUTTING PANELS OR SILL PLATES REQUIRE 3x MINIMUM, NAIL STUDS TO 3x BOTTOM/SILL PLATES WITH (3) 0.148"x3 1/4" TOENAILS.

1 TYPICAL SHEAR WALL INTERSECTIONS



4 TYPICAL HEADER DETAIL

2 TYPICAL HEADER FRAMING FLUSH WITH BOTTOM OF JOIST

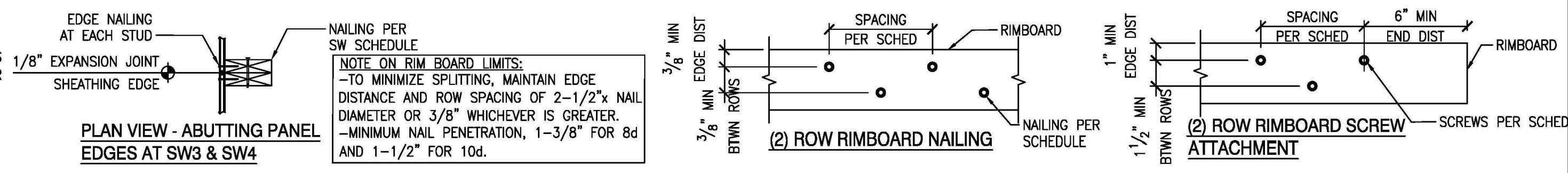


5 TYPICAL BLOCKING BETWEEN FLOOR JOISTS/ROOF TRUSSES

WOOD-FRAMED SHEAR WALL SCHEDULE FOR HEM-FIR FRAMING W/ 8d COMMON NAILS (2021 IBC) & SIMPSON CATALOG 2024-2025

SW TYPE	WALL SHEATHING APA-RATED	EDGE NAILING	BASE PLATE NAILING	RIM BOARD OR BLOCKING TO WALL BELOW	MINIMUM RIM BOARD THICKNESS	FRAMING AT PANEL EDGES	BLOCKING AT PANEL EDGES	ANCHOR BOLT TO CONCRETE FOUNDATION	SILL PLATE AT FOUNDATION	SHEAR WALL CAPACITY (PLF) (SEISMIC)	SHEAR WALL CAPACITY (PLF) (WIND)
SINGLE-SIDED	SW-1	15/32"	0.131" x 2 1/2" @ 6"OC	0.162" x 3 1/2" @ 5"OC	LTP5 @ 14"OC	1 1/4"	2x	5/8" @ 40"OC 5/8" @ 44"OC	P.T. 2x P.T. 3x	261	365
	SW-2	15/32"	0.131" x 2 1/2" @ 4"OC	0.162" x 3 1/2" @ 4"OC	LTP5 @ 12"OC	1 1/4"	2x	5/8" @ 28"OC 5/8" @ 48"OC	P.T. 2x P.T. 3x	380	533
	SW-3	15/32"	0.131" x 2 1/2" STAGGERED	0.162" x 3 1/2" @ 3"OC	LTP5 @ 8"OC	1 1/4"	3x	5/8" @ 20"OC 5/8" @ 32"OC	P.T. 2x P.T. 3x	489	685

NOTE:  
READ NOTES FOR SHEAR WALL INFORMATION.



PROJECT #:  
**25-120**

ENGINEERED BY: GS

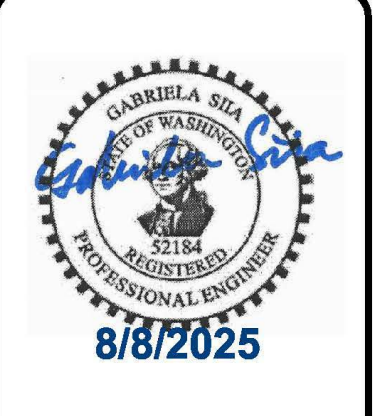
DATE:  
6/25/25

**ZVELT**

ENGINEERING DESIGN PLLC

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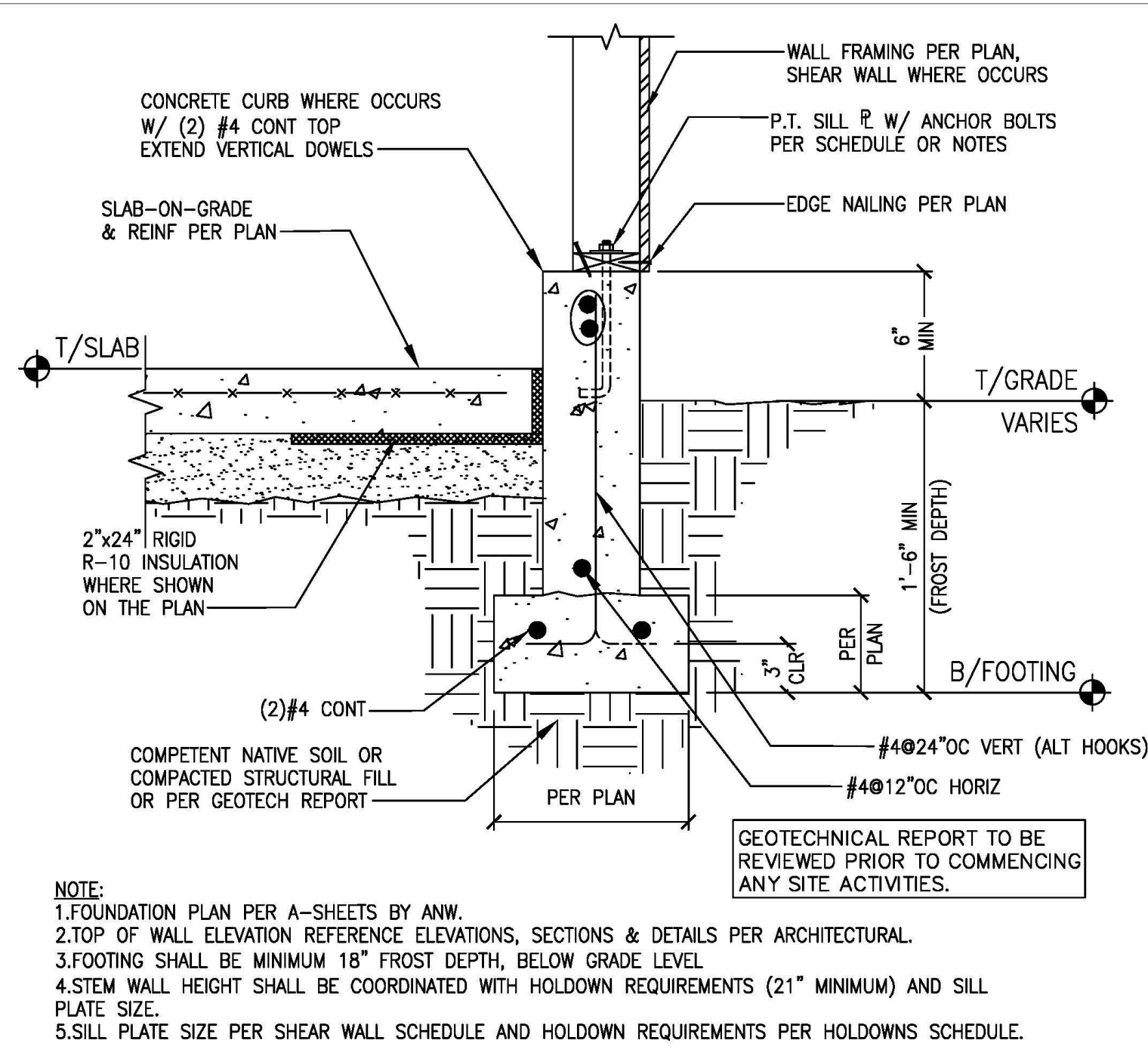
PROJECT NAME:  
**Long - DADU**  
6905 96th Ave SE  
Mercer Island, WA 98040

**IBC 2021**

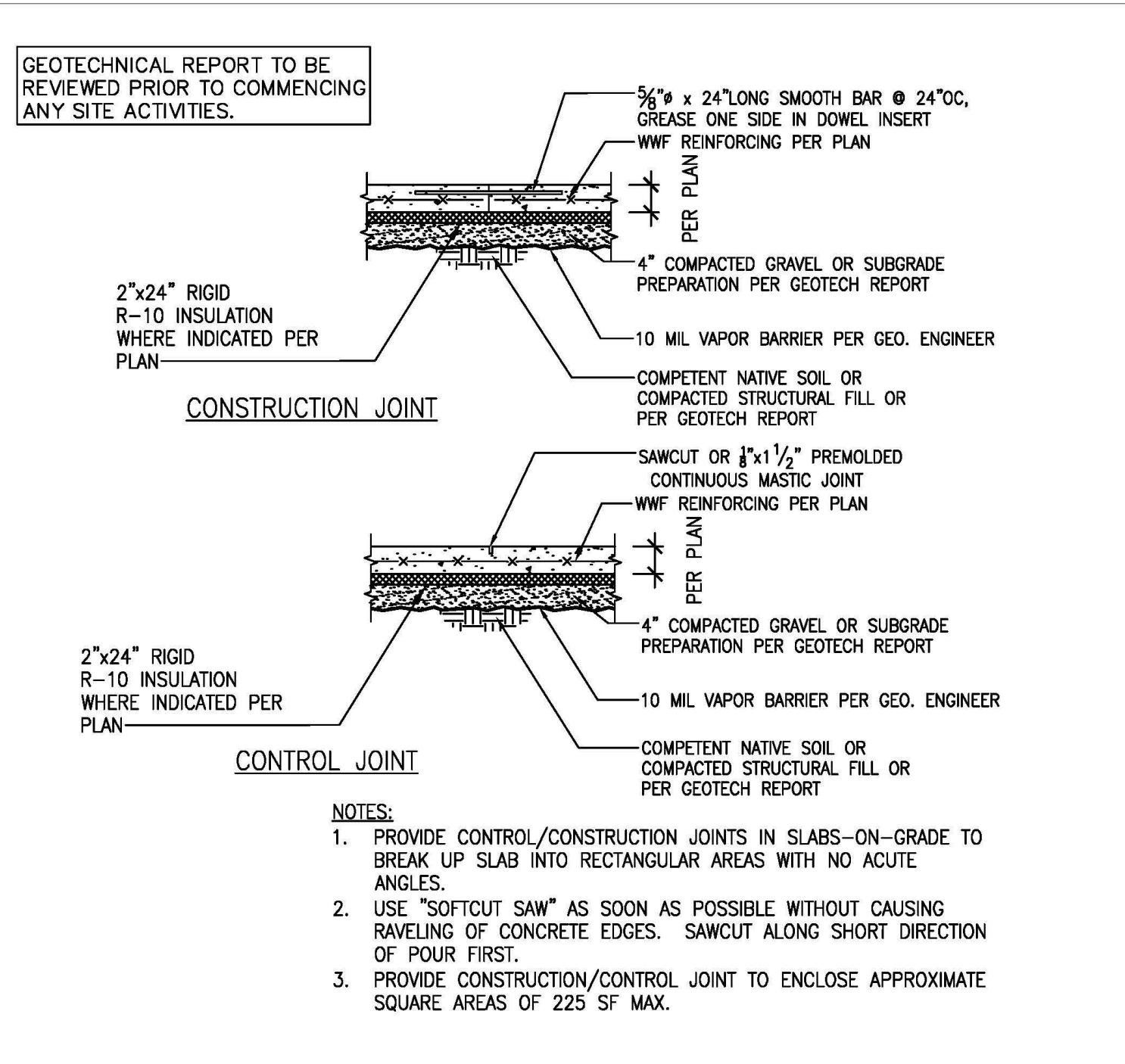
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SCHEDULES  
AND  
DETAILS

ANV 250052  
LATERAL DETAILS

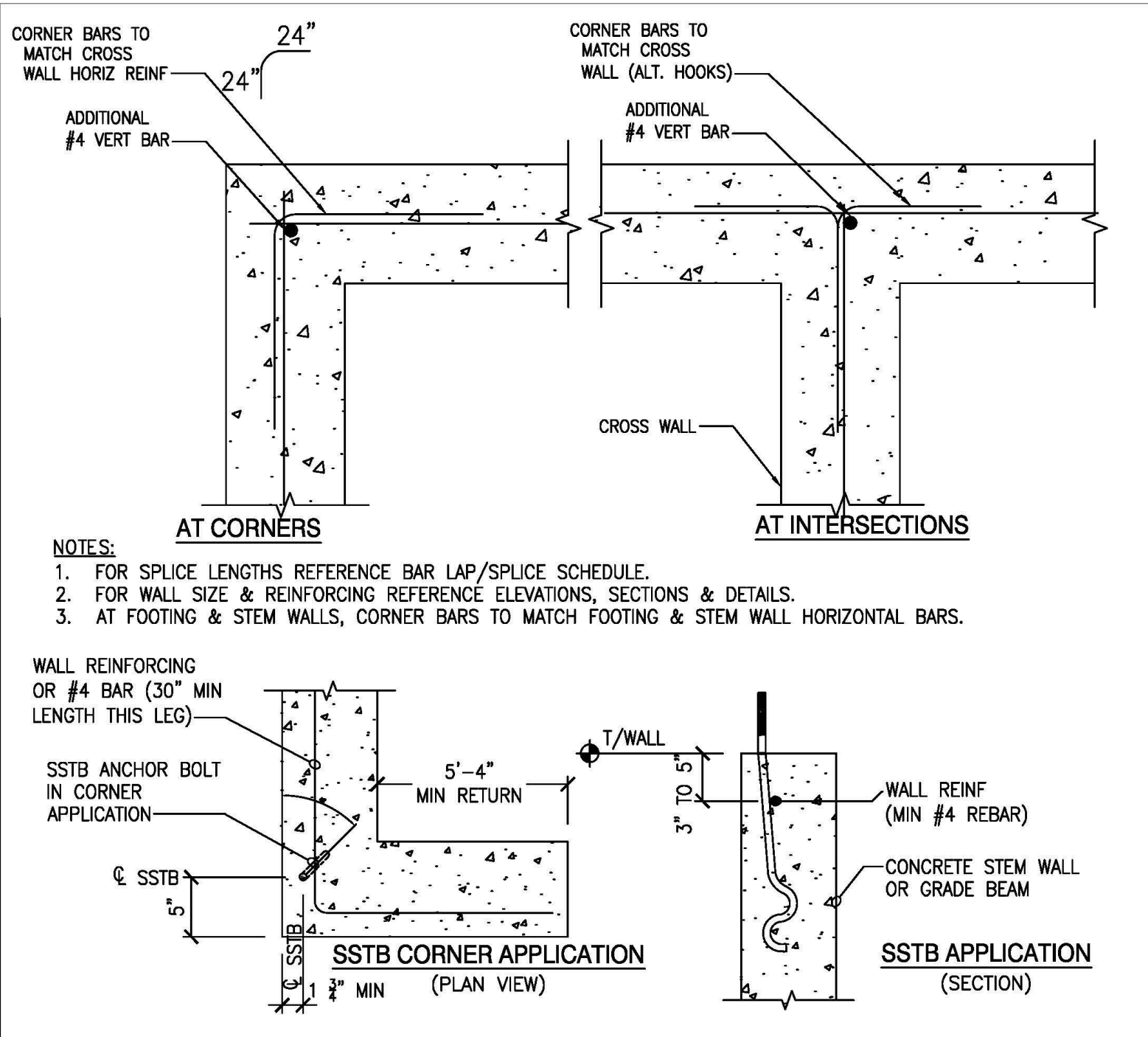
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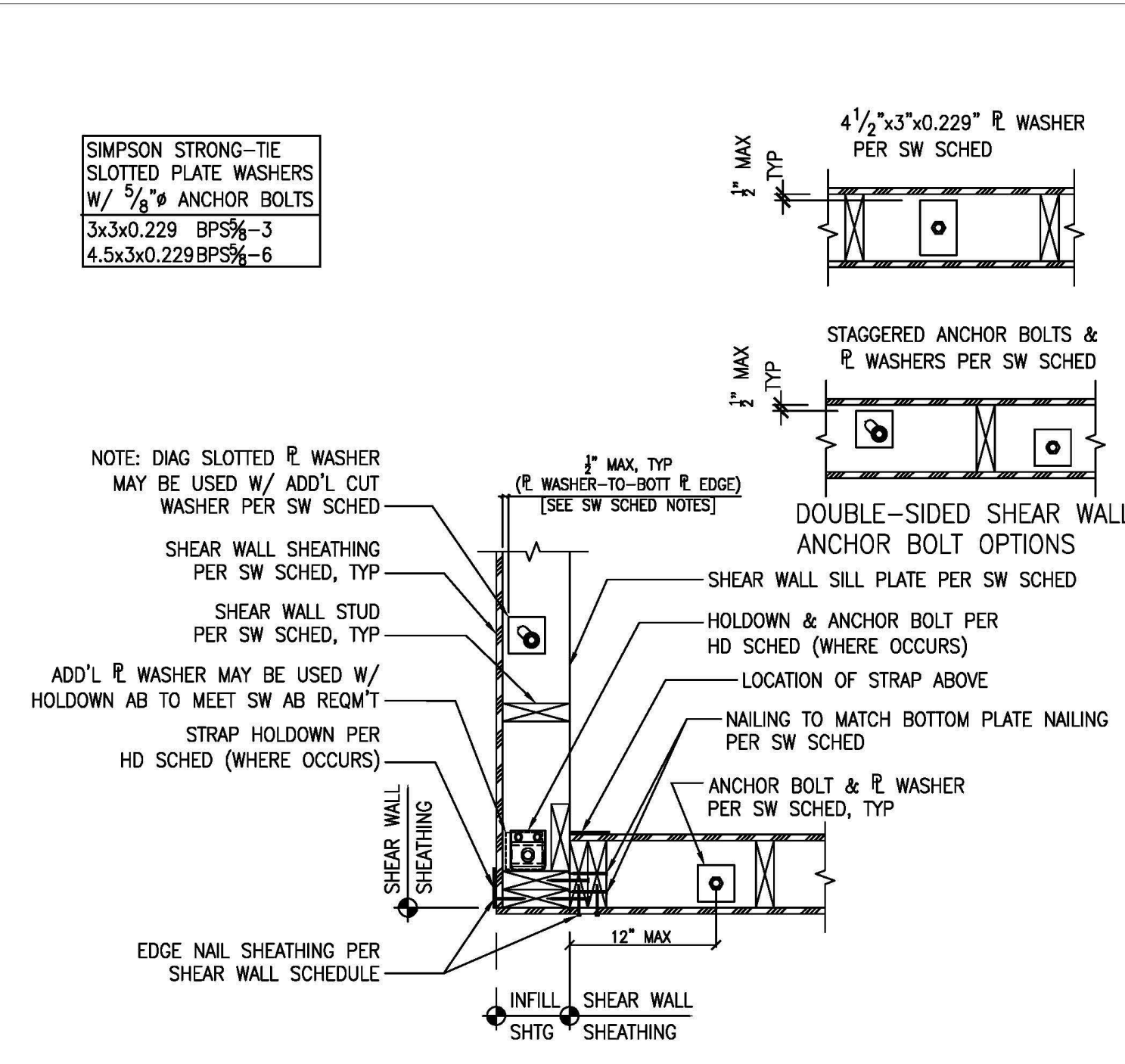
1 TYPICAL EXTERIOR SHEAR WALL WITH SLAB ON GRADE



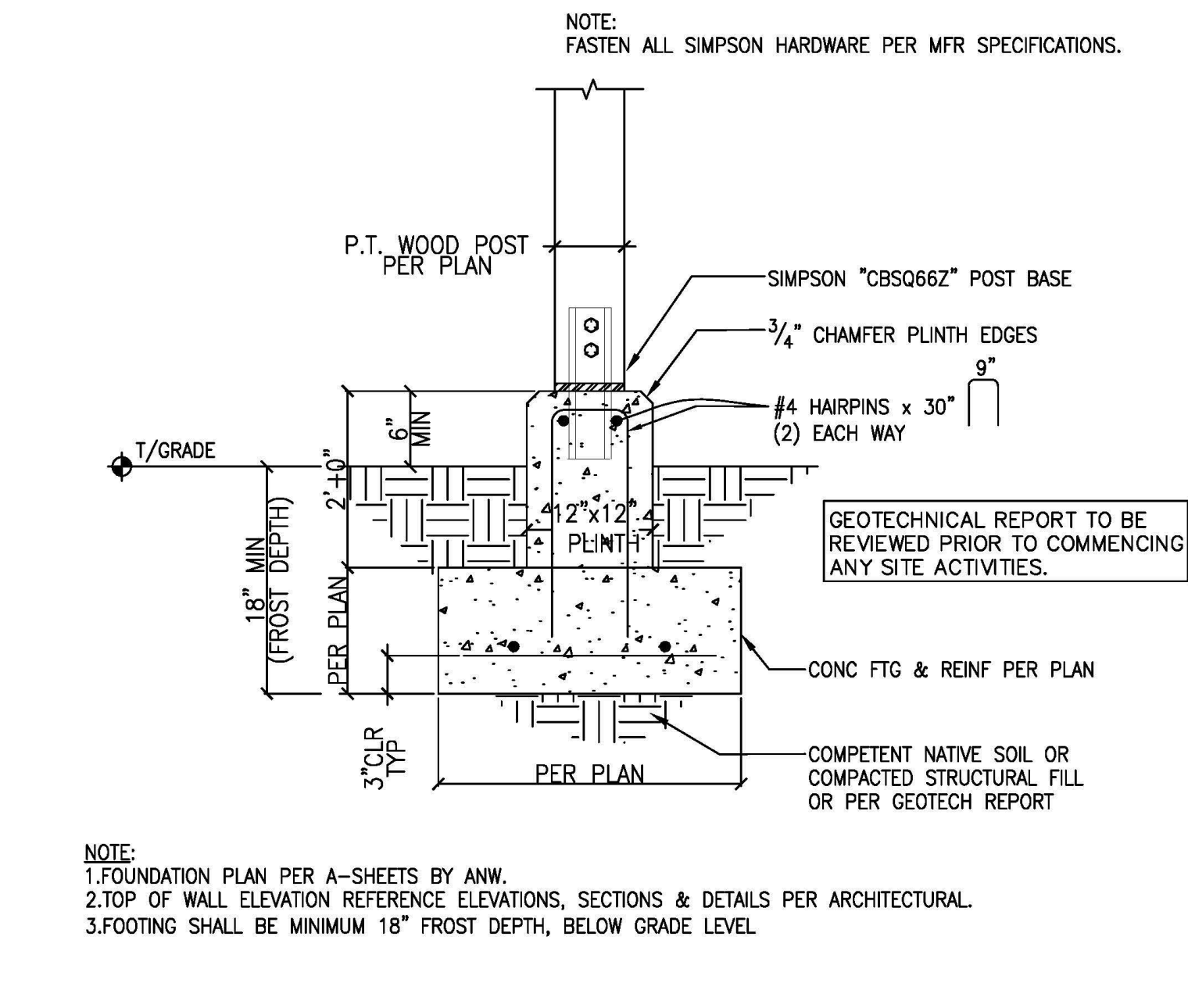
2 TYPICAL SLAB ON GRADE DETAILS



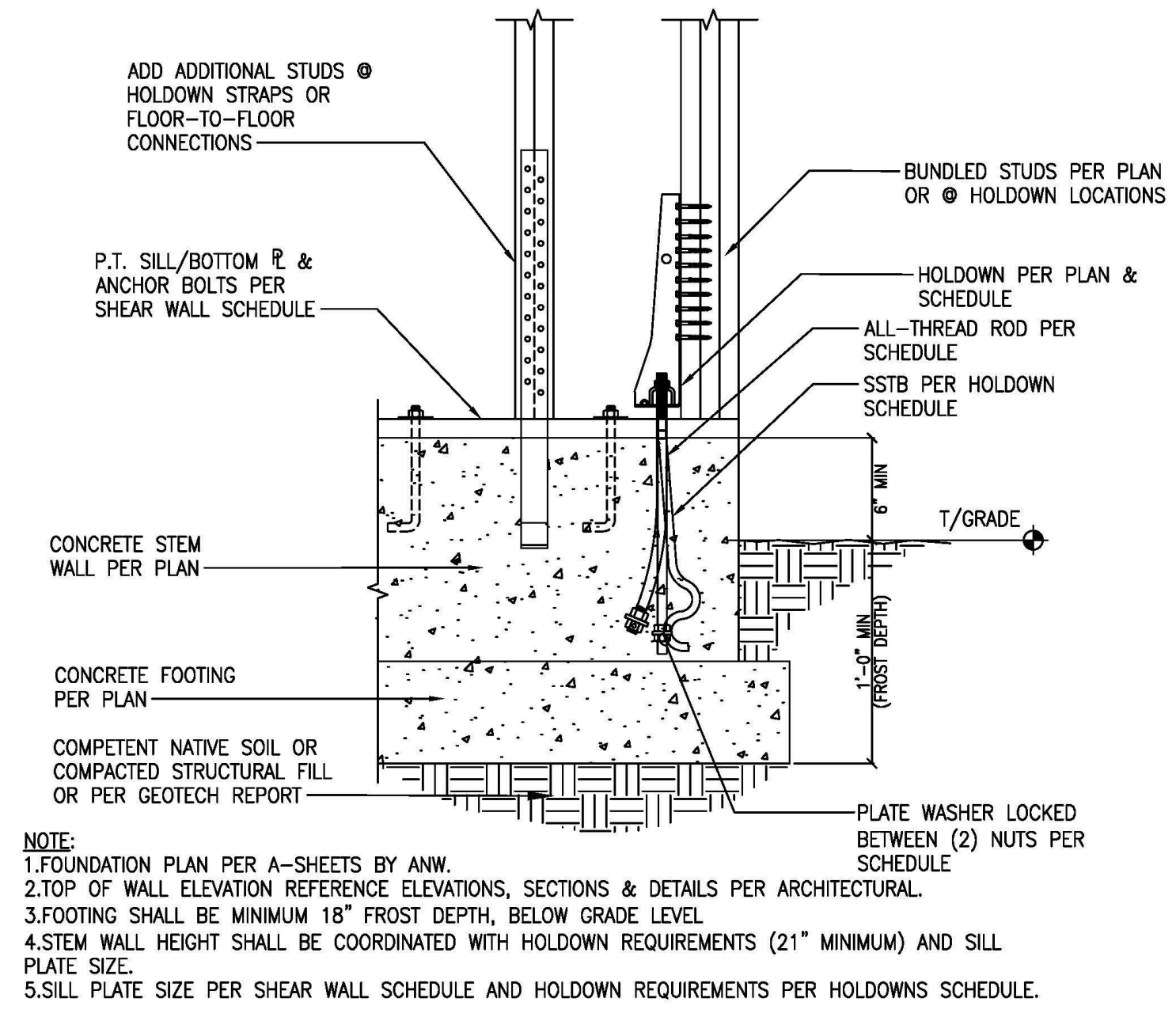
3 TYPICAL CORNERS BARS AT CONCRETE STEM WALLS & FTGs



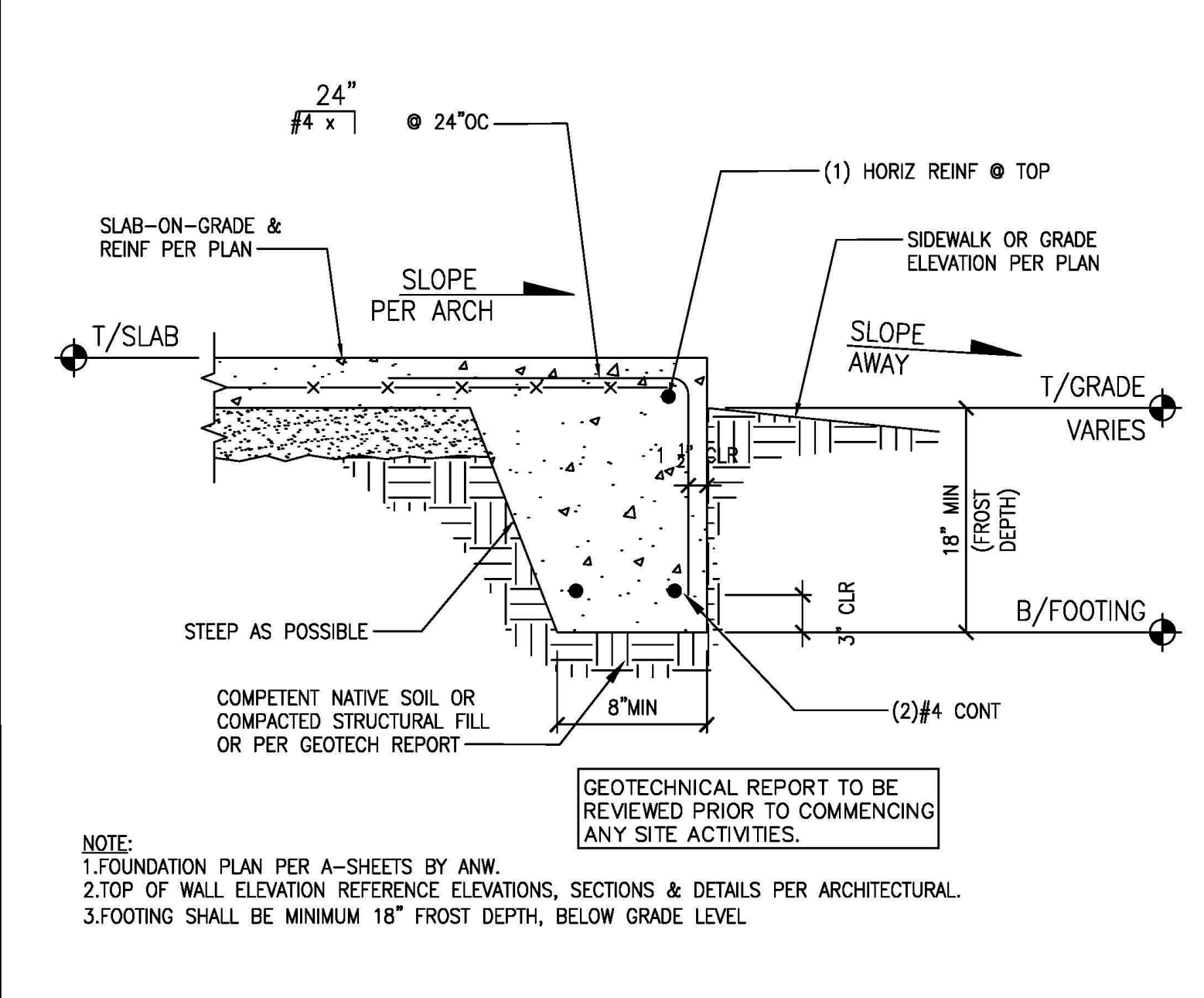
4 TYPICAL PLAN VIEW-CORNER FRAMING AT SHARED HOLDDOWN



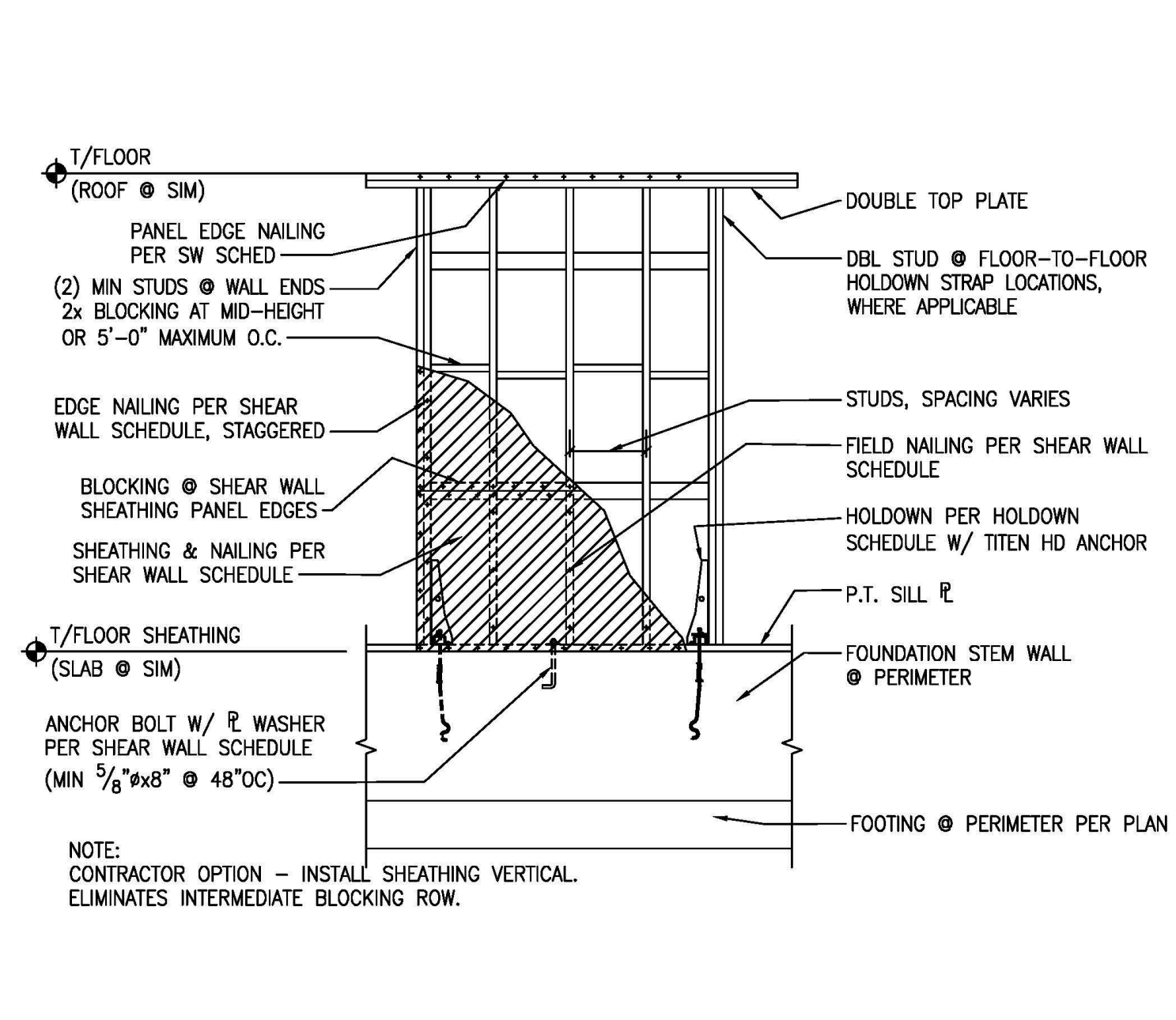
5 TYPICAL POST FOOTING WITH PLINTH



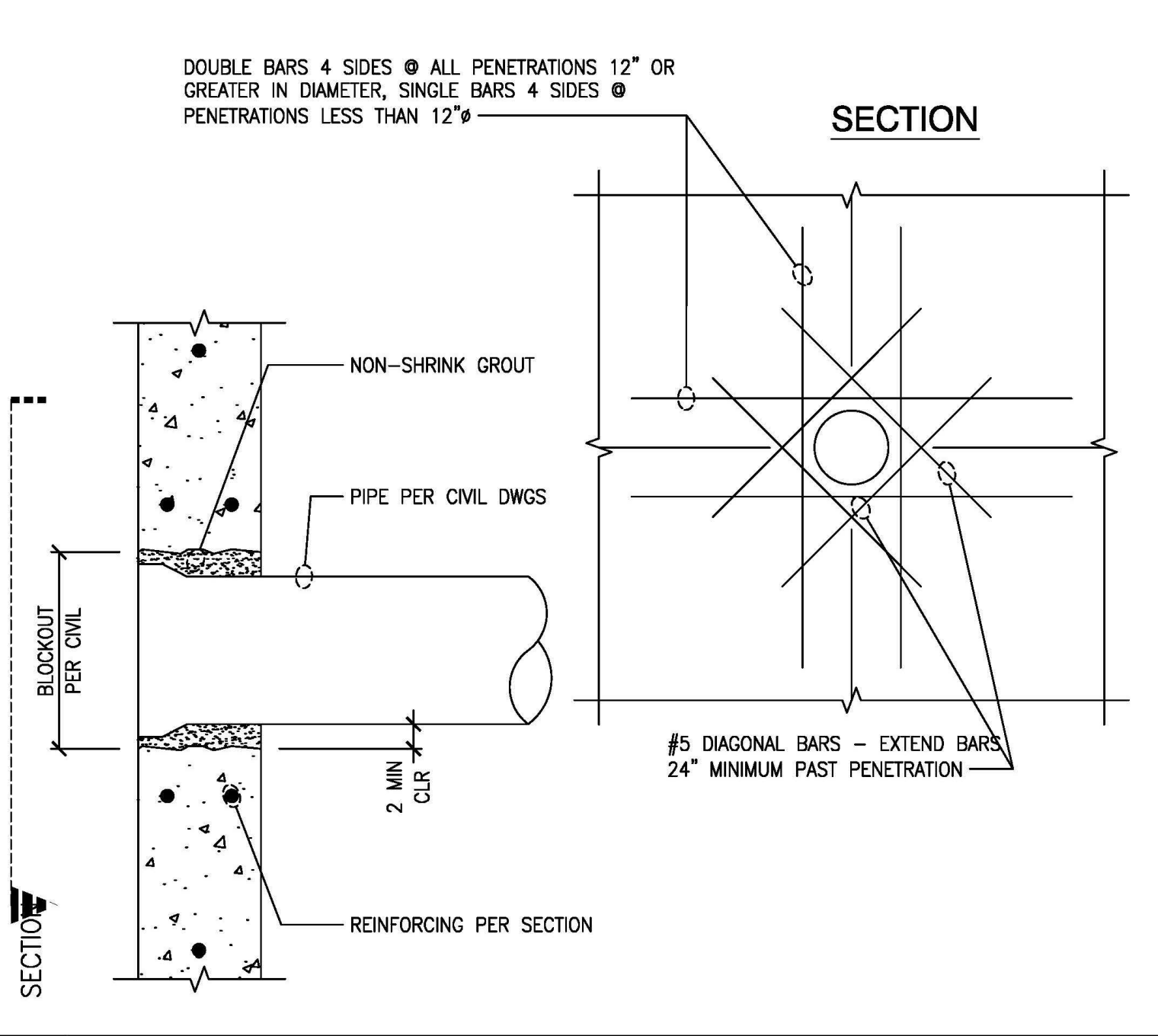
6 TYPICAL SHEAR WALL HOLDDOWN CONNECTION



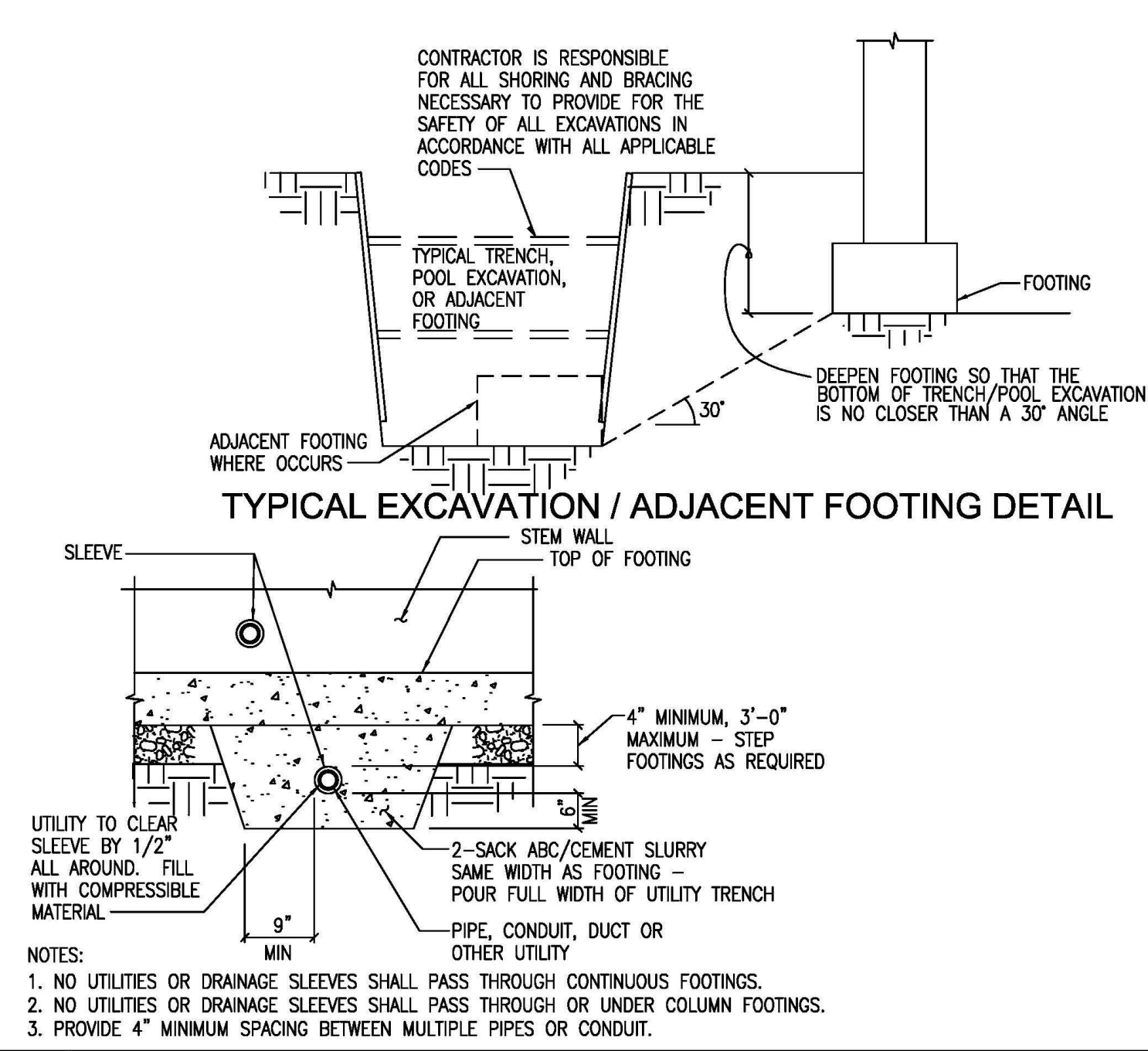
7 TYPICAL THICKENED SLAB EDGE FOOTING AT PATIO



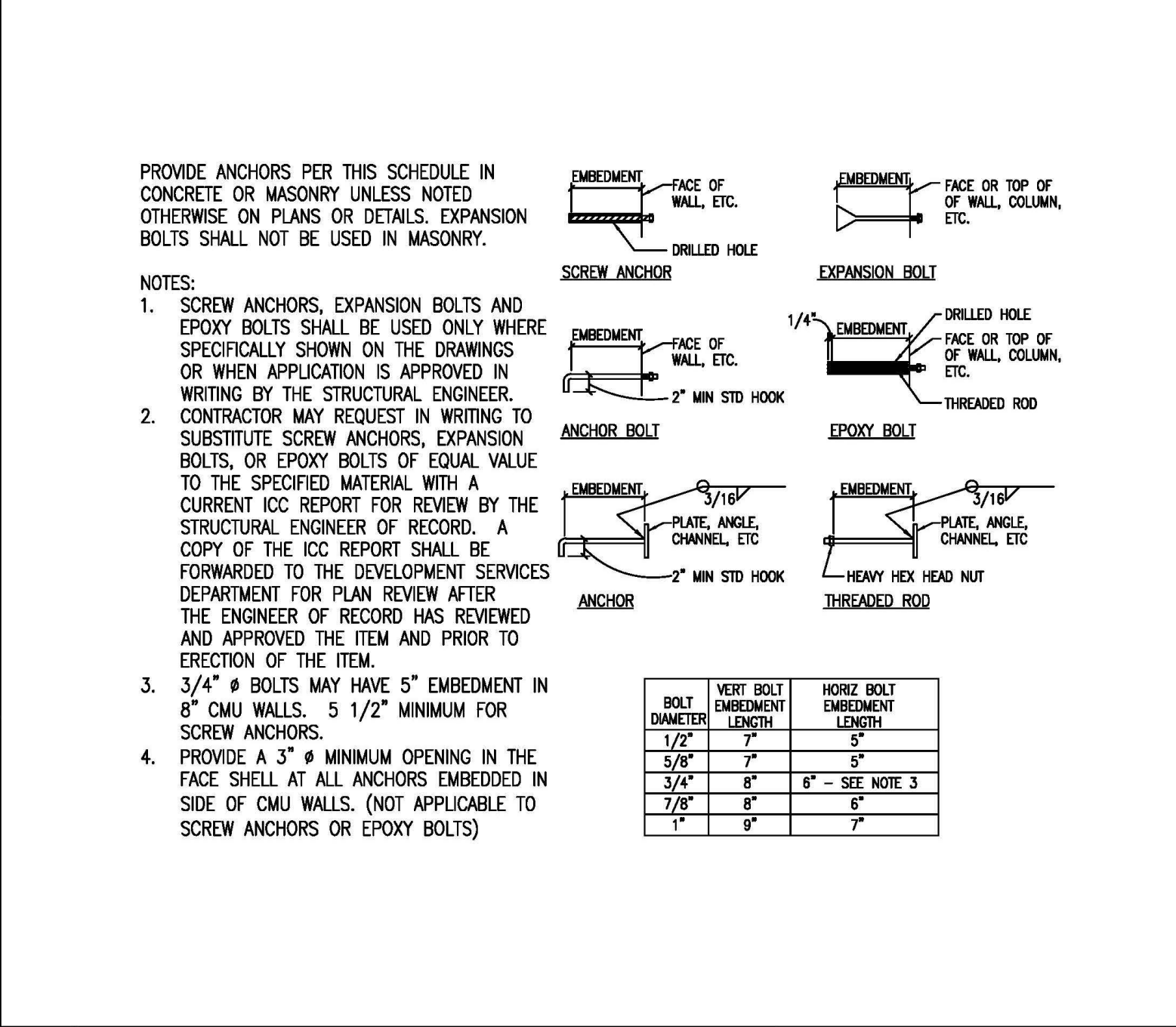
8 TYPICAL SHEAR WALL



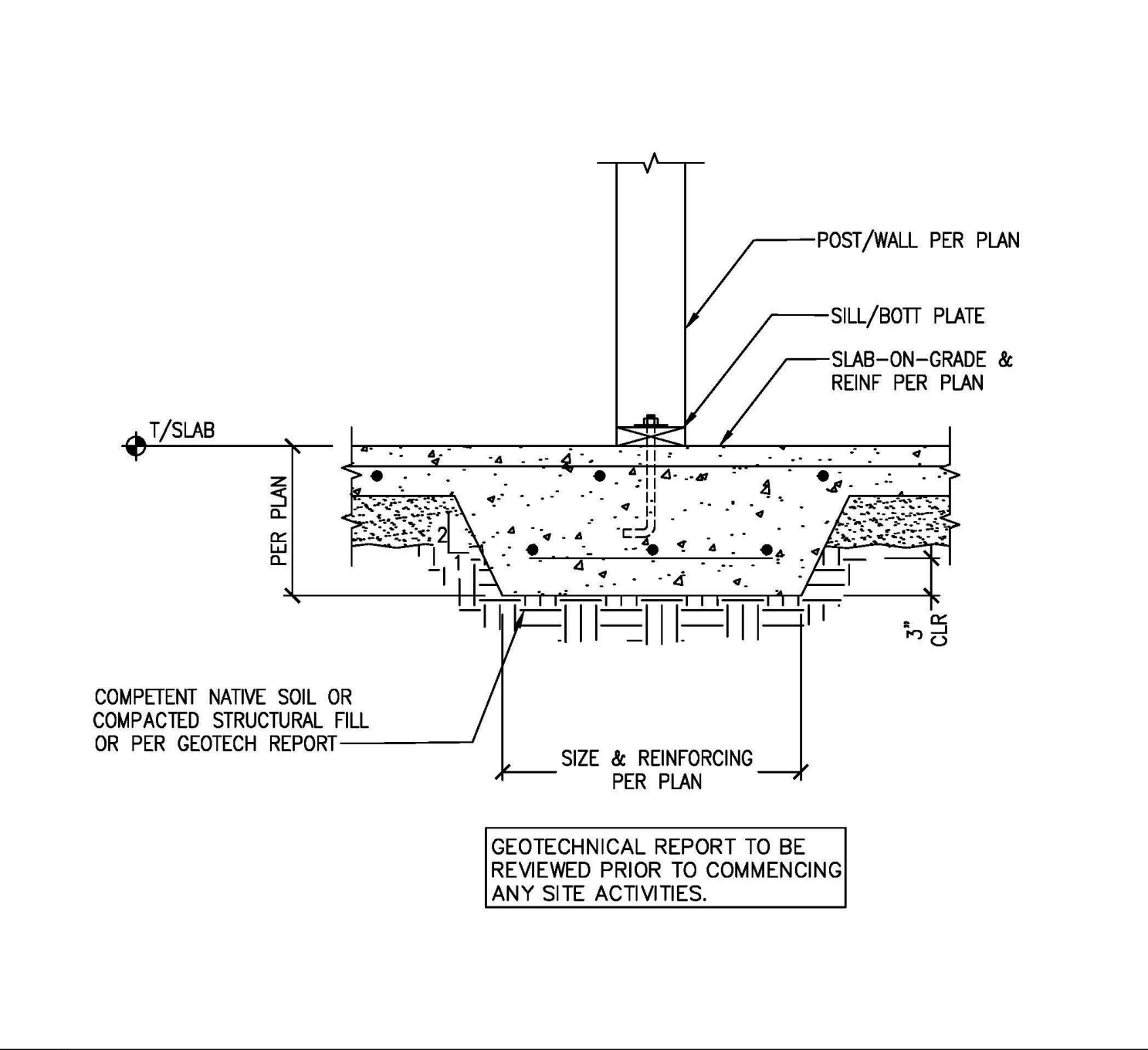
9 TYPICAL REINFORCEMENT AT WALL PENETRATIONS



10 TYPICAL UTILITIES THROUGH STEM / UNDER FOOTING

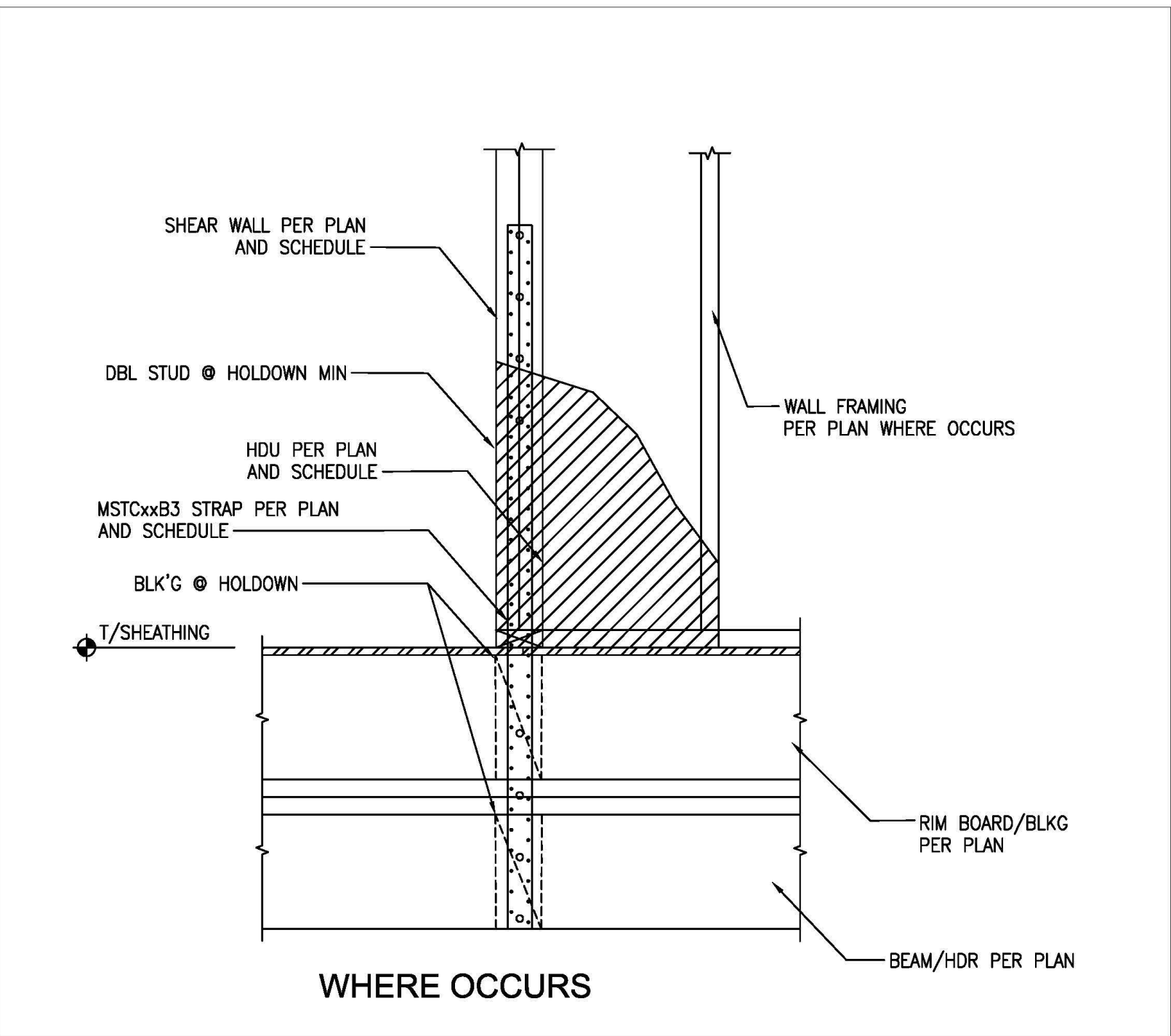
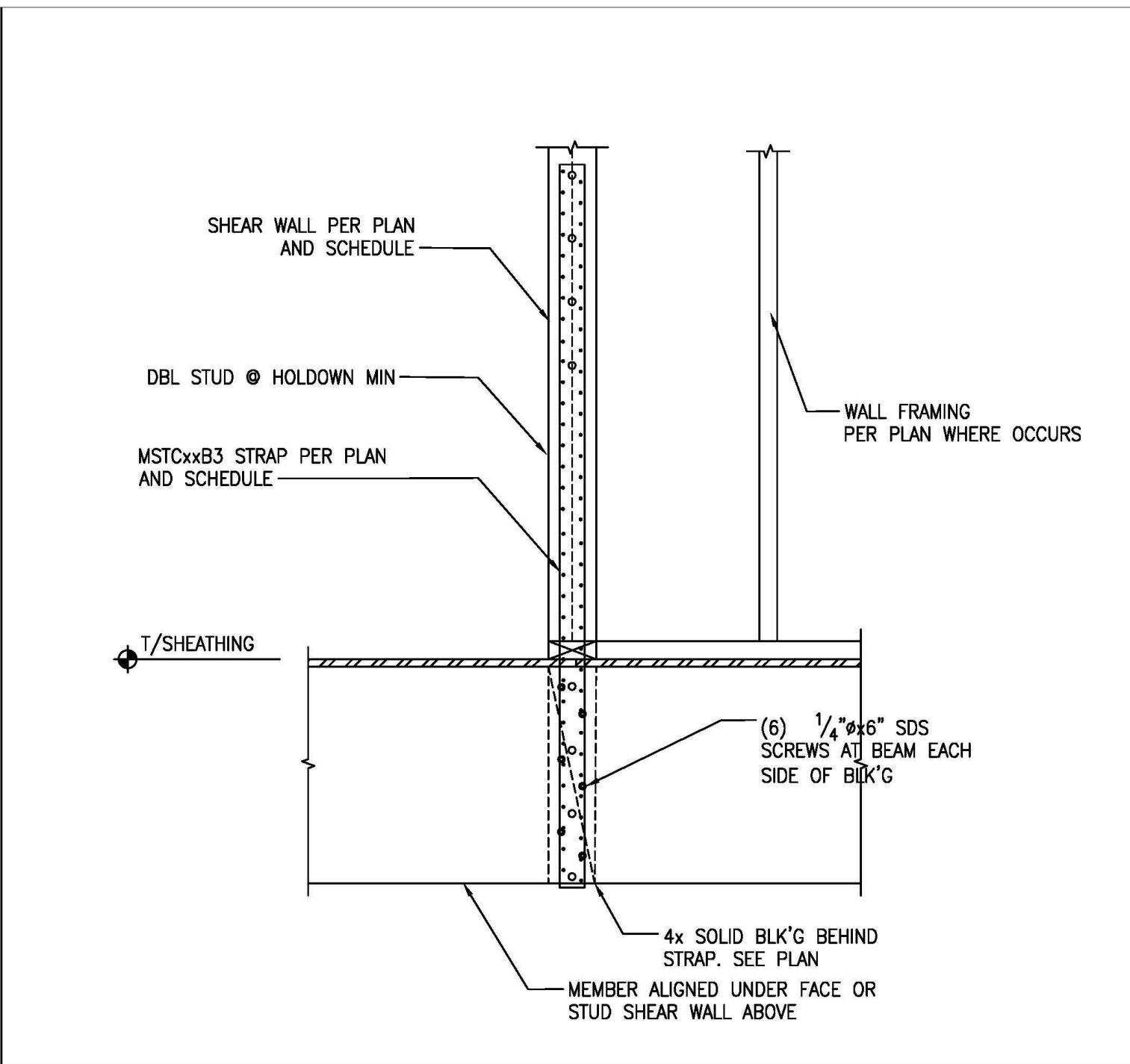
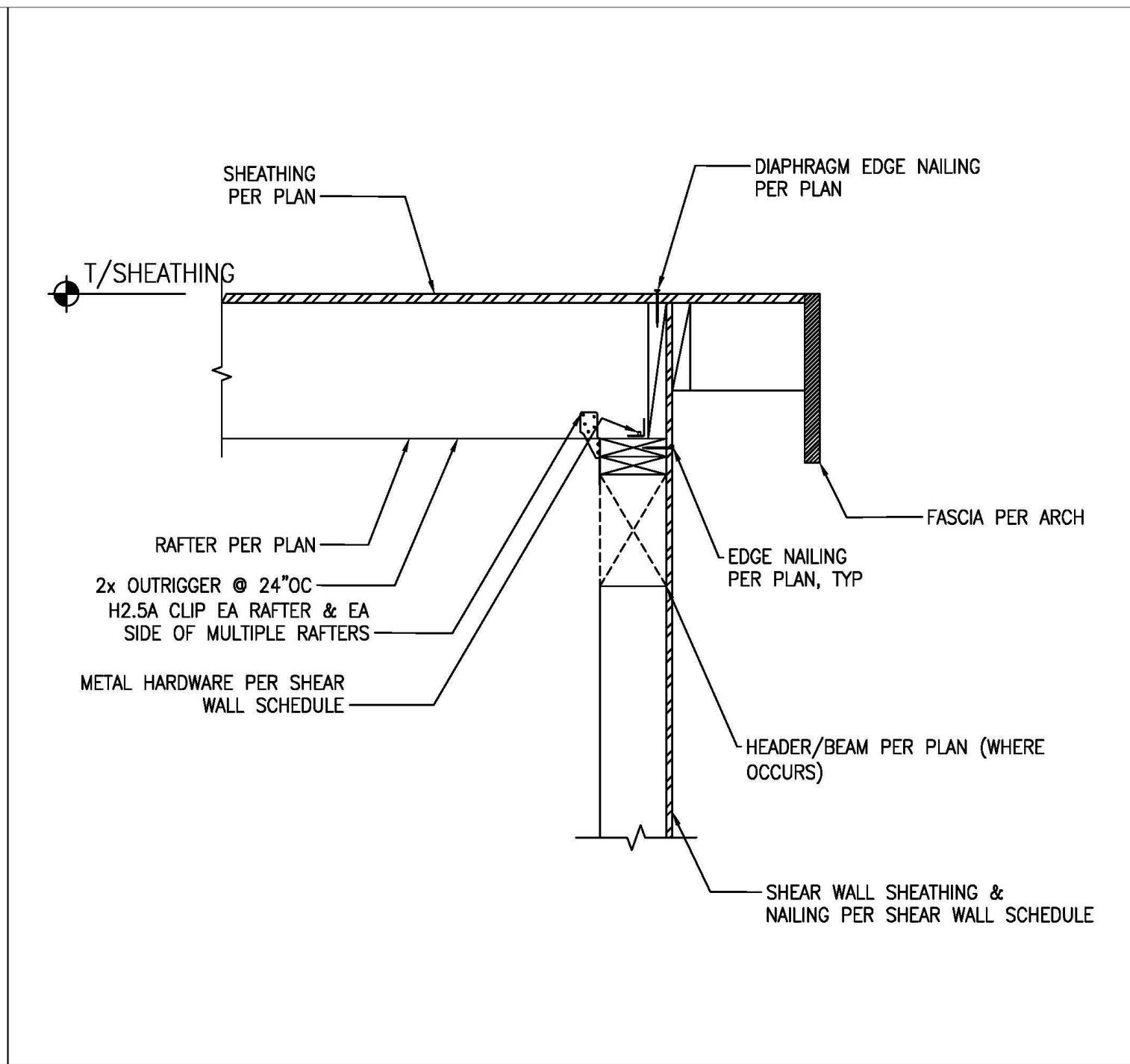
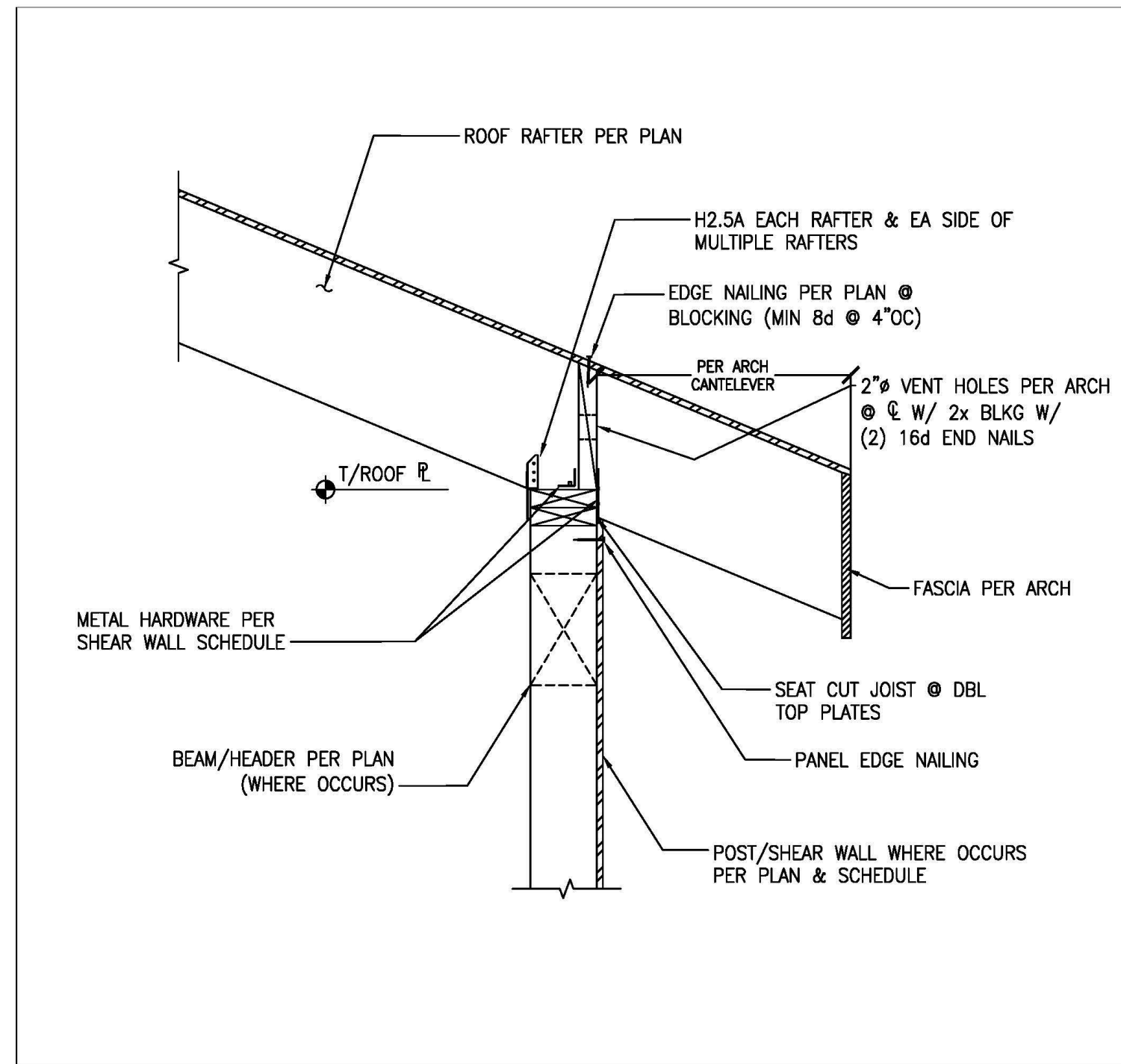


11 CONCRETE-IN-PLACE & POST-INSTALLED ANCHOR SCHEDULE



12 TYPICAL INTERIOR THICKENED SLAB FOOTING

PROJECT #: 25-120  
 ENGINEERED BY: GS  
 DATE: 6/25/25  
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 ENGINEERING DESIGN PLLC  
 STRUCTURAL ENGINEERING  
 721 4th AVE #794  
 KIRKLAND, WA 98033  
 Zvelt.Eng@outlook.com  
 8/8/2025  
 PROJECT NAME:  
 Long - DADU  
 6905 96th Ave SE  
 Mercer Island, WA 98040  
 IBC 2021  
 LATERAL DETAILS  
 ANW 250052  
 LATERAL DETAILS  
 SHEET NUMBER:  
 S 3

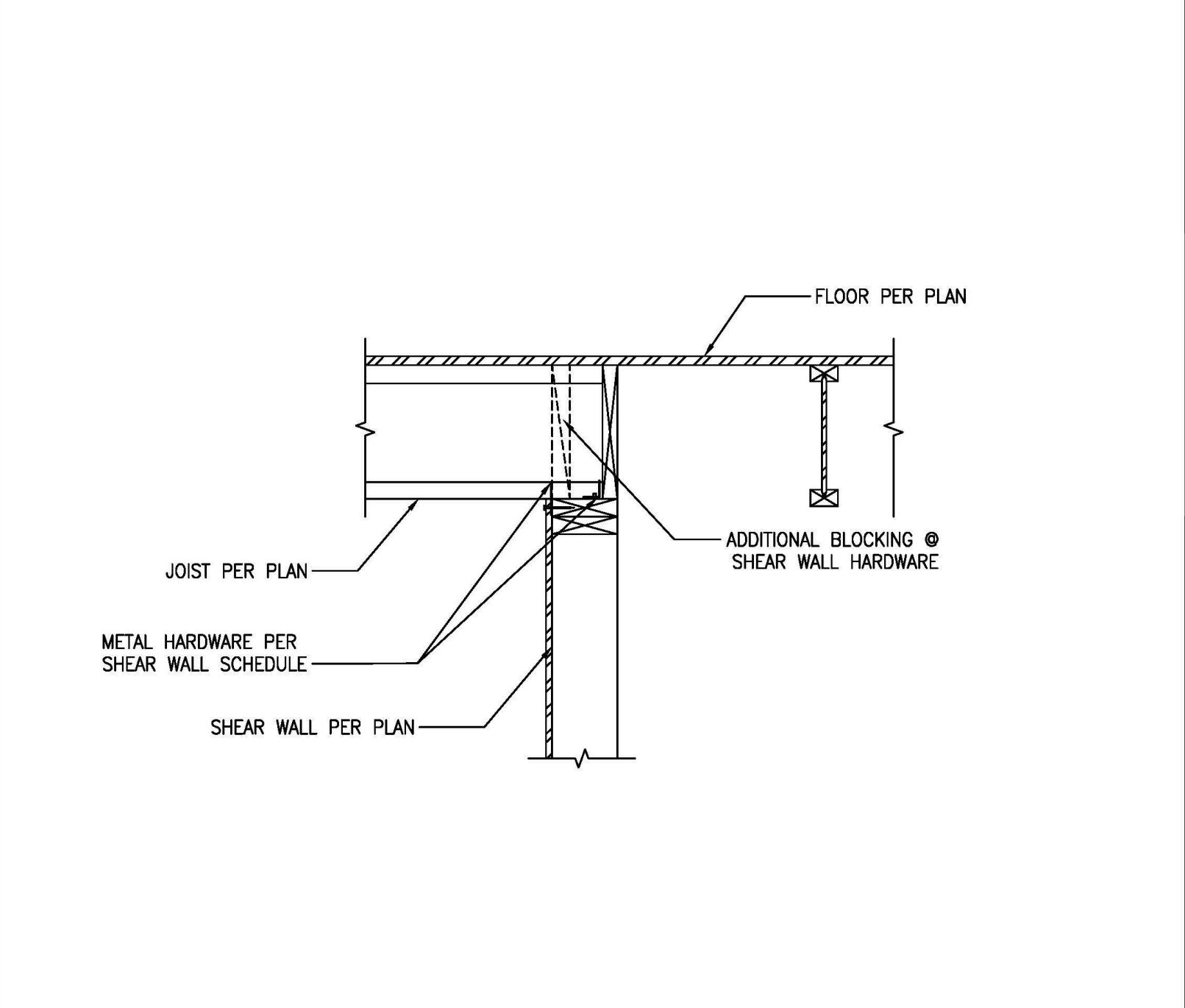
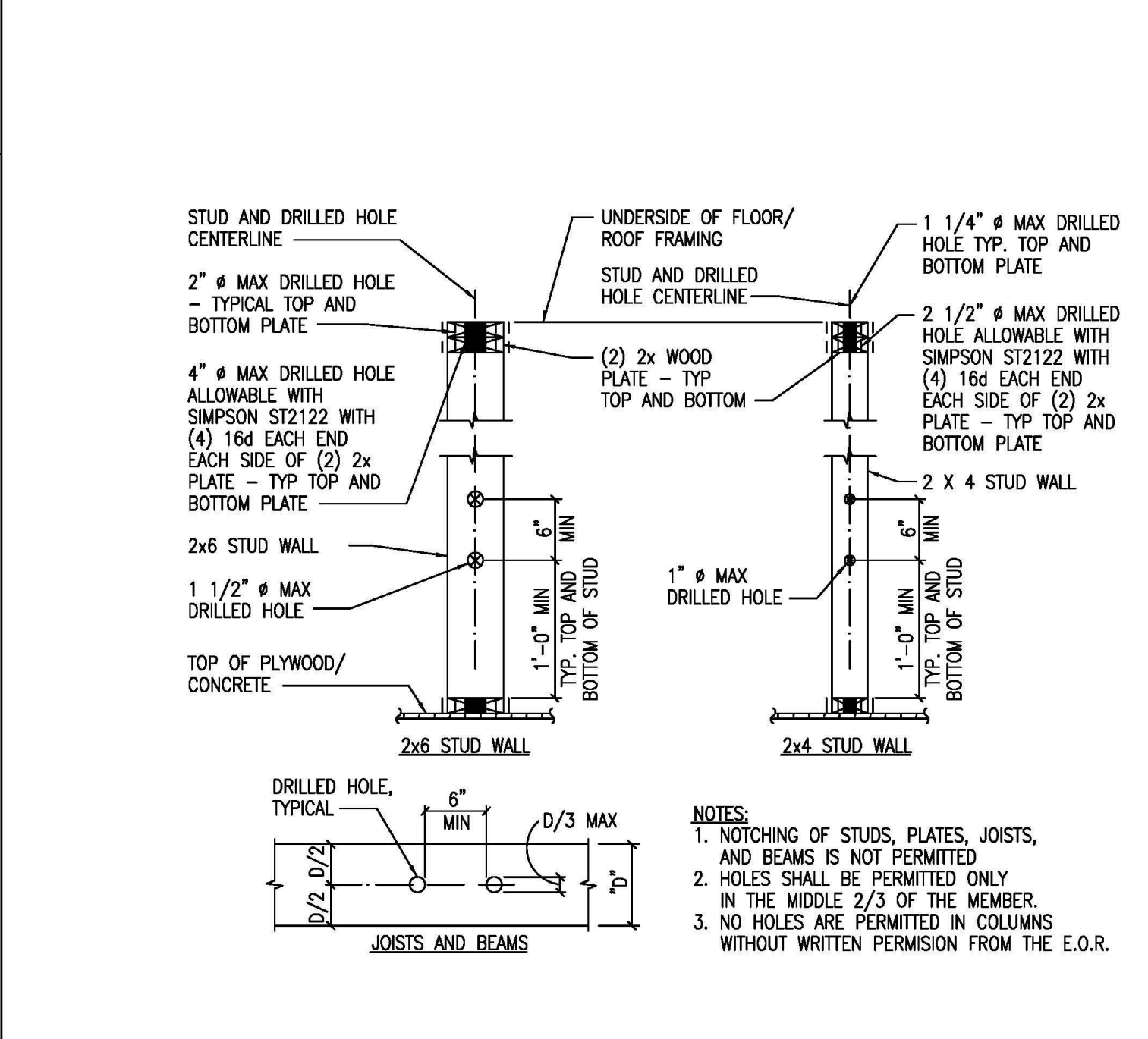
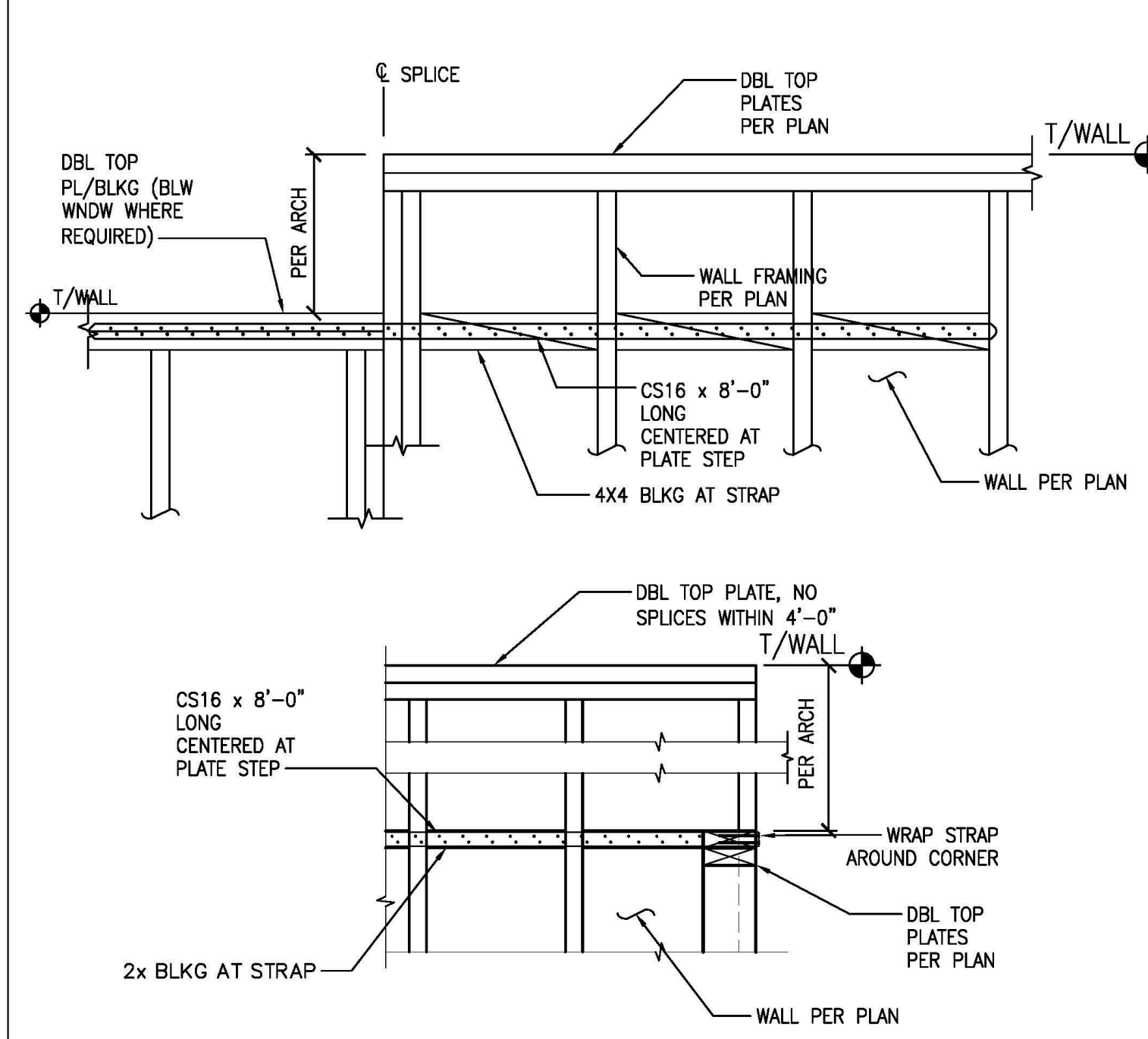
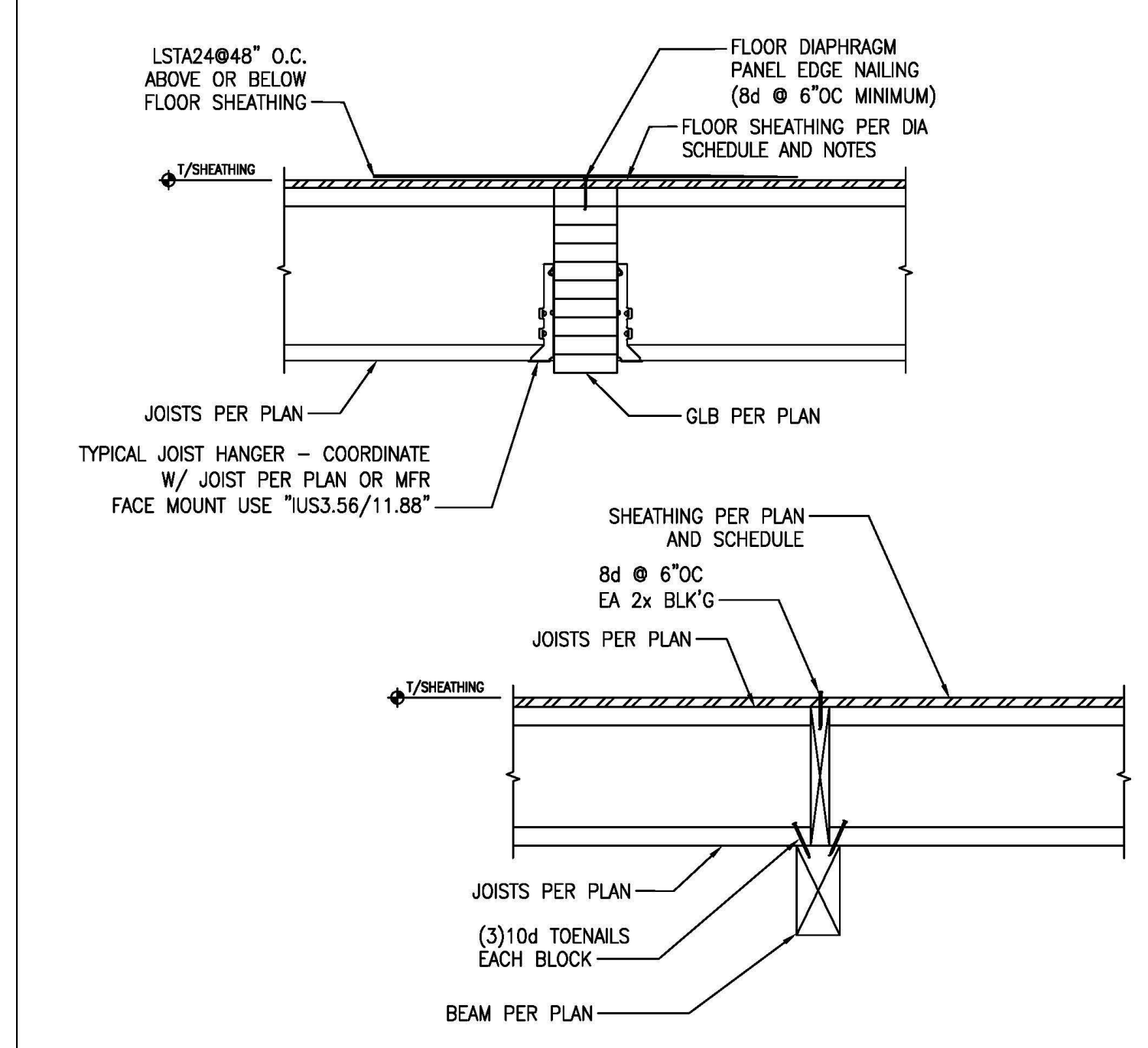


1 TYPICAL RAFTER CONNECTION DETAIL

2 TYPICAL EXT SHEAR WALL PERPENDICULAR TO RAFTERS

3 TYPICAL SHEAR WALL HOLDOWN AT FLOOR MEMBER

4 TYPICAL SHEAR WALL HOLDOWN AT FLOOR MEMBER

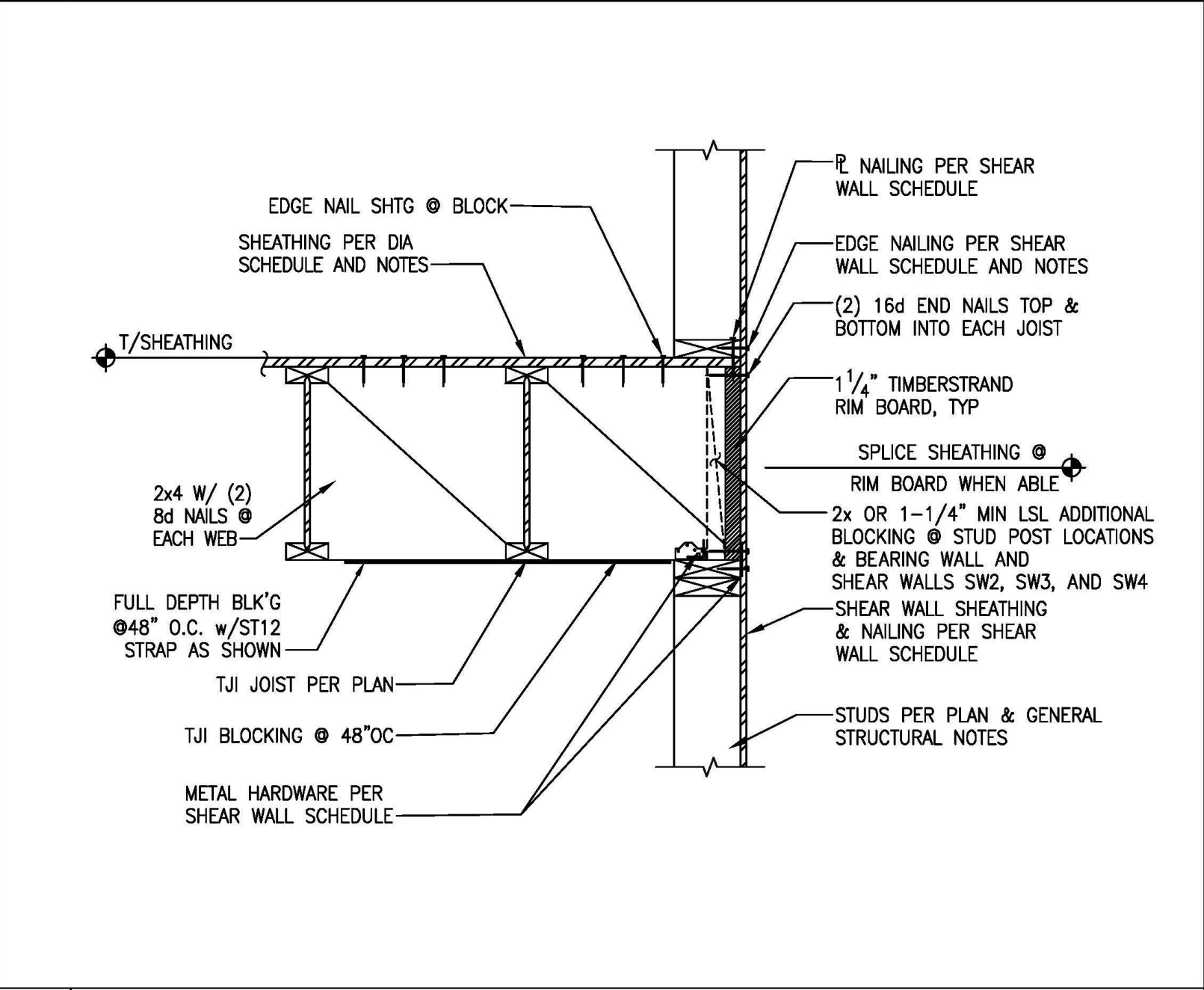
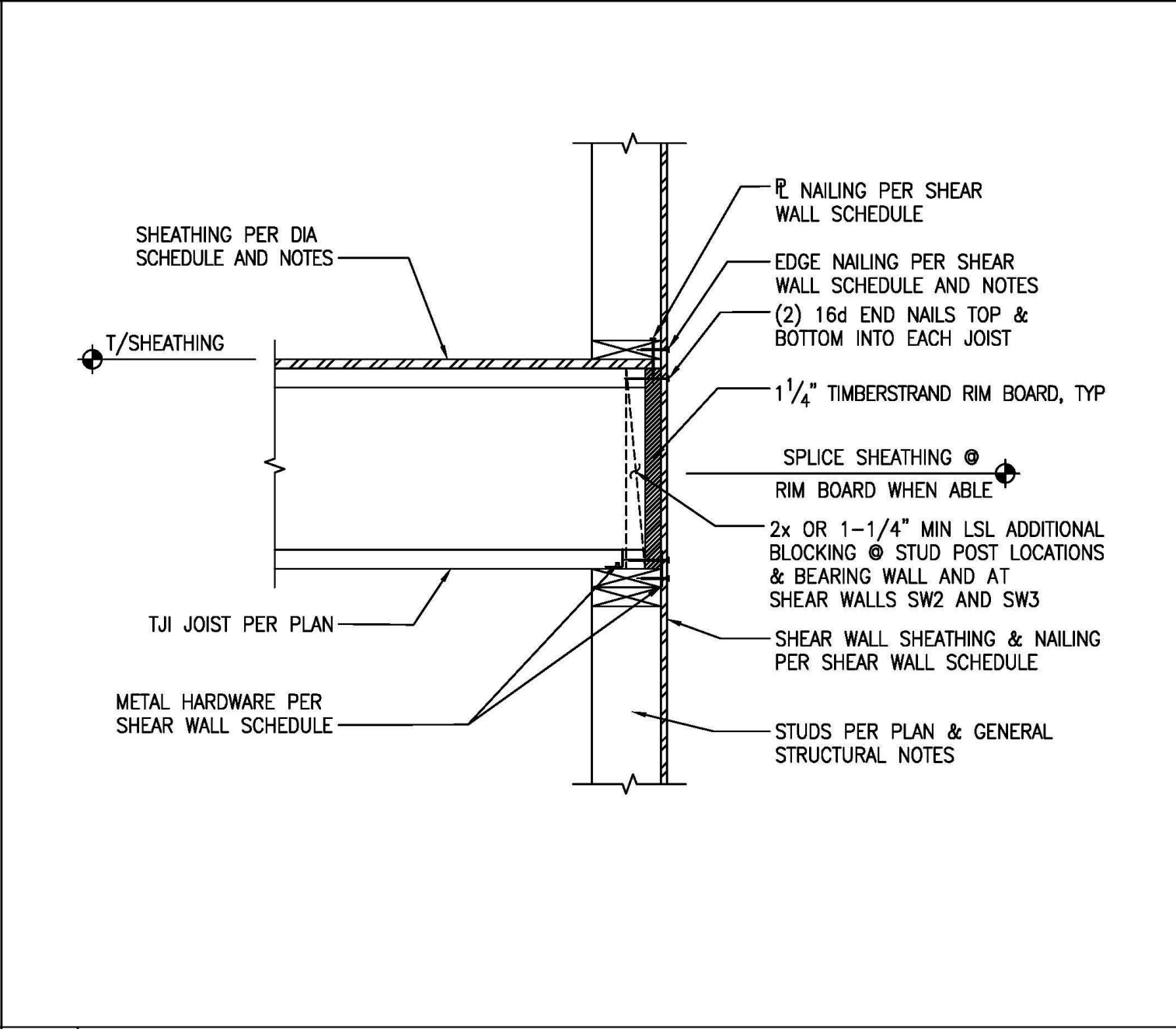
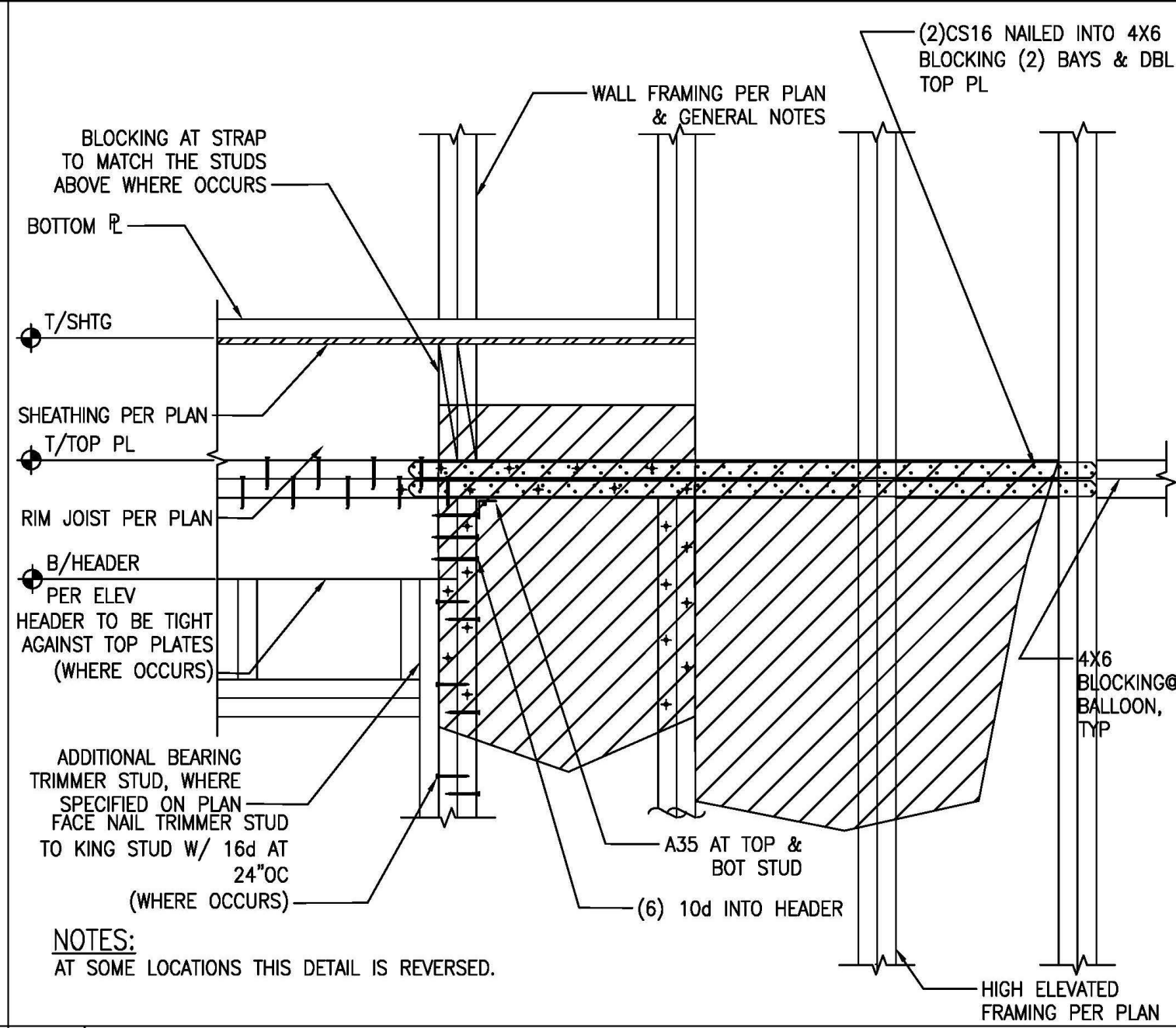
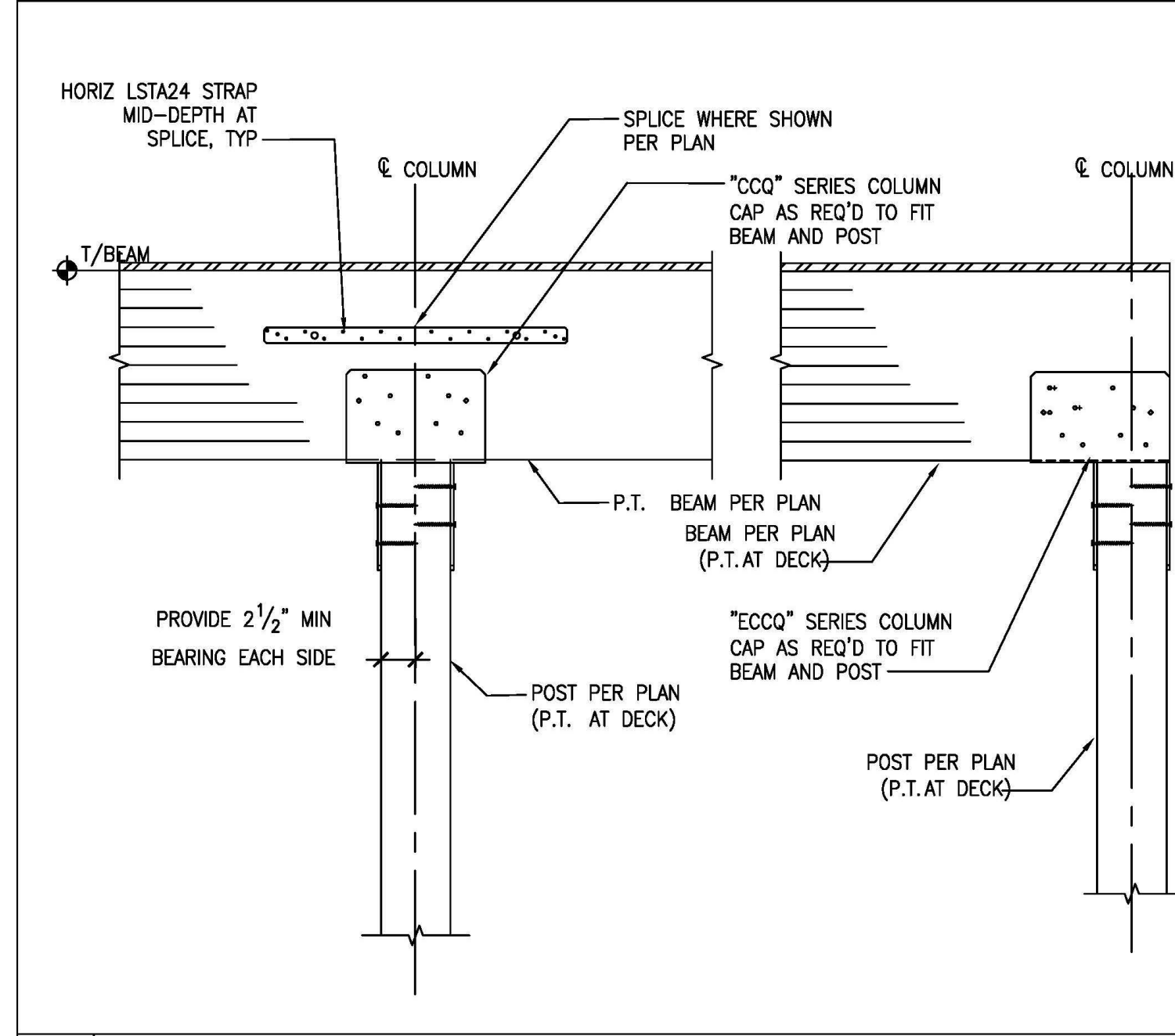


5 TYPICAL FLUSH AND DROPPED BEAM

6 TYPICAL STRAPPING AT DISCONTINUOUS PLATES

7 TYPICAL HOLES IN STUDS - PLATES - JOISTS - BEAMS

8 TYPICAL EXT. SHEAR WALL PERPENDICULAR TO FLOOR JOISTS



9 TYPICAL COLUMN TO BEAM DETAIL

10 TYP WALL BLK'G/STRAPPING AT TOP PLATE DISCONTINUITY

11 TYPICAL EXTERIOR WALL PERPENDICULAR TO JOISTS

12 TYPICAL EXTERIOR WALL PARALLEL TO TJI JOISTS

PROJECT #:  
25-120  
ENGINEERED BY: GS  
DATE:  
6/25/25

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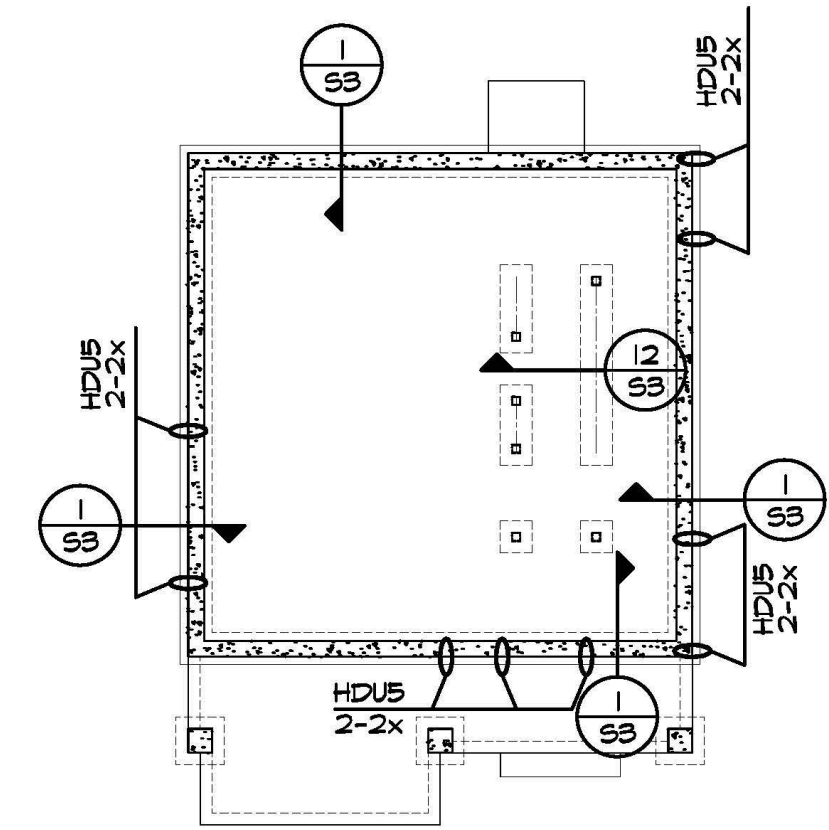
STRUCTURAL ENGINEERING  
721 4th AVE #794  
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PROJECT NAME:  
Long - DADU  
6905 96th Ave SE  
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WOOD LATERAL DETAILS  
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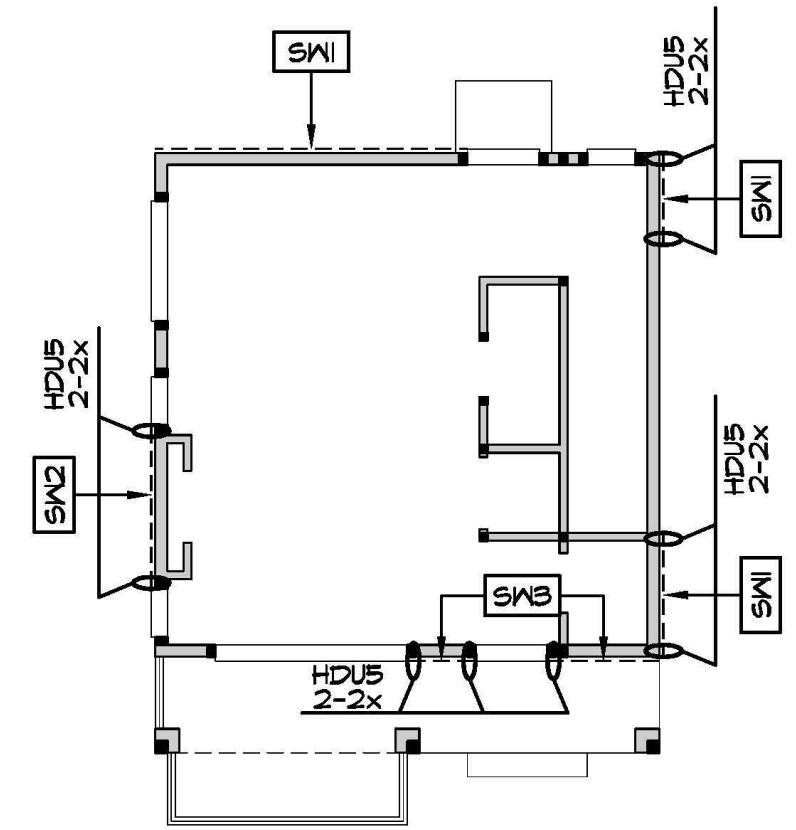
SHEET NUMBER:  
S 4



① FOUNDATION (HARDWARE)  
SCALE: 1/8" = 1'-0"

**FOUNDATION NOTES:**

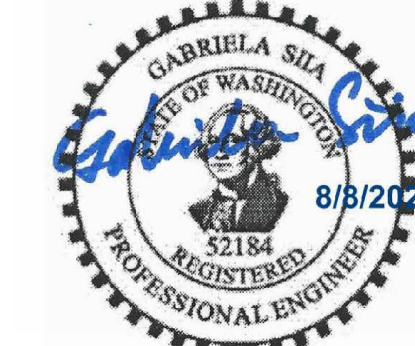
1. VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION & CONSTRUCTION.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
3. BOTTOM OF ALL NEW FOOTINGS SHALL BE 18" MIN BELOW LOWEST ADJACENT GRADE UNLESS NOTED OTHERWISE. CENTER INTERIOR FOOTINGS ON WALLS OR COLUMNS.
4. TYPICAL SLAB-ON-GRADE SHALL BE 4" THICK CONCRETE  $f_c=2500$  PSI MINIMUM, WITH W/F 6x6-1/2.1x1/2.1.
5. PROVIDE CONSTRUCTION/CONTROL JOINTS IN 4" THICK SLAB-ON-GRADE TO DIVIDE SLAB INTO RECTANGULAR AREA OF 225 SQUARE FEET OR LESS. AREAS SHALL HAVE MINIMUM ASPECT RATIO OF 2.5:1 AND HAVE NO ACUTE RE-ENTRANT ANGLES.
6. ALL WOOD IN CONTACT WITH WEATHER EXPOSED CONCRETE OR WITHIN 6" OF FINISHED GRADE SHALL BE PRESSURE TREATED.
7. SEE FOOTING SCHEDULE ON SHEET S2.
8. SOIL GEOTECHNICAL EVALUATION WAS PREPARED BY COSALT GEOSCIENCES. SITE PREPARATION, EXCAVATIONS AND TEMPORARY EXCAVATIONS, COMPACTION, BACKFILLING, STRUCTURAL FILL, STORMWATER MANAGEMENT FEASIBILITY, EROSION AND SEDIMENT CONTROL, AND UTILITIES SHALL BE AS STATED IN THE GEOTECHNICAL REPORT ATTACHED TO THE PROJECT.



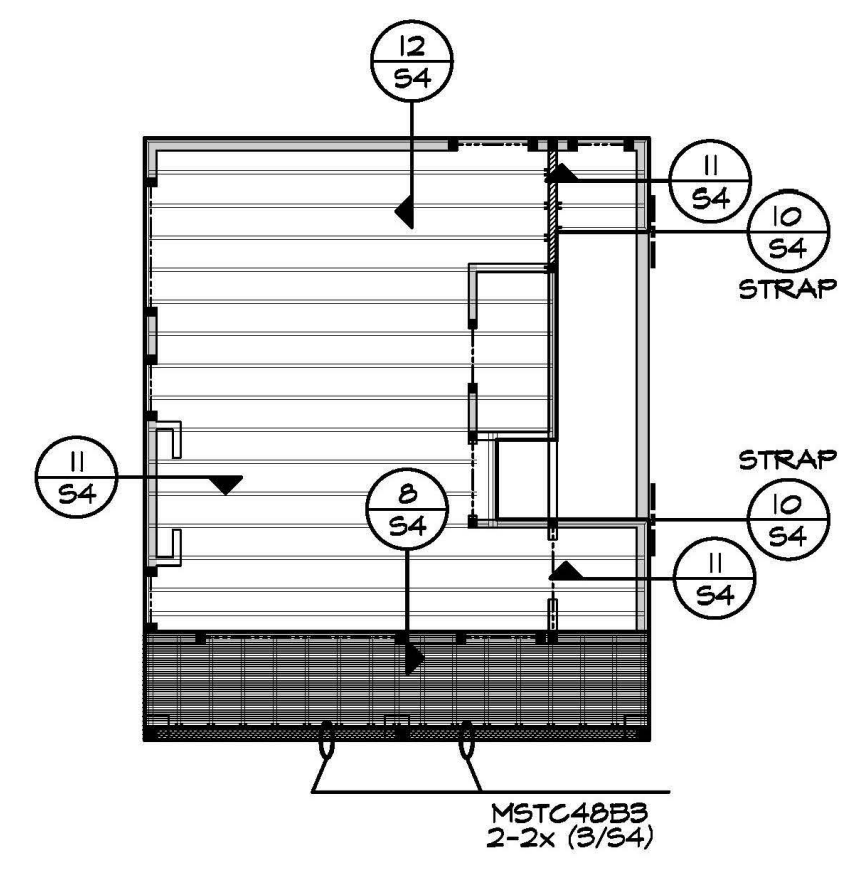
② MAIN FLOOR SHEAR WALLS & HARDWARE  
SCALE: 1/8" = 1'-0"

**FLOOR PLAN NOTES:**

1. VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION & CONSTRUCTION.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
3. HD INDICATES A HOLD-DOWN. REFERENCE THE HOLD-DOWN SCHEDULE PLAN S1 FOR HOLD-DOWN REQUIREMENTS AND MINIMUM STUDS/POST. SEE PLAN FOR OTHER STUDS/POST REQUIREMENTS.
4. SWI INDICATES A SHEAR WALL. REFERENCE THE SHEAR WALL SCHEDULE PLAN S2 FOR SHEAR WALL REQUIREMENTS. ALL SHEAR WALLS TO BE CONTINUOUS BETWEEN ROOF SHEATHING AND TOP OF FOUNDATION WALL. SOME SHEAR WALLS REQUIRE 3x FRAMING AT PANEL EDGES. SEE SHEAR WALL SCHEDULE ON STRUCTURAL DETAILS.
5. SHEAR WALL TO BE CONTINUOUS THROUGH INTERSECTION. SEE DET. 1/52.
6. ALL EXTERIOR SHEAR WALLS SHALL BE SW-I, UNLESS NOTED ON THE PLAN.



ZVELT ENGINEERING DESIGN, PLLC  
Lateral Review  
This review is for general conformance to the structural design criteria, red lined mark-ups, concept and contract documents.  
By: *gs* Job#: A05/25-120 Date: 8/8/2025

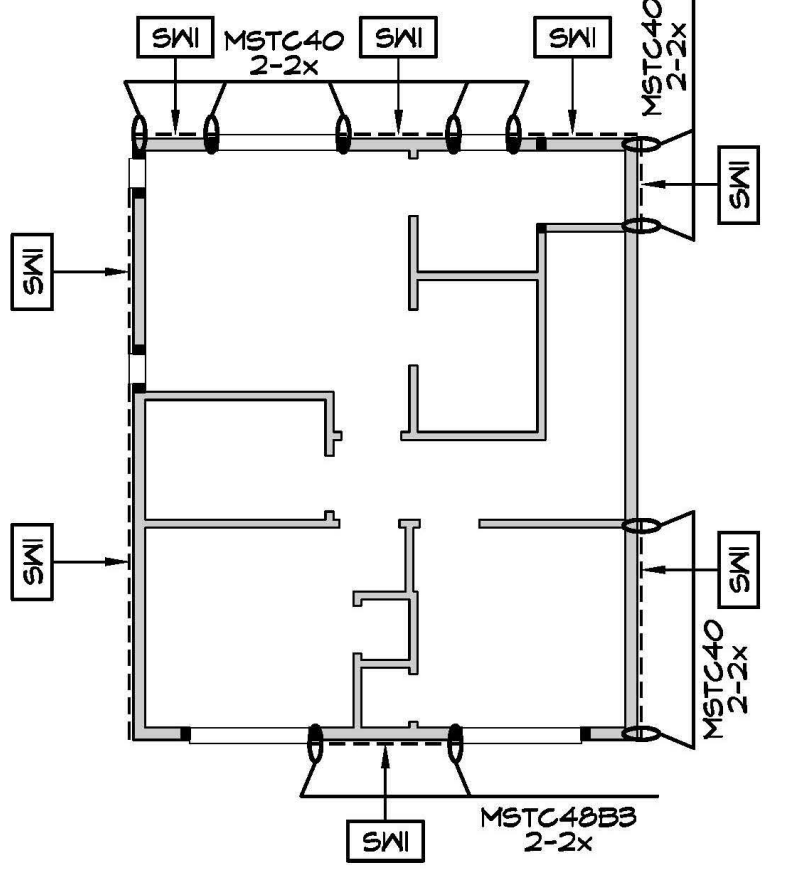


③ UPPER FLOOR FRAMING  
SCALE: 1/8" = 1'-0"

BLOCKED DIAPHRAGM (DET 5/52)  
FLOOR BLOCKED DIAPHRAGM W/ 3/4" SHTS  
0.148"φ x 3" NAILING  
10d @ 6" O.C. EDGE  
10d @ 12" O.C. FIELD STAGGERED

**FLOOR FRAMING NOTES:**

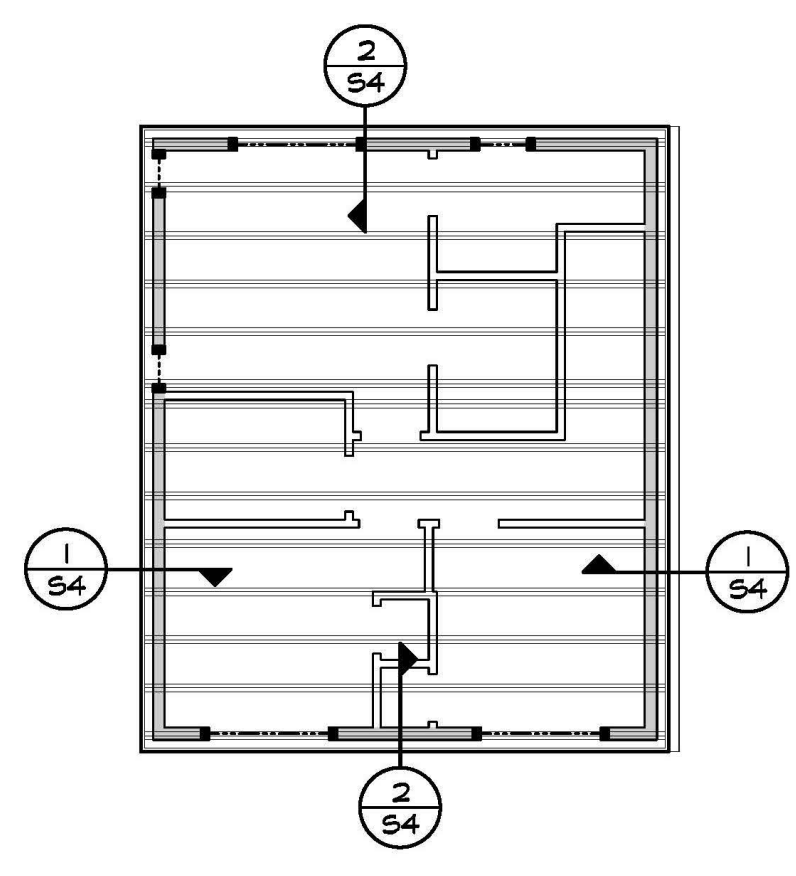
1. VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION & CONSTRUCTION.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
3. FLOOR SHEATHING THICKNESS AND NAILING SHALL BE 3/4" w/10d @ 12" O.C. ALL FIELD SUPPORTS 10d @ 6" O.C. ALL PANEL EDGES, AND 10d @ 6" O.C. AT BOUNDARIES WHERE SHADED PER PLAN. SEE DIAPHRAGM SCHEDULE PLAN S1.
4. SEE GENERAL STRUCTURAL NOTES FOR FLOOR LOADING CONDITIONS.
5. PROVIDE SOLID BLOCKING AT THE LOCATIONS INDICATED PER PLAN.
6. PROVIDE ADDITIONAL L JOIST IN LINE WITH SHEAR WALL WHERE NOTED ON PLAN.
7. ALL POST-BEAM & BM-BM INTERSECTIONS SHALL CONTAIN POSITIVE CONNECTIONS TO RESIST AGAINST UPLIFT AND/OR LATERAL DISPLACEMENT.



④ UPPER FLOOR SHEAR WALLS & HARDWARE  
SCALE: 1/8" = 1'-0"

**FLOOR PLAN NOTES:**

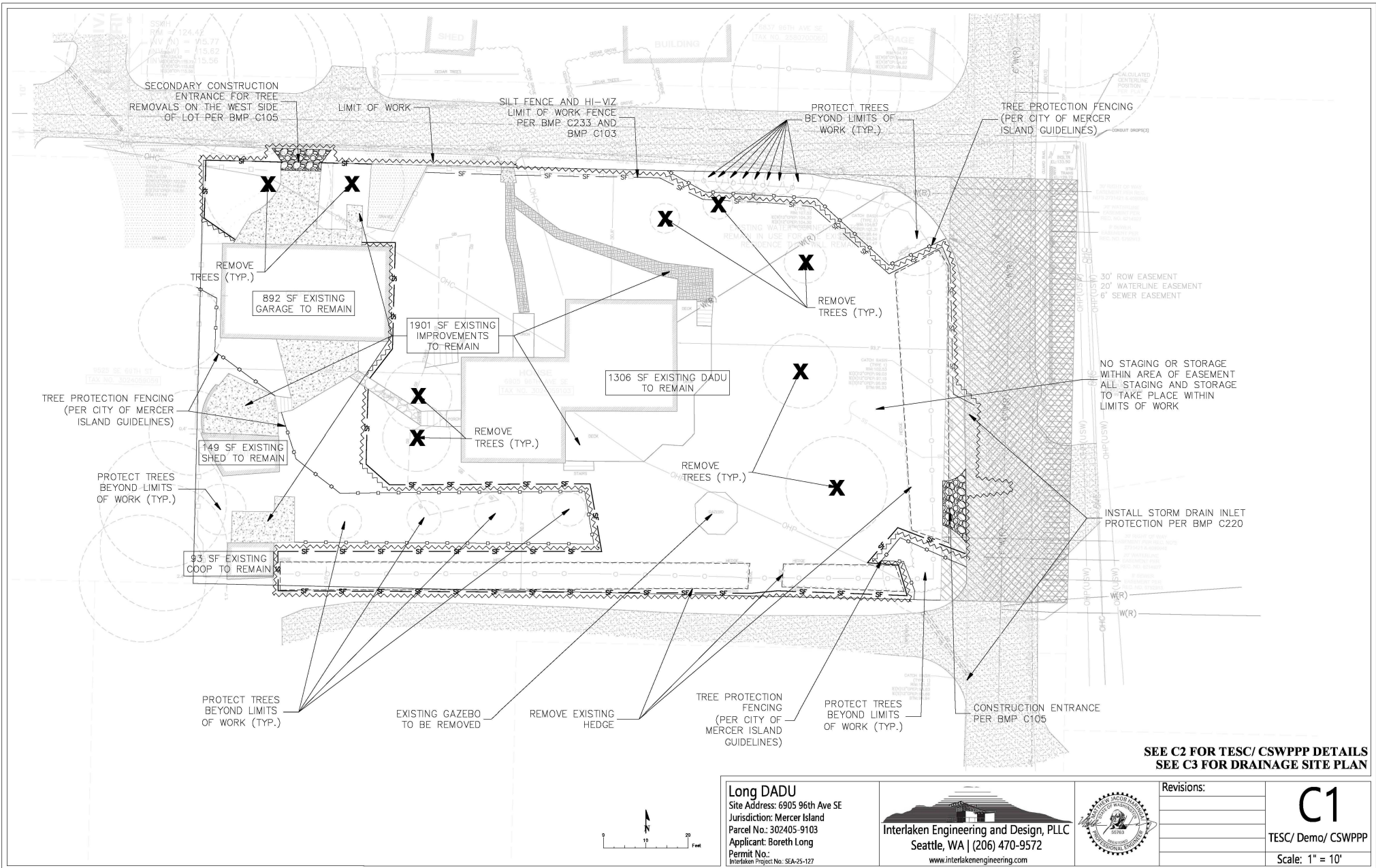
1. VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION & CONSTRUCTION.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
3. HD INDICATES A HOLD-DOWN. REFERENCE THE HOLD-DOWN SCHEDULE PLAN S1 FOR HOLD-DOWN REQUIREMENTS AND MINIMUM STUDS/POST. SEE PLAN FOR OTHER STUDS/POST REQUIREMENTS.
4. SWI INDICATES A SHEAR WALL. REFERENCE THE SHEAR WALL SCHEDULE PLAN S2 FOR SHEAR WALL REQUIREMENTS. ALL SHEAR WALLS TO BE CONTINUOUS BETWEEN ROOF SHEATHING AND TOP OF FOUNDATION WALL. SOME SHEAR WALLS REQUIRE 3x FRAMING AT PANEL EDGES. SEE SHEAR WALL SCHEDULE ON STRUCTURAL DETAILS.
5. SHEAR WALL TO BE CONTINUOUS THROUGH INTERSECTION. SEE DET. 1/52.
6. ALL EXTERIOR SHEAR WALLS SHALL BE SW-I, UNLESS NOTED ON THE PLAN.



⑤ ROOF FRAMING  
SCALE: 1/8" = 1'-0"

**ROOF FRAMING NOTES:**

1. VERIFY ALL EXISTING CONDITIONS PRIOR TO FABRICATION & CONSTRUCTION.
  2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
  3. ROOF FRAMING SHALL BE MANUFACTURED TRUSSES @ 24" O.C. AS PER PLAN. HANGERS INDICATED ARE PER MANUFACTURER.
  4. ROOF SHEATHING THICKNESS AND NAILING SHALL BE 1/2" NOMINAL w/8d @ 6" O.C. ALL FIELD SUPPORTS AND 8d @ 6" O.C. ALL PANEL EDGES, AND 8d @ 6" O.C. @ BOUNDARIES WHERE SHADED ON THE PLAN. SEE DIAPHRAGM SCHEDULE SHEET S1.
  5. SEE GENERAL STRUCTURAL NOTES FOR FLOOR LOADING CONDITIONS.
- ROOF DIAPHRAGM W/ 1/2" SHTS  
0.131"φ x 2-1/2" NAILING  
8d @ 6" O.C. EDGE  
8d @ 6" O.C. FIELD STAGGERED



SEE C2 FOR TESC/ CSWPPP DETAILS  
SEE C3 FOR DRAINAGE SITE PLAN

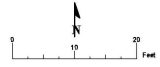
**Long DADU**  
 Site Address: 6905 96th Ave SE  
 Jurisdiction: Mercer Island  
 Parcel No.: 302405-9103  
 Applicant: Boreth Long  
 Permit No.:  
 Interlaken Project No. SEA-25-127

**Interlaken Engineering and Design, PLLC**  
 Seattle, WA | (206) 470-9572  
 www.interlakenengineering.com

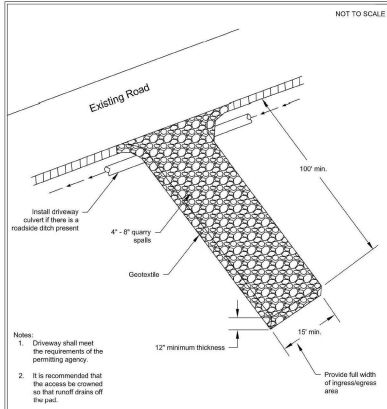


Revisions:

**C1**  
 TESC/ Demo/ CSWPPP  
 Scale: 1" = 10'



**Figure II-4.1: Stabilized Construction Access**



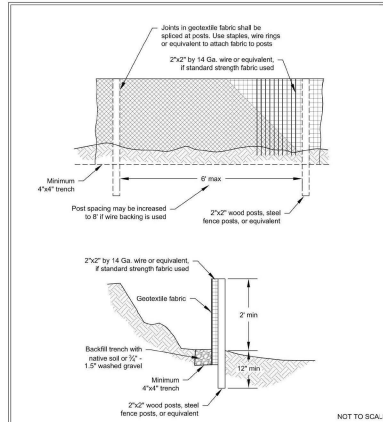
**Stabilized Construction Access**

DEPARTMENT OF ECOLOGY  
State of Washington

Revised June 2018

2024 Stormwater Management Manual for Western Washington  
Volume II - Chapter 4 - Page 320

**Figure II-4.22: Silt Fence**



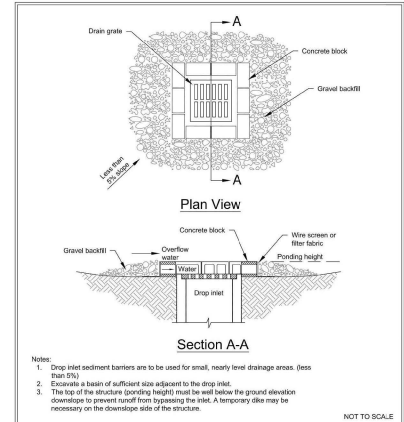
**Silt Fence**

DEPARTMENT OF ECOLOGY  
State of Washington

Revised July 2017

2024 Stormwater Management Manual for Western Washington  
Volume II - Chapter 4 - Page 415

**Figure II-4.17: Block and Gravel Filter**



**Block and Gravel Filter**

DEPARTMENT OF ECOLOGY  
State of Washington

Revised June 2018

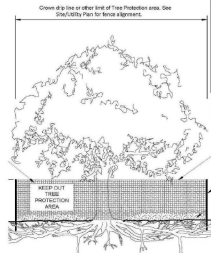
2024 Stormwater Management Manual for Western Washington  
Volume II - Chapter 4 - Page 403

**TREE PROTECTION AREA (TPZ)  
KEEP OUT!**

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

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

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



- Notes:
1. No pruning shall be performed unless under the direction of the Project Arborist, including limbing trees up.
  2. No grading, excavation, storage (materials, equipment, vehicles, etc.), or other unpermitted activity shall occur inside the protective fencing.
  3. Penalties for damaging by root damage/compaction or removing a saved tree may be a fine up to three times the value of the tree plus restoration (MICC 19.10.180).
  4. Any work in approved TPZ must be with the permission of the Land Use and Planning Division at [landuse.planning@mercer.gov](mailto:landuse.planning@mercer.gov).
  5. 5" course woodchips within the tree protection zone, but not against the tree trunk.

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

2" x 6" steel posts or approved equal

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

Any Work in the protected area must be with the permission of the Land Use and Planning Division at [landuse.planning@mercer.gov](mailto:landuse.planning@mercer.gov).



**Long DADU**  
Site Address: 6905 96th Ave SE  
Jurisdiction: Mercer Island  
Parcel No.: 302405-9103  
Applicant: Boreth Long  
Permit No.:  
Interlaken Project No: SEA-25-127

**Interlaken Engineering and Design, PLLC**  
Seattle, WA | (206) 470-9572  
[www.interlakenengineering.com](http://www.interlakenengineering.com)



Revisions:


**C2**

TESC/ CSWPPP Details

Scale: As Noted

**SEE C1 FOR TESC/ DEMO/ CSWPPP**



# Tree Removal & Replacement Plan

**Property Address:** 6905 96<sup>th</sup> Ave SE, Mercer Island, WA 98040

**Owner:** Boreth Long

**Date:** November 15, 2025

## 1. Arborist Report and Existing Tree Inventory

Arborist report was completed by Andrew Raines, a certified arborist with Arborist Solutions. A copied of the arborist report is provided as a separate supporting document and included in Appendix A of this document.

All significant trees on the property are inventoried and included in the arborist report. The location of inventoried trees is accurately incorporated into the topography survey.

The tree inventory in the arborist report includes the following:

- Tree numbering system of all existing large regulated tress on the property
- Tree species
- Tree size (diameter, height, and dripline diameter)
- Brief general health or condition rating of each tree
- Tree status (retained or proposed for removal), and
- Using color code to identify of all significant and exception trees and differentiate between those less than 24 inches and those greater than or equal to 24 inches in diameter.

There is a total of 25 trees on the property include the following category:

- 4 trees with diameter smaller than 10"
- 21 large regulated trees greater than 10", with
  - 2 of 21 trees has a diameter greater than or equal to 36"
  - 5 of 21 trees has a diameter greater than or equal to 24", and
  - 4 of 21 trees is considered exceptional tree per Table MICC 19.16

*Note: The tree inventory in the Arborist report also includes five (5) large regulated trees on adjacent property with driplines or critical root zones extending into the property.*

A list of trees for each category mentioned above is provided in Mercer Island Tree Inventory & Replacement Submittal Information Form in Appendix B of this document for reference.

*Note: A copy of the Tree Inventory and Replacement Submittal Form is provided as a separate supporting document.*

## 2. Trees Removal Plan

Eight (8) large regulated trees on site are proposed for removal. As shown in the completed Mercer Island Tree Inventory & Replacement Submittal Information Form in Appendix B of this document, tree numbers proposed for removal are: 1, 2, 3, 4, 6, 8, 9, and 16. However, in Phase 1 (proposed ADU), only tree 8 and 9 will be removed. The remaining trees will be removed at a later time during phase 2/3 of the project (See project narrative for details).

See provided site plan and arborist report for the location of tree #8 and #9.

**Reason for Tree #8 Removal:** Hemlock Tree (DBH: 36") is a hazard tree with co-dominant base with included bark and missing structural wood. It is leaning toward the house and has base cavity as confirmed by the certified arborist. Removal is necessary to prevent property damage and safety hazards.

**Reason for Tree #9 Removal:** Western Red Cedar (DBH: 24") is in the way of the proposed ADU intended for construction path and prevent necessary installation of site improvements (walkway and utilities). Removal is necessary for site improvement and construction of the proposed ADU.

## 3. Trees Replacement Plan

In Phase 1 (proposed ADU), only tree 8 (DBH: 36") and tree 9 (DBH: 24") will be removed. Therefore, per MICC 19.10.070 – tree replacement, removed trees shall have the following replacement as shown in table below.

Diameter of Removed Tree	Tree Replacement Ratio	Number of Trees Proposed for Removal	Number of Three Required for Replacement Based on Size/Type
Less than 10"	1	0	0
10" up to 24"	2	1	2
Greater than 24" up to 36"	3	0	0
Greater than 36" and any Exceptional Tree	6	1	6
<b>TOTAL TREE REPLACEMENT</b>			<b>8</b>

As indicated in the arborist report and on the site plan, a row of 8 emerald green arborvitae trees (conifers) at least six feet tall will be planted as replacement trees south of the proposed ADU as shown in Figure 1 and Figure 2 below.

By installing these replacement trees at the boarder of the property south of the ADU, these trees won't interface with land improvement and building of the main home (north of the ADU) in near future in Phase 3 of the project, as well as providing needed privacy for the ADU in the future.

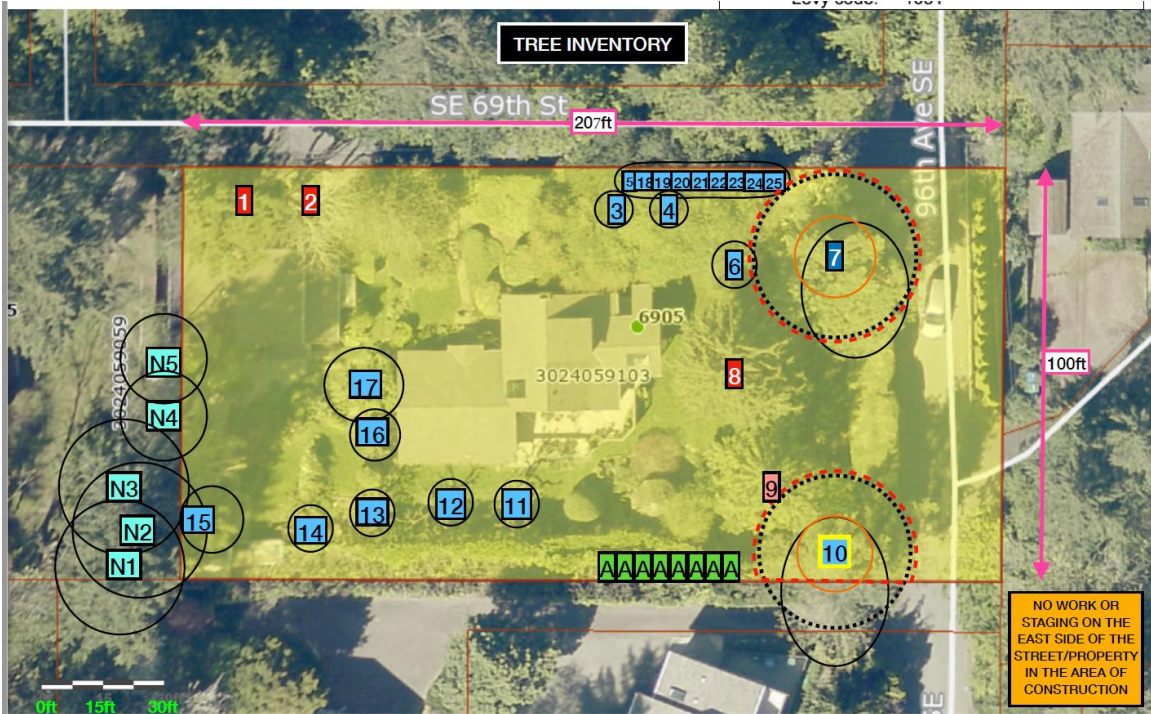


Figure 1: Approximately Location of Replacement Trees (designated with “A”) as shown in the Arborist Report

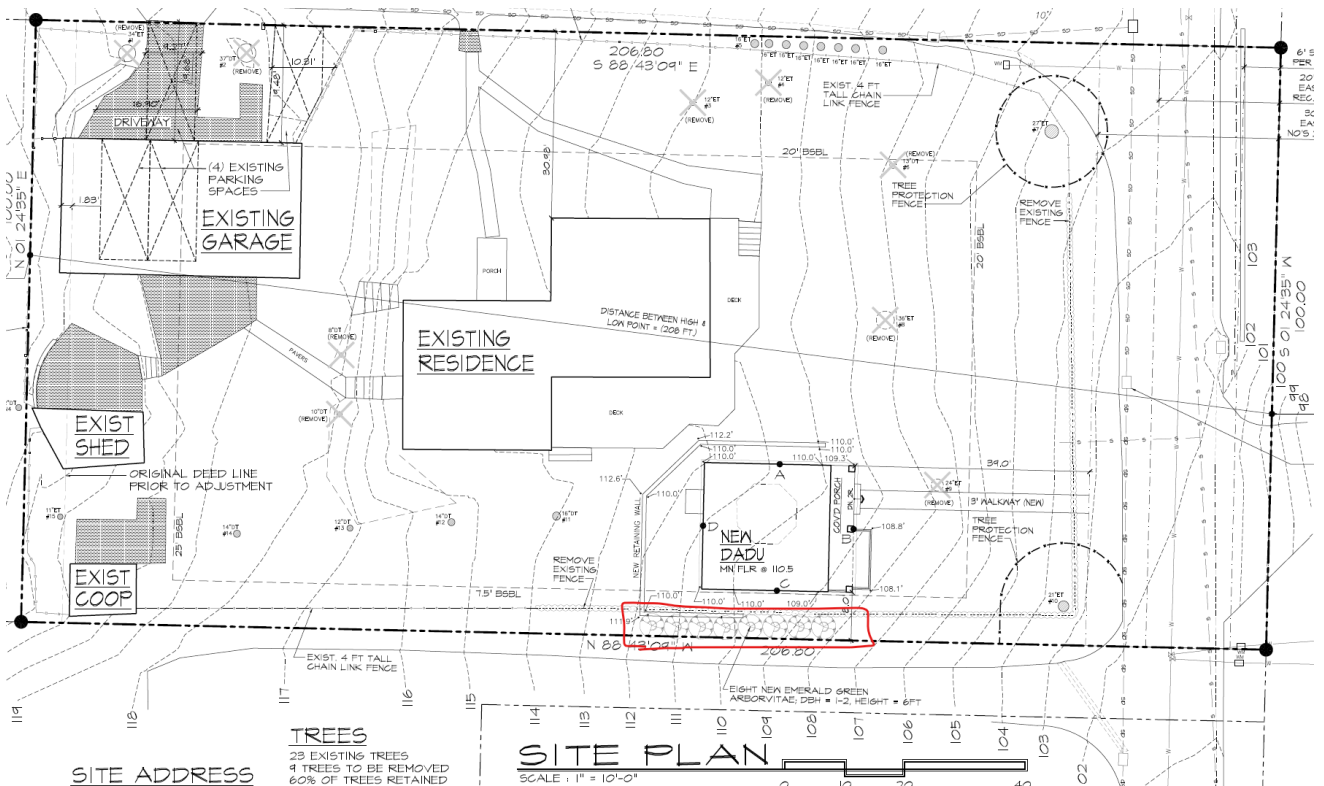


Figure 2: Approximately Location of Replacement Trees as shown on the Site Plan

**Planting Replacement Trees Timing:**

In the Pacific Northwest and the per MICC 19.10.070 (B)(5), the replacement trees shall be planted in the wet season between October 1 through April 1, following the applicable tree removal or completion of the development work. Assuming, we start construction on April 1, 2026, we should complete the ADU construction by end of 2026. Then we can immediately plant the replacement trees as shown in the site plan.

*Note: we understand and will avoid planting trees when the ground is frozen or during hot, dry weather.*

**4. Support Documents**

- Arborist report (in Appendix A herein and as separate supporting document)
- Mercer Island Tree Inventory & Replacement Submittal Information Form (in Appendix B herein and as separate supporting document)
- Site plan showing existing and proposed tree locations (separate document)

**5. Owner Certification**

I certify that the above information is accurate and that replacement trees will be maintained in healthy condition for at least 5 years after planting. I shall replant any replacement tree that dies, become diseased, or is removed during this five-year time period.

APPENDIX A

**ARBORIST SOLUTIONS**

**Andrew Raines**

ISA Certified Arborist

ISA TRAQ Certified

ISA Utility Specialist

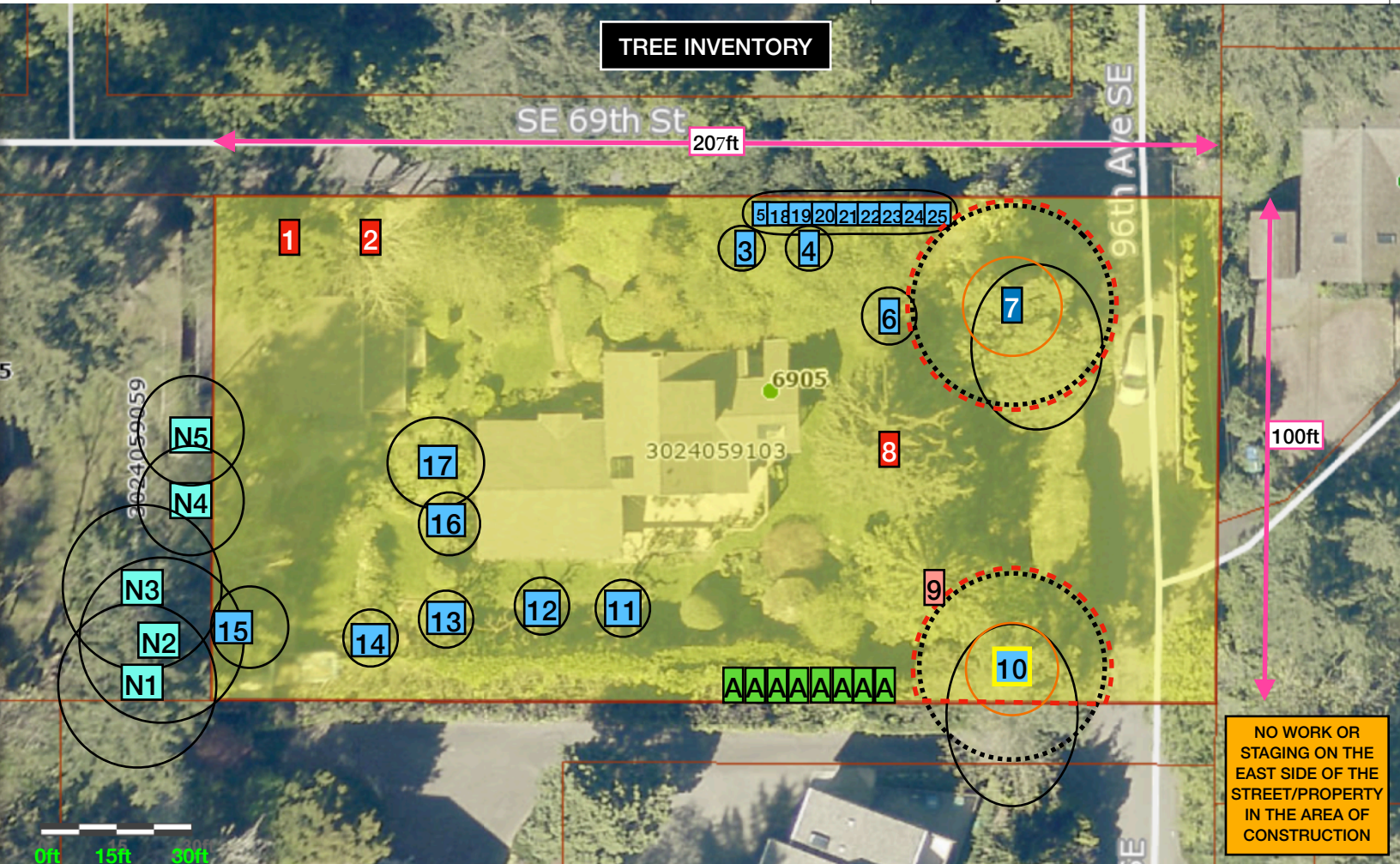
PN-7684AU

206-747-5907

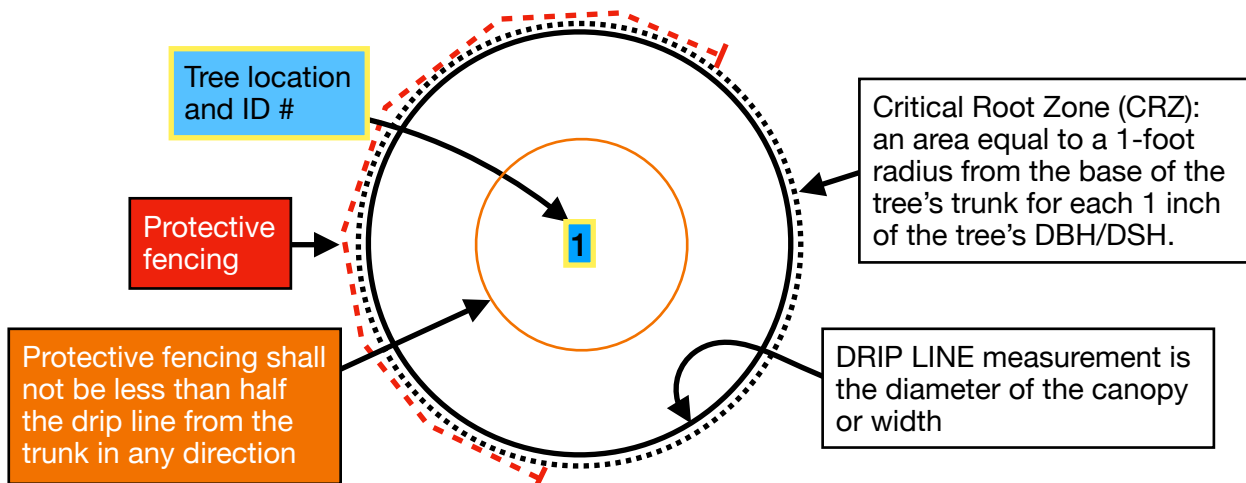
Andrew.Raines.Arb@gmail.com



Parcel 3024059103
Present use: Single Family(Res Use/Zone)
Jurisdiction: MERCER ISLAND
Taxpayer name: BORTH LONG & UYEN LE
Address: 6905 96TH AVE SE 98040
Appraised value: [REDACTED]
Lot area: 20,000
Levy code: 1031



Tree protection fencing shall be installed as the first part of the project to reduce all impacts inside of the CRZ of any protected tree.



# TREE PROTECTION AREA (TPZ)

## KEEP OUT!

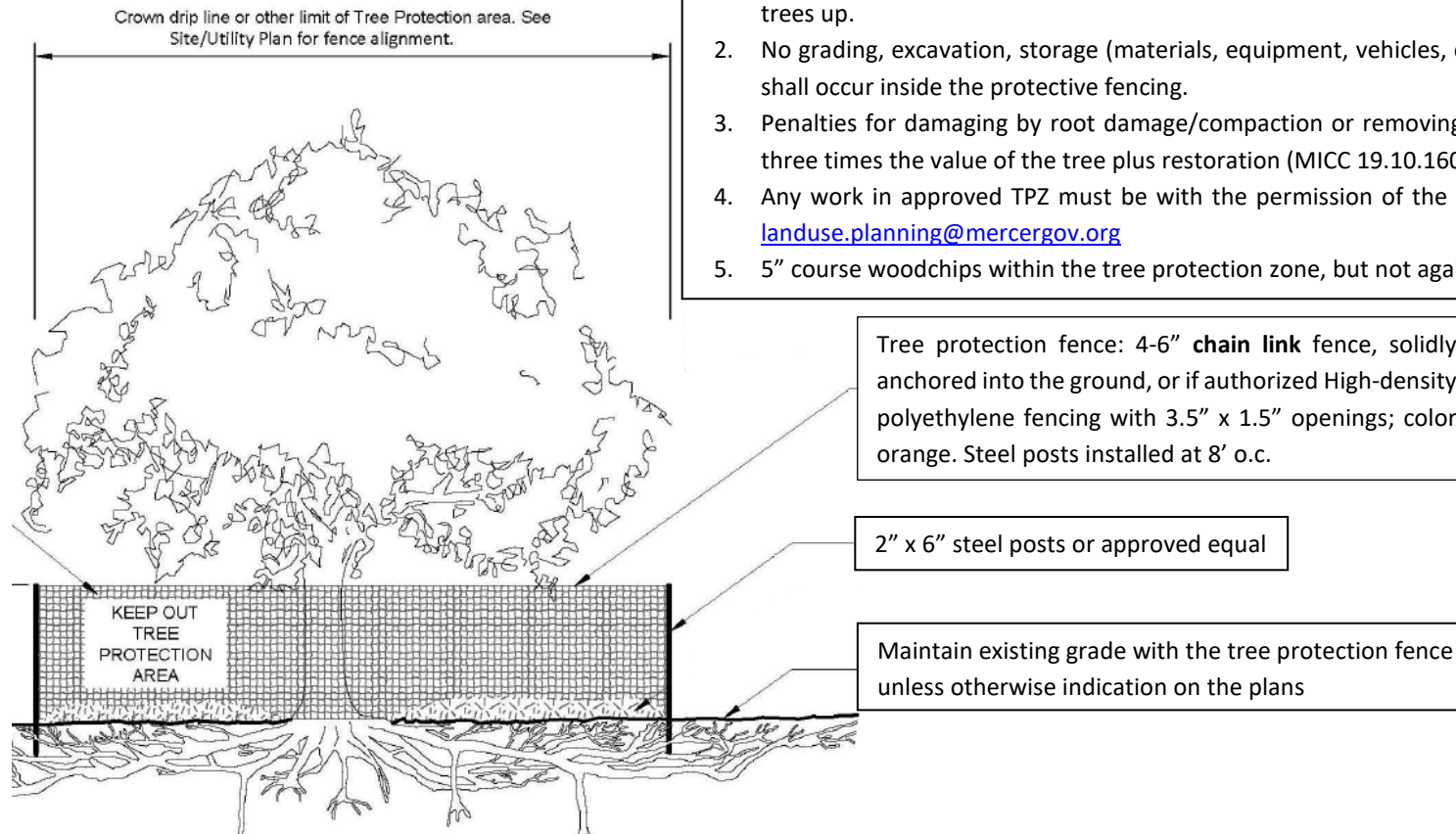
### DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

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

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

#### Notes

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






Any Work in the protected area must be with the permission of the Land Use and Planning Division at [landuse.planning@mercergov.org](mailto:landuse.planning@mercergov.org)

Significant trees	Significant neighbors tree	Significant removal	Replacement trees
Exceptional trees	Exceptional neighbors tree	Exceptional removal	Protected tree= yellow border

TREE #	Species	DBH" DIAMETER	H'	W' DRIPLINE DIAMETER	Condition	Mitigation
1	Douglas fir	34	100	30	Hazard; previously topped at 60ft (internal decay at topped), co-dom tops prone to fail, bark decay	Remove  
2	Bigleaf maple	37	60	25	Hazard; root and base decay, previously failed at 9ft	Remove 
3	Holly	12.5	25	7	-IN A GROVE OF HOLLY	Retain
4	Holly	12	25	7	-IN A GROVE OF HOLLY	Retain
5	Holly	16	25	7	-IN A GROVE OF HOLLY	Retain
6	Birch	13.5	8	10	Internal decay throughout	Retain or remove 
7	Scotts pine	27	65	35	<u>In the area of construction</u>  Normal (Dull in color)	<u>Protect and retain</u>  CRZ -From trunk to fencing: 27FT -Across/diameter: 56.26FT

Significant trees	Significant neighbors tree	Significant removal	Replacement trees
Exceptional trees	Exceptional neighbors tree	Exceptional removal	Protected tree= yellow border

TREE #	Species	DBH" DIAMETER	H'	W' DRIPLINE DIAMETER	Condition	Mitigation
8	Hemlock	36	95	35	Hazard; co-dominant base with included bark, lead towards house missing structural wood, and base cavity	Remove 
9	Western red cedar	23.75	35	25	In the way of construction: intended front walkway and construction path	Remove
10	Scotts pine	21.5	35	20	<u>In the area of construction</u>  Normal (Dull in color)	<b><u>Protect and retain</u></b>  CRZ -From trunk to fencing: 21.5FT -Across/diameter: 44.79FT
11	Cherry	16	10	8	Mostly dead with internal decay throughout -REDUCED/ROUDNED	Retain or remove 
12	Plum	14.5	15	10	Mostly dead with internal decay throughout and fungus present -REDUCED/ROUDNED	Retain or remove 
13	Apple	12	10	8	Normal -REDUCED/ROUDNED	Retain
14	Apple	14	8	8	Normal -REDUCED/ROUDNED	Retain

Significant trees	Significant neighbors tree	Significant removal	Replacement trees
Exceptional trees	Exceptional neighbors tree	Exceptional removal	Protected tree= yellow border

TREE #	Species	DBH" DIAMETER	H'	W' DRIPLINE DIAMETER	Condition	Mitigation
15	Douglas fir	11	50	12	Normal -REDUCED/ROUDNED	Retain
16	Green apple	10	15	15	Normal	Retain
17	Green apple	8	20	15	Normal	Retain
18	Holly (grove/row)	14	20	5	Barrier trees- all the same size	Retain
19	Holly (grove/row)	14	20	5	Barrier trees- all the same size	Retain
20	Holly (grove/row)	14.5	20	5	Barrier trees- all the same size	Retain
21	Holly (grove/row)	12	20	5	Barrier trees- all the same size	Retain
22	Holly (grove/row)	12	20	5	Barrier trees- all the same size	Retain
23	Holly (grove/row)	9	20	5	Barrier trees- all the same size	Retain
24	Holly (grove/row)	8	20	5	Barrier trees- all the same size	Retain
25	Holly (grove/row)	8.5	20	5	Barrier trees- all the same size	Retain
N1	Douglas fir	18	120	30	Neighbors tree Canopy= NORMAL	Retain
N2	Douglas fir	20	120	30	Neighbors tree Canopy= NORMAL	Retain
N3	Douglas fir	18	80	30	Neighbors tree Canopy= NORMAL	Retain
N4	Birch	12	40	20	Neighbors tree Canopy= DISEASED	Retain
N5	Birch	12	40	20	Neighbors tree Canopy= DISEASED	Retain
A	Emerald green arborvitae	1-2	6	-	Replacement trees: after construction and between Nov-April.	Plant

**Replacement trees:** Row of 8 Emerald green arborvitae were selected with the goal of that they will provide privacy for the DADU. Also, by installing them on the border of the property, these trees won't interfere with the building of the main home (north of DADU) in the near future in Phase 3 of the project.

**When to plant replacement trees:** In the Pacific Northwest, this is generally between November and April. Avoid planting trees when the ground is frozen or during hot, dry weather. This species shouldn't need

maintenance and nothing should be planted that needs it. Trees shall be replaced after all construction is finished.

**Inventory and survey:** All the significant trees I inventoried I add to my map as accurate as possible. The location of the surveyed trees also seem to be accurate.

**Area of disturbance:** tree protection shall be added to tree 10. As long as protective fencing stays in place there are no concerns for impact. If the project involved disturbance in this area its recommended to airspace in the CRZ/dripline. From there we can assess how to mitigate.

### **MERCER ISLAND TREE INVENTORY & REPLACEMENT**

**SUBMITTAL INFORMATION FORM:** This form looks to be accurate and matches the arborist report and calculations.

# CITY OF MERCER ISLAND

## COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | [www.mercergov.org](http://www.mercergov.org)



# MERCER ISLAND TREE INVENTORY & REPLACEMENT SUBMITTAL INFORMATION

### PROJECT INFORMATION

Property Owner  
Name: \_\_\_\_\_

Site Address or  
Parcel Number: \_\_\_\_\_

Project Contact  
Name: \_\_\_\_\_

Contact Email  
Address: \_\_\_\_\_

Contact Phone  
Number: \_\_\_\_\_

### EXCEPTIONAL TREES

*Exceptional Trees*- means a tree or group of trees that because of its unique historical, ecological or aesthetic value constitutes an important community resource. A tree that is rare or exceptional by virtue of its size, species, condition, cultural/historical importance, age, and/or contribution as part of a tree grove. Trees with a diameter of more than 36 inches, or with a diameter that is equal to or greater than the diameter listed in the Exceptional Tree Table shown in MICC 19.16 under Tree, Exceptional.

List the total number of trees for each category and the tree identification numbers from the arborist report.

Number of trees 36" or greater \_\_\_\_\_

List tree numbers: \_\_\_\_\_

Number of trees 24" or greater (including 36" or greater) \_\_\_\_\_

List tree numbers: \_\_\_\_\_

Number of trees from Exceptional Tree Table (MICC 19.16) \_\_\_\_\_

List tree numbers: \_\_\_\_\_

### LARGE REGULATED TREES

Large Regulated Trees- means any tree with a diameter of 10 inches or more, and any tree that meets the definition of an Exceptional Tree.

Number of Large Regulated Trees on site \_\_\_\_\_ (A)

List tree numbers: \_\_\_\_\_

Number of Large Regulated Trees on site proposed for removal \_\_\_\_\_ (B)

List tree numbers: \_\_\_\_\_

**Percentage of trees to be retained ((A-B)/Ax100) note: must be at least 30%** \_\_\_\_\_ 61.9 %

**RIGHT OF WAY TREES**

Right of Way Trees- means a tree that is located in the street right of way adjacent to the project property.

Number of Large Regulated Trees in right of way \_\_\_\_\_

List tree numbers: \_\_\_\_\_

Number of Large Regulated Trees in right of way proposed for removal \_\_\_\_\_

List tree numbers: \_\_\_\_\_

Reason for removal: \_\_\_\_\_

**TREE REPLACEMENT**

Tree replacement- removed trees must be replaced based on the ratio in the table below. Replacement trees shall be conifers at least six feet tall and or deciduous at least one and one-half inches in diameter at base.

Diameter of Removed Tree (measured 4.5' above ground)	Tree replacement Ratio	Number of Trees Proposed for Removal	Number of Tree Required for Replacement Based on Size/Type
Less than 10"*	1		
10" up to 24"	2		
Greater than 24" up to 36"	3		
Greater than 36" and any Exceptional Tree	6		
<b>TOTAL TREE REPLACEMENTS</b>			

***\*no replacement tree is needed if the tree fits all of the following;  
Less than 10 inches in diameter, not an exceptional tree, and not a replacement tree from another tree permit.  
\****

***\*\*Note: In Phase 1 (proposed ADU), only tree 8 (36") and tree 9 (24") will be removed. Therefore, the total tree replacements in Phase 1 is 6+2 = 8 trees. The remaining will be removed at a later time during phase 2/3. (see project narrative for details)***