

AVERAGE BUILDING ELEVATION			
PROPOSED RESIDENCE			
WALL	WALL SEGMENT	MIDPT. ELEV.	WALL SEGMENT X ELEV.
A	20'	84.5'	1690
B	21.5'	81'	1763
C	11.67'	81'	945.27
D	12'	81'	972
E	11.67'	81'	945.27
F	11'	82.5'	907.5
G	25'	82.5'	2062.5
H	9.15'	81'	744.62
I	20'	81.5'	1630
J	34.67'	84.5'	2929.6
K	12.5'	85.5'	1068.75
L	4'	85.5'	342
M	12.5'	85'	1062.5
TOTAL	212.26'		17536.53

AVERAGE BUILDING ELEVATION = $17536.53/212.26' = 82.61'$
 MAXIMUM BUILDING HEIGHT = $82.61' + 30.0' = 112.61'$
 PROPOSED BUILDING HEIGHT = 111'

BASEMENT FLOOR AREA CALCULATION			
WALL	LENGTH	COVERAGE	RESULT
A	9'	28.4%	2.5%
B	3'-6"	29.1%	1.1%
C	2'-2"	31.1%	.7%
TOTAL	14.67		4.3%

PORTION OF EXCLUDED BASEMENT FLOOR AREA:
 $532 \text{ (ACTUAL SQ. FT. W/ GARAGE)} \times (4.3/14.67) = 155.9 \text{ SQ. FT.}$
 AREA OF BASEMENT EXCLUDED = $532 - 155.9 = 376.1 \text{ SQ. FT.}$

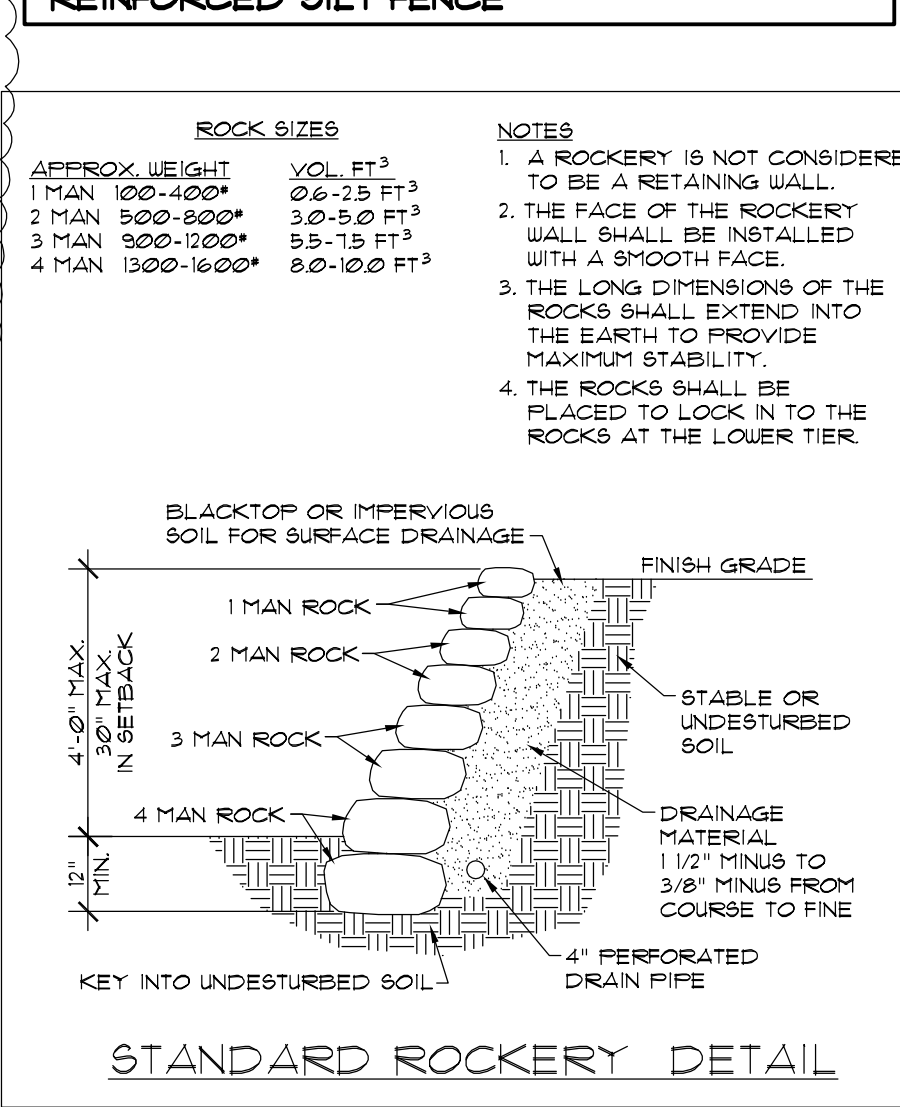
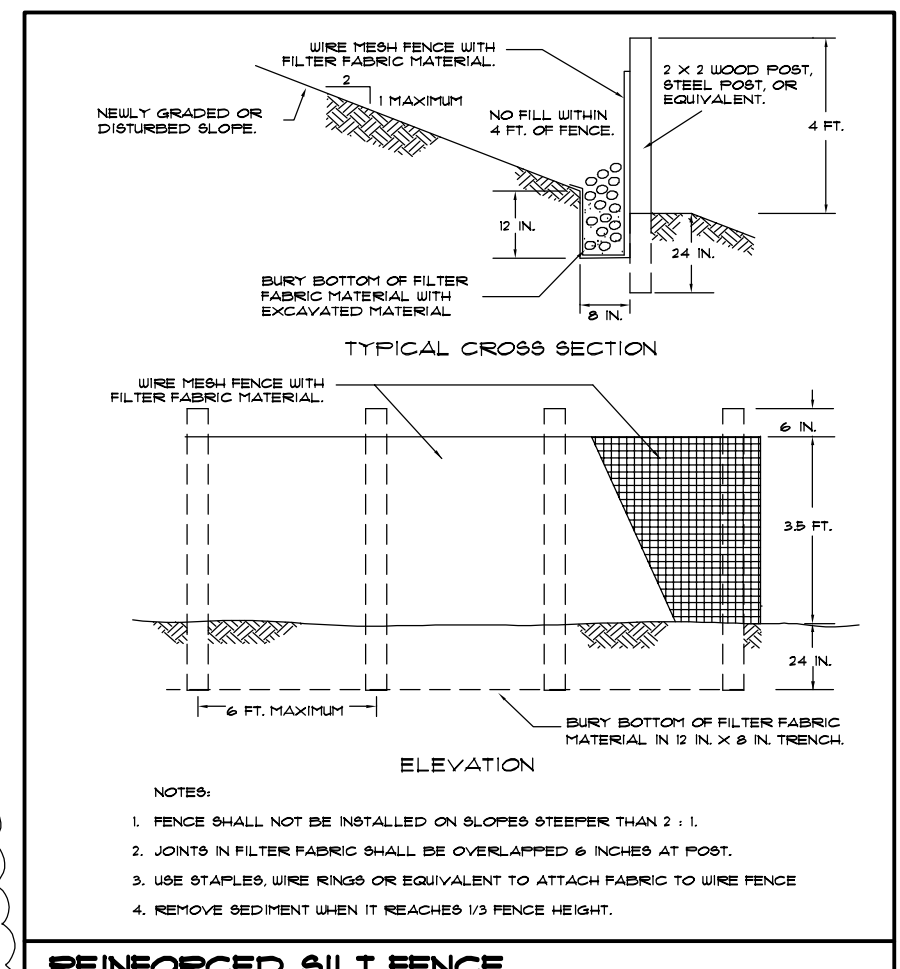
GROSS FLOOR AREA	
LOWER FLOOR W/ GARAGE	532 SQ. FT.
MAIN FLOOR W/ STAIR	1410 SQ. FT.
UPPER FLOOR W/ STAIR	1204 SQ. FT.
TOTAL	3146 SQ. FT.
BASEMENT EXCLUDED	-155.9 SQ. FT.
TOTAL	2990.1 SQ. FT.
LOT AREA	1297 SQ. FT.
SQUARE FOOTAGE ALLOWED	3000 SQ. FT.

IMPERVIOUS SURFACE	
PROPOSED HOME W/ O.H.	1713 SQ. FT.
WATERPROOF DECK	218 SQ. FT.
FRONT PORCH	20 SQ. FT.
WALK, DRIVE AND PATIO	468 SQ. FT.
TOTAL	2,419 SQ. FT. (33.2%)
LOT AREA	1,297 SQ. FT.
ALLOWABLE	2,914 SQ. FT. (40%)

LOT COVERAGE	
MAIN STRUCTURE ROOF AREA	1713 SQ. FT.
DRIVEWAYS, FRONT WALK, PATIO	488 SQ. FT.
WATERPROOF DECK	218 SQ. FT.
TOTAL	2,419 SQ. FT.
LOT AREA	1,297 SQ. FT.
PROPOSED LOT COVERAGE	33.2%
SQUARE FOOTAGE ALLOWED (40%)	2,914 SQ. FT.

HARDSCAPE CALC	
LOT AREA	1,297 SQ. FT.
UNCOVERED DECK	506 SQ. FT.
FRONT WALK	14 SQ. FT.
PATIO	26 SQ. FT.
ROCKERY	86 SQ. FT.
TOTAL	632 SQ. FT.
HARDSCAPE ALLOWED	12% (OR 816 SQ. FT.)
PROPOSED HARDSCAPE	9.5% (632 SQ. FT.)

SQUARE FOOTAGE SUMMARY	
LOWER FLOOR	227 SQ. FT.
MAIN FLOOR	1414 SQ. FT.
UPPER FLOOR	928 SQ. FT.
TOTAL	2679 SQ. FT.
GARAGE	364 SQ. FT.
MAIN FLOOR DECKS	409 SQ. FT.
MAIN FLR. WATERPROOF DECK	218 SQ. FT.
UPPER FLOOR DECKS	621 SQ. FT.



LOT SLOPE CALCULATION	
LOW POINT ON LOT	78'
HIGH POINT ON LOT	93'
HEIGHT DIFFERENCE	15'
LENGTH BETWEEN POINTS	118'
LOT SLOPE % =	$15' / 118' = 12.7\%$

A NFPA 13D Fire Sprinkler System in compliance with NFPA 13D and CoMI standards shall be installed throughout the residence. A separate FIRE permit is required.

Note that this system requires a minimum of 1" water meter and 1" water supply line.

A NFPA 72- Chapter 29 Monitored Fire Alarm System in compliance with NFPA 72 and CoMI standards shall be installed throughout the residence. A separate FIRE permit is required."

MICC 19.02.020(F)(3)(d) requires noxious weeds to be removed during new development proposals. Please add a note to the plan set that states:

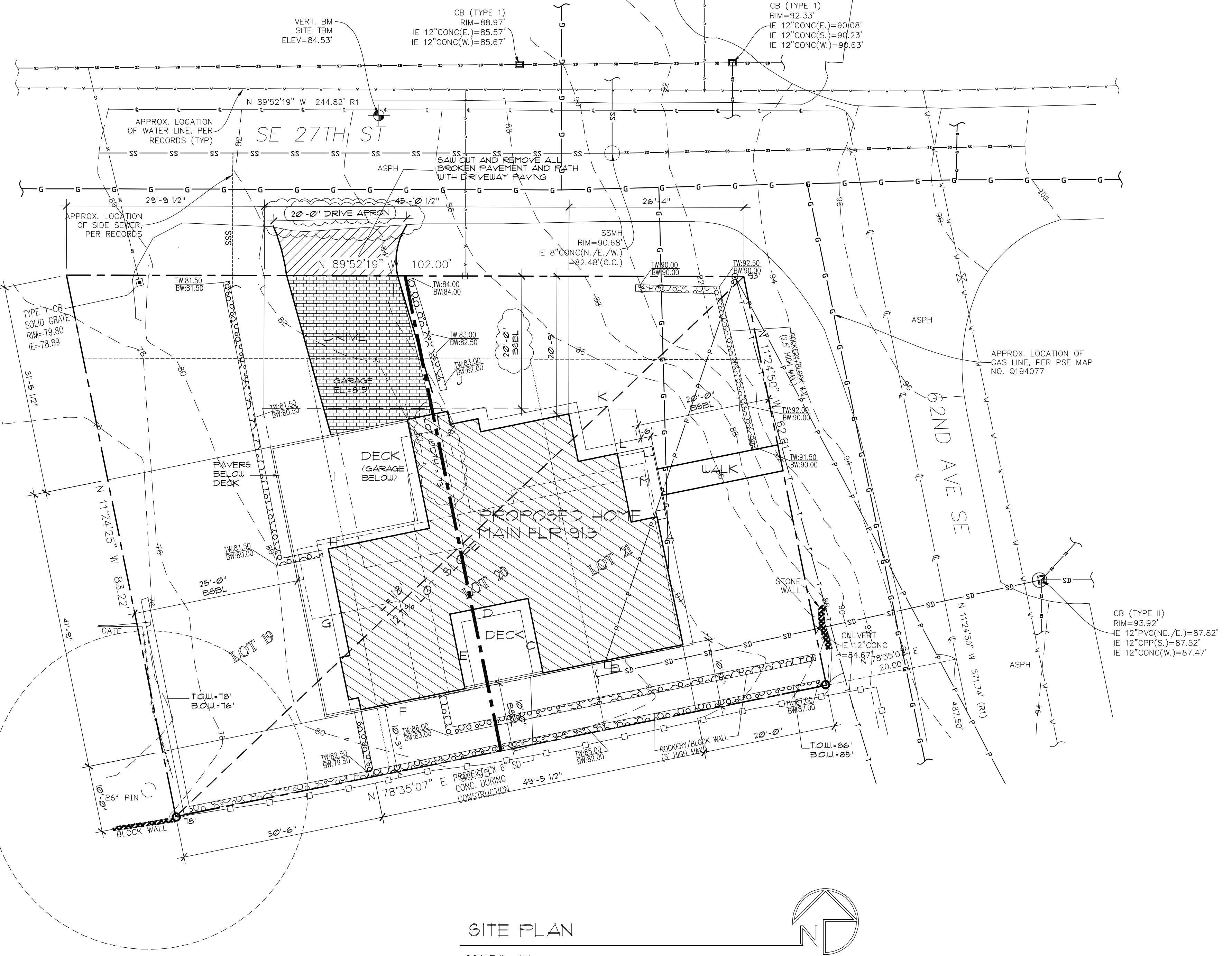
"Development proposals for a new single-family home shall remove Japanese knotweed (*Polygonum cuspidatum*) and Regulated Class A, Regulated Class B, and Regulated Class C weeds identified on the King County Noxious Weed list, as amended, from required landscaping areas established pursuant to subsection 19.02.020(F)(3)(a). New landscaping associated with new single-family home shall not incorporate any weeds identified on the King County Noxious Weed list, as amended, that removal shall not be required if the removal will result in increased slope instability or risk of landslide or erosion."

Pursuant to MICC 19.02.050(D) any "...rockeries, retaining walls, fences, or any combination thereof, are limited to a maximum height of 42 inches within that portion of any required yard which lies within 20 feet of any improved street." Please indicate the height of the rock wall that falls within 20 feet of the public-right-of-way.

If the height exceeds the 42-inch height limitation you can apply for a fence height deviation pursuant to MICC 19.02.050(F).

Fence height deviation required for 4' retaining walls.

This property is mapped on a lot with a hazard area. Per: 19.07.160(F.) (2) when excavation/foundation or other similar work will occur between October 1 and April 1 a wet season development waiver is to be applied and reviewed for work during the wet season. See this website for requirements, submission, and process:
<https://www.mercerisland.gov/cpd/page/wet-season-work-waiver-seasonal-development-limitation>



CONTACT:
 TONY CHEN
 PH: 206-412-3998

SITE PLAN
 SCALE 1" = 10'
 6175 SE 27TH STREET
 MERCER ISLAND, WA 98040
 PARCEL #2174503305
 ZONING: R-8.4

LEGAL:
 (PER STATUTORY WARRANTY DEED RECORDING* 2001052902559)
 LOTS 19, 20 AND 21, BLOCK 19, EAST SEATTLE ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 3 OF PLATS, PAGE 22 AND 23, IN KING COUNTY, WASHINGTON;
 TOGETHER WITH PORTION OF VACATED CABLE AVENUE "SOUTHEAST 27TH STREET" ADJOINING ON THE NORTH.

A NEW HOME AT:
 6175 SE 27TH STREET
 MERCER ISLAND, WA 98040

JOB NO: 23006
 DATE: 12/11/23
 DRWN. BY: TH
 REVISED: 8/20/24

SHEET NO.
 10

GENERAL NOTES

CODE

ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION SHALL CONFORM TO THE 2018 EDITION OF THE IBC, IIRC, BUILDING CODE REQUIREMENTS AND ALL APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION.

BUILDING

TYPE V-B
OCCUPANCY GROUP, R3
SITE CLASS, D
WIND EXPOSURE, E

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD, PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS AND STIFFENINGS HAVE BEEN INSTALLED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL DISCREPANCIES OR CONFLICTS TO THE DESIGNER AT THE TIME THEY ARE NOTED.

FOUNDATION

UNLESS A SOILS INVESTIGATION BY A QUALIFIED SOILS ENGINEER IS PROVIDED, FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING OF 1500 PSF. EXTERIOR FOOTINGS SHALL BEAR 1'-6" (MINIMUM) BELOW FINISHED GRADE. ALL FOOTINGS TO BEAR ON FIRM UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS. BACKFILL TO BE THOROUGHLY COMPACTED PER SPECIFICATIONS. PROVIDE (2) 4" (MIN) CONTINUOUS BOTTOM OF ALL WALLS AND FOOTINGS.

CONCRETE

CLASS AND USE	PSI F _c	MINIMUM SLUMP	SACKS/CY.
A - FOOTINGS AND FOUNDATIONS	2500	3 - 4	5-1/2
B - SLABS ON GRADE	2500	3 - 4	5-1/2

NOTE: 3000 PSI CONCRETE IS FOR WEATHERING PURPOSES ONLY. NO SPECIAL REINFORCEMENT REQUIRED.

- AIR-ENTRAINING AGENT (5% TO 7%) TO BE USED IN ALL CONCRETE FLATWORK EXPOSED TO WEATHER.
- FOZZOLITH 300 SERIES (4 OZ PER 100# OF CEMENT) TO BE USED IN ALL CONCRETE.
- MIX MAY BE DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 1905 OF THE IBC.
- WATER - CEMENT RATIO PER IBC TABLE 1904.2.2 & 1904.3.

REINFORCING STEEL

A57M A615 GRADE 40, REINFORCING STEEL DETAILS SHALL BE PREPARED BY AN EXPERIENCED DETAILER APPROVED BY THE DESIGNER AND CONFORM TO STANDARD PRACTICE OUTLINED IN ACI REPORT 315. NOTE: GRADE 40 FOR 14 BARS AND SMALLER, GRADE 60 FOR 15 BARS AND LARGER.

CONCRETE COVER OF REINFORCING

3"	CONCRETE POURED AGAINST EARTH
2"	FORMED CONCRETE WITH EARTH BACKFILL.
1-1/2"	BEAMS AND COLUMNS (STRIPPED TIES) WALLS EXPOSED TO WEATHER, SLABS ON MOISTURE BARRIER
1"	WALLS, INSIDE FACE.

LAP COLUMN VERTICALS, CLASS 1A CONCRETE AND MASONRY COLUMN AND WALL VERTICALS 40 DIAMETERS (2" MIN) LAP ALL OTHER REINFORCING 30 DIAMETERS (2" MIN), SPLICES AT TENSION REGIONS SHALL NOT BE PERMITTED.

FRAMING

ALL FRAMING TO COMPLY WITH 2018 IBC, NAIL SIZES AND SPACING TO CONFORM TO IRC TABLE 602.3(1)

ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED, EXTERIOR HANGERS TO BE SIMPSON ZMAX OR EQUAL (185).

STRUCTURAL DESIGN IS BASED ON THE FOLLOWING ALLOWABLE STRESSES (UNITS IN PSI):

WOOD

FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH U.C.L.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 16. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS: (2X MEMBERS)	HEM-FIR NO. 2 MINIMUM BASE VALUE, F _b = 2500 PSI
(3X AND 4X MEMBERS)	DOUGLAS FIR NO. 1 MINIMUM BASE VALUE, F _b = 1000 PSI
BEAMS: (4X MEMBERS) (INCL. 6X AND LARGER)	HEM-FIR NO. 2 DOUGLAS FIR NO. 1 MINIMUM BASE VALUE, F _b = 1350 PSI
POSTS: (4X MEMBERS) (6X AND LARGER)	DOUGLAS FIR NO. 2 MINIMUM BASE VALUE, F _c = 1300 PSI DOUGLAS FIR NO. 2 MINIMUM BASE VALUE, F _c = 925 PSI
STUDS, PLATES & MISG. FRAMING:	HEM-FIR STANDARD GRADE
EXTERIOR TOP PLATES:	DOUG-FIR STUD GRADE
DECKING: (2X6 TO 4X8)	HEM-FIR COMMERCIAL DEX MINIMUM BASE VALUE, F _b = 1350 PSI
LOADING:	
ROOF:	15 PSF DEAD LOAD + 25 PSF LIVE LOAD + 40 PSF
FLOOR:	10 PSF DEAD LOAD + 40 PSF LIVE LOAD + 50 PSF
CEILING:	5 PSF DEAD LOAD + 5 PSF LIVE LOAD + 10 PSF
DECK:	10 PSF DEAD LOAD + 60 PSF LIVE LOAD + 10 PSF
INTERIOR PARTITION:	10 PSF
EXTERIOR PARTITION:	10 PSF

BOLT HEADS AND NUTS BEARING AGAINST WOOD TO BE PROVIDED WITH FLAT CUT WASHERS. WOOD BEARING ON OR INSTALLED WITHIN 1" OF MASONRY OR CONCRETE TO BE TREATED WITH AN APPROVED PRESERVATIVE. SOLID BLOCKING OF NOT LESS THAN 2" THICKNESS SHALL BE PROVIDED AT ENDS AND AT ALL SUPPORT OF JOISTS AND RAFTERS. BETWEEN SUPPORTS PROVIDE BLOCKING OR APPROVED BRIDGING AT 8'-0" O.C. FOR FLOOR JOISTS, 10'-0" FOR ROOF JOISTS. TYPICAL GILL BOLTS TO BE 5/8" DIAMETER AT 4'-0" O.C. EMBED 10". ALL METAL FRAMING ANCHORS AND HANGERS SHOWN ON DRAWINGS SHALL BE "STRONG TIE CONNECTORS" AS MANUFACTURED BY SIMPSON COMPANY OR APPROVED EQUAL.

WOOD TRUSSES

SHALL BE FACTORY FABRICATED TRUSSES, DESIGN AND FABRICATION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, ENGINEERING DESIGN AND SHOP DRAWINGS BEARING THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON AND SHOWING ALL DETAILS OF CONSTRUCTION INCLUDING BRACING.

TRUSSES SHALL BE DESIGNED FOR THE UNIFORM LOADS AS FOLLOWS:

TOP CORD	33 PSF OF TRIBUTARY AREA
BOTTOM CORD	10 PSF OF TRIBUTARY AREA

FABRICATOR SHALL BE APPROVED BY THE DESIGNER.

DRAFTSTOPPING

(IRC 302.12)

CONCEALED SPACES AT UPPER FLOOR OPEN TRUSS FRAMING SHALL BE DIVIDED IN APPROXIMATE EQUAL SPACES NOT TO EXCEED 1000 SF, AND SHALL CONSIST OF 1/2" GYPSUM BOARD OR 3/8" WOOD STRUCTURAL PANELS. DRAFTSTOPPING SHALL BE INSTALLED PARALLEL TO FRAMING MEMBERS. THE INTEGRITY OF THE DRAFTSTOPS SHALL BE MAINTAINED.

STRUCTURAL GLUE-LAMINATED TIMBER

GLUE LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, F_b 2400 PSI, F_v 185 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, F_b 2400 PSI, F_v 185 PSI. CANTILEVERED SIMPLE SPAN GULLIAM BEAMS TO 1200' RADIIUS, UNLESS SHOWN OTHERWISE ON PLANS. GULLIAM COLUMNS SHALL BE DOUGLAS FIR COMBINATION NO. 5, F_b 2400 PSI, E=1,000,000 PSI.

PLYWOOD / OSB

EACH SHEET SHALL BEAR THE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION. ALL GRADING SHALL CONFORM TO PS 1 USE THICKNESS AND NAILING AS SHOWN ON THE DRAWINGS. ALL PLYWOOD SHALL BE C-D INTERIOR GRADE WITH EXTERIOR GLUE, EXCEPT AS OTHERWISE SHOWN OR NOTED. PROVIDE 8d AT 6" O.C. ON CENTER AT SUPPORTED PANEL EDGES AND 8d AT 12" ON CENTER ON OTHER SUPPORTING MEMBERS FOR WALLS, ROOF AND FLOORS. NOTE: EQUIVALENT RATED ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD CALLED OUT, AND Ø1/3" DIAMETER P-NAILS MAY BE USED IN LIEU OF 8d NAILS.

ROOF DIAPHRAGM: 1/2" PLYWOOD (PANEL INDEX + 24/16) WITH 8d NAILS AT 6" O.C. AT SUPPORTED PANEL AND AT 12" O.C. AT FIELD (TYPICAL UNLESS NOTED OTHERWISE).

FLOOR DIAPHRAGM: 3/4" PLYWOOD (PANEL INDEX + 24/16) WITH 10d NAILS AT 6" O.C. AT SUPPORTED PANEL EDGES AND AT 12" O.C. AT FIELD (TYPICAL UNLESS NOTED OTHERWISE ON PLAN).
OPTIONAL TO USE Ø1/8" DIAMETER P-NAILS IN LIEU OF 10d NAILS

STRUCTURAL STEEL

STRUCTURAL GRADE ASTM A36, F_y = 36,000 PSI. PIPE COLUMNS ASTM A53, GRADE B, F_y = 35,000 PSI. STRUCTURAL TUBING COLUMNS ASTM A500, GRADE B, F_y = 46,000 PSI. ALL STEEL EXCEPT STEEL EMBEDDED IN CONCRETE SHALL BE GIVEN ONE SHOP COAT OF APPROVED PAINT. WELDS TO BE 3/16" MINIMUM CONTINUOUS FILLET BY WABO CERTIFIED WELDERS. FIELD CONNECTIONS NOT SHOWN SHALL BE BOLTED FRAMED BEAM CONNECTIONS PER AISC. ALL BOLTS TO BE A325 DURING ERECTION. STRUCTURAL STEEL SHALL BE SECURED FROM COLLAPSING WITH TEMPORARY BRACING, WHERE EXPANSION ANCHORS ARE SPECIFIED, THE CONTRACTOR SHALL SUBMIT TO THE STRUCTURAL ENGINEER A SAMPLE OF THE ANCHOR TO BE USED WITH LABORATORY DATA OF PULL-OUT AND SHEAR STRENGTH.

FIREPLACES

MASONRY FIREPLACES AND CHIMNEYS ARE TO BE CONSTRUCTED TO CONFORM TO ALL APPLICABLE PORTIONS OF THE IBC SECTION 903 AND IRC SECTION 903.2 FLUE LINER MINIMUM 5/8" FIRE CLAY (OR EQUIV.) PER IBC SECTION 903.2.2 AND TABLE 903.4. FLUE AREA PER IBC TABLE 900.1. CHIMNEY SHALL SUPPORT ONLY THEIR OWN WEIGHT UNLESS SPECIFICALLY DESIGNED TO SUPPORT ADDITIONAL LOADS.

ALL FIREPLACES ARE TO BE PROVIDED WITH TIGHTLY-FITTING FLUE DAMPERS, OPERATED WITH A READILY-ACCESSIBLE MANUAL OR APPROVED AUTOMATIC CONTROL, AND AN OUTSIDE SOURCE OF COMBUSTION AIR. MINIMUM DUCT SIZE OF 6 SQUARE INCHES IN AREA, PROVIDED WITH READILY-OPERABLE DAMPER LOCATED IN FRONT PART OF FIREBOX.

PREFABRICATED FIREPLACES, CHIMNEYS AND RELATED COMPONENTS TO BEAR UL, HAVE WASHINGTON STATE CERTIFICATION SEAL OF APPROVAL AND BE INSTALLED PER ANY CONDITIONS OF APPROVAL.

DIRECT VENT UNITS ARE REQUIRED WHEN GAS OPERATED.

DOORS AND WINDOWS

ALL GLAZING TO BE DOUBLE GLAZING WITH MAXIMUM "U" VALUE OF Ø18. ALL SKYLIGHTS TO BE DOUBLE GLAZING MAXIMUM "U" VALUE OF Ø39. FACTORY BUILT WINDOWS TO BE CONSTRUCTED TO PERMIT MAXIMUM INFILTRATION OF Ø5 CFM PER LINEAL FOOT OF OPERABLE SASH PERIMETER AS TESTED BY STANDARD ASTM E 283.13. SITE BUILT AND MILLWORK SHOP BUILT WOODEN SASH ARE EXEMPT FROM INFILTRATION CRITERIA ABOVE, BUT MUST BE MADE TIGHTLY FITTING AND WEATHER-STRIPPED OR CAULKED. SLIDING GLASS DOORS TO PERMIT MAXIMUM INFILTRATION OF Ø5 CFM PER INFILTRATION OF 10 CFM PER SQUARE FOOT OF DOOR AREA.

CAULK OR WEATHER-STRIP WINDOWS, DOORS AND PENETRATIONS

GLAZING IN DOORS, AND GLAZING IN HAZARDOUS LOCATIONS DESCRIBED IN IRC SECTION R308, TO BE SAFETY GLAZING.

GLAZING (IRC R308)

GLAZING INSTALLED IN HAZARDOUS LOCATIONS AS DEFINED IN SECTION R308.4 SHALL BE PROVIDED WITH A MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, THE TYPE OF GLASS AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES. THE DESIGNATION SHALL BE VISIBLE IN THE FINAL INSTALLATION AND CANNOT BE REMOVED FROM THE WINDOW WITHOUT BEING DESTROYED.

INSULATION

UNLESS OTHERWISE NOTED, INSULATION TO BE AS FOLLOWS:

LOCATION	MINIMUM INSULATION ADDED	MAXIMUM ASSEMBLY "U" VALUE
CEILING & ROOFS	R-49, R-38 (ADV.)	Ø3
EXTERIOR WALLS	R-21	Ø5
WALLS BETWEEN HOUSE & GARAGE	R-21	Ø5
FLOORS OVER UNHEATED SPACE	R-38	Ø3
SLAB PERIMETER: (2)	R-10	
ELECTRIC WATER HEATERS (3)	PER ASHRAE 90A-80	
GAS WATER HEATERS (4)	PER ASHRAE 90A-80	
DUCTS IN UNHEATED SPACES	PER USEC TABLE 4-16	

FOOTNOTES:

- R-38 IN SINGLE RAFTER, JOIST VAULTED CEILINGS
- APPLIED TO PERIMETER OF SLAB FROM TOP OF SLAB DOWNWARD HORIZONTALLY MINIMUM 24" SEE BASIC FOUNDATION DETAILS.
- MUST BE INTEGRATED WITH UNIT. UNIT MUST DISPLAY VERIFICATION.
- UNLESS UNIT CONFORMS TO ASHRAE 90A-80 AND IS LABELED TO SIGNIFY CONFORMANCE

SMOKE ALARMS (IRC R314)

ALL SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND INSTALLED IN ACCORDANCE WITH THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72. SMOKE ALARMS SHALL BE 10V, INTERCONNECTED WITH BATTERY BACK-UP AND SHALL BE LOCATED IN:
a. EACH SLEEPING ROOM
b. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS
c. ON EACH ADDITIONAL STORY OF THE DWELLING

EFFECTIVE JAN. 1, 2019, SINGLE STATION CARBON MONOXIDE ALARMS COMPLYING WITH UL 2034 SHALL BE INSTALLED IN ACCORDANCE WITH THIS CODE AND MANUFACTURER'S INSTRUCTIONS AND BE INSTALLED OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOMS AND EACH FLOOR LEVEL.

HEAT ALARMS (IRC R314)

R314.2.3 New attached garages. A heat detector or heat alarm rated for the ambient outdoor temperatures and humidity shall be installed in new garages that are attached to or located under new and existing dwellings. Heat detectors and heat alarms shall be installed in a central location and in accordance with the manufacturer's instructions.

R314.4 Heat detection interconnection. Heat detectors and heat alarms shall be connected to an alarm or a smoke alarm that is installed in the dwelling. Alarms and smoke alarms that are installed for this purpose shall be located in a hallway, room, or other location that will provide occupant notification.

INFILTRATION CONTROL (USEC SECTION 402.4)

- 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, FLOOR AND ROOFS, AND ALL OTHER OPENINGS IN THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED OR GASKETED OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE. OTHER EXTERIOR JOINTS AND SEAMS SHALL BE SIMILARLY TREATED, OR TAPED, OR COVERED WITH MOISTURE VAPOUR PERMEABLE HOUSEWRAP.
- ALL EXTERIOR DOORS OR DOORS SERVING AS ACCESS TO AN ENCLOSED UNHEATED AREA SHALL BE WEATHER-STRIPPED TO LIMIT LEAKAGE AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION.
- RECESSED LIGHTING FIXTURES, WHEN INSTALLED IN CONTACT WITH THE BUILDING ENVELOPE SHALL BE:
 - TYPE IC RATED AND CERTIFIED UNDER ASTM E283 TO HAVE NO MORE THAN 2.0 CFM AIR MOVEMENT
 - THE LIGHTING FIXTURE SHALL BE TESTED AT 15 PASCALS OR 151 LBS/SF PRESSURE DIFFERENCE AND LABELED SHOWING COMPLIANCE
 - SHALL BE INSTALLED WITH A GASKET OR CAULK AT THE CEILING TO PREVENT AIR LEAKAGE
- BUILDING AIR LEAKAGE TESTING REQUIRED PER USEC 402.4.12 AND SHALL OCCUR ANYTIME AFTER ROUGH IN AND AFTER INSTALLATION OF PENETRATIONS OF THE BUILDING ENVELOPE. ACCEPTABLE AIR LEAKAGE TO BE LESS THAN 0.000930 SLA WITH A BLOWER DOOR AT A PRESS OF 50 PASCALS (Ø2 INCH UG).

DUCTWORK

- DUCT SYSTEMS SHALL BE OF METAL AS SET FORTH IN TABLE M16Ø11(2) OR FACTORY-MADE AIR DUCTS COMPLYING WITH M16Ø12 AND 16Ø12.1 IRC.
- JOINTS AND SEAMS SHALL BE SUBSTANTIALLY AIRTIGHT (M16Ø14.1 IRC.)
- INSTALLATION OF DUCTS SHALL COMPLY WITH SECTION M16Ø14.1 IRC.
- DUCT INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH SECTION M16Ø13.1 IRC.
- BUILDING CAVITIES MAY NOT BE USED AS DUCTS (WAC M16Ø11.)
- INSTALLATION OF DUCTS IN EXTERIOR WALLS, FLOORS OR CEILINGS SHALL NOT DISPLACE REQUIRED ENVELOPE INSULATION.

SEAMS AND JOINTS: (M16Ø14.1) IRC.)

DUCTS SHALL BE LEAK TESTED IN ACCORDANCE WITH R5-33 USING THE MAXIMUM DUCT LEAKAGE RATES. ALL DUCTS, AIR HANDLERS, FILTER BOXES, AND BUILDING CAVITIES USED AS DUCTS SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH SECTION M16Ø9.3 OF THE IRC OR 6Ø9.3 IMC. DUCT TIGHTNESS TESTING SHALL BE CONDUCTED TO VERIFY THAT DUCT ARE SEALED AND A SIGNED AFFIDAVIT DOCUMENTING THE TEST RESULTS SHALL BE PROVIDED TO THE JURISDICTION. DUCT TIGHTNESS SHALL BE VERIFIED BY EITHER POST-CONSTRUCTION TESTING OR ROUGH-IN TESTING.

2018 WASHINGTON STATE ENERGY CODE

TABLE R402.1.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENTA

CLIMATE ZONE 5 AND MARINE 4	
Fenestration U-Factorb	0.30
Skylightb U-Factor	0.50
Ceiling R-Valuec	49
Wood Frame Wall, g, h R-Value	21 int
Floor R-Value	30
Below-Grade, h Wall R-value	10/15/21 int + 5TB
Slab, f R-Value & Depth	10, 2 ft

For SI: 1 foot = 304.8 mm, ci = continuous insulation, int = intermediate framing.

- 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.
- The fenestration U-factor column excludes skylights.
- "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.
- R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
- For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
- R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
- For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for climate zone 5 of ICC 400.
- Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78 percent of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

R402.1.2 R-value computation. Insulation R-value shall be determined as specified in Section R303.1.4. Insulation material used in layers, such as framing cavity insulation or continuous insulation, shall be summed to compute the corresponding component R-value. The manufacturer's settled R-value shall be used for blown insulation. Computed R-values shall not include an R-value for other building materials or air films. Where insulated siding is used for the purpose of complying with the continuous insulation requirements of Table R402.1.1, the manufacturer's labeled R-value for insulated siding shall be reduced by R-0.6.

R402.1.3 U-factor alternative. An assembly with a U-factor equal to or less than that specified in Table R402.1.3 shall be permitted as an alternative to the R-value in Table R402.1.1. U-factors shall be determined as specified in Section R402.1.5.

CERTIFICATE (USEC R403)

A permanent certificate shall be completed by the builder or registered design professional and posted on a wall in the space where the furnace is located, a utility room, or an approved location inside the building. When located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label, or other required labels. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, below-grade wall, and/or floor) and ducts outside conditioned spaces; U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration; and the results from any required duct system and building envelope air leakage testing done on the building, where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment, where a gas-fired vented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired vented room heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be listed for gas-fired vented room heaters, electric furnaces or electric baseboard heaters.

LIGHTING (USEC R404)

LIGHTING EQUIPMENT (MANDATORY). A MINIMUM IF 90% OF LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS IN ACCORDANCE WITH 2018 USEC SECTION R404.1

A NFPA 72 – Chapter 29 Monitored Fire Alarm System in compliance with NFPA 72 and CoMi standards shall be installed throughout the residence.

A separate FIRE permit is required.

A NFPA 13D Fire Sprinkler System in compliance with NFPA 13D and CoMi standards shall be installed throughout the residence.

A separate FIRE permit is required.

INTERMITTENT WHOLE HOUSE VENTILATING

SYSTEM USING EXHAUST FANS

2018 INTERNATIONAL RESIDENTIAL CODE (IRC M15Ø13) CHAPTER 51-5Ø2 WAC. - EFFECTIVE FEB. 1, 2021 ACCORDING TO WA STATE AMENDMENTS VIA WAØ 51

INTERMITTENT WHOLE HOUSE VENTILATION SYSTEMS SHALL OPERATE INTERMITTENTLY AND CONTINUOUSLY. THE SYSTEM SHALL HAVE A AUTOMATIC 24-HOUR CLOCK TIMER SET TO OPERATE PER FRACTIONAL OPERATION TIME IN M15Ø13.2. CONTROLS SHALL BE CAPABLE OF OPERATING THE VENTILATION SYSTEM WITHOUT ENERGIZING OTHER ENERGY CONSUMING APPLIANCES. A LABEL SHALL BE AFFIXED TO THE CONTROLS THAT READS "WHOLE HOUSE VENTILATION (SEE OPERATING INSTRUCTIONS)". OUTDOOR AIR WILL BE DRAIN FROM AIR INLETS INSTALLED IN WINDOWS.

WHOLE HOUSE VENTILATION FANS:

- FAN AIRFLOW RATING AND DUCT SYSTEM SHALL BE DESIGNED AND INSTALLED TO DELIVER AT LEAST THE OUTDOOR AIRFLOW PER TABLE, ADJUSTED PER THE EXCEPTION
- EXHAUST FANS SHALL BE TESTED AND RATED IN ACCORDANCE WITH THE AIRFLOW AND SOUND RATING PROCEDURES OF THE HOME VENTILATING INSTITUTE.
- DOORS WILL BE UNDERCUT BY 1/2" PER THE WASHINGTON STATE AMENDMENTS R15Ø13.4.4

FAN NOISE: (IRC M15Ø13.4.3)

- WHOLE HOUSE FANS LOCATED 4 FEET OR LESS FROM THE INTERIOR GRILLE SHALL HAVE A SONE RATING OF 10 OR LESS MEASURED AT Ø10 INCHES WATER GAUGE.
- MANUFACTURER'S FAN NOISE RATINGS SHALL BE DETERMINED ACCORDING TO HV1.95
- REMOTELY MOUNTED FANS SHALL BE ACOUSTICALLY ISOLATED FROM THE STRUCTURAL ELEMENTS OF THE BUILDING AND FROM ATTACHED DUCT WORK USING INSULATED FLEXIBLE DUCT OR OTHER APPROVED MATERIAL.

EXHAUST DUCTS (IRC R506)

- SHALL TERMINATE OUTSIDE THE BUILDING.
- SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS
- ALL EXHAUST DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED TO A MINIMUM OF R-4.5
- EXHAUST OUTLETS SHALL COMPLY WITH SECTION 5Ø12

OUTDOOR AIR (IRC M15Ø13.4.4)

EXHAUST FAN ONLY VENTILATION SYSTEMS SHALL PROVIDE OUTDOOR AIR THROUGH AIR INLETS INSTALLED IN WINDOWS. INLETS SHALL BE CONTROLLABLE WITH SECURE OPENINGS SHALL BE DESIGNED TO NOT COMPROMISE THE THERMAL PROPERTIES OF THE BUILDING ENVELOPE. ACCESSIBLE TO OCCUPANTS AND SCREENED. INLETS SHALL PROVIDE NOT LESS THAN 4 SQUARE INCHES OF NET FREE AREA OF OPENING FOR EACH 100CFM OF OUTDOOR AIR REQUIRED IN TABLE 15Ø13.3. EACH OCCUPIABLE SPACE SHALL HAVE A MINIMUM OF ONE AIR INLET THAT HAS A MINIMUM OF 4 SQUARE INCHES OF NET FREE AREA.

SOURCE-SPECIFIC VENTILATION (IRC M15Ø13)

SOURCE SPECIFIC EXHAUST VENTILATION IS REQUIRED IN EACH KITCHEN, BATHROOM, WATER CLOSET, LAUNDRY ROOM, INDOOR SWIMMING POOL, SPA, AND OTHER ROOMS WHERE EXCESS WATER VAPOUR OR COOKING ODOR IS PRODUCED. THE MINIMUM SOURCE SPECIFIC VENTILATION EFFECTIVE EXHAUST CAPACITY SHALL NOT BE LESS THAN LEVELS SPECIFIED IN TABLE 15Ø14.

TABLE 15Ø3.3(1)

VENTILATION RATES FOR ALL GROUP R PRIVATE DWELLINGS (CONTINUOUSLY OPERATING SYSTEM)

FLOOR AREA	BEDROOMS				
	Ø-1	2-3	4-5	6-7	7 OR MORE
LESS THAN 1500	30 CFM	45 CFM	60 CFM	75 CFM	90 CFM
1501-3000	45 CFM	60 CFM	75 CFM	90 CFM	105 CFM
3001-4500	60 CFM	75 CFM	90 CFM	105 CFM	120 CFM
4501-6000	75 CFM	90 CFM	105 CFM	120 CFM	135 CFM
6001-7500	90 CFM	105 CFM	120 CFM	135 CFM	150 CFM
7500 -	105 CFM	120 CFM	135 CFM	150 CFM	165 CFM

FRACTIONAL OPERATION TIME (f) OF 24-HR TIMER TO BE SET BY MECHANICAL CONTRACTOR BASED ON

4-HOUR CYCLE, 15ØCFM (16 cfm @ Ø25in UG) FAN, ASHRAE 62.2-2Ø1Ø AND TABLE M15Ø13.3(2) THE ON TIME SHALL BE:

- CONTINUOUS FAN RATE 6Ø: f = 1/2, AND WILL RUN 125 MINUTES PER 4-HR CYCLE
- CONTINUOUS FAN RATE 75: f = 1/3, AND WILL RUN 150 MINUTES PER 4-HR CYCLE
- CONTINUOUS FAN RATE 9Ø: f = 1/3, AND WILL RUN 1Ø1 MINUTES PER 4-HR CYCLE
- CONTINUOUS FAN RATE 1Ø5: f = 1/3, AND WILL RUN 21Ø MINUTES PER 4-HR CYCLE

EXHAUST FAN REQUIREMENTS (SECTION 3Ø3.3.2 V.I.A.Q.)

- BATHROOMS, LAUNDRIES, WATER CLOSETS OR SIMILAR ROOMS SHALL HAVE A MINIMUM FAN FLOW RATING NOT LESS THAN 50 cfm @ Ø25 WATER GAUGE
- KITCHENS SHALL HAVE A MINIMUM FAN FLOW RATING NOT LESS THAN 100 cfm @ Ø25 WATER GAUGE. HOWEVER, WHERE A RANGE HOOD OR DOWN DRAFT EXHAUST FAN IS USED THE MINIMUM FAN FLOW RATING SHALL NOT BE LESS THAN 100 cfm @ Ø10 WATER GAUGE.
- EXHAUST FANS CANNOT TERMINATE WITHIN 3 FT. FROM ANY OPERABLE OPENING PER IRC R506.3

SOURCE SPECIFIC VENTILATION DUCTS

- MUST TERMINATE OUTSIDE THE BUILDING
- EXHAUST DUCTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS
- VENTILATION DUCTS IN UNCONDITIONED SPACE WILL REQUIRE R-8 INSULATION PER USEC R403.1
- TERMINAL ELEMENTS MUST BE SCREENED AND SIZED TO BE GREATER THAN OR EQUAL TO THE NET FREE AREA OF THE DUCT

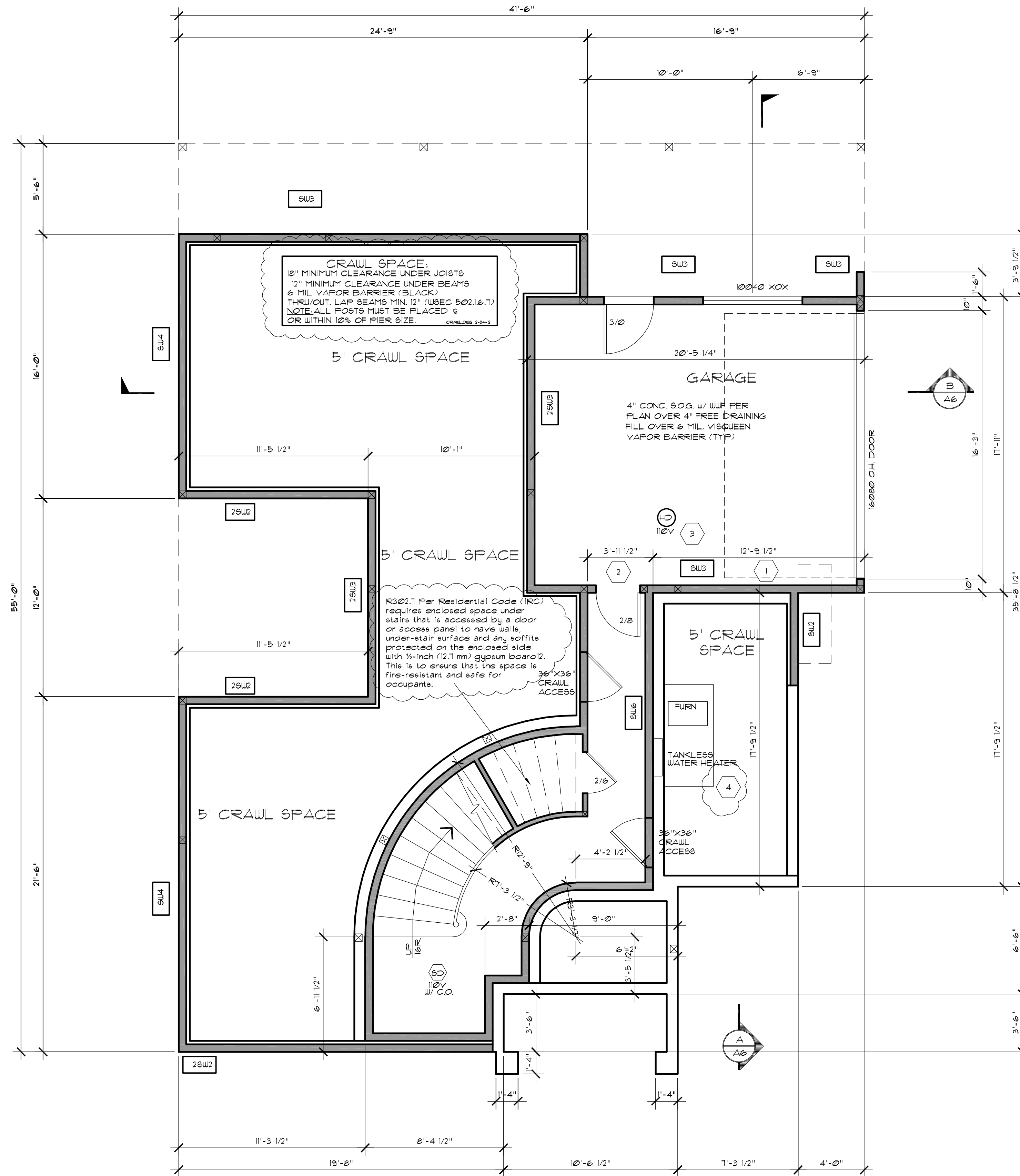
A NEW HOME AT:

6175 SE 27TH STREET
MERCER ISLAND, WA 98040

JOB NO: 23006

DATE: 12/11/23

DRWN. BY: TH



CRAWL SPACE:
 18" MINIMUM CLEARANCE UNDER JOISTS
 12" MINIMUM CLEARANCE UNDER BEAMS
 6 MIL VAPOR BARRIER (BLACK)
 THRU/OUT LAP BEAMS MIN. 12" (USBC 5021.6.7)
 NOTE: ALL POSTS MUST BE PLACED 6"
 OR WITHIN 10% OF PIER SIZE

R302.7.1 Per Residential Code (IRC) requires enclosed space under stairs that is accessed by a door or access panel to have walls, under-stair surface and any soffits protected on the enclosed side with 1/2-inch (12.7 mm) gypsum board. This is to ensure that the space is fire-resistant and safe for occupants.

- 1 2018 IRC R302.6: Dwelling/garage separation required: The garage shall be separated as required by Table R302.6. Openings in garage walls shall comply with Section R302.5. This provision does not apply to garage walls that are perpendicular to the adjacent dwelling unit wall. Ceilings and beams will be covered by 5/8" Type X gypsum run perpendicular to the floor joists (see 2018 IRC Table R102.3.5 footnote a).
- 2 Openings between the garage and residence shall be equipped with solid wood doors not less than 1-3/8-inches (35mm) in thickness, solid or honeycomb core steel doors not less than 1-3/8 inches (35mm) thick, or 20-minute fire-rated doors, equipped with a self-closing device.
- 3 R314.4.1 Heat detection interconnection. Heat detectors and heat alarms shall be connected to an alarm or a smoke alarm that is installed in the dwelling. Alarms and smoke alarms that are installed for this purpose shall be located in a hallway, room, or other location that will provide occupant notification.
- 4 5.3 Water heating system shall include one of the following:
 Energy Star rated gas or propane water heater with a minimum UEF of 0.91
 or
 Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 65 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems
 or
 Water heater heated by ground source heat pump meeting the requirements of Option 3.3.
 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings.

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

A NFPA 72 – Chapter 29 Monitored Fire Alarm System in compliance with NFPA 72 and CoMi standards shall be installed throughout the residence.
 A separate FIRE permit is required.
 A NFPA 13D Fire Sprinkler System in compliance with NFPA 13D and CoMi standards shall be installed throughout the residence.
 A separate FIRE permit is required.

LOCAL EXHAUST FANS SHALL BE PROVIDED IN EACH KITCHEN, BATHROOM, WATER CLOSET, LAUNDRY ROOM, INDOOR SWIMMING POOL, SPA, AND OTHER ROOMS WHERE WATER VAPOR OR COOKING ODOR IS PRODUCED. IRC 1507.4

NOTE: CONTRACTOR SHALL VERIFY TO INSPECTOR ALL GUARDS AND RAILINGS SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL IN ANY DIRECTION AS REQUIRED BY IRC TABLE 302.5

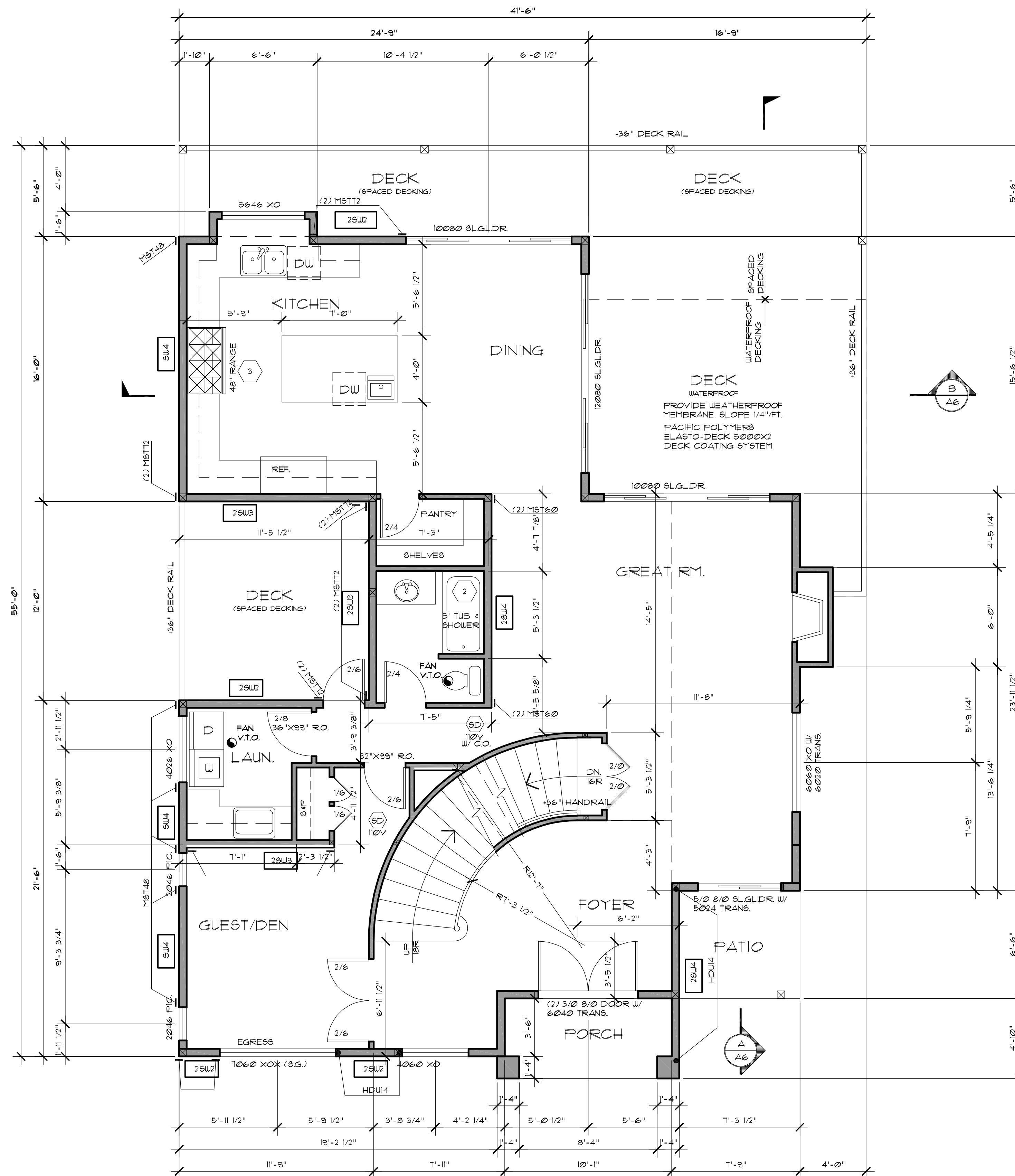
STAIR LIGHTING ALL STAIRWAYS SHALL BE PROVIDED WITH LIGHT SOURCES, LIGHT ACTIVATION CONTROLS SHALL BE ACCESSIBLE AT THE TOP AND BOTTOM OF INTERIOR STAIRWAYS AND WITHIN DWELLING UNIT FOR EXTERIOR STAIRS
 IRC SECTIONS R303.7.4 R311.7.9

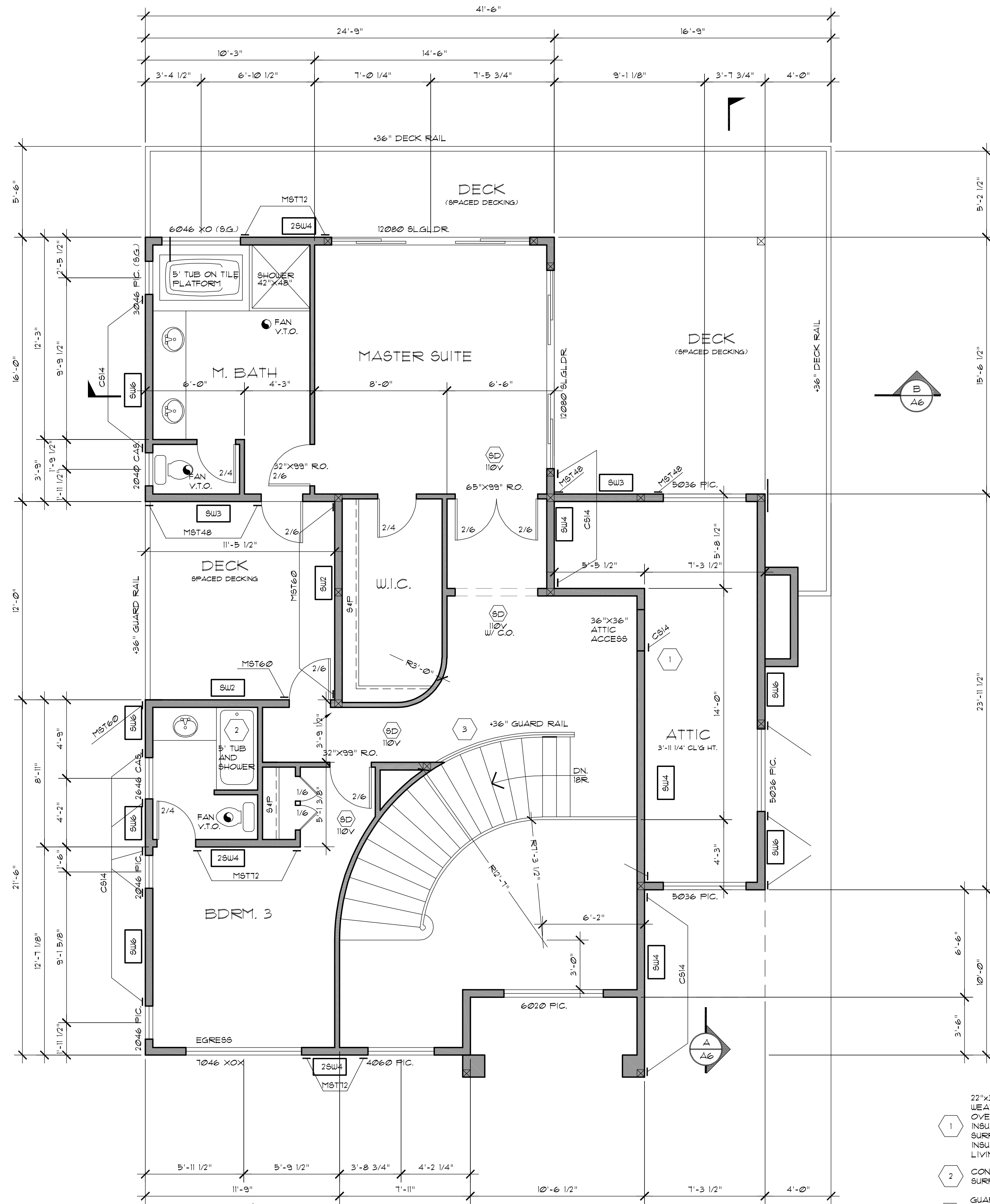
Winder treads shall have a tread depth of not less than 10 inches measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline. Winder treads shall have a tread depth of not less than 6 inches at any point within the clear width of the stair. Within any flight of stairs, the largest winder tread depth at the walkline shall not exceed the smallest winder tread by more than 3/8 inch. Consistently shaped winders at the walkline shall be allowed within the same flight of stairs as rectangular treads and do not have to be within 3/8 inch of the rectangular tread depth (R311.7.5.1)

A NEW HOME AT:
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JOB NO: 23006
 DATE: 12/11/23
 DRAWN BY: TH
 REVISED: 5/18/24
 8/20/24

SHEET NO.
 A1





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

A NFPA 72 - Chapter 29 Monitored Fire Alarm System in compliance with NFPA 72 and CoMI standards shall be installed throughout the residence.
 A separate FIRE permit is required.
 A NFPA 13D Fire Sprinkler System in compliance with NFPA 13D and CoMI standards shall be installed throughout the residence.
 A separate FIRE permit is required.

- 1 22"x30" ATTIC ACCESS. WEATHERSTRIP 4 INSULATE OVER TO EQUAL CEILING INSULATION. PROVIDE WOOD SURROUND TO PREVENT LOOSE INSULATION SPILLAGE TO LIVING SPACE. (IBC SEC. R807.1)
- 2 CONC. FIBERBOARD 6" TUB 4 SHOWER SURROUND TO 6" ABOVE DRAIN
- 3 GUARDS ARE NOT OF GLASS BALUSTER CONSTRUCTION. IF GUARDS TO BE OF GLASS BALUSTER CONSTRUCTION, PROVIDE DETAILS OF CONSTRUCTION. GLASS INFILL IS PERMITTED.

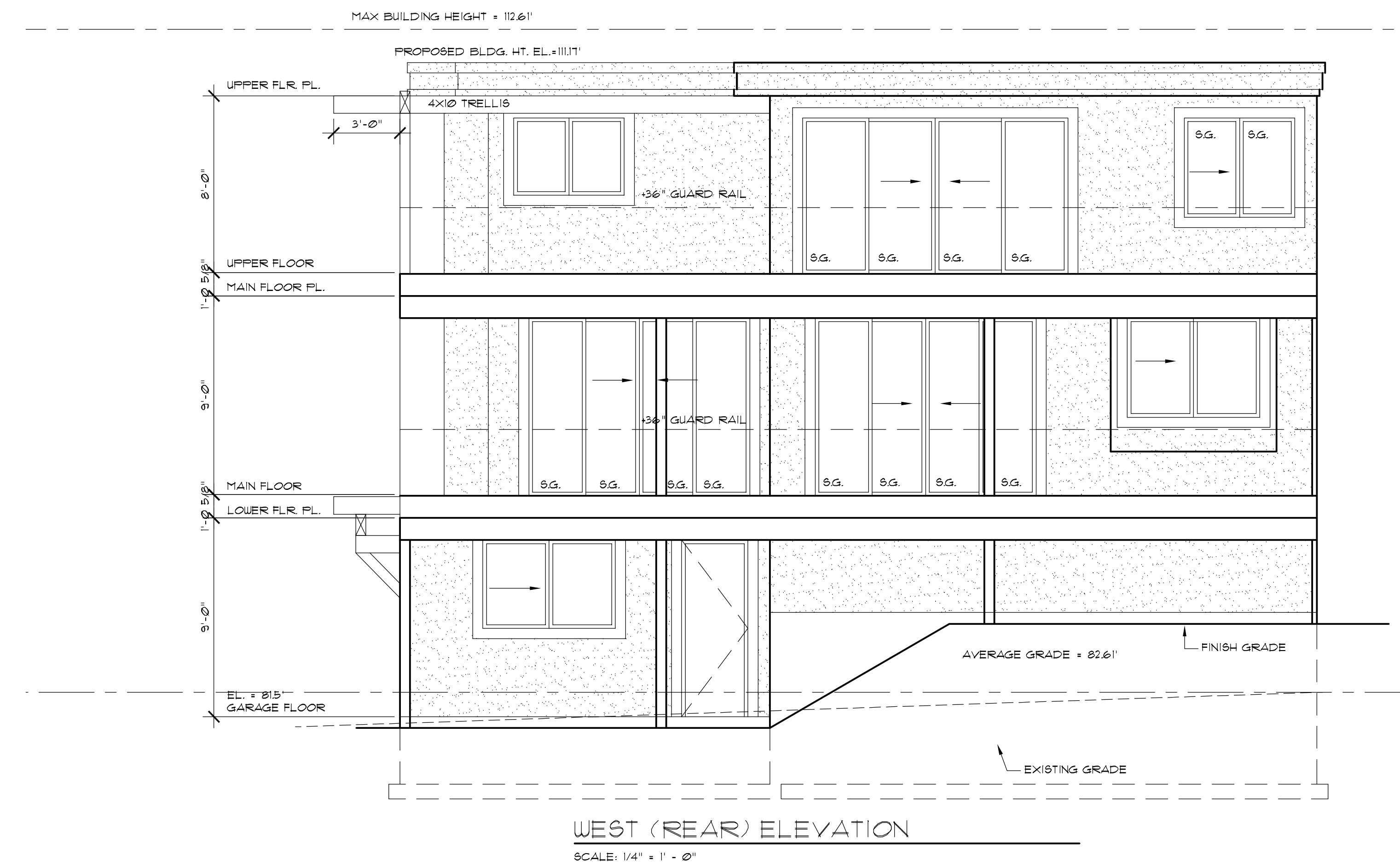
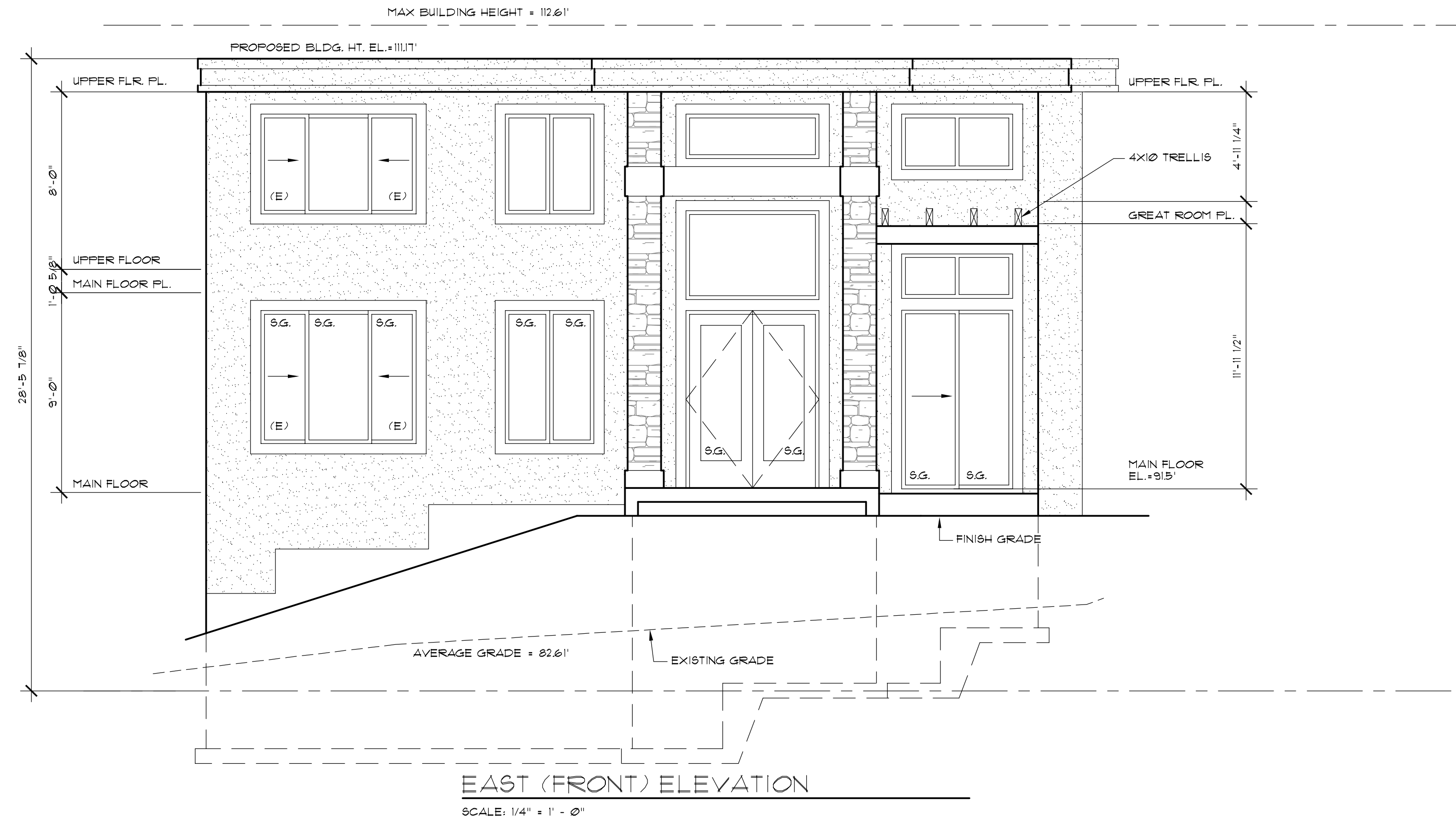
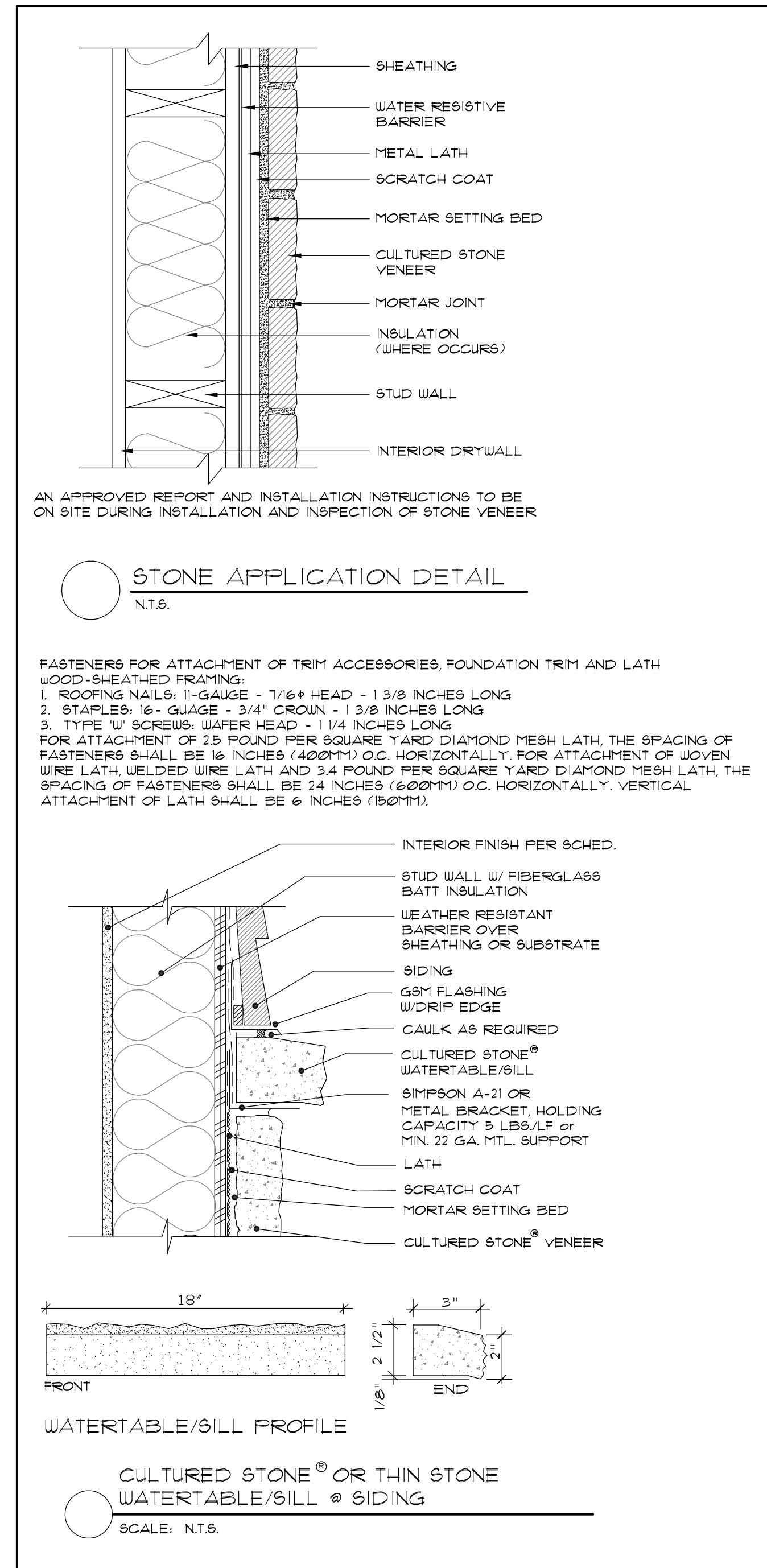
NOTE: CONTRACTOR SHALL VERIFY TO INSPECTOR ALL GUARDS AND RAILINGS SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL IN ANY DIRECTION AS REQUIRED BY IRC TABLE 302.5

STAIR LIGHTING ALL STAIRWAYS SHALL BE PROVIDED WITH LIGHT SOURCES. LIGHT ACTIVATION CONTROLS SHALL BE ACCESSIBLE AT THE TOP AND BOTTOM OF INTERIOR STAIRWAYS AND WITHIN DWELLING UNIT FOR EXTERIOR STAIRS. IRC SECTIONS R303.7 & R301.7.3

A NEW HOME AT:
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 MERCER ISLAND, WA 98040

JOB NO: 23006
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 DRAWN BY: TH
 REVISED: 5/18/24
 8/20/24

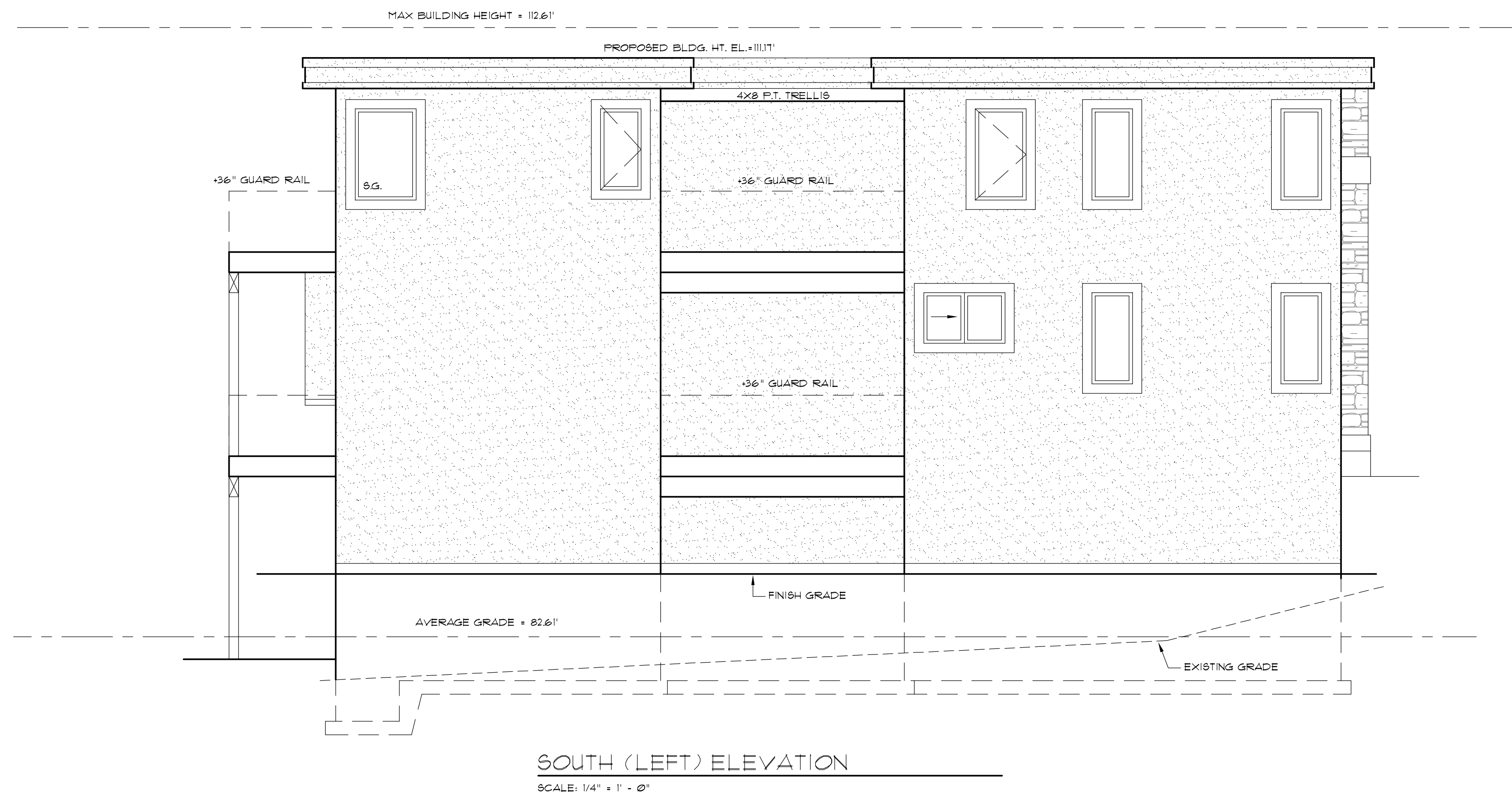
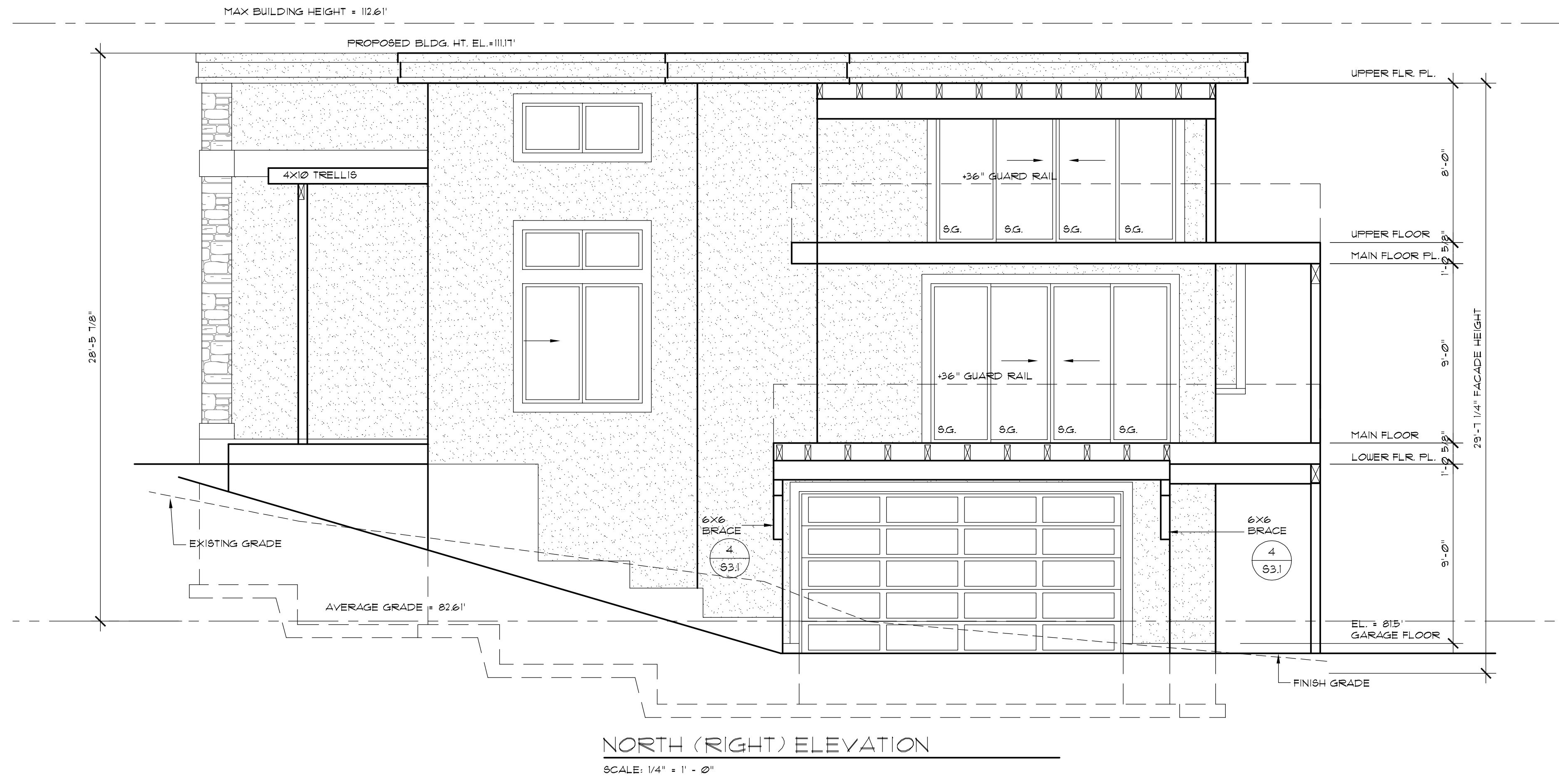
SHEET NO.
A3



A NEW HOME AT:
6175 SE 27TH STREET
MERCER ISLAND, WA 98040

JOB NO: 23006
DATE: 12/11/23
DRWN. BY: TH
REVISED: 6/27/24

SHEET NO.
A4

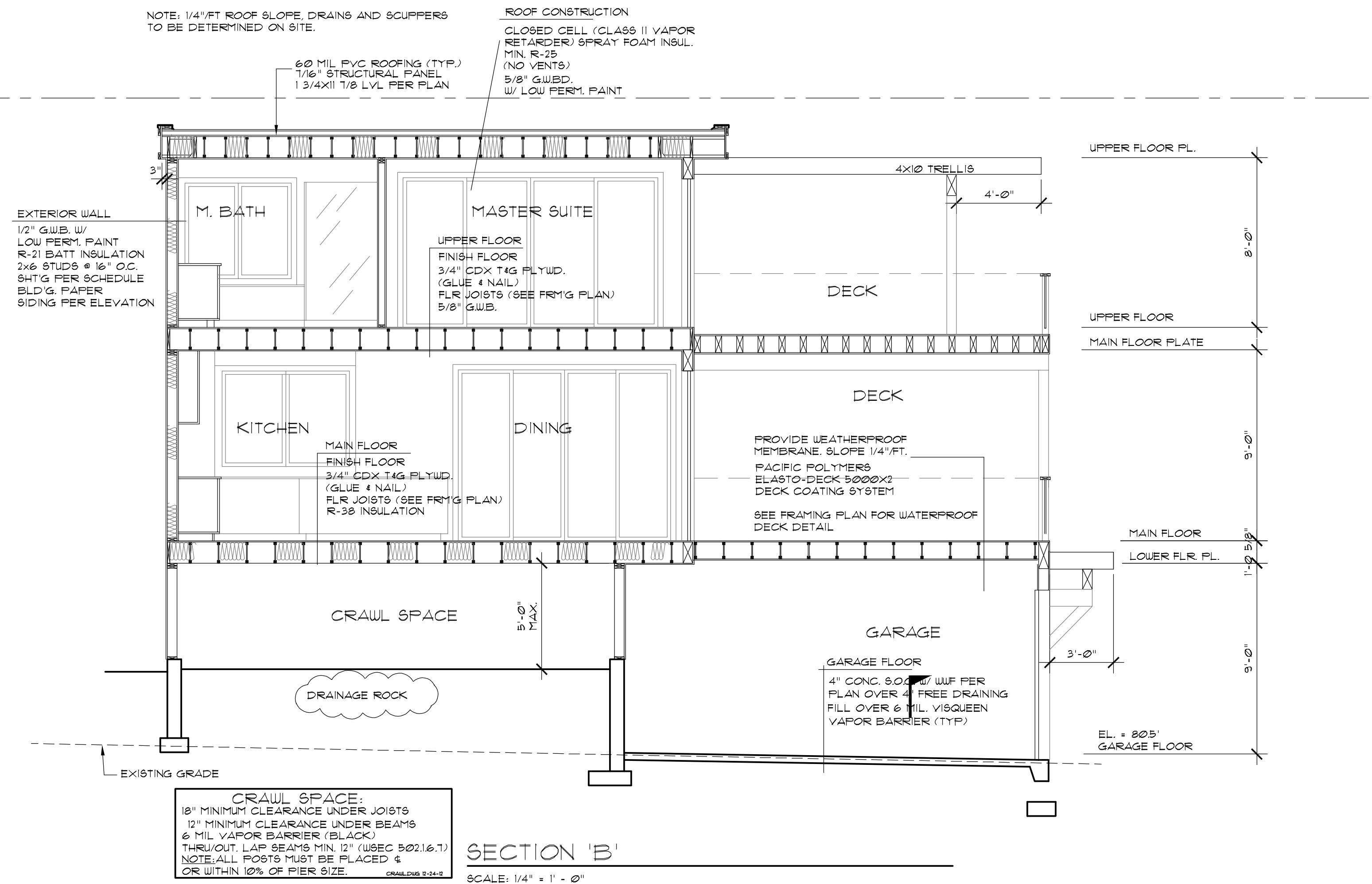
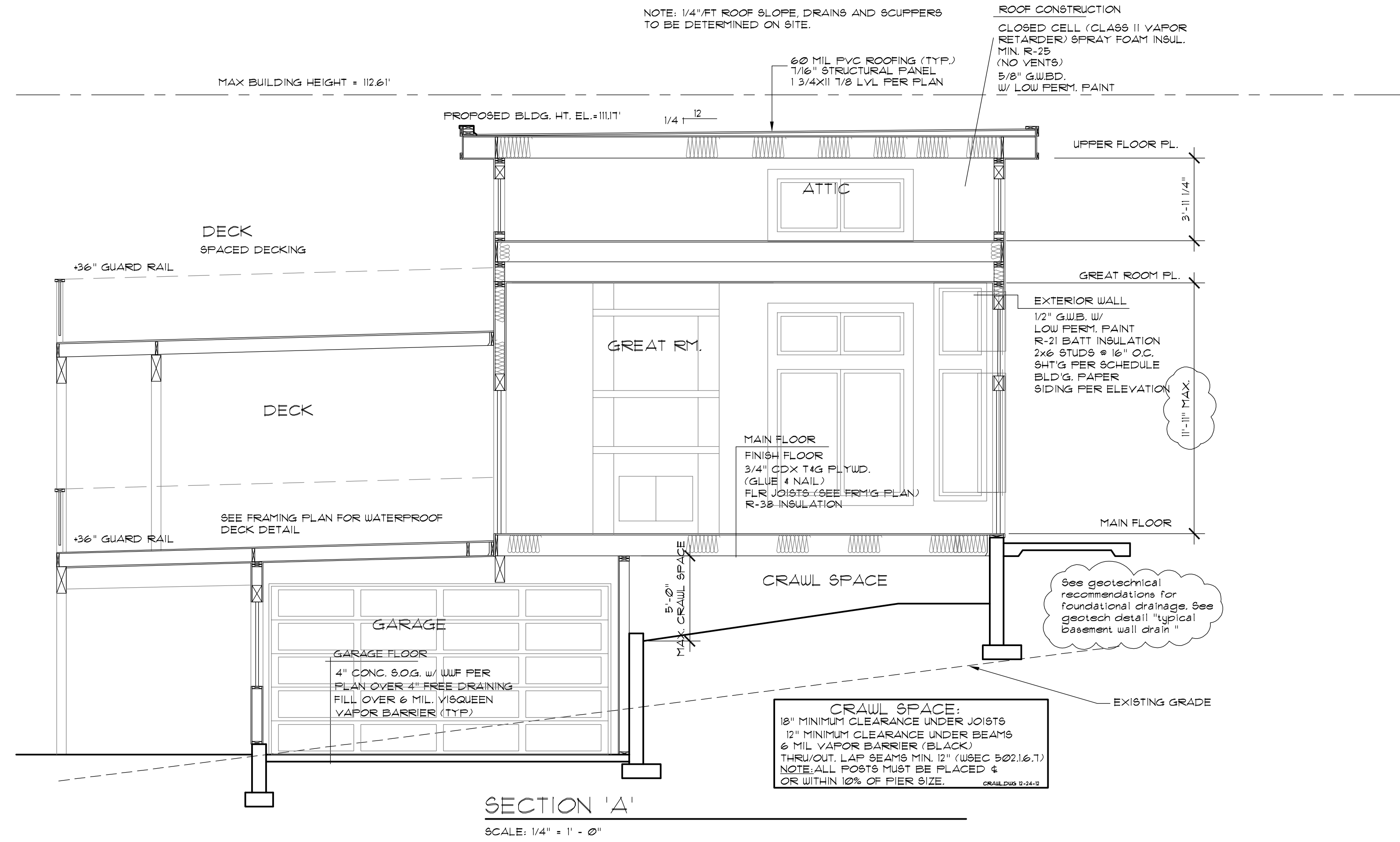


A NEW HOME AT:
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 MERCER ISLAND, WA 98040

JOB NO: 23006
 DATE: 12/11/23
 DRAWN BY: TH
 REVISED: 6/27/24

SHEET NO.

A5

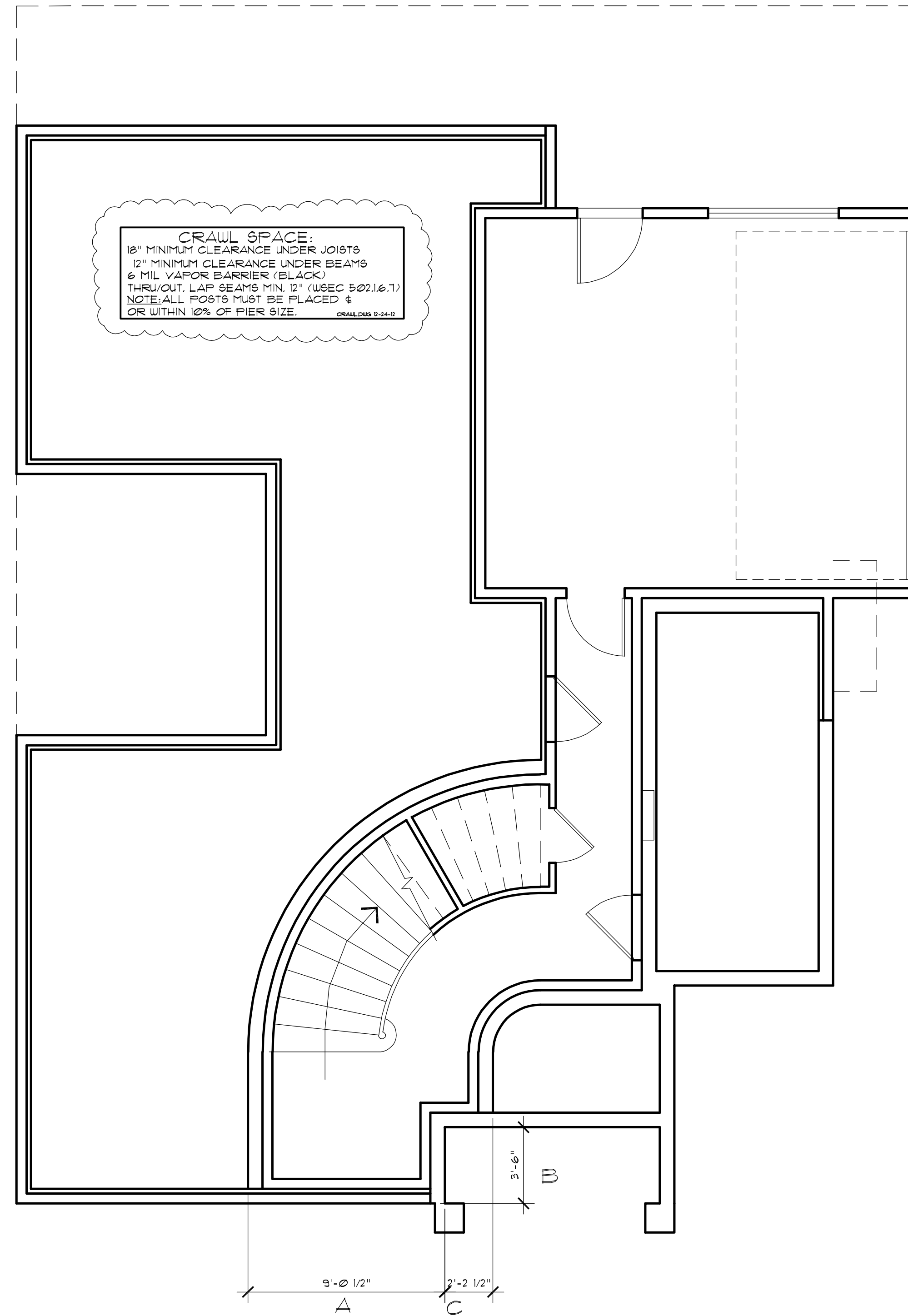


A NEW HOME AT:
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REVISED: 6/27/24

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A6



BASEMENT FLOOR AREA CALCULATION

WALL	LENGTH	COVERAGE	RESULT
A	9'	28.4%	2.5%
B	3'-6"	29.7%	1.1%
C	2'-2"	31.1%	.7%
TOTAL	14.67'		4.3%

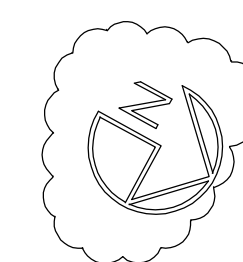
PORTION OF EXCLUDED BASEMENT FLOOR AREA:
 $532 \text{ (ACTUAL SQ. FT. W/ GARAGE)} \times (4.3/14.67) = 155.9 \text{ SQ. FT.}$
 AREA OF BASEMENT EXCLUDED = $532 - 155.9 = 376.1 \text{ SQ. FT.}$

GROSS FLOOR AREA

LOWER FLOOR W/ GARAGE	532	SQ. FT.
MAIN FLOOR W/ STAIR	1410	SQ. FT.
UPPER FLOOR W/ STAIR	1204	SQ. FT.
TOTAL	3146	SQ. FT.
BASEMENT EXCLUDED	-155.9	SQ. FT.
TOTAL	2990.1	SQ. FT.
LOT AREA	7281	SQ. FT.
SQUARE FOOTAGE ALLOWED	3000	SQ. FT.

SQUARE FOOTAGE SUMMARY

LOWER FLOOR	227	SQ. FT.
MAIN FLOOR	1414	SQ. FT.
UPPER FLOOR	988	SQ. FT.
TOTAL	2629	SQ. FT.
GARAGE	364	SQ. FT.
MAIN FLOOR DECKS	621	SQ. FT.
UPPER FLOOR DECKS	621	SQ. FT.



BASEMENT REDUCTION CALC
 SCALE: 1/4" = 1' - 0"



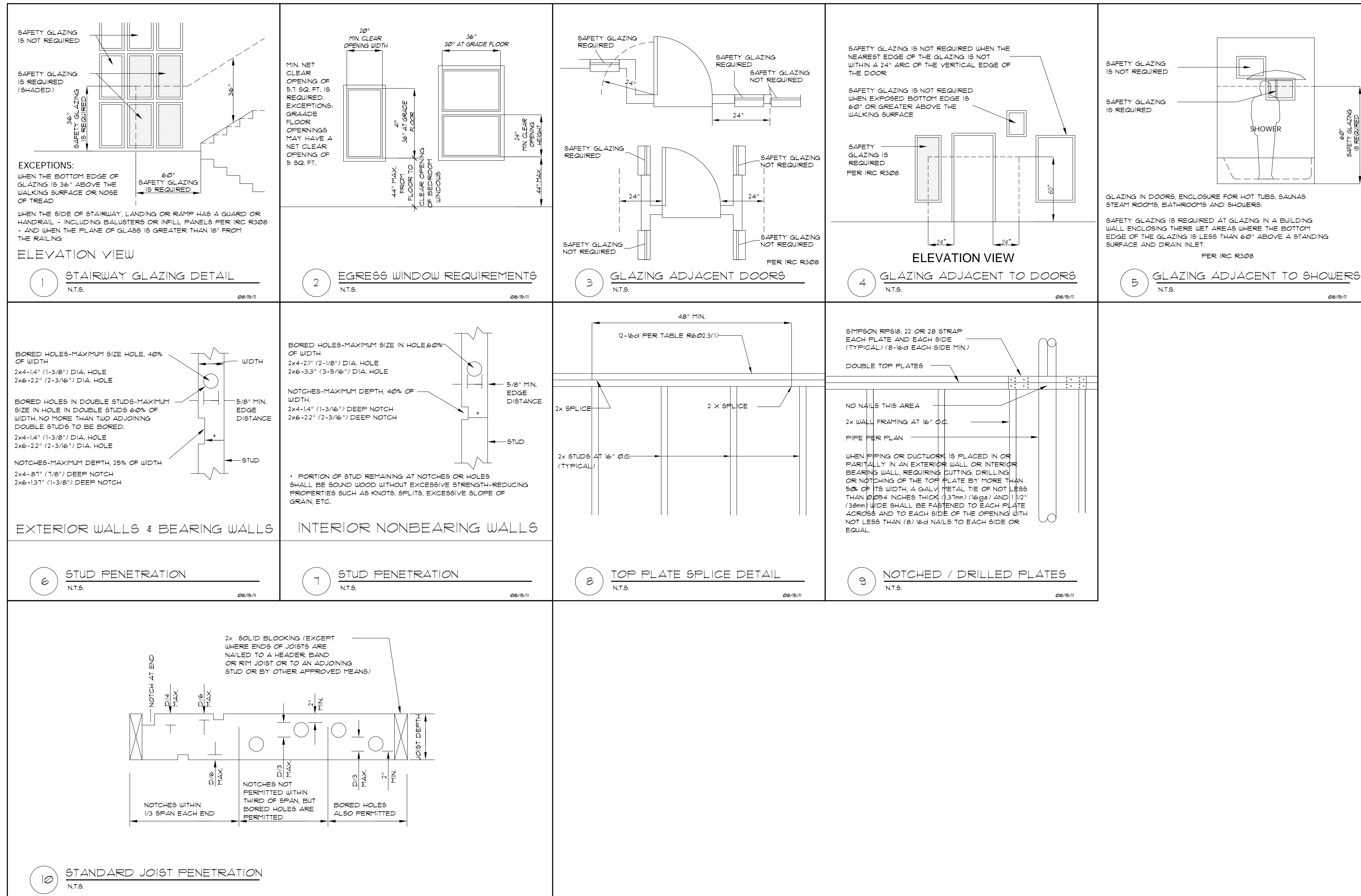
A NEW HOME AT:

6115 SE 27TH STREET
 MERCER ISLAND, WA 98040

JOB NO: 23006
 DATE: 12/11/23
 DRAWN BY: TH
 REVISED:

SHEET NO.

A8



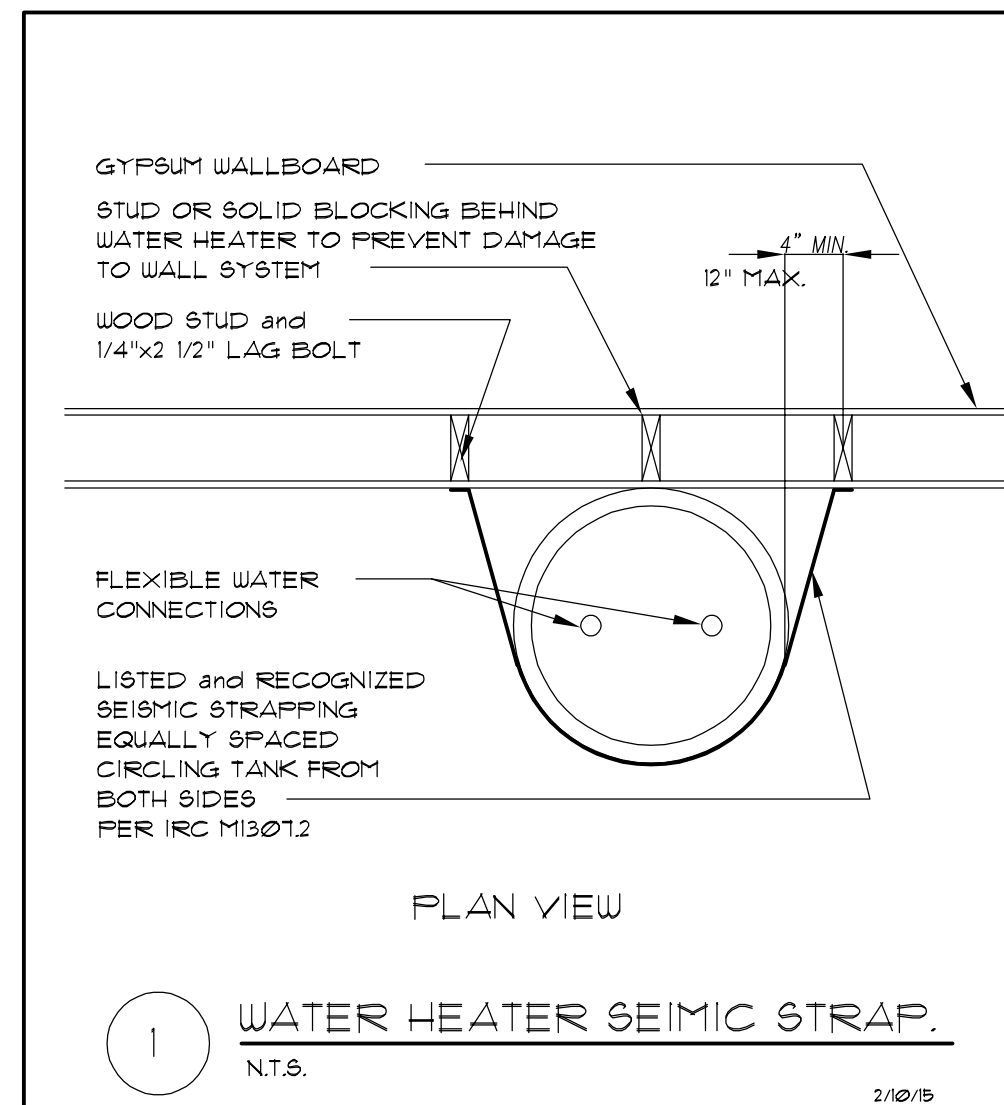
A NEW HOME AT:

6115 SE 27TH STREET
MERCER ISLAND, WA 98040

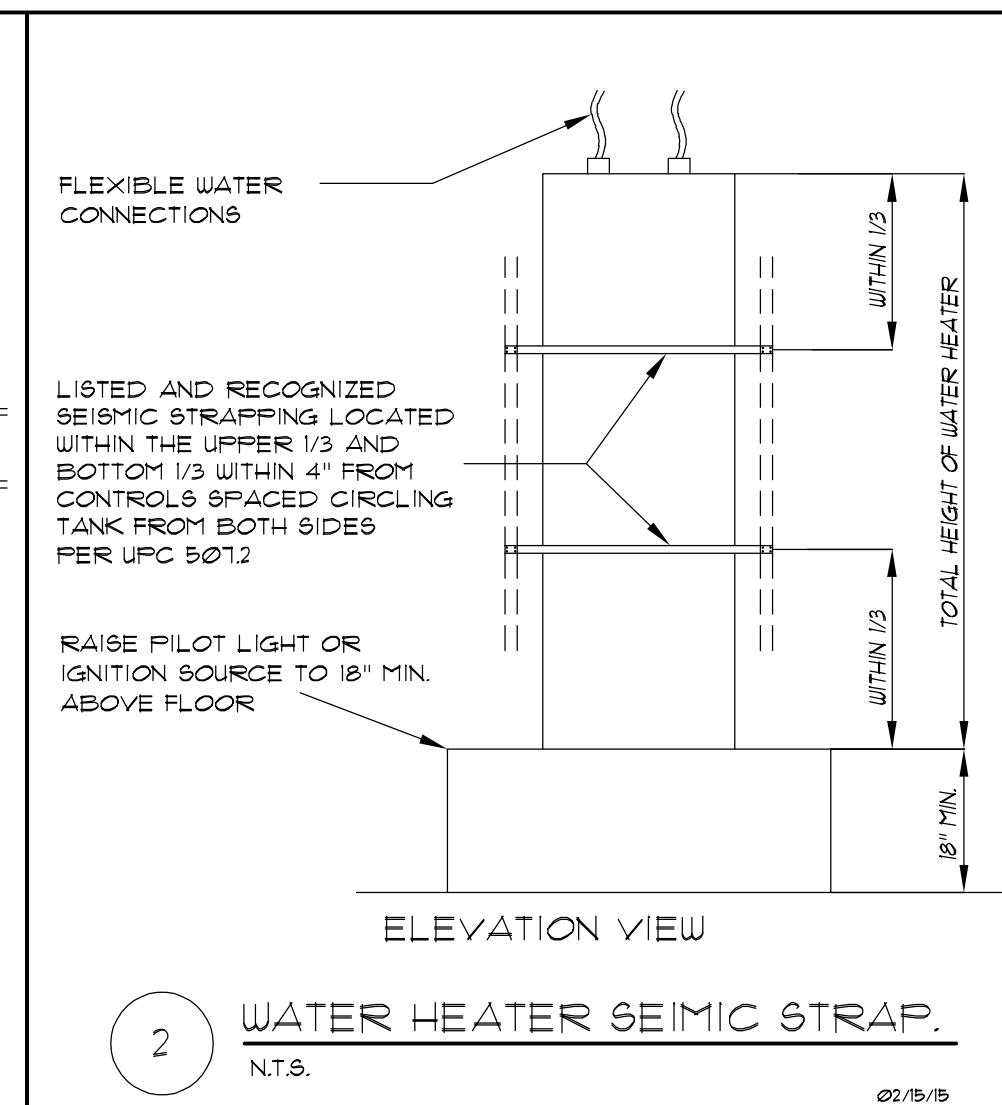
JOB NO: 23006
DATE: 12/11/23
DRWN. BY: TH
REVISED:

SHEET NO.

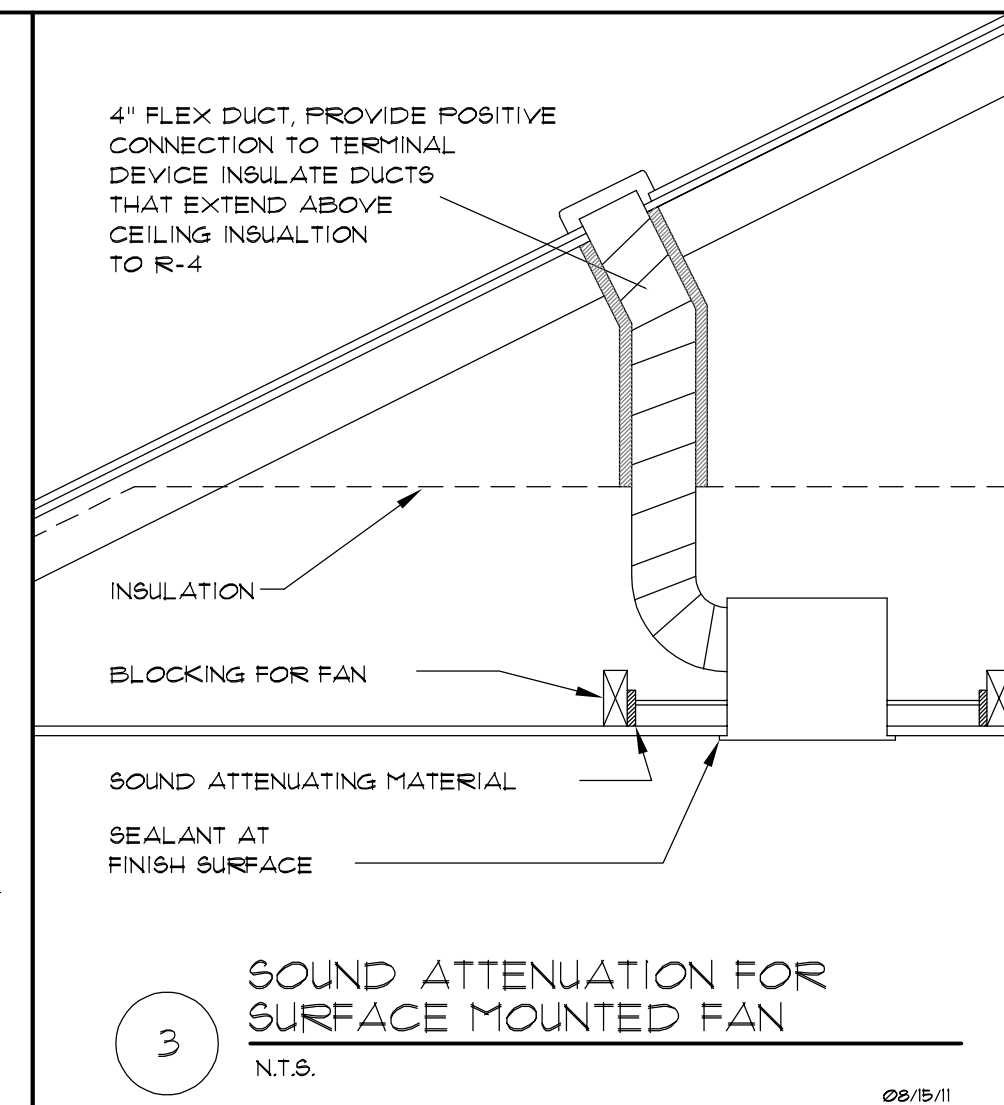
D1



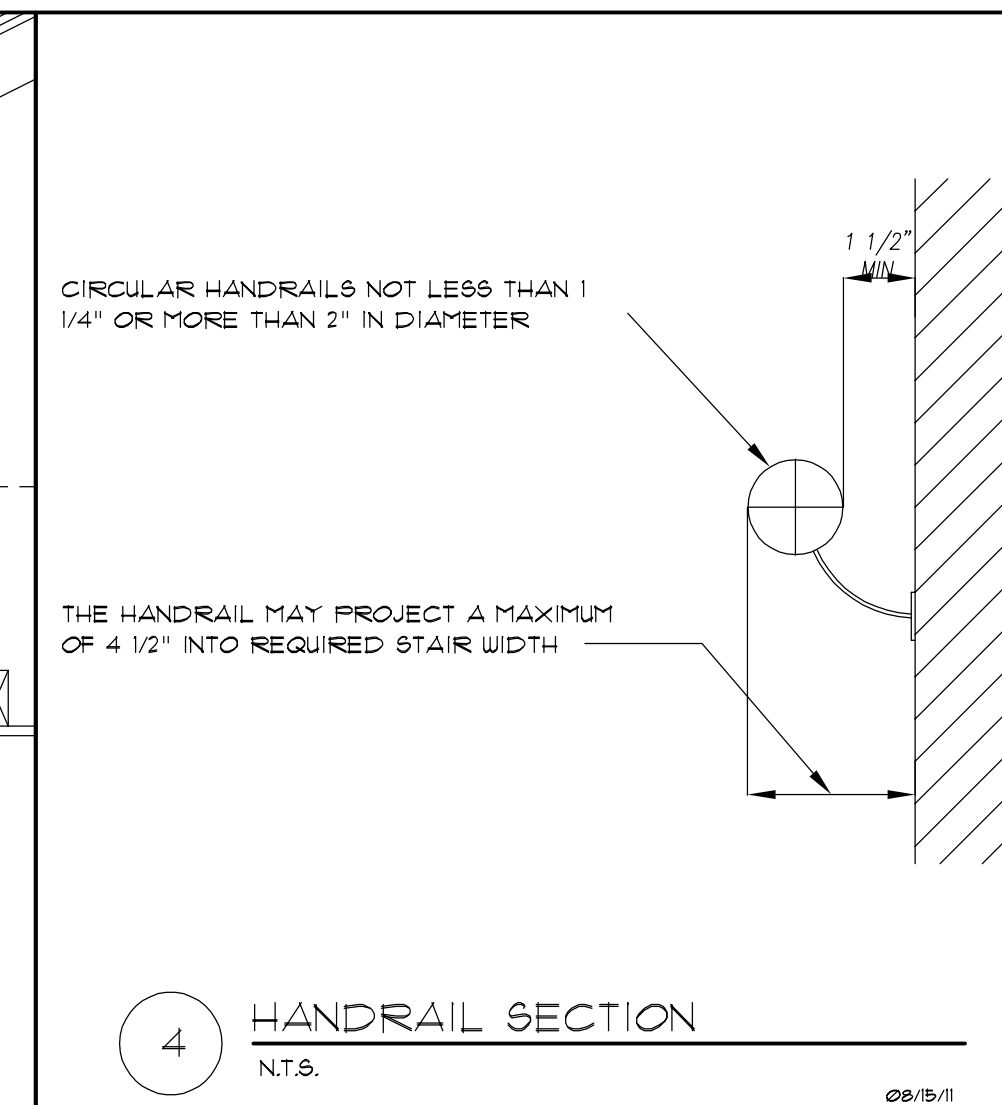
1 WATER HEATER SEISMIC STRAP.
N.T.S. 2/10/15



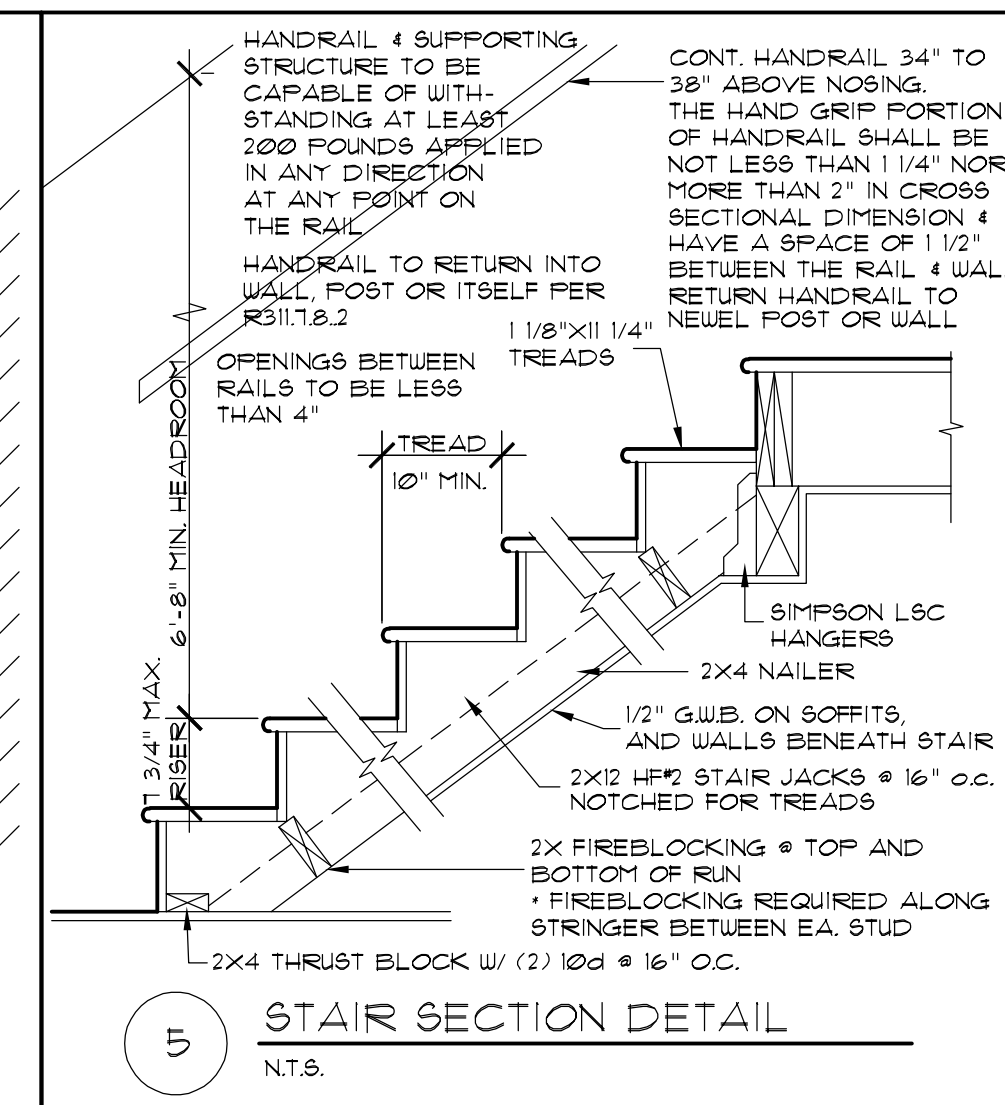
2 WATER HEATER SEISMIC STRAP.
N.T.S. 02/15/15



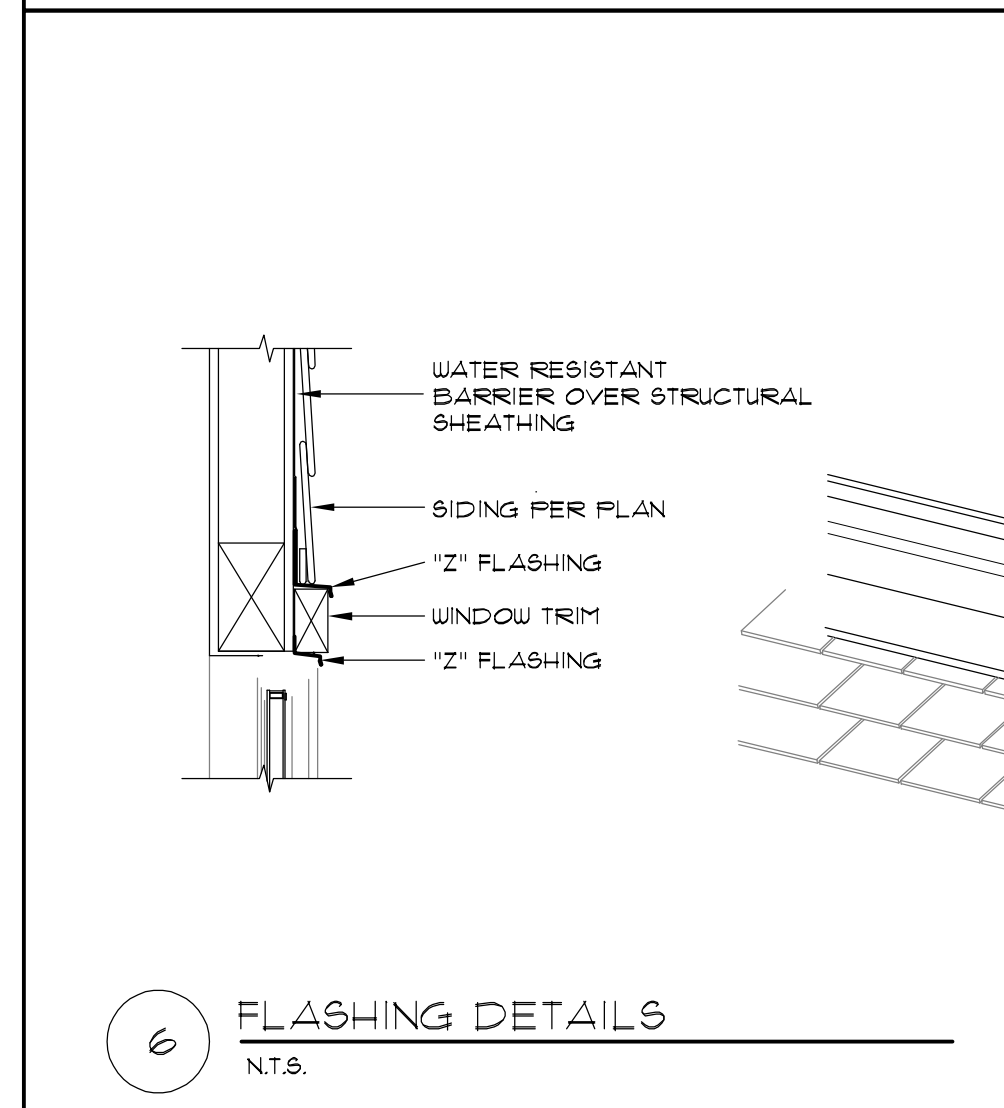
3 SOUND ATTENUATION FOR SURFACE MOUNTED FAN
N.T.S. 06/15/11



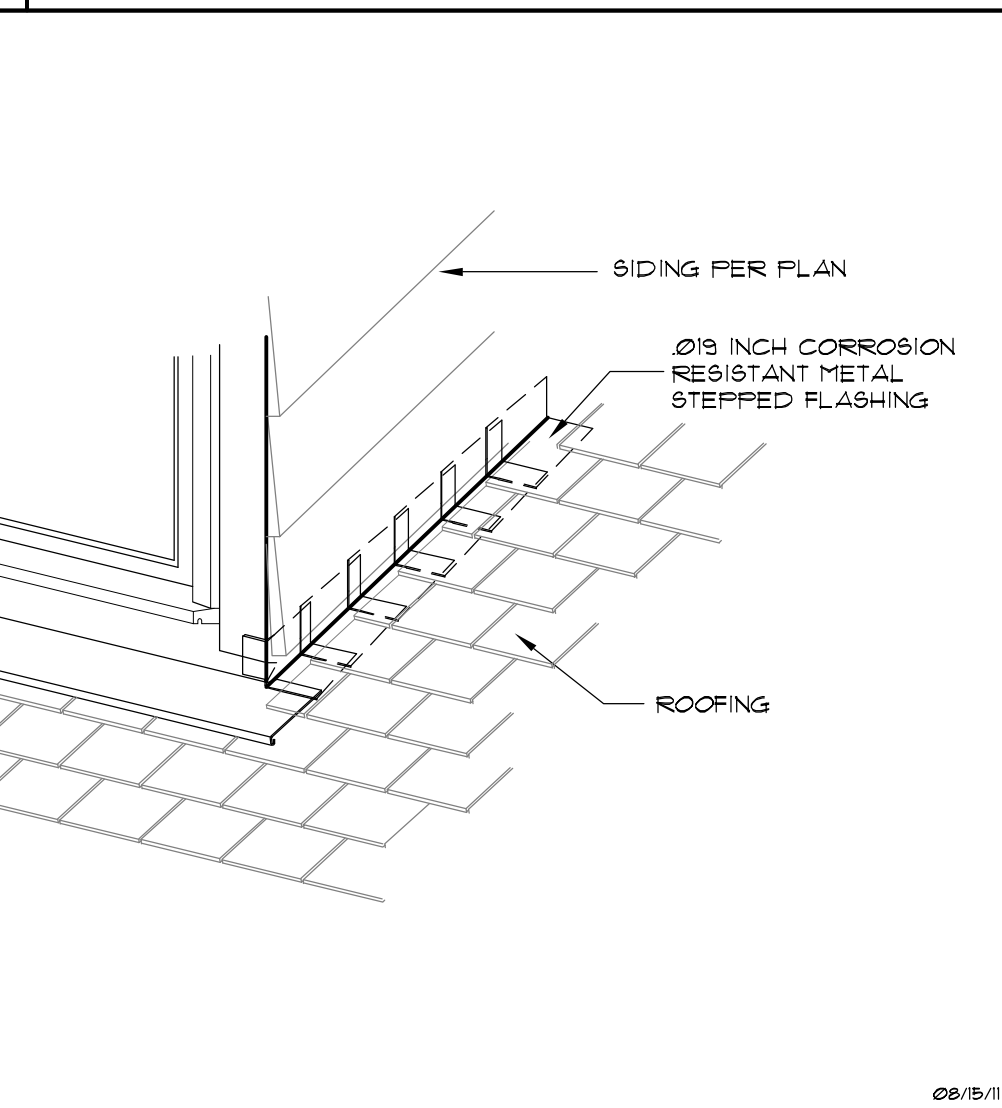
4 HANDRAIL SECTION
N.T.S. 06/15/11



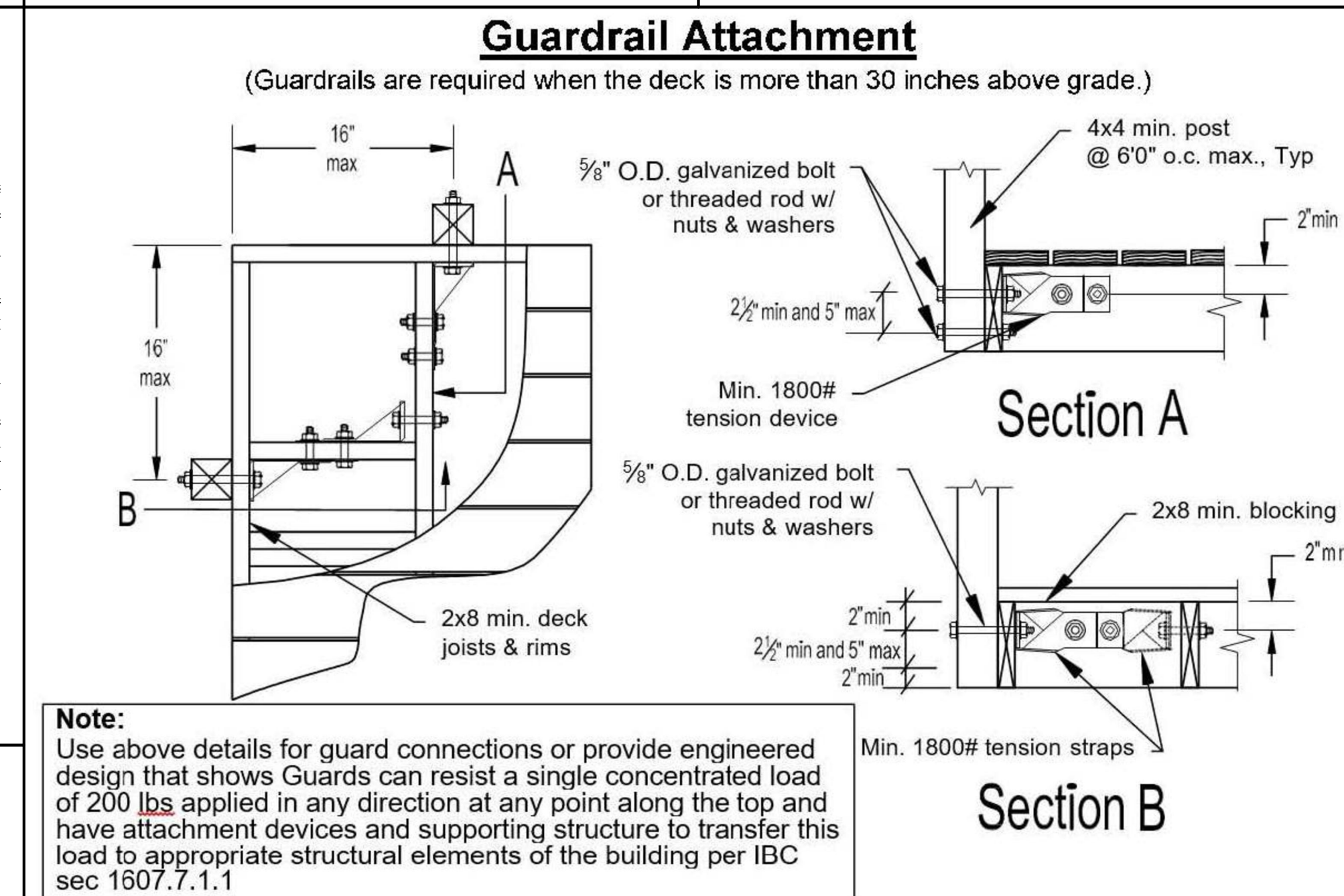
5 STAIR SECTION DETAIL
N.T.S.



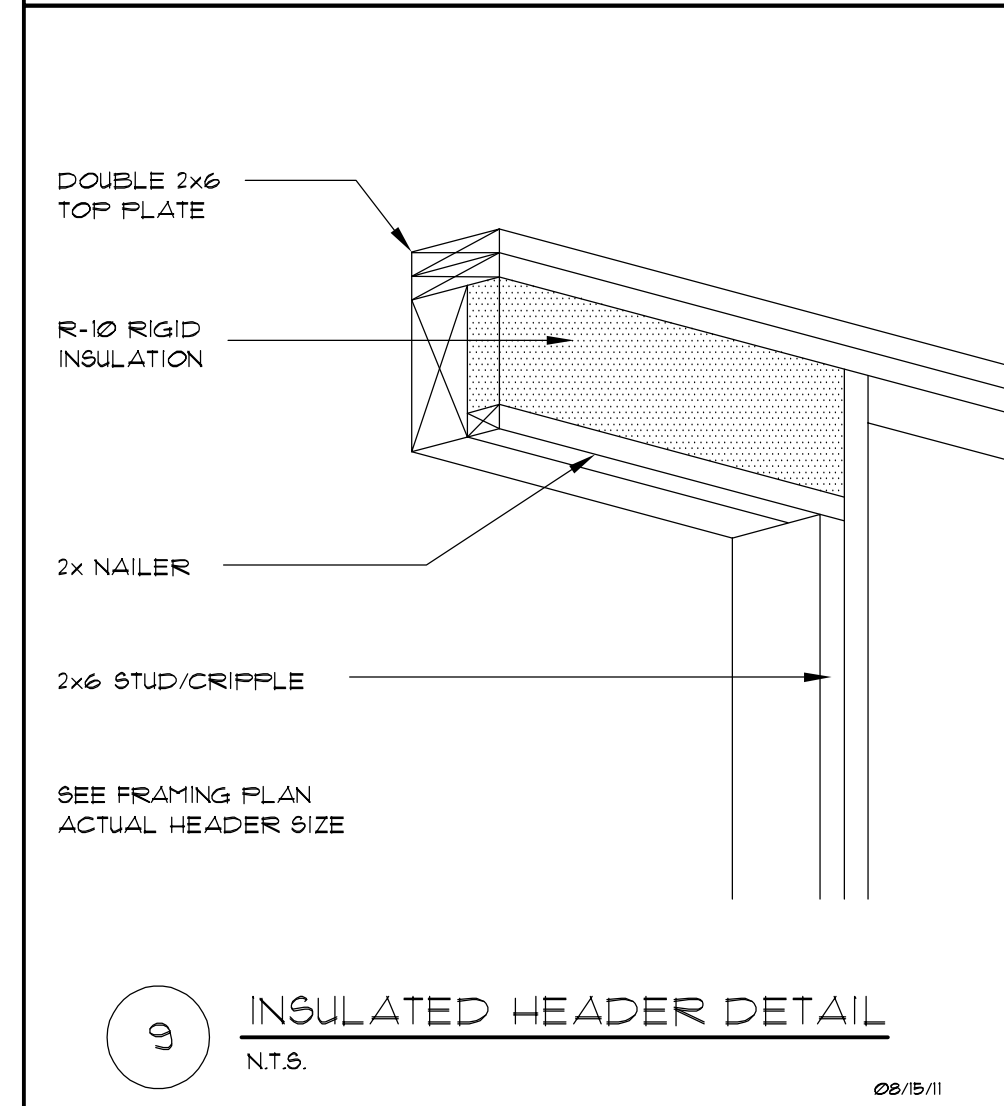
6 FLASHING DETAILS
N.T.S.



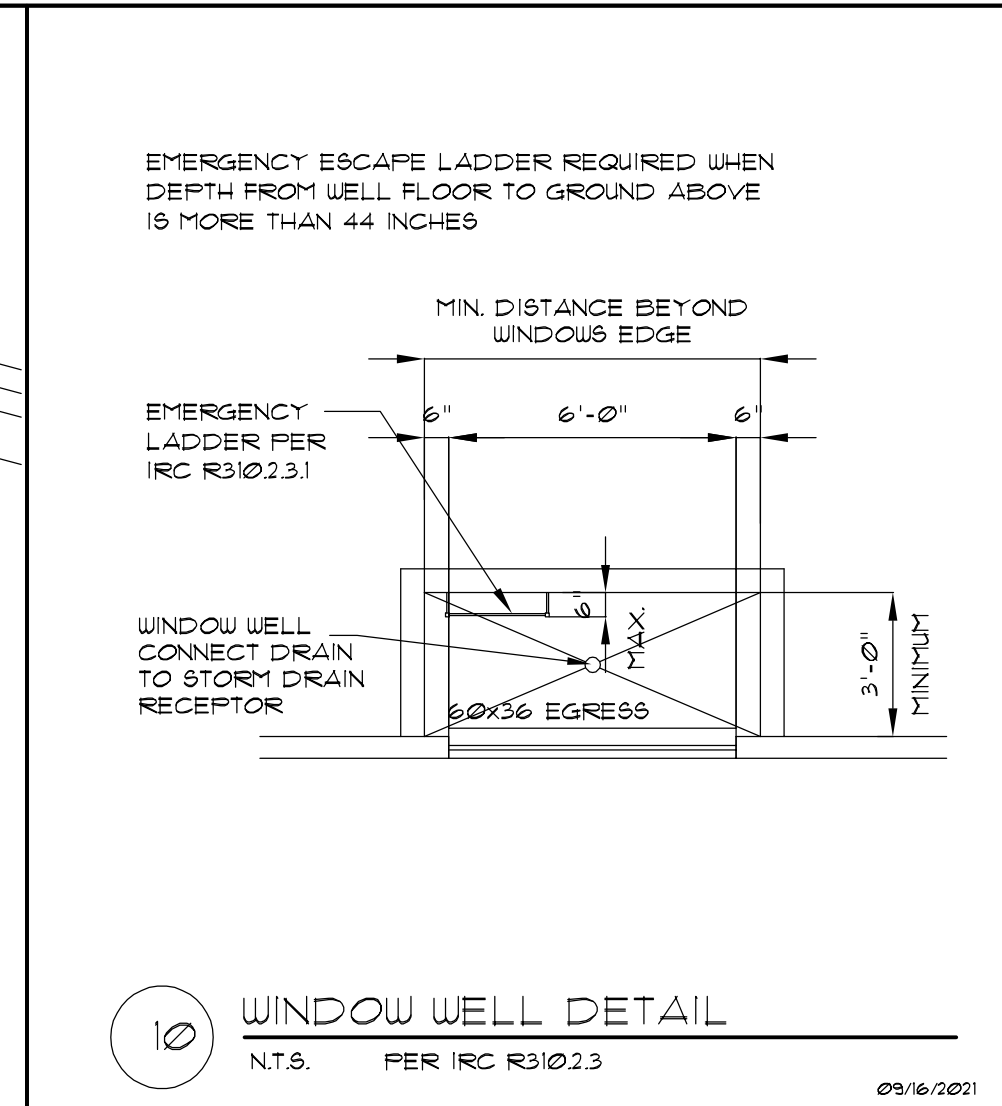
7 PLUMBING VENT FLASHING
N.T.S. 06/15/11



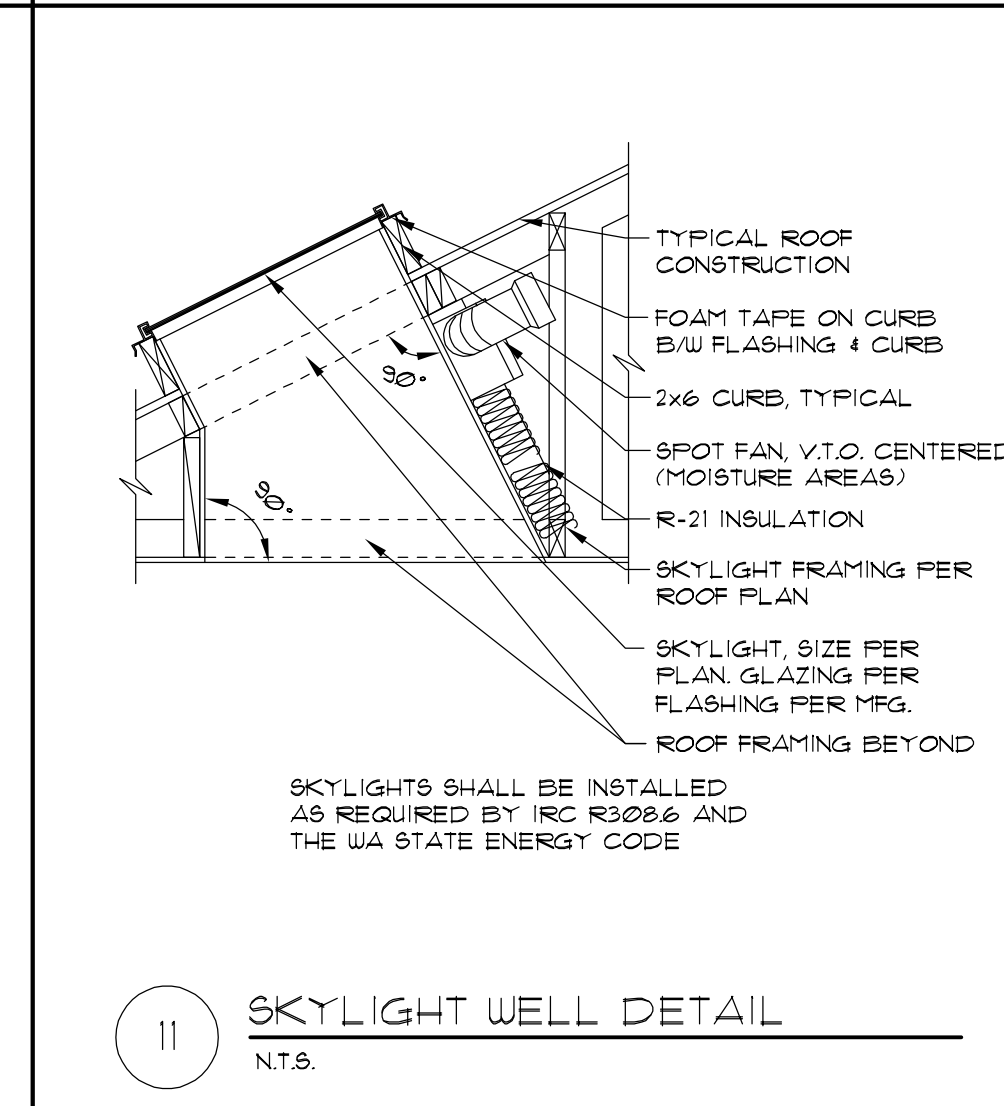
8 GUARD RAIL ATTACHMENT
N.T.S.



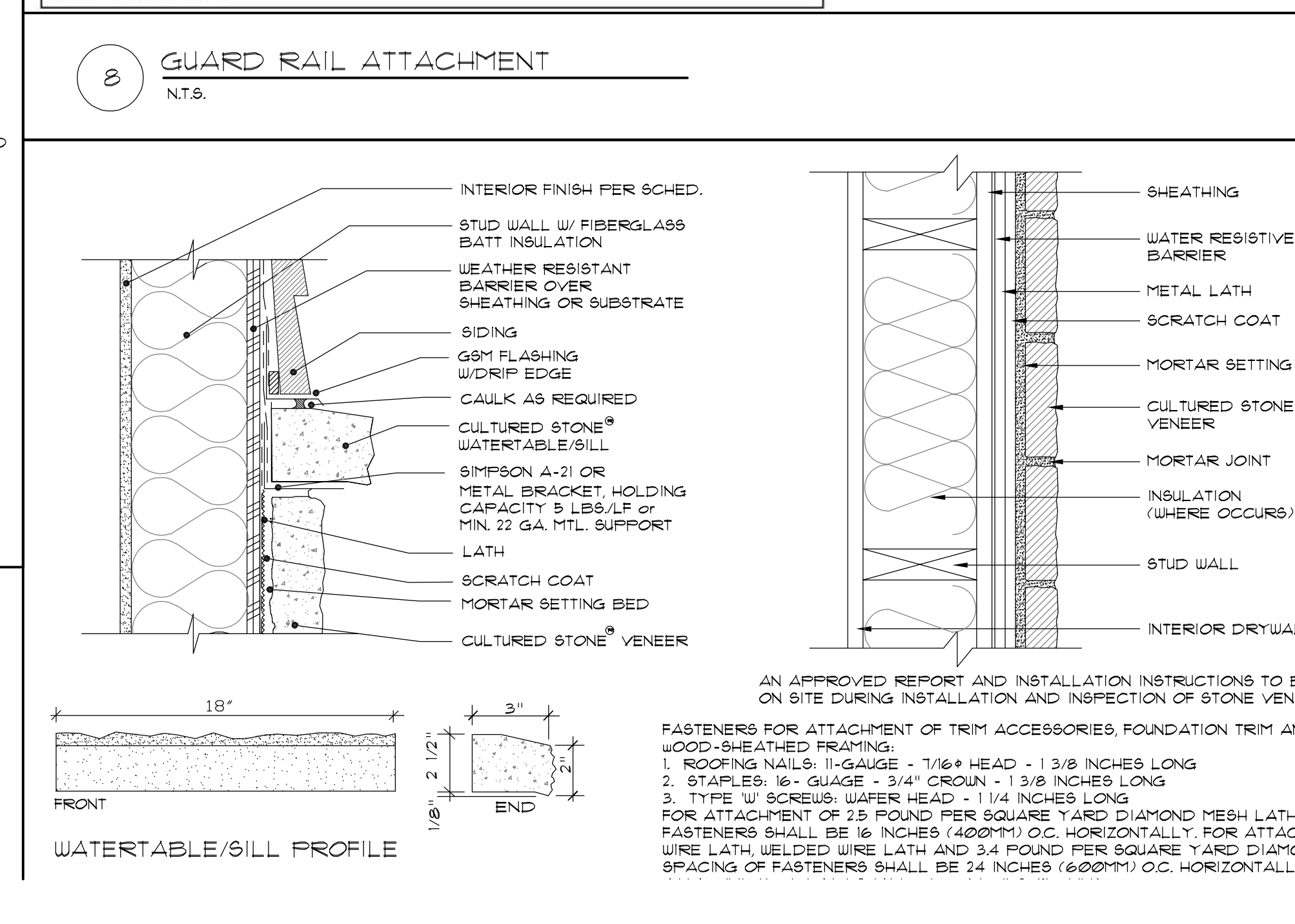
9 INSULATED HEADER DETAIL
N.T.S. 06/15/11



10 WINDOW WELL DETAIL
N.T.S. PER IRC R310.2.3 09/16/2012



11 SKYLIGHT WELL DETAIL
N.T.S.



9 WATER TABLE/SILL PROFILE
FRONT 18" 2 1/2" 1 1/2" 3" 1 1/2" END

AN APPROVED REPORT AND INSTALLATION INSTRUCTIONS TO BE ON SITE DURING INSTALLATION AND INSPECTION OF STONE VENEER

FASTENERS FOR ATTACHMENT OF TRIM ACCESSORIES, FOUNDATION TRIM AND LATH WOOD-SHEATHED FRAMING:
1. ROOFING NAILS: 11-GAUGE - 1 1/8" HEAD - 1 3/8" INCHES LONG
2. STAPLES: 16-GAUGE - 3/4" CROWN - 1 3/8" INCHES LONG
3. TYPE W SCREWS: WAFER HEAD - 1 1/4" INCHES LONG

FOR ATTACHMENT OF 25 POUND PER SQUARE YARD DIAMOND MESH LATH, THE SPACING OF FASTENERS SHALL BE 16 INCHES (406MM) O.C. HORIZONTALLY. FOR ATTACHMENT OF JOVEN WIRE LATH, WELDED WIRE LATH AND 3.4 POUND PER SQUARE YARD DIAMOND MESH LATH, THE SPACING OF FASTENERS SHALL BE 24 INCHES (609MM) O.C. HORIZONTALLY. VERTICAL

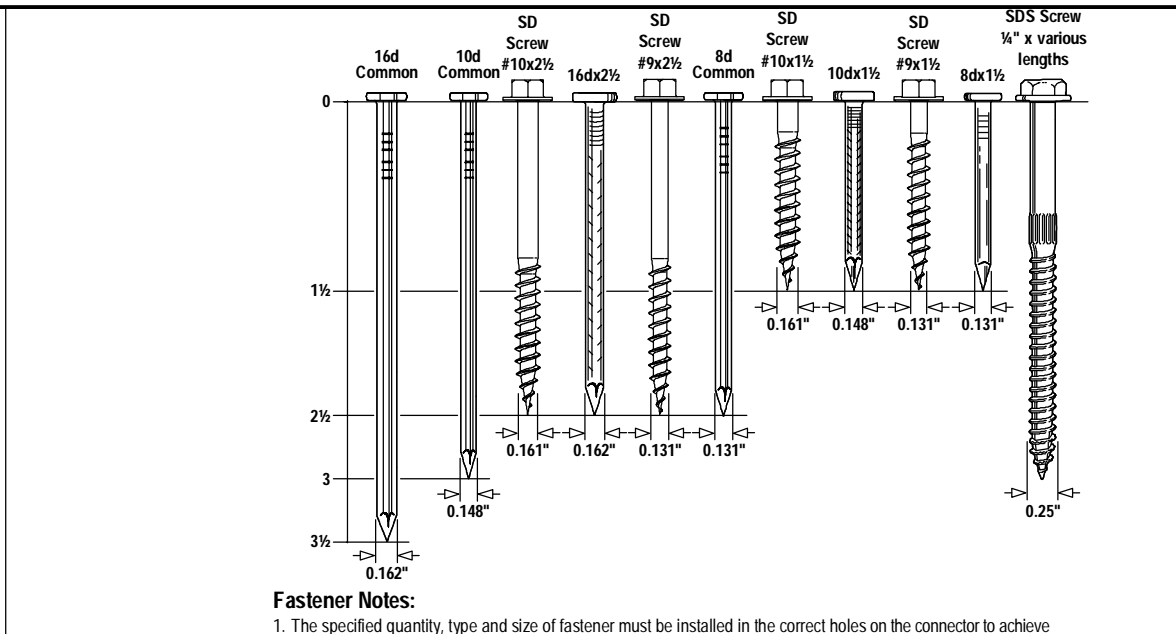
A NEW HOME AT:
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REVISED:

SHEET NO.
D2

Notes:

- Outdoor environments are generally more corrosive to steel. If you choose to use ZMAX® or HDG finish or stainless steel material on an outdoor project, you should periodically inspect your connectors and fasteners or have a professional inspection performed. Regular maintenance, including water-proofing of the wood used in your outdoor project is also a good practice.
- Coatings Available:
 - ZMAX: Galvanized (G185) 1.85 oz. of zinc per square foot of surface area. (hot-dip galvanized per ASTM A653 total both sides). These products require hot-dip galvanized fasteners (fasteners which meet the specifications of ASTM A153 both sides). These products require hot-dip galvanized fasteners (fasteners which meet the specifications of ASTM A153 both sides).
 - HDG - Hot Dip Galvanized: Products are hot-dip galvanized after fabrication (14 ga. and thicker). The coating weight increases with material thickness. The minimum specified coating weight is 2.0 oz. per square foot. (per ASTM A123 total both sides). These products require hot-dip galvanized fasteners (fasteners which meet the specifications of ASTM A153).
 - SS - Stainless Steel: Connectors are manufactured from Type 316L stainless steel, and provide greater durability against corrosion. Stainless-steel nails are required with stainless-steel products, and are available from Simpson Strong-Tie.
- When using stainless steel connectors, use stainless steel fasteners. When applications allow the use of ZMAX/HDG galvanized connectors, use HDG fasteners that meet the specifications of ASTM A153 or equivalent coating offered on Simpson Strong-Tie fasteners.
- Due to many variables involved with outdoor construction, Simpson Strong-Tie cannot provide estimates on service life of connectors, anchors or fasteners.
- To obtain optimal performance from Simpson Strong-Tie products, the products must be installed properly and used in accordance with the installation instructions and design limits provided by Simpson Strong-Tie.
- All installation notes and guidelines within the current Wood Construction Connectors catalog shall apply for the connectors, anchors, and fasteners shown.
- Simpson Strong-Tie reserves the right to change the specifications, design and model numbers without notice or liability for such changes.
- Simpson Strong-Tie does not guarantee the performance or safety of products that are modified, improperly installed or not used in accordance with the design.
- All references to bolts or machine bolts (MB) are structural quality through bolts (not lag screws or carriage bolts) equal to or better than ASTM A307, grade A. Bolt holes shall be at least a minimum 1/32" and no more than a maximum of 1/16" larger than the bolt diameter per 2005 NDS Section 11.1.2.
- Unless noted otherwise, all references to standard cut washers refer to Type A plain washers (W) conforming to the dimensions shown in ASME B18.22.1 for the appropriate rod sizes.
- Unless stated otherwise, Simpson Strong-Tie cannot and does not make any representation regarding the suitability of use or load-carrying capacities of connectors installed with improper fasteners.



STRUCTURAL NOTES

GENERAL REQUIREMENTS & DESIGN CRITERIA

BUILDING CODE & REFERENCE STANDARDS: THE "INTERNATIONAL BUILDING CODE", 2018 EDITION, GOVERNS THE DESIGN AND CONSTRUCTION OF THIS PROJECT. REFERENCE TO A SPECIFIC SECTION IN THE CODE DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE ENTIRE MATERIALS REFERENCE STANDARDS NOTED BELOW. THE LATEST EDITION OF THE MATERIALS REFERENCE STANDARDS SHALL BE USED.

ARCHITECTURAL DRAWINGS: REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, ELEVATIONS, SLOPES, DOOR AND WINDOW OPENINGS, NON-BEARING WALLS, STAIRS, CURBS, DRAINS, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES AND OTHER NONSTRUCTURAL ITEMS.

STRUCTURAL RESPONSIBILITIES: THE PE IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE PRIMARY STRUCTURE IN ITS COMPLETED STATE.

CONTRACTOR RESPONSIBILITIES: THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND ALL JOB RELATED SAFETY STANDARDS SUCH AS OSHA AND WSHA. THE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SHORING, BRACING AND OTHER ELEMENTS REQUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE WORK REQUIRED IN THE CONSTRUCTION DOCUMENTS AND THE REQUIREMENTS FOR EXECUTING IT PROPERLY.

DISCREPANCIES: IN CASE OF DISCREPANCIES BETWEEN THESE GENERAL NOTES, THE CONTRACT DRAWINGS AND SPECIFICATIONS, AND/OR REFERENCE STANDARDS, THE ENGINEER SHALL DETERMINE WHICH SHALL GOVERN. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

SITE VERIFICATION: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR CONSTRUCTION. CONFLICTS BETWEEN THE DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL UNDERGROUND UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION OR DRILLING.

WIND DESIGN: BASIC WIND SPEED (3-SECOND GUST), V = 85 MPH(ASD); WIND IMPORTANCE FACTOR, IW = 1.0; OCCUPANCY CATEGORY = II; EXPOSURE CATEGORY = C;

SEISMIC DESIGN: SEISMIC IMPORTANCE FACTOR IE = 1.0; OCCUPANCY CATEGORY = II; SS = 1.40G; S1 = 0.488G; SITE CLASS = D; SDS = 1.12G; SD1 = 0.488G; SEISMIC DESIGN CATEGORY = D; BASIC SEISMIC FORCE RESISTING SYSTEM = A-13 (BEARING WALL SYSTEMS) LIGHT-FRAMED WALLS WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE; CS = 0.12I; R = 6.5; ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7, SEC 12.8.

SNOW LOAD: GROUND SNOW LOAD, PG = 20 PSF; FLAT ROOF SNOW LOAD, PF = 25 PSF (DRIFT LOADS CONSIDERED PER ASCE 7 WHERE APPLICABLE); SNOW EXPOSURE FACTOR, CE = 1.0; SNOW IMPORTANCE FACTOR, IS = 1.0; THERMAL FACTOR, CT = 1.0.

LIVE LOADS:	ROOF (LIVE)	20 PSF
	ROOF (SNOW)	25 PSF
	RESIDENTIAL FLOOR	40 PSF
	RESIDENTIAL DECK	60 PSF

DESIGN-BY-OTHERS (DEFERRED SUBMITTALS) LOADS: ALL PRE-ENGINEERED/FABRICATED/MANUFACTURED OR OTHER PRODUCTS DESIGNED BY OTHERS SHALL BE DESIGNED FOR THE TRIBUTARY DEAD AND LIVE LOADS PLUS WIND, EARTHQUAKE, AND COMPONENT AND CLADDING LOADS WHEN APPLICABLE. DESIGN SHALL CONFORM TO THE PROJECT DRAWINGS AND SPECIFICATIONS, REFERENCE STANDARDS, AND GOVERNING CODE.

ROOF DEAD LOAD	15 PSF
TOP CHORD DEAD LOAD	8 PSF
BOTTOM CHORD DEAD LOAD	7 PSF
TRUSS UPLIFT LOAD (GROSS)	10 PSF

DEFERRED SUBMITTALS: ITEMS DESIGNED BY OTHERS SHALL INCLUDE CALCULATIONS, SHOP DRAWINGS AND PRODUCT DATA. DESIGN SHALL BE PREPARED BY THE SSE AND SUBMITTED TO THE ARCHITECT AND SER FOR REVIEW PRIOR TO SUBMISSION TO THE JURISDICTION FOR APPROVAL. THE SSE SHALL SUBMIT TO THE ENGINEER FOR REVIEW CALCULATIONS AND SHOP DRAWINGS THAT ARE STAMPED AND SIGNED BY THE SSE. REVIEW OF THE SSE'S SHOP DRAWINGS IS FOR GENERAL COMPLIANCE WITH DESIGN CRITERIA AND COMPATIBILITY WITH THE DESIGN OF THE PRIMARY STRUCTURE AND DOES NOT RELIEVE THE SSE OF RESPONSIBILITY FOR THAT DESIGN. ALL NECESSARY BRACING, TIES, ANCHORAGE, AND PROPRIETARY PRODUCTS SHALL BE FURNISHED AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS OR THE SSE'S DESIGN DRAWINGS AND CALCULATIONS.

INSPECTIONS: ALL CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL IN ACCORDANCE WITH IBC SEC 109. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE BUILDING OFFICIAL. SUBMIT COPIES OF ALL INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

PREFABRICATED CONSTRUCTION: ALL PREFABRICATED CONSTRUCTION SHALL CONFORM TO IBC SEC 1703.6.

GEOTECHNICAL INSPECTION: THE GEOTECHNICAL ENGINEER OR BUILDING OFFICIAL SHALL INSPECT ALL PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF CONCRETE AND REINFORCING STEEL AND PROVIDE A LETTER TO THE OWNER STATING THAT SOILS ARE ADEQUATE TO SUPPORT THE "ALLOWABLE FOUNDATION PRESSURE" SHOWN BELOW. SOIL VALUES SHALL BE FIELD VERIFIED BY THE BUILDING OFFICIAL OR THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

GEOTECHNICAL REPORT: RECOMMENDATIONS CONTAINED IN "GEOTECHNICAL ENGINEERING INVESTIGATION" G-6035 BY GROUP NORTHWEST, INC., DATED MAR 8, 2024 WERE USED FOR FOOTING DESIGN.

DESIGN SOIL VALUES:

ALLOWABLE BEARING PRESSURE (ASSUMED)	2000 PSF
PASSIVE LATERAL PRESSURE	350 PSF/FT
ACTIVE LATERAL PRESSURE (UNRESTRAINED)	35 PSF/FT
ACTIVE LATERAL PRESSURE (RESTRAINED)	45 PSF/FT
COEFFICIENT OF SLIDING FRICTION	0.35

SLABS-ON-GRADE & FOUNDATIONS: ALL FOUNDATIONS SHALL BEAR ON STRUCTURAL COMPACTED FILL OR COMPACTED NATIVE SOIL PER THE GEOTECHNICAL REPORT. ALL SLABS-ON-GRADE SHALL BE FOUNDED ON APPROPRIATE SUB-GRADE PREPARATION AS NOTED IN THE GEOTECHNICAL REPORT. EXTERIOR PERIMETER FOOTINGS SHALL BEAR NOT LESS THAN 18 INCHES BELOW FINISH GRADE, OR BY THE GEOTECHNICAL ENGINEER AND THE BUILDING OFFICIAL. INTERIOR FOOTINGS SHALL BEAR NOT LESS THAN 12 INCHES BELOW FINISH FLOOR.

COMPACTION: UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER, FOOTINGS SHALL BE PLACED ON COMPACTED MATERIAL AND SHALL BE WELL-GRADED GRANULAR MATERIAL WITH NO MORE THAN 5% PASSING A #2 SIEVE. FILLS PLACED SHALL BE IN MAXIMUM 8" LIFTS AND ALL BEARING SOILS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT USING THE MODIFIED PROCTOR TEST.

CAST-IN-PLACE CONCRETE & REINFORCEMENT

REFERENCE STANDARDS: CONFORM TO:

- (1) ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY".
- (2) IBC CHAPTER 19.
- (3) ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE", SEC 3 "REINFORCEMENT AND REINFORCEMENT SUPPORTS."

FIELD REFERENCE: THE CONTRACTOR SHALL KEEP A COPY OF ACI FIELD REFERENCE MANUAL, SP-15, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301) WITH SELECTED ACI AND ASTM REFERENCES."

CONCRETE MIXTURES: CONFORM TO ACI 318 CHAPTER 5 "CONCRETE QUALITY, MIXING, AND PLACING."

MATERIALS: CONFORM TO ACI 318 CHAPTER 3 "MATERIALS" FOR REQUIREMENTS FOR CEMENTITIOUS MATERIALS, AGGREGATES, MIXING WATER AND ADMIXTURES.	
REINFORCING BARS	ASTM A615, GRADE 60, DEFORMED BARS.
DEFORMED WELDED WIRE FABRIC	ASTM A497
BAR SUPPORTS	CRSI MSP-2, CHAPTER 3 "BAR SUPPORTS."
TIE WIRE	16.5 GAGE OR HEAVIER, BLACK ANNEALED.

MIX DESIGNS: PROVIDE A 5-SACK MINIMUM, 28-DAY COMPRESSIVE STRENGTH $f'_c = 2,500$ PSI CONCRETE MIX WITH MAXIMUM 3/4" AGGREGATE AND 0.50 W/C RATIO FOR ALL ISOLATED POST AND CONTINUOUS WALL FOOTINGS, SLABS-ON-GRADE, AND BASEMENT WALLS EXTENDING NO MORE THAN 8" ABOVE FINISH GRADE. ELEVATION FOR BASEMENT WALLS EXTENDING MORE THAN 8" ABOVE FINISH GRADE AND ALL SITE WALLS, PROVIDE A 5-1/2 SACK MINIMUM $f'_c = 3,000$ PSI CONCRETE MIX WITH MAXIMUM 3/4" AGGREGATE AND 0.50 W/C RATIO.

MIX DESIGN NOTES:

- (1) W/C RATIO: WATER-CEMENTITIOUS MATERIAL RATIOS SHALL BE BASED ON THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS.
- (2) CEMENTITIOUS CONTENT: THE USE OF FLY ASH, OTHER POZZOLANS, SILICA FUME, OR SLAG SHALL CONFORM TO ACI 301 SEC 4.2.2.8.B. MAXIMUM AMOUNT OF FLY ASH SHALL BE 20% OF TOTAL CEMENTITIOUS CONTENT UNLESS REVIEWED AND APPROVED OTHERWISE BY SER.

- (3) AIR CONTENT: CONFORM TO ACI 301 SEC 4.2.2.4. HORIZONTAL EXTERIOR SURFACES IN CONTACT WITH THE SOIL REQUIRE ENTRAINED AIR. USE "MODERATE EXPOSURE". VERTICAL EXTERIOR SURFACES REQUIRE "MODERATE EXPOSURE". TOLERANCE IS +/- 1-1/2%. AIR CONTENT SHALL BE MEASURED AT POINT OF PLACEMENT.
- (4) SLUMP: CONFORM TO ACI 301 SEC 4.2.2.2. SLUMP SHALL BE DETERMINED AT POINT OF PLACEMENT.
- (5) NON-CHLORIDE ACCELERATOR: NON-CHLORIDE ACCELERATING ADMIXTURE MAY BE USED IN CONCRETE SLABS PLACED AT AMBIENT TEMPERATURES BELOW 50°F AT THE CONTRACTOR'S OPTION.

FORMWORK: CONFORM TO ACI 301 SEC 2 "FORMWORK AND FORM ACCESSORIES." REMOVAL OF FORMS SHALL CONFORM TO SEC 2.3.2 EXCEPT STRENGTH INDICATED IN SEC 2.3.2.5 SHALL BE 0.75 f'_c .

MEASURING, MIXING, AND DELIVERY: CONFORM TO ACI 301 SEC 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: CONFORM TO ACI 301 SEC 5.

REBAR FABRICATION & PLACING: CONFORM TO ACI 301, SEC 3.2.2 "FABRICATION", AND ACI SP-66 "ACI DETAILING MANUAL." CONFORM TO ACI 301, SEC 3.3.2 "PLACEMENT." PLACING TOLERANCES SHALL CONFORM TO SEC 3.3.2.1 "TOLERANCES."

SPLICING: CONFORM TO ACI 301, SEC 3.3.2.7. REFER TO PLANS FOR TYPICAL SPLICES.

FIELD BENDING: CONFORM TO ACI 301 SEC 3.3.2.8. "FIELD BENDING OR STRAIGHTENING." BAR SIZES #3 THROUGH #5 MAY BE FIELD BENT COLD THE FIRST TIME. OTHER BARS REQUIRE PREHEATING. DO NOT TWIST BARS.

CORNER BARS: PROVIDE MATCHING-SIZED "L" CORNER BARS FOR ALL HORIZONTAL WALL AND FOOTING BARS WITH THE APPROPRIATE SPLICE LENGTH, UNO.

CONCRETE COVER: CONFORM TO THE FOLLOWING COVER REQUIREMENTS FROM ACI 301, TABLE 3.3.2.3:	
CONCRETE CAST AGAINST EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER (#5 & SMALLER)	1-1/2"
BARS IN SLABS AND WALLS	3/4"

CONSTRUCTION JOINTS: CONFORM TO ACI 301 SEC 2.2.2.5, 5.1.2.3A, 5.2.2.1, AND 5.3.2.6. CONSTRUCTION JOINTS SHALL BE LOCATED AND DETAILED AS ON THE CONSTRUCTION DRAWINGS. USE OF AN ACCEPTABLE ADHESIVE, SURFACE RETARDER, PORTLAND CEMENT GROUT, OR ROUGHENING THE SURFACE IS NOT REQUIRED UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. WHERE SHEAR BOND IS REQUIRED, ROUGHEN SURFACES TO 1/4" AMPLITUDE.

WOOD FRAMING

REFERENCE STANDARDS: CONFORM TO:

- (1) IBC CHAPTER 23 "WOOD".
- (2) NDS AND NDS SUPPLEMENT - "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION".
- (3) ANS/TP1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION".

DEFERRED SUBMITTALS: SUBMIT PRODUCT DATA AND PROOF OF ICC APPROVAL FOR FRAMING MEMBERS AND FASTENERS THAT HAVE BEEN DESIGNED BY OTHERS. SUBMIT CALCULATIONS PREPARED BY THE SSE IN THE STATE OF WASHINGTON FOR ALL MEMBERS AND CONNECTIONS DESIGNED BY OTHERS ALONG WITH SHOP DRAWINGS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS AND WEB STIFFENERS SHALL BE DETAILED AND FURNISHED BY THE SUPPLIER. TEMPORARY AND PERMANENT BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DEFLECTION LIMITS SHALL BE AS NOTED UNDER DESIGN LOADS SECTION.

IDENTIFICATION: ALL SAWN LUMBER AND PRE-MANUFACTURED WOOD PRODUCTS SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION ISSUED BY THE CERTIFYING AGENCY.

MATERIALS:

SAWN LUMBER: CONFORM TO GRADING RULES OF WMPA, WCLIB OR NLGA. FINGER JOINTED STUDS ACCEPTABLE AT INTERIOR WALLS ONLY.

MEMBER USE	SIZE	SPECIES	GRADE
STUDS & POSTS	2x, 4x	HEM-FIR	NO. 2
RAFTERS	2x4 - 2x10	HEM-FIR	NO. 2
BEAMS	4x8 - 4x12	HEM-FIR	NO. 2
BEAMS	6x8 - 6x12	HEM-FIR	NO. 2
POSTS & TIMBERS	6x, 8x	DOUG-FIR	NO. 2

GLUED LAMINATED TIMBER: CONFORM TO AITC 117 "STANDARD SPECIFICATIONS FOR STRUCTURAL GLUE-LAMINATED TIMBER OF SOFTWOOD SPECIES, MANUFACTURING AND DESIGN" AND ANS/AITC A190.1 "STRUCTURAL GLUED LAMINATED TIMBER." CAMBER ALL GLUED LAMINATED MEMBERS BEAMS TO 2000" RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.

MEMBER USE	SIZES	SPECIES	STRESS CLASS	USES
BEAMS	ALL	DF/DF	24F-1.8E	SIMPLE SPANS
ALL	ALL	DF/DF	24F-1.8E [(-FB)=(+FB)]	CANTILEVER SPANS

METAL PLATE CONNECTED WOOD ROOF TRUSSES: CONFORM TO IBC SEC 2303.4 "TRUSSES."

WOOD STRUCTURAL SHEATHING (PLYWOOD): WOOD APA-RATED STRUCTURAL SHEATHING INCLUDES: ALL VENEER PLYWOOD, ORIENTED STRAND BOARD, WATERBOARD, PARTICLEBOARD, 11-11 SIDING, AND COMPOSITES OF VENEER AND WOOD BASED MATERIAL. CONFORM TO PRODUCT STANDARDS PS-1 AND PS-2 OF THE U.S. DEPT. OF COMMERCE AND THE AMERICAN PLYWOOD ASSOCIATION (APA).

LOCATION	THICKNESS	SPAN RATING	PLYWOOD GRADE	EXPOSURE
ROOF	15/32"		32/16	C-D
FLOOR	23/32" T&G		24 OC	STURD-I-FLOOR
WALLS	15/32"		32/16	C-D
WALLS(ALT)	7/16" OSB		24/16	C-D

JOIST HANGERS AND CONNECTORS: SHALL BE "STRONG TIE" BY SIMPSON COMPANY OR USP EQUIVALENT AS SPECIFIED IN THEIR LATEST CATALOGS. ALTERNATE CONNECTORS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUIVALENT OR GREATER LOAD CAPACITIES AND ARE REVIEWED AND APPROVED BY THE SER PRIOR TO ORDERING. CONNECTORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE 1/2 OF THE NAILS OR BOLTS IN EACH MEMBER. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE FULL LENGTH COMMON. NAIL STRIPS TO WOOD FRAMING AS LATE AS POSSIBLE IN THE FRAMING PROCESS TO ALLOW THE WOOD TO SHRINK AND THE BUILDING TO SETTLE.

NAILS AND STAPLES: CONFORM TO IBC SEC 2303.6 "NAILS AND STAPLES," UNLESS NOTED ON PLANS, NAIL PER IBC TABLE 2304.9.1. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE COMMON. NAIL SIZES SPECIFIED ON THE DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8d	2-1/2"	0.131"
10d	3"	0.148"
(8d & 10d ALTERNATIVE) PASLODE TETRAGRIP NAILS	2-3/8"	0.113"
12d (16d SINKER)	3-1/4"	0.148"
16d	3-1/2"	0.162"

LAG BOLTS/BOLTS: CONFORM TO ASTM A307.

NAILING REQUIREMENTS: PROVIDE MINIMUM NAILING IN ACCORDANCE WITH IBC TABLE 2304.9.1 "FASTENING SCHEDULE" EXCEPT AS NOTED ON THE DRAWINGS. NAILING FOR ROOF/FLOOR DIAPHRAGMS/SHEAR WALLS SHALL BE PER DRAWINGS. NAILS SHALL BE DRIVEN FLUSH AND SHALL NOT FRACTURE THE SURFACE OF SHEATHING.

STANDARD LIGHT-FRAME CONSTRUCTION: UNLESS NOTED ON THE PLANS, CONSTRUCTION SHALL CONFORM TO IBC SEC 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION" AND IBC SEC 2304 "GENERAL CONSTRUCTION REQUIREMENTS."

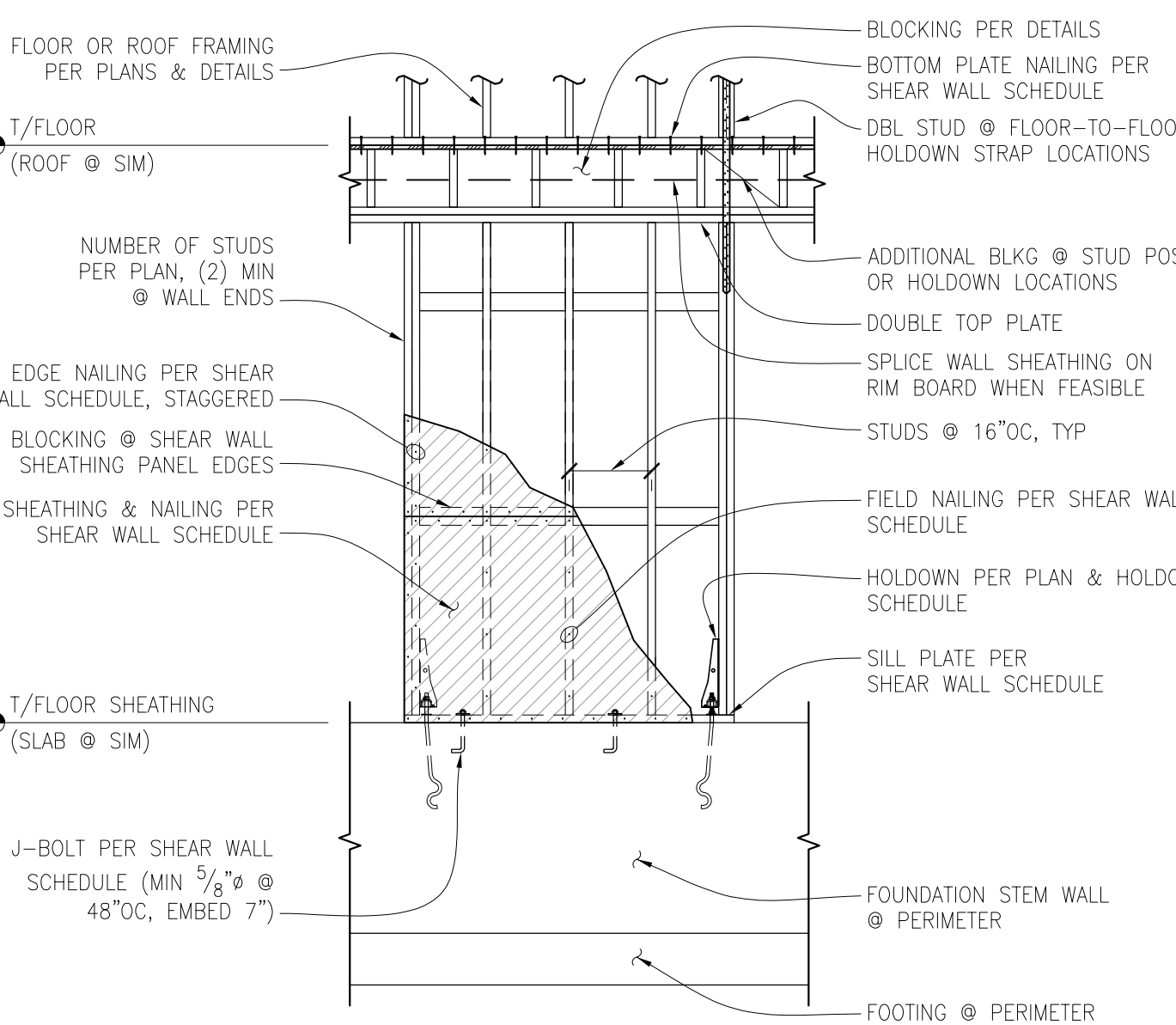
(1) **WALL FRAMING:** UNLESS OTHERWISE NOTED, ALL INTERIOR WALLS SHALL BE 2x4 @ 16"OC AND ALL EXTERIOR WALLS SHALL BE 2x6 @ 16"OC. PROVIDE (2)BUNDLED STUDS MIN AT WALL ENDS AND EACH SIDE OF ALL OPENINGS. UNO, ALL SOLID SAWN LUMBER HEADERS SHALL BE SUPPORTED BY A MINIMUM OF (1)TRIM AND (1)KING STUD AND ALL GULUM OR ENGINEERED WOOD HEADERS BY (2)TRIM AND (2)KING STUDS. AT FRAMED WALLS, UNO, ALL SOLID SAWN LUMBER BEAMS SHALL BE SUPPORTED ON A MINIMUM OF (2) BUNDLED 2X STUDS AND ALL GULUM OR ENGINEERED WOOD BEAMS ON A MINIMUM OF (3) BUNDLED 2X STUDS. STITCH-NAIL BUNDLED STUDS WITH (2)10D @ 12"OC, UNO, ALL INTERIOR AND EXTERIOR HEADERS SHALL BE 4X6. PROVIDE SOLID BLOCKING THRU FLOORS TO SUPPORTS BELOW FOR BEARING WALLS AND POSTS. UNO, ATTACH BOTTOM PLATES OF STUD WALLS TO WOOD FRAMING BELOW WITH 16D @ 12"OC OR TO CONCRETE WITH 5/8"-DIA. ANCHOR BOLTS X 7" EMBEDMENT AT 48"OC. REFER TO SHEAR WALL SCHEDULE FOR SPECIFIC SHEATHING, STUD, AND NAILING REQUIREMENTS AT SHEAR WALLS. UNO, PROVIDE GYPSUM SHEATHING ON INTERIOR SURFACES AND PLYWOOD SHEATHING ON EXTERIOR SURFACES.

- (2) **ROOF/FLOOR FRAMING:** UNLESS OTHERWISE NOTED, PROVIDE DOUBLE JOISTS/RAFTERS UNDER ALL PARALLEL BEARING PARTITIONS AND SOLID BLOCKING AT ALL BEARING POINTS. PROVIDE DOUBLE JOISTS AROUND ALL ROOF/FLOOR OPENINGS. UNO, MULTI-JOISTS/RAFTERS SHALL BE STITCH-NAILED TOGETHER WITH (2)10D @ 12"OC. PROVIDE ROOF SHEATHING EDGE CLIPS CENTERED BETWEEN FRAMING AT UNBLOCKED PLYWOOD EDGES. ALL FLOOR SHEATHING SHALL HAVE TONGUE AND GROOVE JOINTS OR BE SUPPORTED BY SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ROOF/FLOOR SHEATHING. ROOF/FLOOR SHEATHING SHALL BE LAID FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS.

MOISTURE CONTENT: WOOD MATERIAL USED FOR THIS PROJECT SHALL HAVE MAXIMUM MOISTURE CONTENT OF 19% EXCEPT FOR THE PRESSURE-TREATED WOOD SILL PLATE.

PRESERVATIVE TREATMENT: WOOD MATERIALS ARE REQUIRED TO BE "TREATED WOOD" UNDER CERTAIN CONDITIONS IN ACCORDANCE WITH IBC SEC 2304.11 "PROTECTION AGAINST DECAY AND TERMITES". CONFORM TO THE APPROPRIATE STANDARDS OF THE AMERICAN WOOD-PRESERVERS ASSOCIATION (AWPA) FOR SAWN LUMBER, GLUED LAMINATED TIMBER, ROUND POLES, WOOD PILES AND MARINE PILES. FOLLOW AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) QUALITY ASSURANCE PROCEDURES. PRODUCTS SHALL BEAR THE APPROPRIATE MARK.

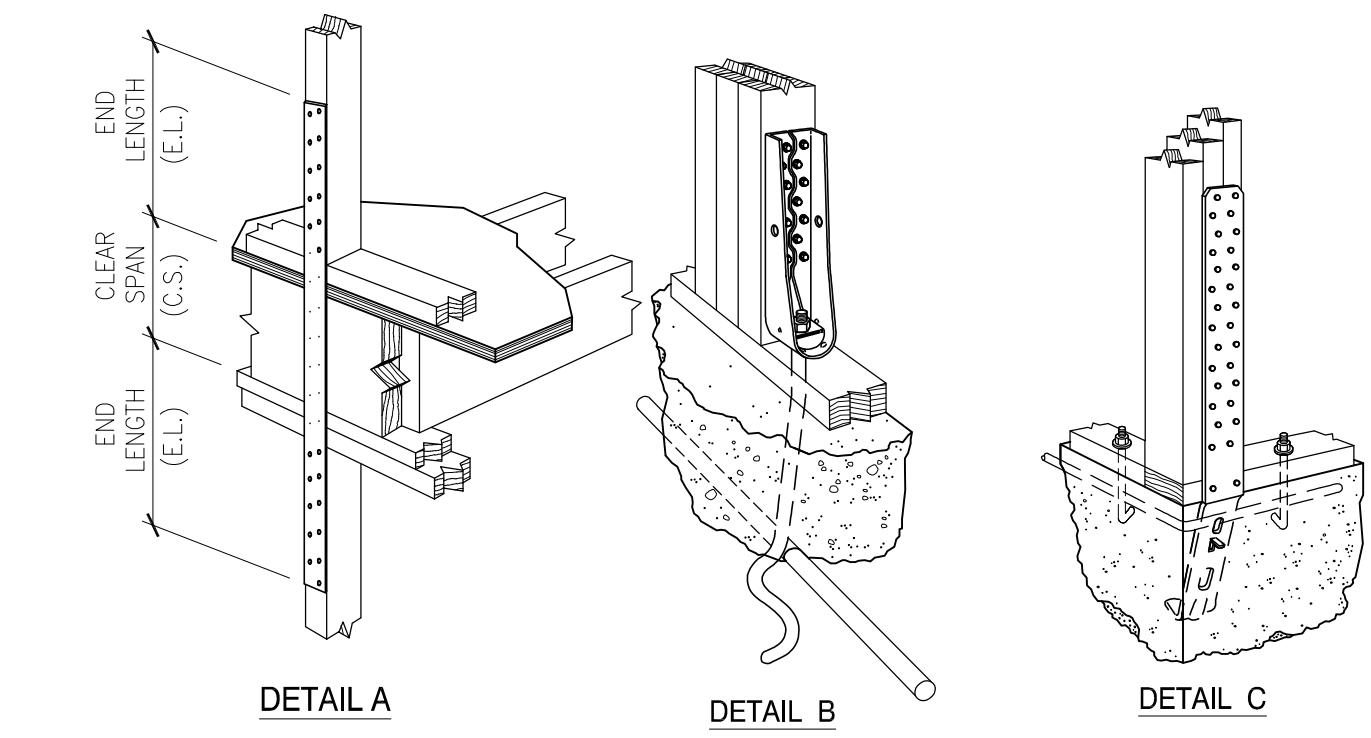
METAL CONNECTORS/PT WOOD: CK ENGINEERING LLC RECOMMENDS THAT ALL METAL HARDWARE AND FASTENERS IN CONTACT WITH TREATED LUMBER BE STAINLESS STEEL TYPE 316L. AT THE OWNER'S RISK AND DISCRETION, HOT-DIPPED GALVANIZED METAL HARDWARE AND FASTENERS MAY BE INVESTIGATED FOR USE IN LIEU OF STAINLESS STEEL PROVIDED THAT THE FINISH HAS A MINIMUM ZINC CONTENT OF AT LEAST 1.85 OZ/SF AND ITS USE IS COORDINATED BY THE CONTRACTOR AND WOOD SUPPLIER FOR THE EXPECTED ENVIRONMENT AND MOISTURE EXPOSURE FOR APPROPRIATE USE BASED ON THE METHOD OF PRESERVATIVE TREATMENT OF THE WOOD.



TYPICAL SHEAR WALL ELEVATION

SCALE: N.T.S.

7



MODEL # (1)	ANCHORAGE TYPE (2)(3)(6)	FASTENERS	END STUD REQUIRED (2)(3)	CAPACITY (LBS)	
				DOUG-FIR	HEM-FIR
CS14	FLR-TO-FLR STRAP (E.L.=19")	(30) 10d COMMON	2x STUD	2,490	2,490
MST48	FLR-TO-FLR STRAP (CNTR'D ON C.S.)	(32) 16d COMMON	(2) 2x STUDS	3,960	3,425
MST60	FLR-TO-FLR STRAP (CNTR'D ON C.S.)	(46) 16d COMMON	(2) 2x STUDS	6,235	5,405
MST72	FLR-TO-FLR STRAP (CNTR'D ON C.S.)	(62) 16d COMMON	(2) 2x STUDS	6,730	6,475
CMST12	FLR-TO-FLR STRAP (E.L.=38")	(84) 16d COMMON	(3) 2x STUDS	9,215	9,215
STHD14/RJ	CAST-IN-PLACE	(22) 16d SINKERS	(2) 2x STUDS ⁷	3,695	3,695
HDU11	SB1x30	(30) 1 1/2" x 2 1/2" SDS WOOD SCREWS	6x6 DF#2 MIN.	9,335	
HDU14	PAB8-36	(4) 1"Ø	6X6 DF#2 MIN.	14,445	
HD19	PAB9-36	(5) 1"Ø	6X6 DF#2 MIN.	16,775	

- NOTES:
- HOLD-DOWNS SPECIFIED ARE AS MANUFACTURED BY SIMPSON ANCHOR TIE DOWN CO., INC.; ACCEPTABLE EQUIVALENT PRODUCT SUBSTITUTIONS ARE AVAILABLE FROM OTHER MANUFACTURERS WITH SER APPROVAL.
 - LOCATE ALL HOLD-DOWNS AT ENDS OF ALL SHEAR WALLS & FASTEN TO BUNDLED END STUDS.
 - BUNDLED END STUDS SHOULD BE STITCH-NAILED TOGETHER USING MINIMUM (2) 16d @ 10"OC, UNO.
 - LOCATE "HDU#", "LSTDH#" & "STHD#" HOLD-DOWNS AT CONCRETE FOUNDATION LEVEL. (DETAIL B & C) LOCATE "CS#", "MST", "MSTC#" & "CMST#" STRAPS AT FLOOR-TO-FLOOR CONNECTIONS. (DETAIL A)
 - ALL HOLD-DOWN ANCHOR BOLTS SHALL BE MIN 5" FROM CONCRETE WALL ENDS.
 - USE "SSTB" FOR 2x SILL PLATES & "SSTBL" FOR 3x SILL PLATES.
 - ADDITIONAL END STUD REQUIRED TO MEET MINIMUM 1 1/2" EDGE DISTANCE FROM CONCRETE CORNER TO "STHD" STRAP. USE "RJ" STYLE WITH "STHD" WHERE RIM JOIST IS PRESENT.
 - INSTALL ALL HOLD-DOWN HARDWARE PER MANUFACTURER'S INSTRUCTIONS & RECOMMENDATIONS.

HOLD-DOWN SCHEDULE

SCALE: N.T.S.

8

WOOD-FRAMED SHEAR WALL SCHEDULE

SW TYPE	SW SHEATHING APA-RATED (1, 2, 10)	NAIL SIZE & SPACING @ PANEL EDGES (4, 5, 6)	RIM JOIST OR BLOCKING ATTACHMENT TO TOP PLATE BELOW (8, 9)	BOTTOM PLATE & EDGE MEMBER REQUIREMENTS (3, 7, 13)		SILL PLATE REQUIREMENTS		SHEAR LOAD CAPACITY (PLF)
				SHEAR NAILING TO WOOD FRAMING BELOW	BOTTOM P. AT FRAMING	ANCHOR BOLT TO CONCRETE FOUNDATION (10)	SILL P. AT FOUNDATION (11)	
SW-6	15/32" CD-EXT	0.131"Ø x 2 1/2" @ 6"OC	CLIP @ 18"OC	0.148"Ø x 3 1/4" @ 6"OC	2x	5/8"Ø @ 48"OC	P.T. 2x	242
SW-4	15/32" CD-EXT	0.131"Ø x 2 1/2" @ 4"OC	CLIP @ 14"OC	0.148"Ø x 3 1/4" @ 4"OC	3x	5/8"Ø @ 32"OC 5/8"Ø @ 48"OC	P.T. 2x P.T. 3x (15)	353
SW-3	15/32" CD-EXT	0.131"Ø x 2 1/2" @ 3"OC, STAGGERED	CLIP @ 12"OC	0.148"Ø x 3 1/4" @ 4"OC & CLIP @ 18"OC	3x (15)	5/8"Ø @ 24"OC 5/8"Ø @ 32"OC	P.T. 2x P.T. 3x (15)	456
SW-2	15/32" CD-EXT	0.131"Ø x 2 1/2" @ 2"OC, STAGGERED	CLIP @ 8"OC	0.148"Ø x 3 1/4" @ 4"OC & CLIP @ 16"OC	3x (15)	5/8"Ø @ 16"OC 5/8"Ø @ 24"OC	P.T. 2x P.T. 3x (15)	595
2SW-4	15/32" CD-EXT BOTH SIDE	0.131"Ø x 2 1/2" @ 4"OC, STAGGERED	CLIP @ 6"OC	0.148"Ø x 3 1/4" @ 4"OC & CLIP @ 12"OC	3x (15)	5/8"Ø @ 24"OC	P.T. 3x (15)	707



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NEW HOME AT:
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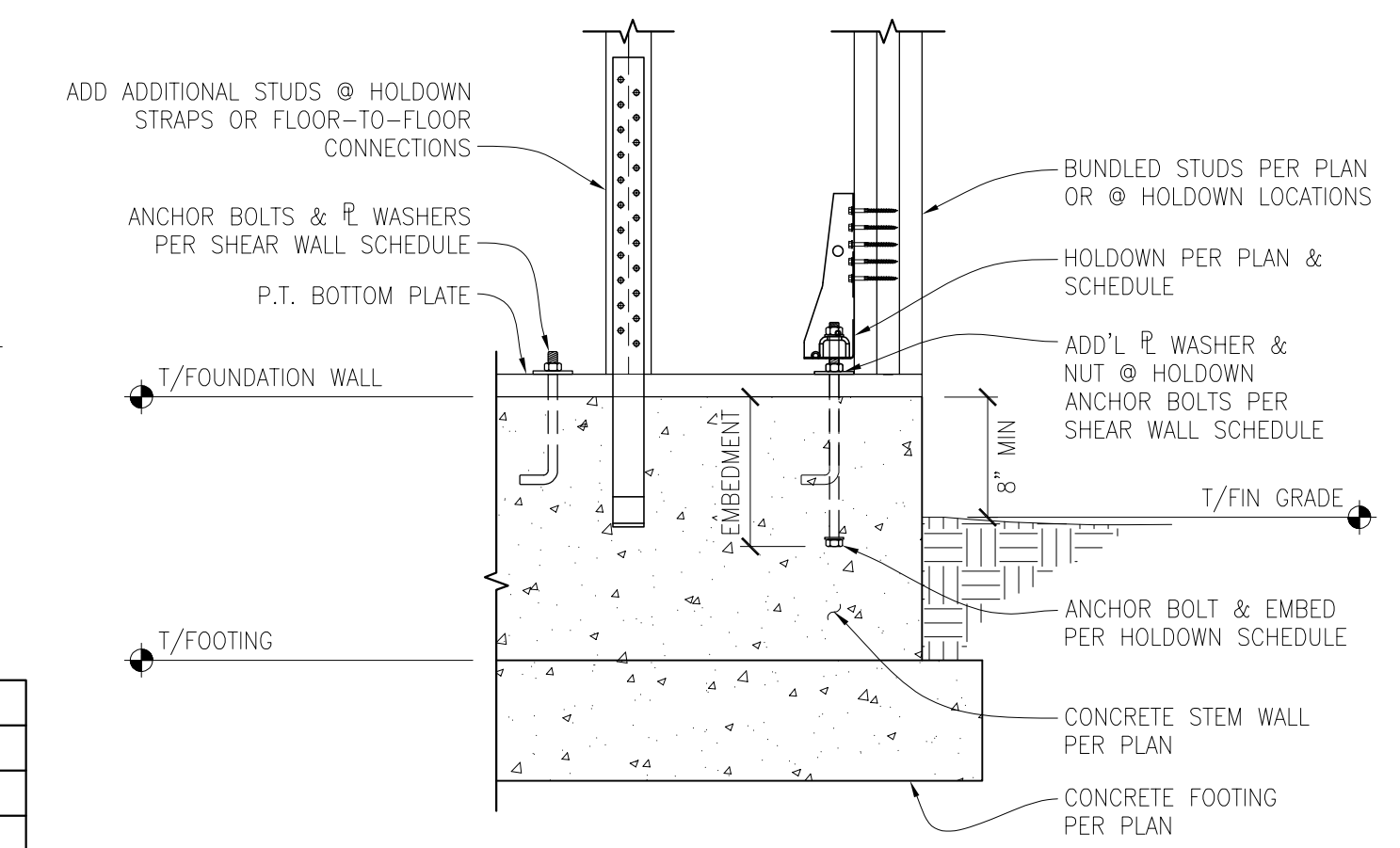
REVISION #	DATE	DESCRIPTION
1	03-15-2024	BDC REVIEW
2	10-20-2024	REVISIONS

Drawn By: PK
 Checked By: SC
 Date: 10-20-2024

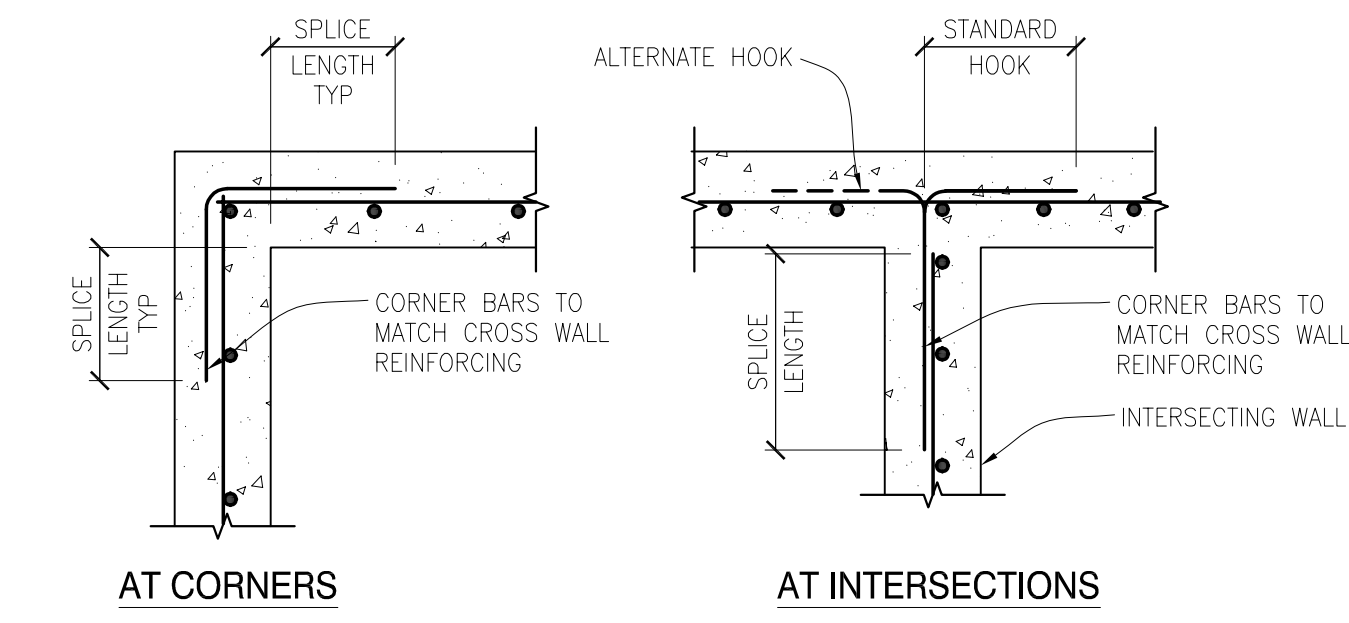
CK JOB NO.
23-043

STRUCTURAL
 DETAILS

S-2.0

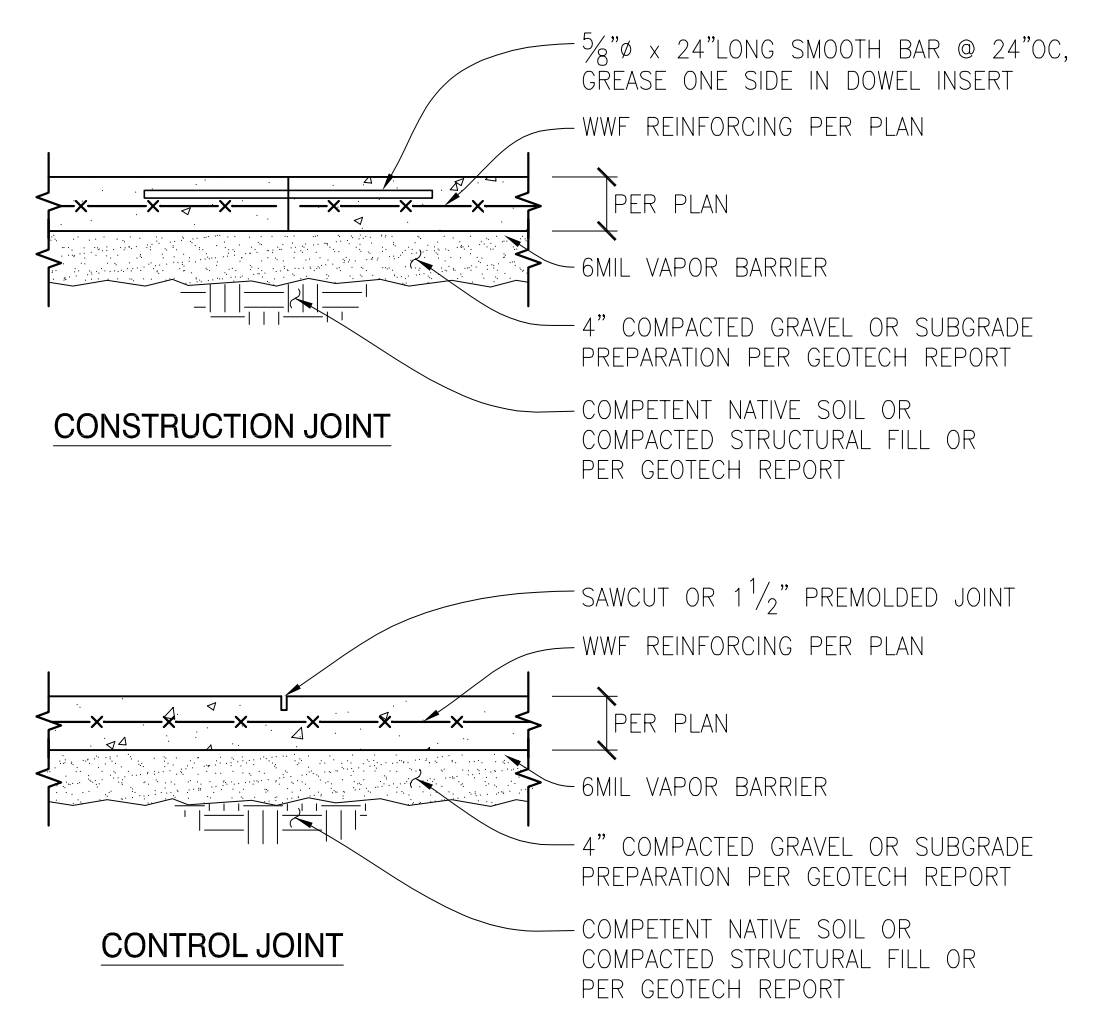


TYPICAL SHEAR WALL HOLDDOWN CONNECTIONS AT FOUNDATION CONCRETE WALL
 SCALE: 3/4" = 1'-0"



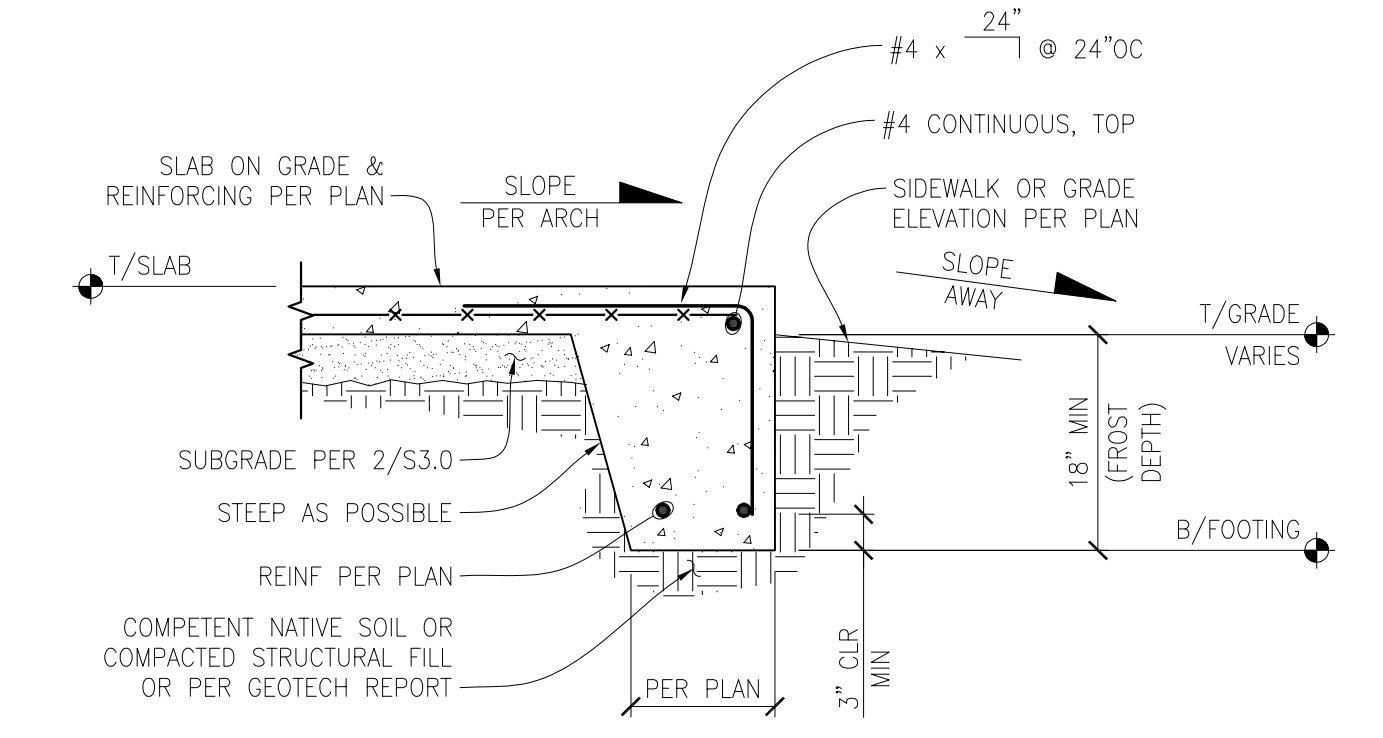
TYPICAL CORNER BARS AT CONCRETE WALLS - SINGLE MAT
 SCALE: N.T.S.

SPLICE LENGTH	
BAR	LENGTH
#4	28"
#5	36"

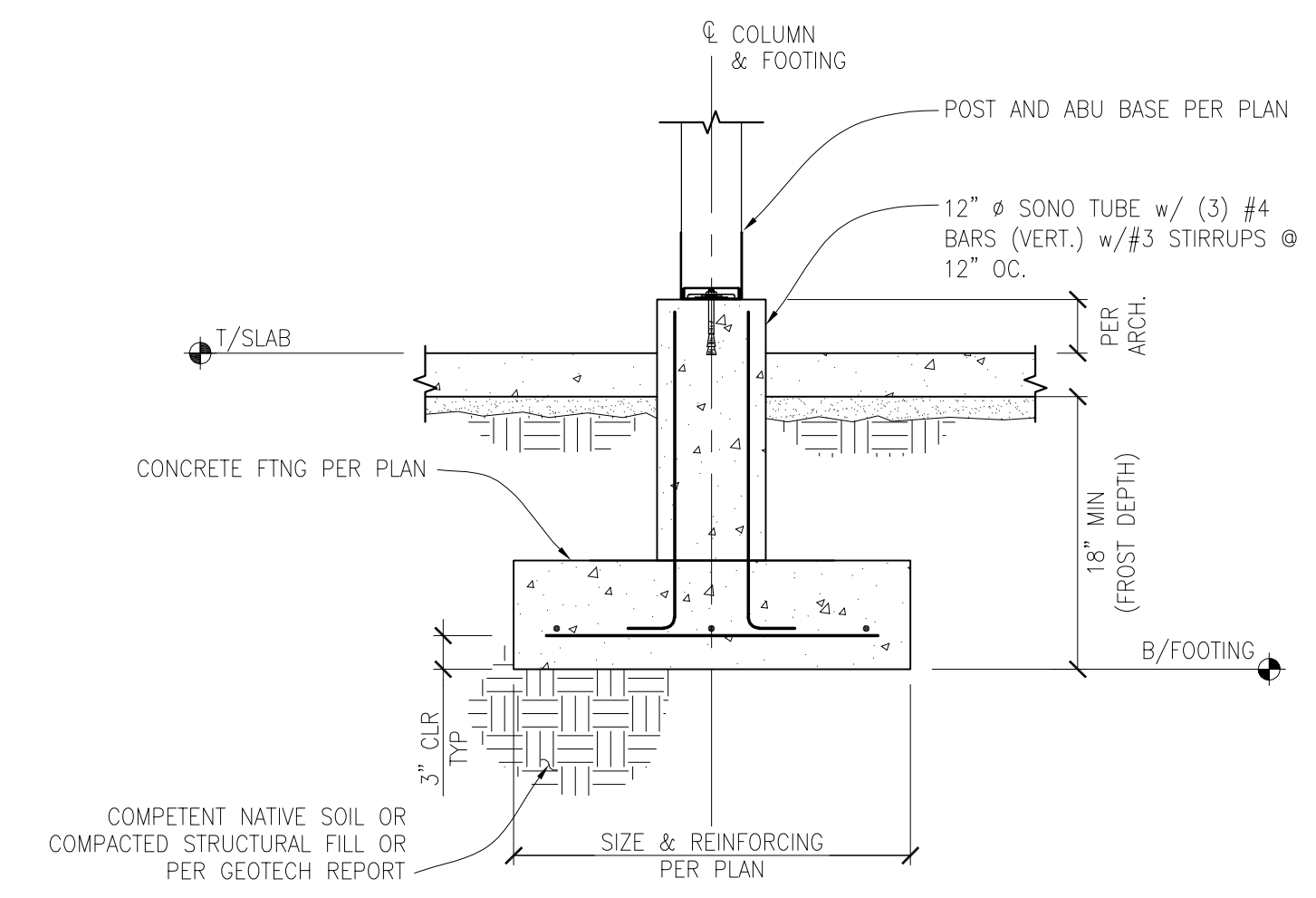


TYPICAL SLAB ON GRADE JOINT DETAILS
 SCALE: N.T.S.

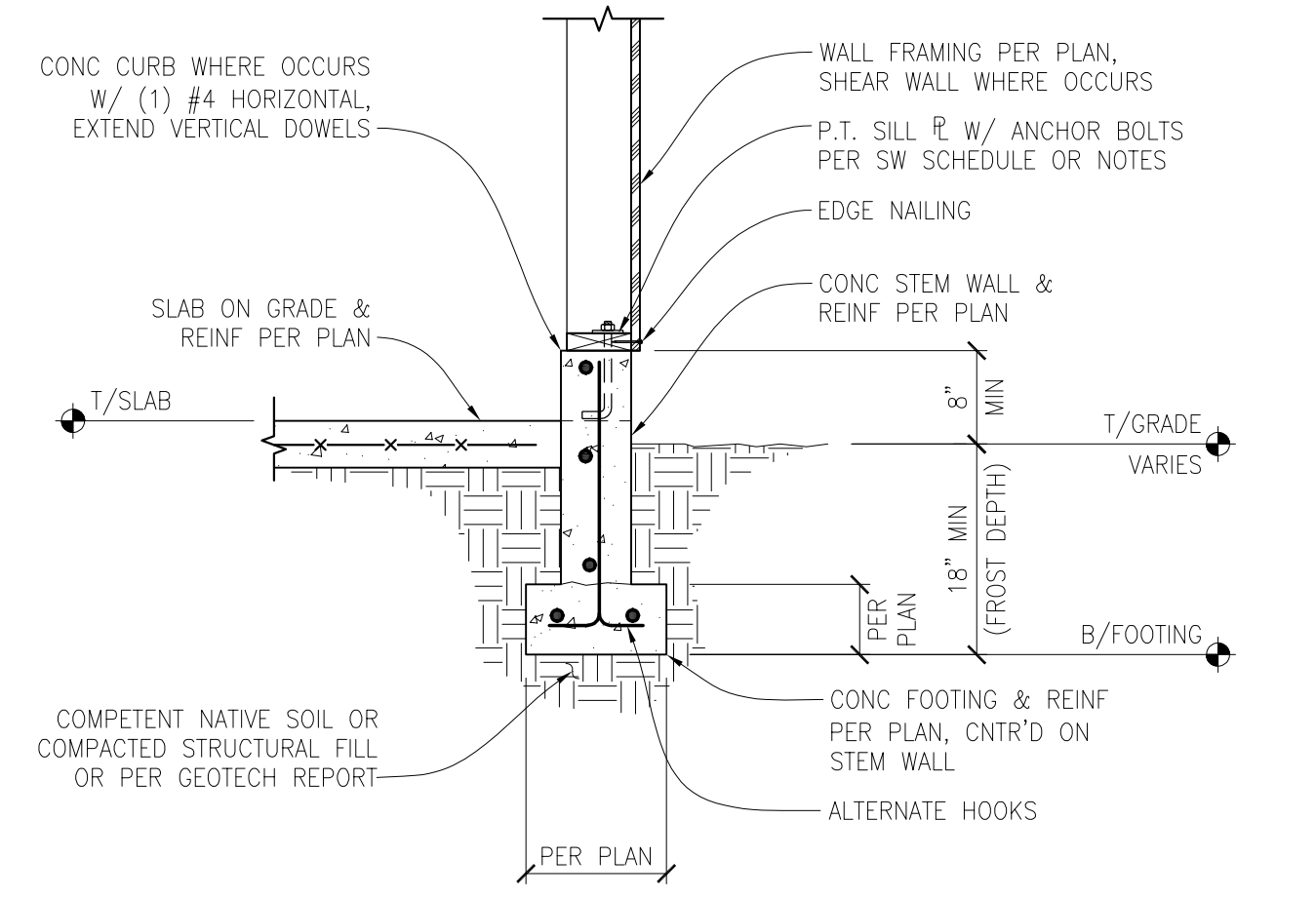
NOTES:
 1. FOR CONSTRUCTION OR CONTROL JOINT LOCATIONS REFERENCE FOUNDATION/SLAB PLAN
 2. USE "SOFTCUT SAW" AS SOON AS POSSIBLE WITHOUT CAUSING RAVELING OF CONCRETE EDGES. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST
 3. PROVIDE CONSTRUCTION/CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE AREAS OF 225 SF MAX



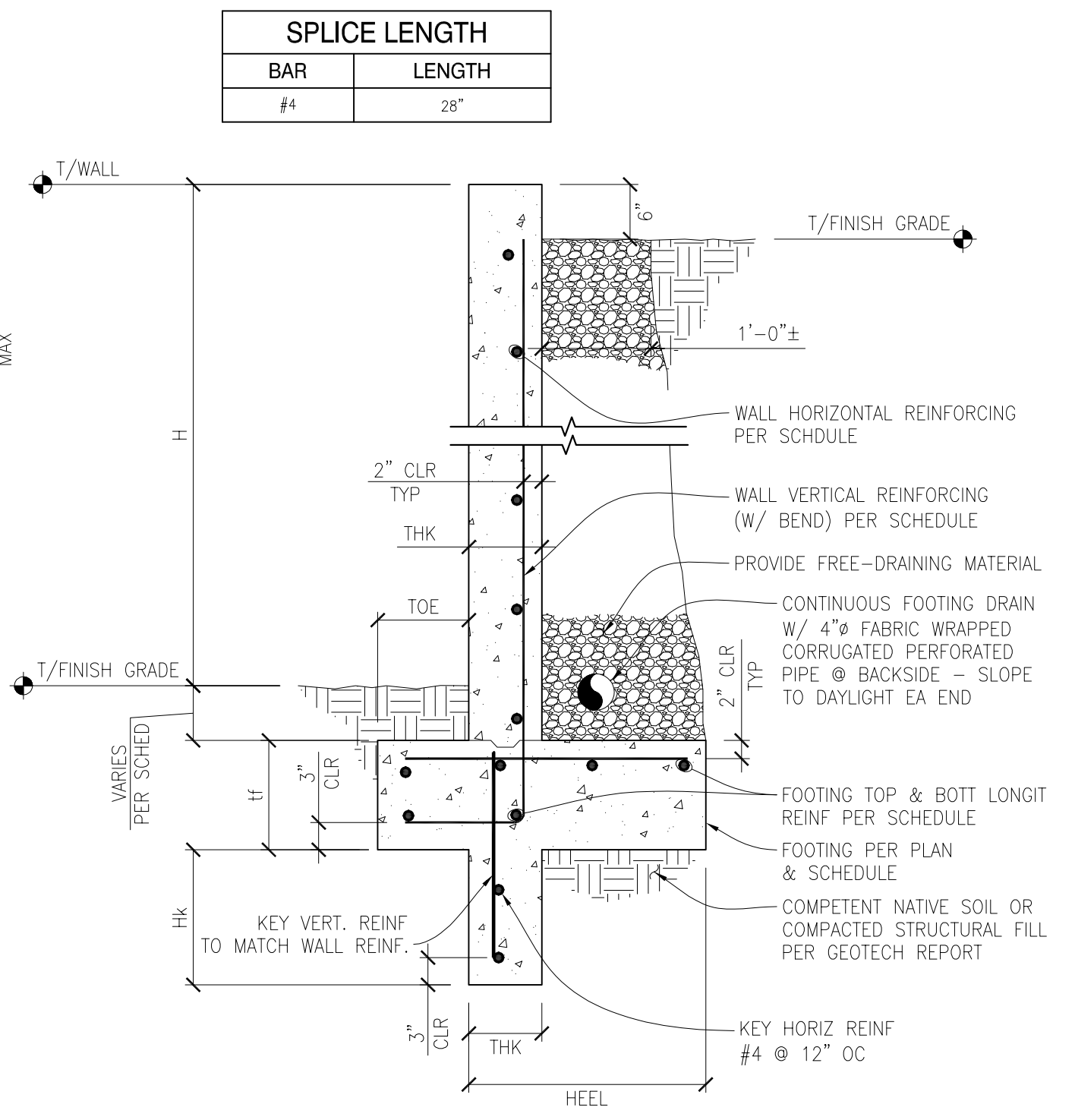
TYPICAL THICKENED SLAB EDGE FOOTING
 SCALE: 3/4" = 1'-0"



NEW FOOTING/POST CONNECTION
 SCALE: 3/4" = 1'-0"

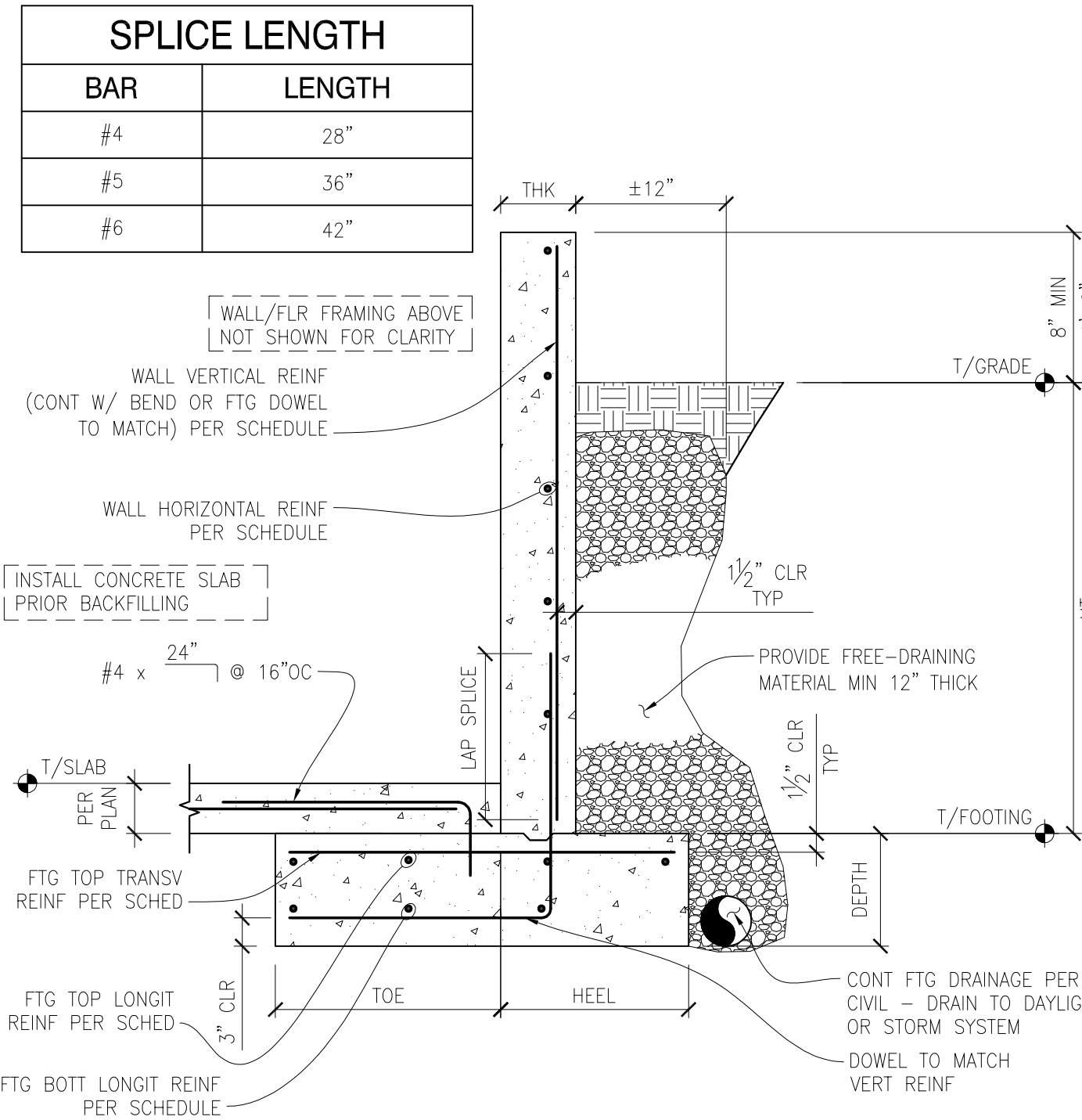


TYPICAL FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE
 SCALE: 3/4" = 1'-0"



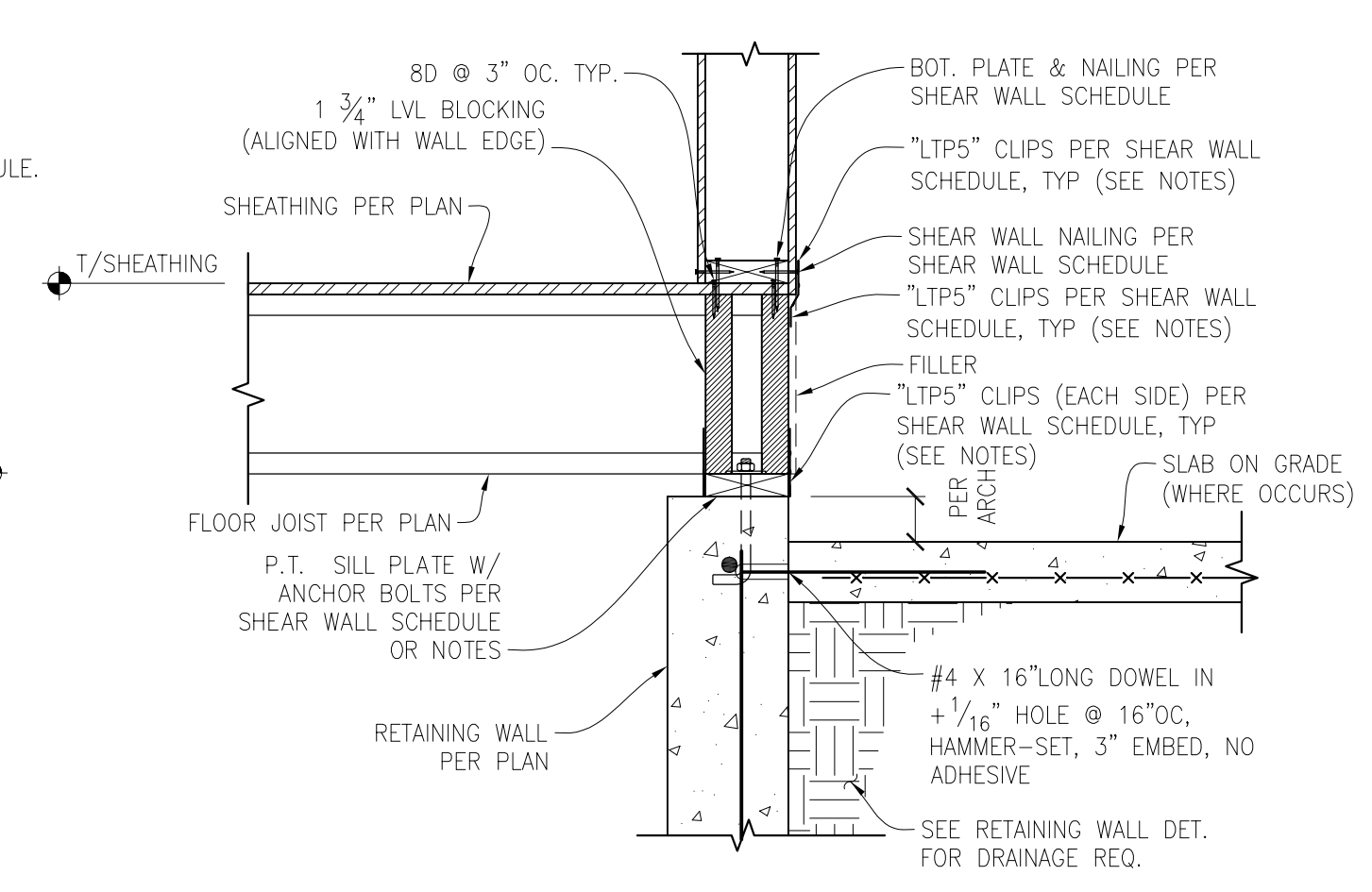
TALL CRAWL SPACE RETAINING WALL SCHEDULE
 SCALE: N.T.S.

RETAINING WALL/FOOTING SCHEDULE									
WALL					FOOTING				
HT (MAX)	THK	VERTICAL	HORIZONTAL	TOE	HEEL	DEPTH	TOP/TRANSV	TOP/LONGIT	BOTTOM/LONGIT
4'-0"	8"	#4 @ 12"OC	#4 @ 12"OC	1'-0"	1'-6"	10"	#4 @ 10"OC	(3) #4	(2) #4
6'-0"	8"	#4 @ 8"OC	#4 @ 12"OC	2'-6"	1'-6"	10"	#4 @ 10"OC	(4) #4	(3) #4
8'-0"	8"	#5 @ 10"OC	#4 @ 12"OC	3'-6"	2'-0"	14"	#5 @ 10"OC	(5) #5	(3) #5
9'-0"	8"	#5 @ 8"OC	#4 @ 12"OC	3'-6"	3'-0"	14"	#5 @ 10"OC	(6) #5	(4) #5
10'-0"	10"	#6 @ 10"OC	#5 @ 12"OC	4'-3"	3'-0"	16"	#5 @ 10"OC	(8) #5	(6) #5

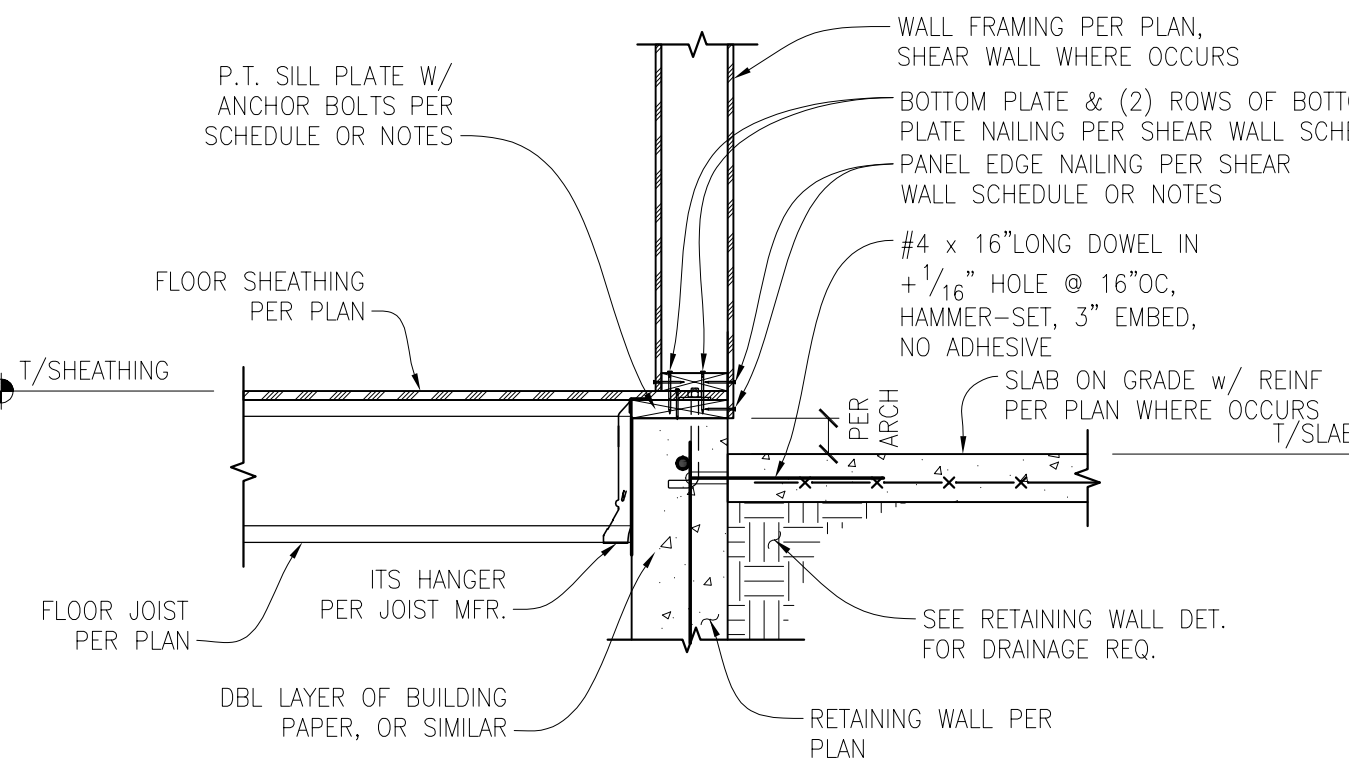


RETAINING WALL SCHEDULE
 SCALE: N.T.S.

RETAINING WALL/FOOTING SCHEDULE									
WALL					FOOTING				
HT (MAX)	THK	VERTICAL	HORIZONTAL	TOE	HEEL	DEPTH	TOP/TRANSV	TOP/LONGIT	BOTTOM/LONGIT
4'-0"	8"	#4 @ 12"OC	#4 @ 12"OC	1'-0"	1'-6"	10"	#4 @ 10"OC	(3) #4	(2) #4
6'-0"	8"	#4 @ 8"OC	#4 @ 12"OC	2'-6"	1'-6"	10"	#4 @ 10"OC	(4) #4	(3) #4
8'-0"	8"	#5 @ 10"OC	#4 @ 12"OC	3'-6"	2'-0"	14"	#5 @ 10"OC	(5) #5	(3) #5
9'-0"	8"	#5 @ 8"OC	#4 @ 12"OC	3'-6"	3'-0"	14"	#5 @ 10"OC	(6) #5	(4) #5
10'-0"	10"	#6 @ 10"OC	#5 @ 12"OC	4'-3"	3'-0"	16"	#5 @ 10"OC	(8) #5	(6) #5



DBL SIDED SHEAR WALL TO RETAINING WALL CONNECTION
 SCALE: 1" = 1'-0"



EXTERIOR SHEAR WALL WITH JOISTS PERPENDICULAR TO RETAINING WALL
 SCALE: 3/4" = 1'-0"



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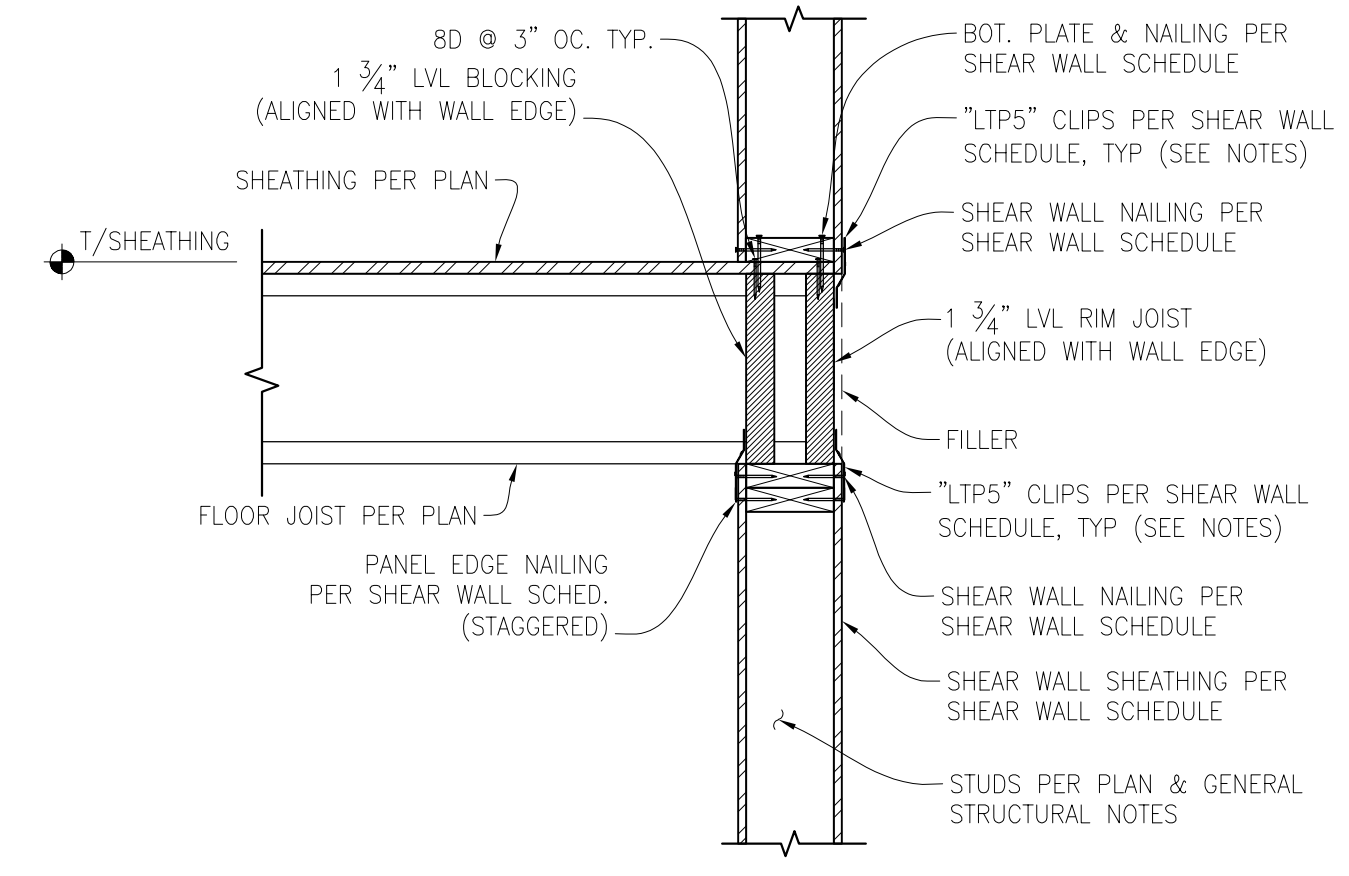
Drawn By: PK
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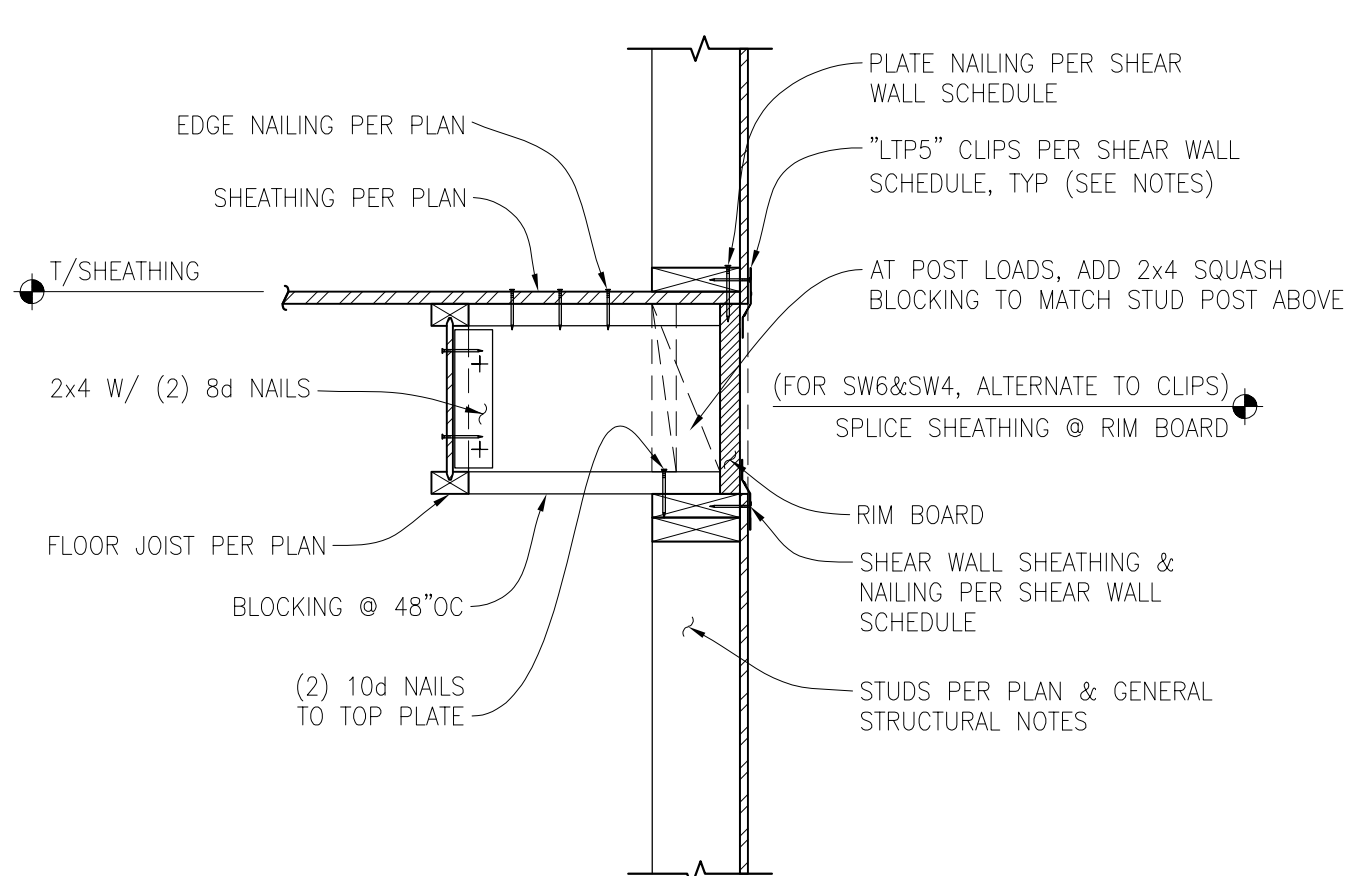
STRUCTURAL
 DETAILS

S-3.0

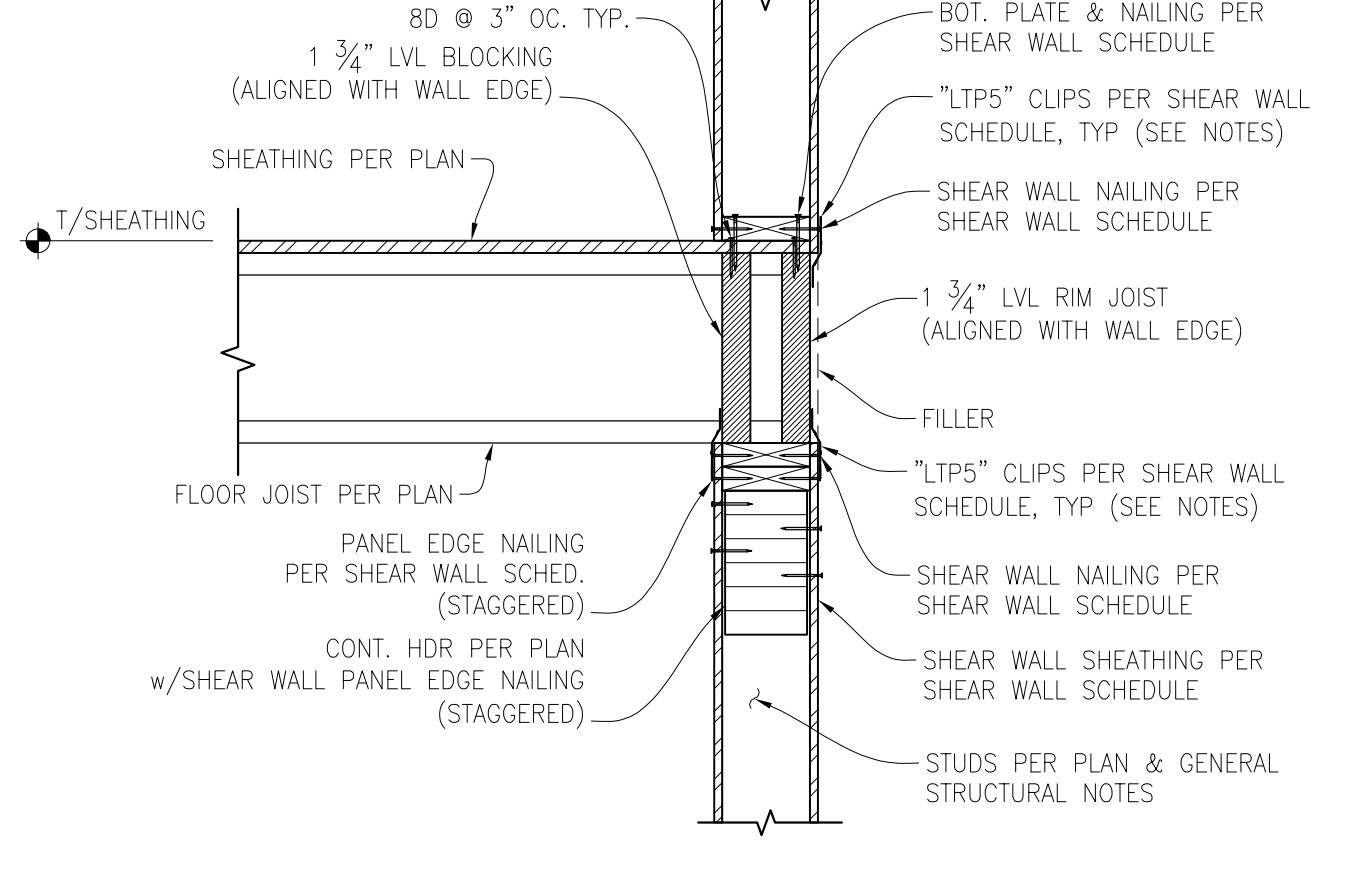
NOTES:
 FOR SW-6 TO SW-4, TO ELIMINATE SHEAR WALL
 CLIPS @ R'S, LOCATE SHEATHING SPLICES AT
 MID-HT OF RIM BOARD & NAIL W/ (2) ROWS OF
 PANEL EDGE NAILING PER SHEAR WALL SCHEDULE.



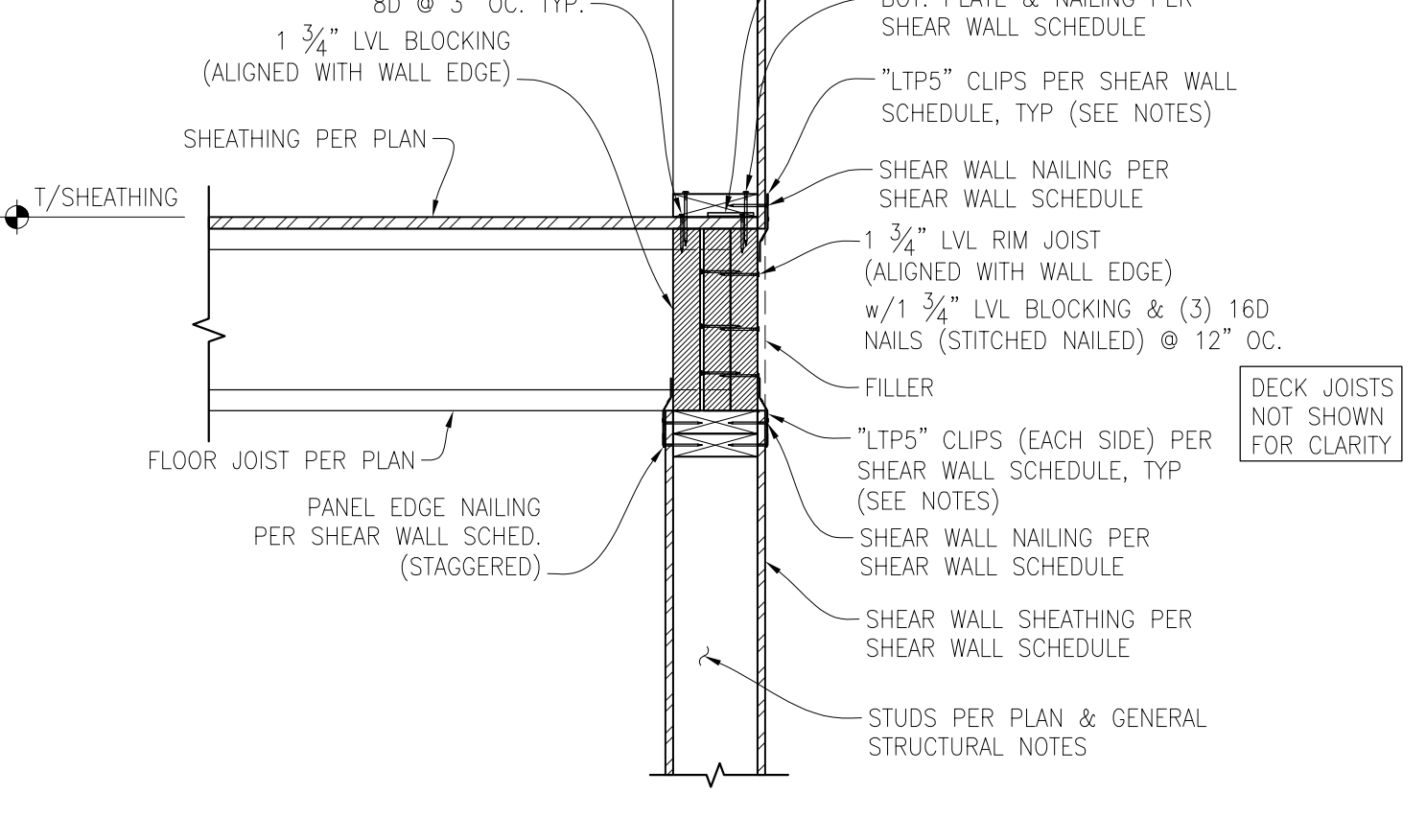
FL. JOIST PERP. TO DBL SIDED SHEAR WALL CON. 1
 SCALE: 1" = 1'-0"



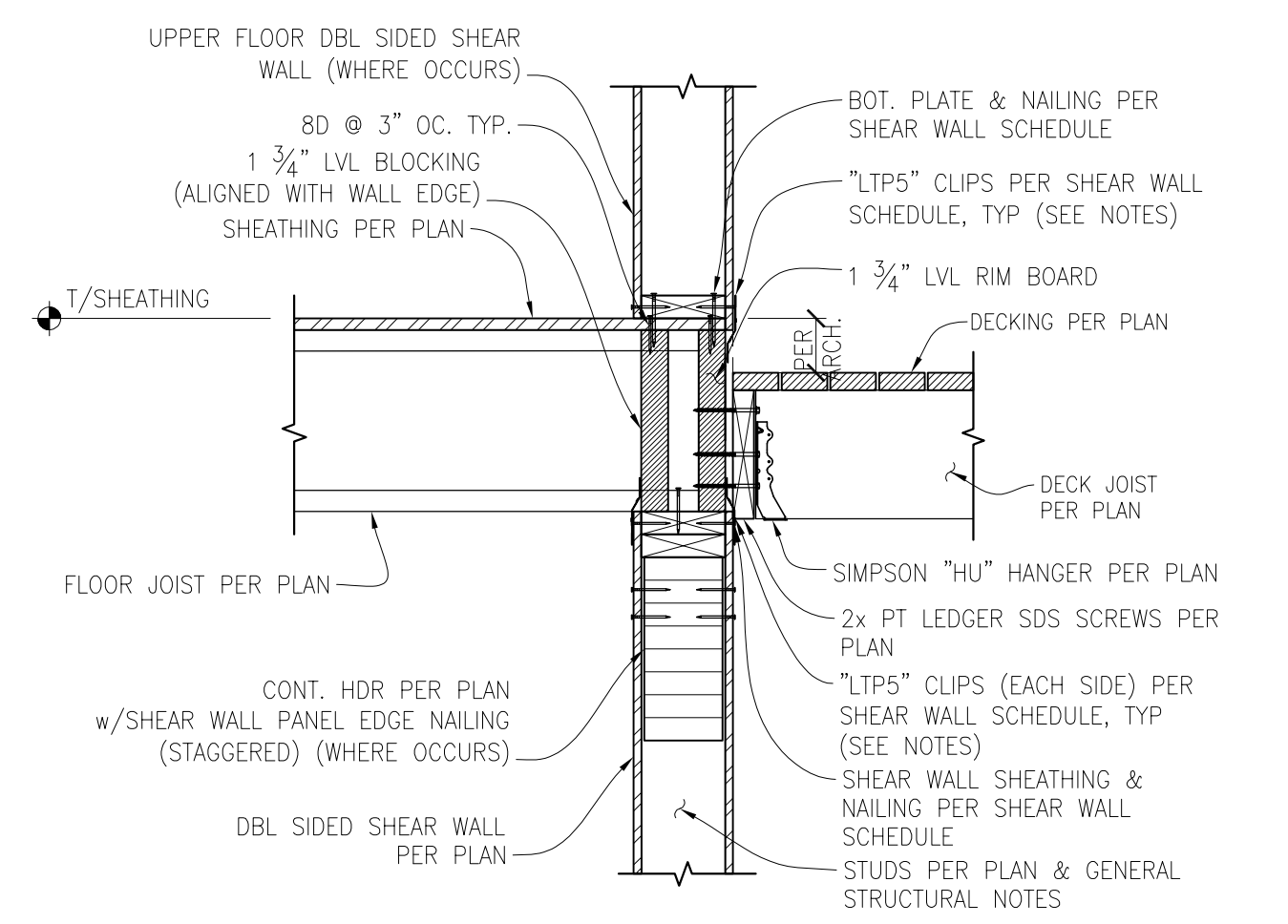
FLOOR JOIST PARALLEL TO EXTERIOR WALL CON. 2
 SCALE: 1" = 1'-0"



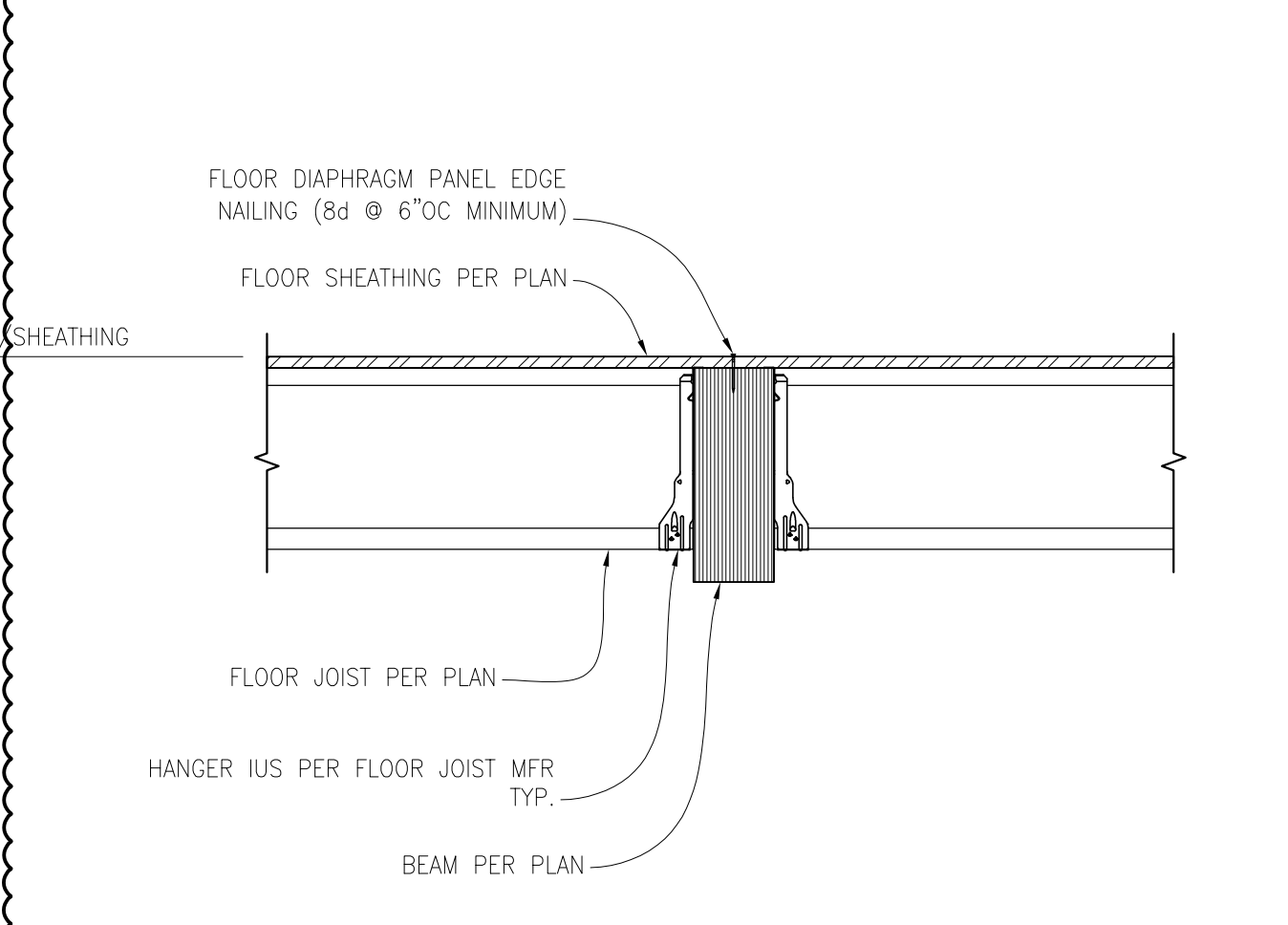
CONT. HEADER & FL. JOIST PERP. TO DBL SIDED SHEAR WALL CON. 3
 SCALE: 1" = 1'-0"



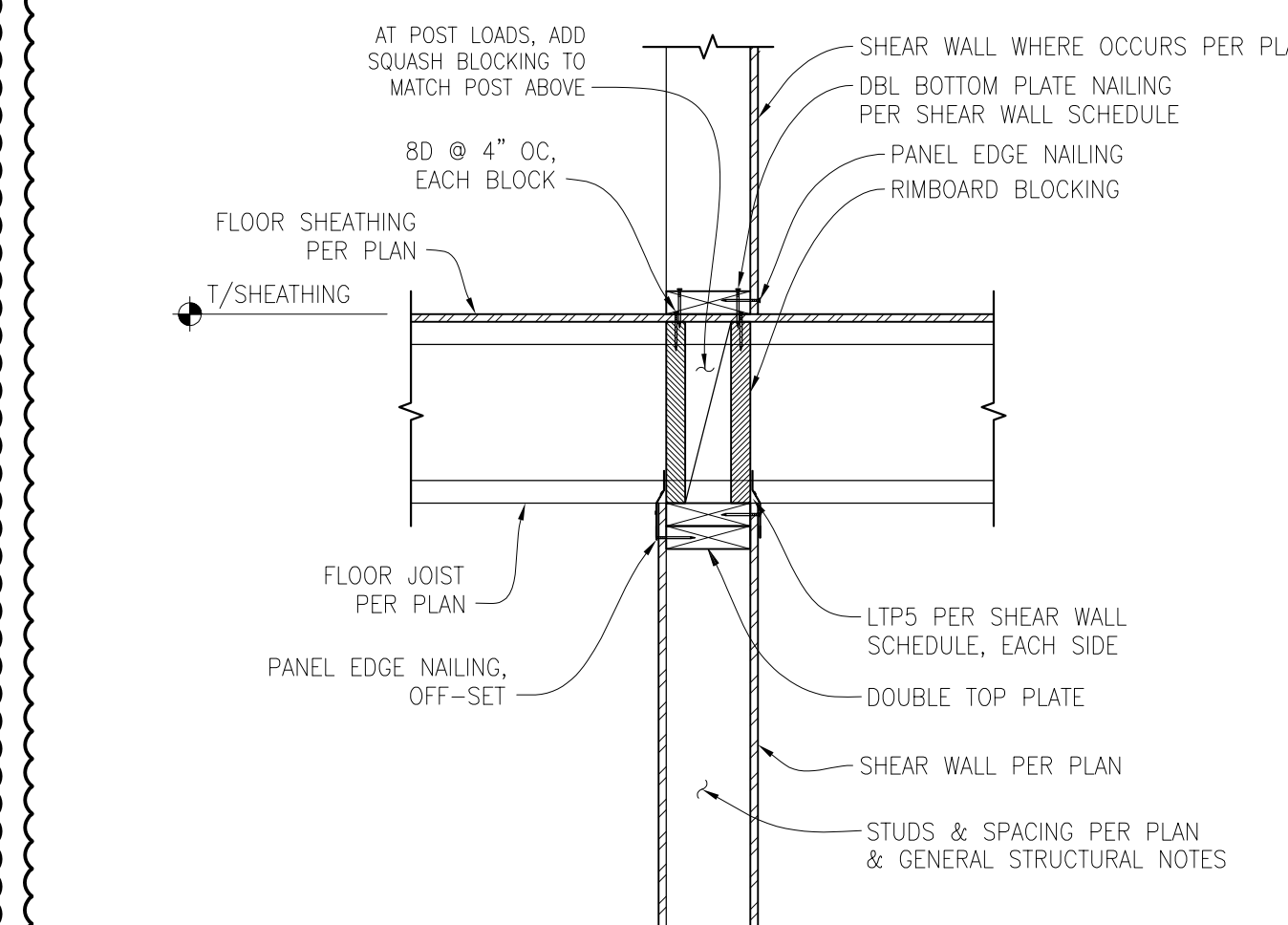
CMST STRAP TO BLOCKING & FL. JOIST PERP. TO DBL SIDED SHEAR WALL CON. 4
 SCALE: 1" = 1'-0"



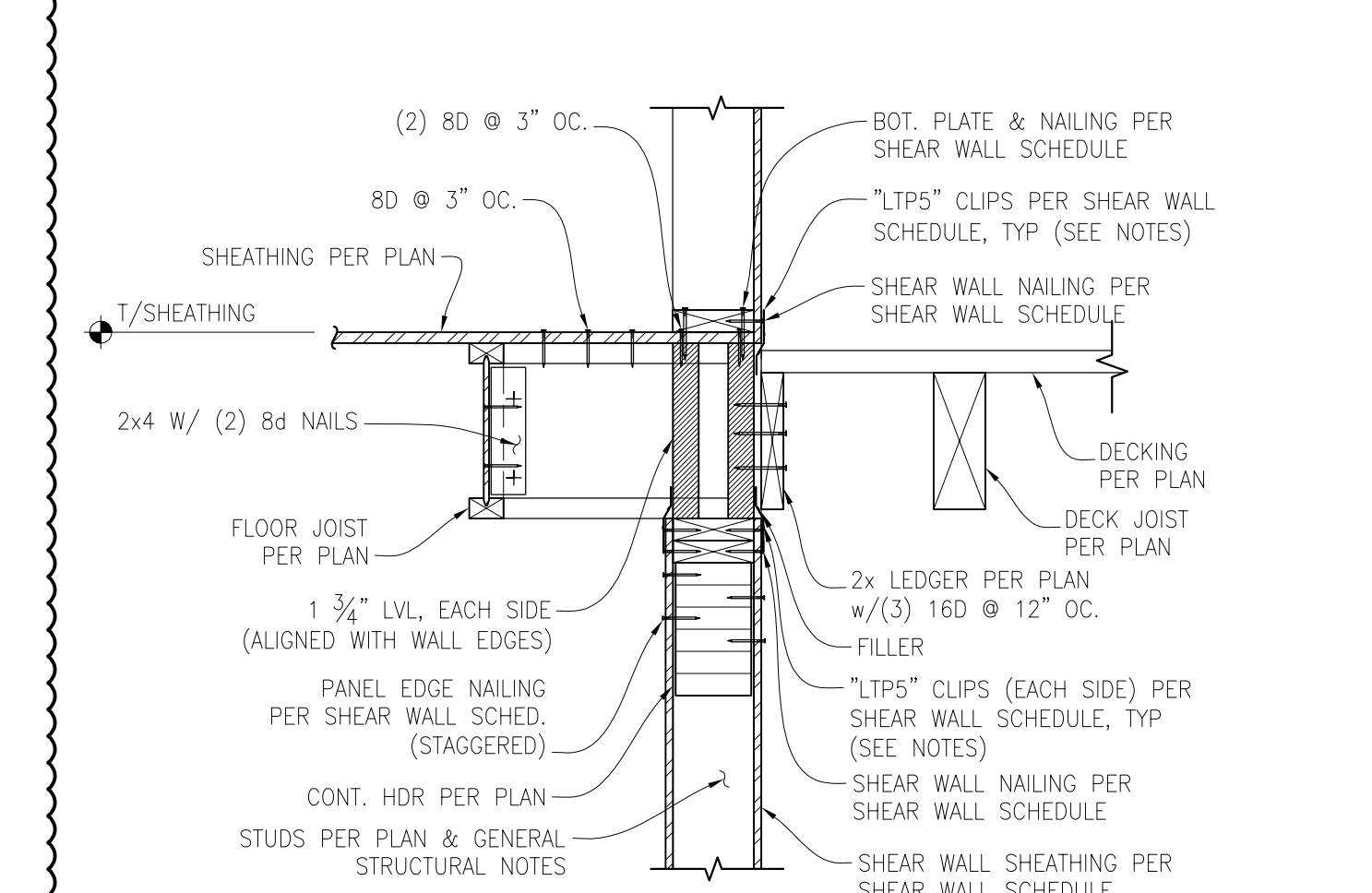
DBL SIDED SHEAR WALL/ RIM JOIST TO LEDGER CONNECTION 5
 SCALE: 1" = 1'-0"



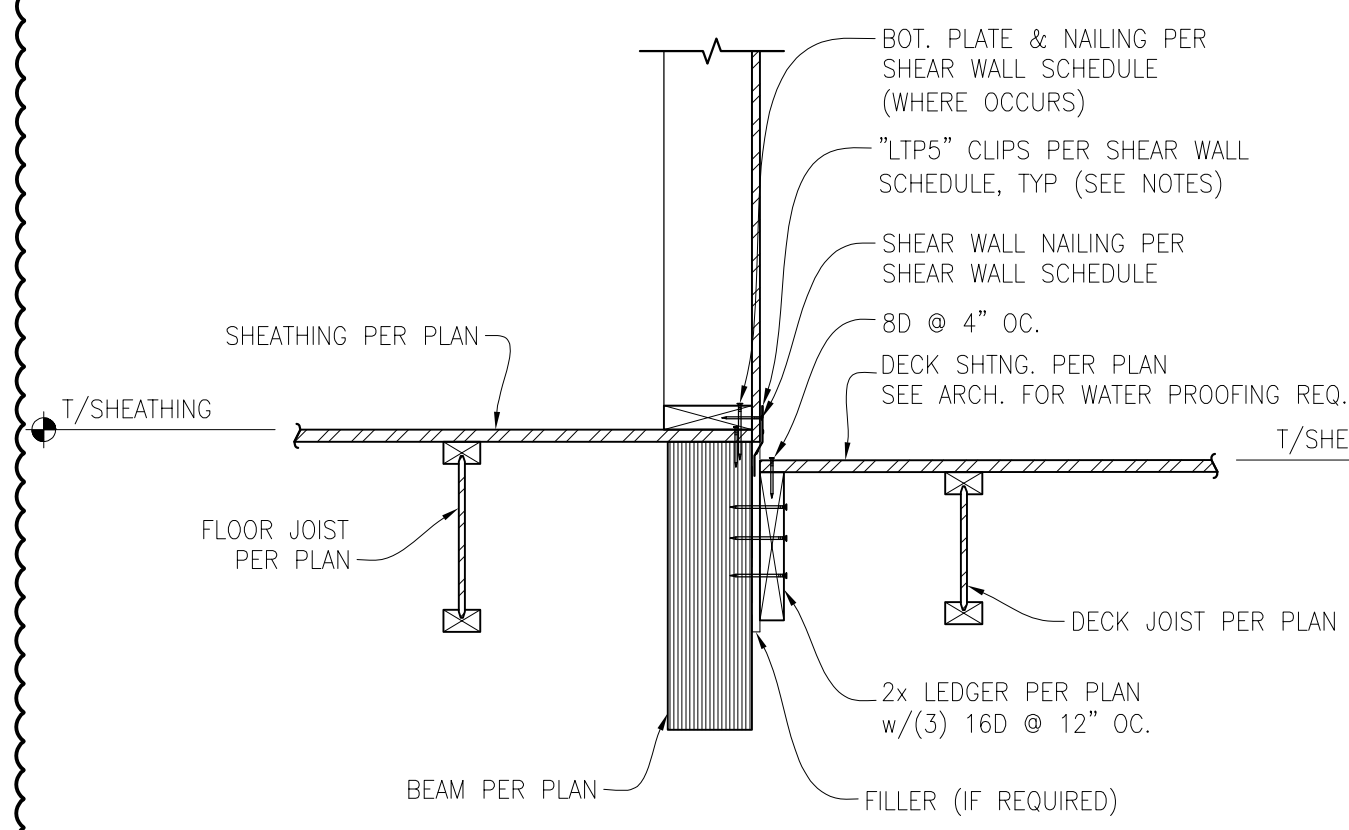
FLOOR JOIST/FLUSH BEAM CONNECTION 6
 SCALE: 1" = 1'-0"



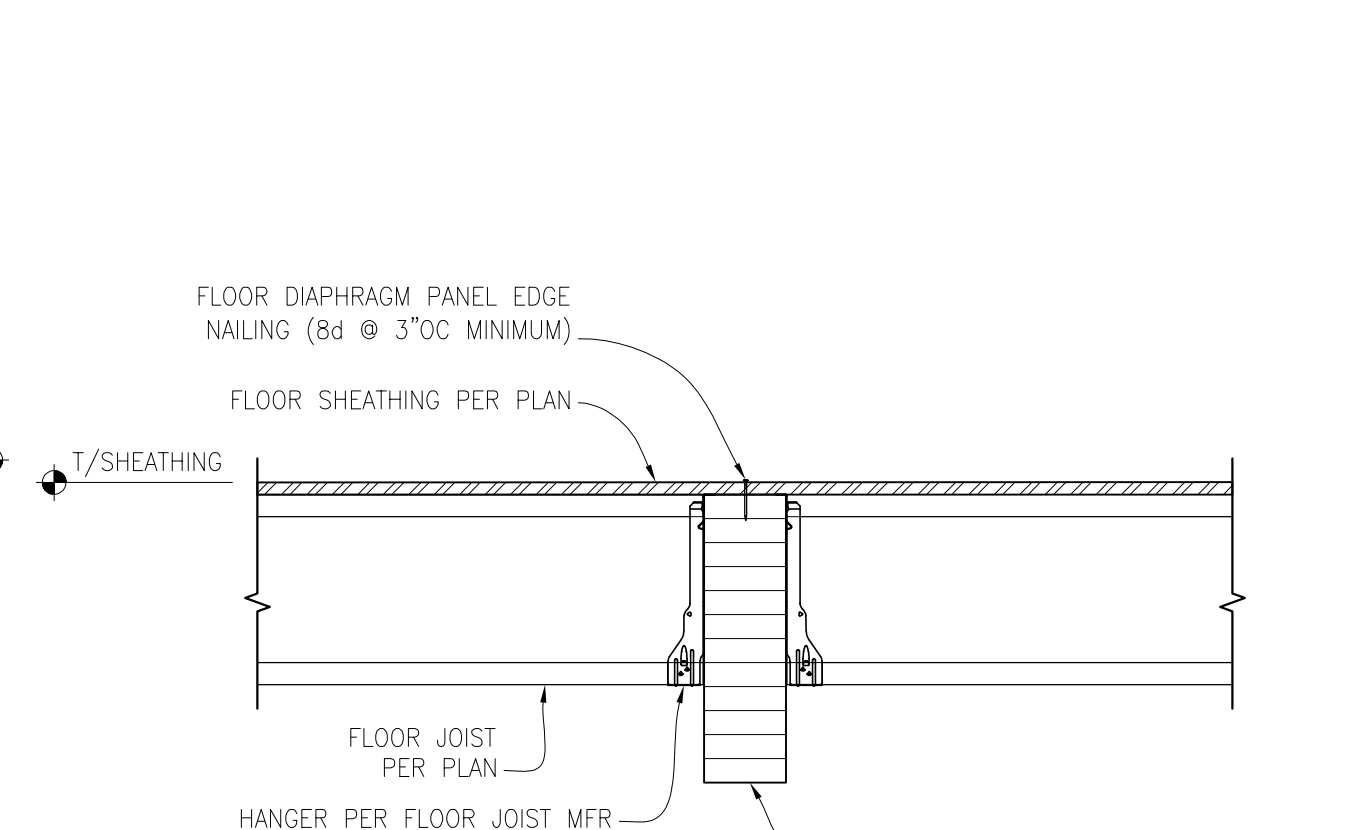
INTERIOR BEARING/SHEAR WALL CON. 7
 SCALE: 1" = 1'-0"



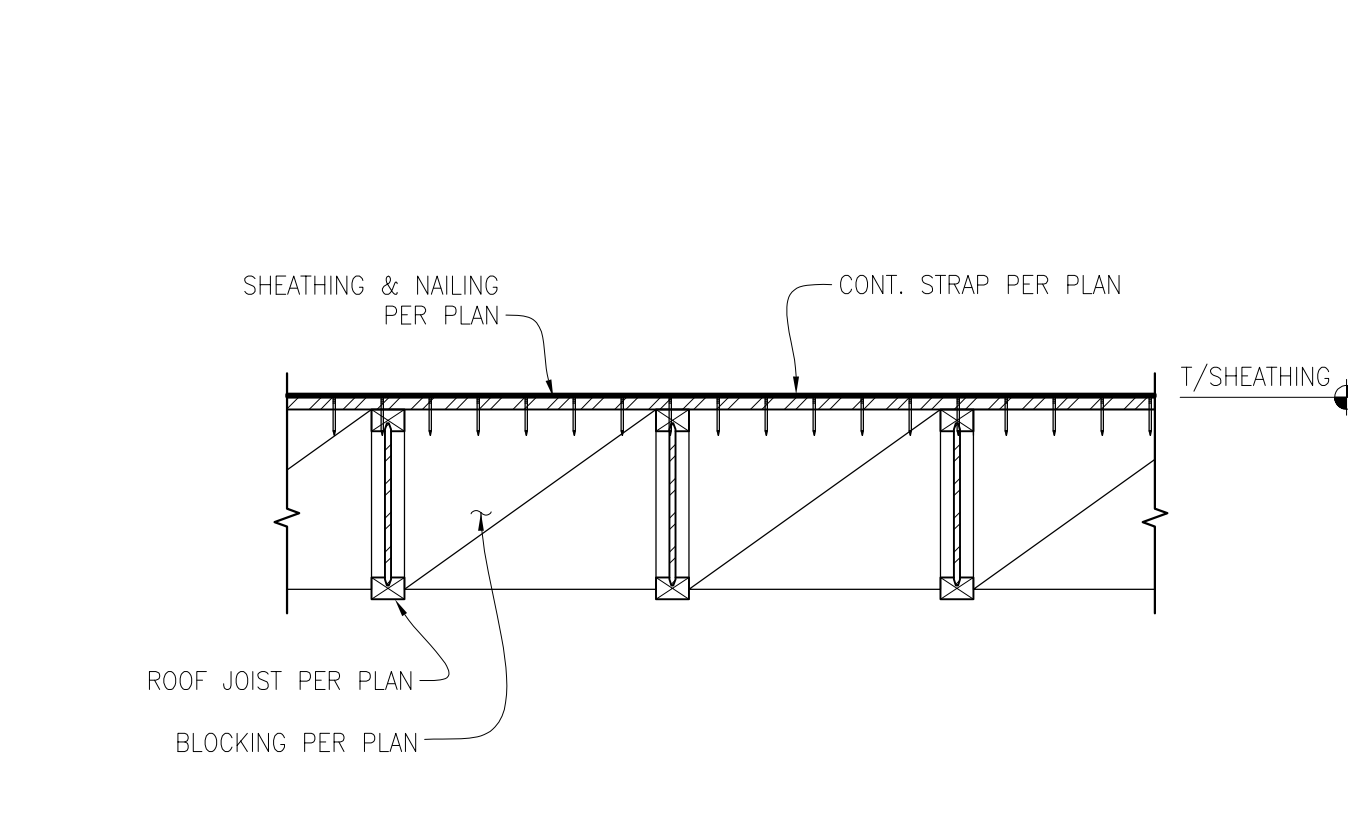
CONT. HEADER/SHEAR WALL CONNECTION (FLOOR/DECK JOIST PARALLEL) 8
 SCALE: 1" = 1'-0"



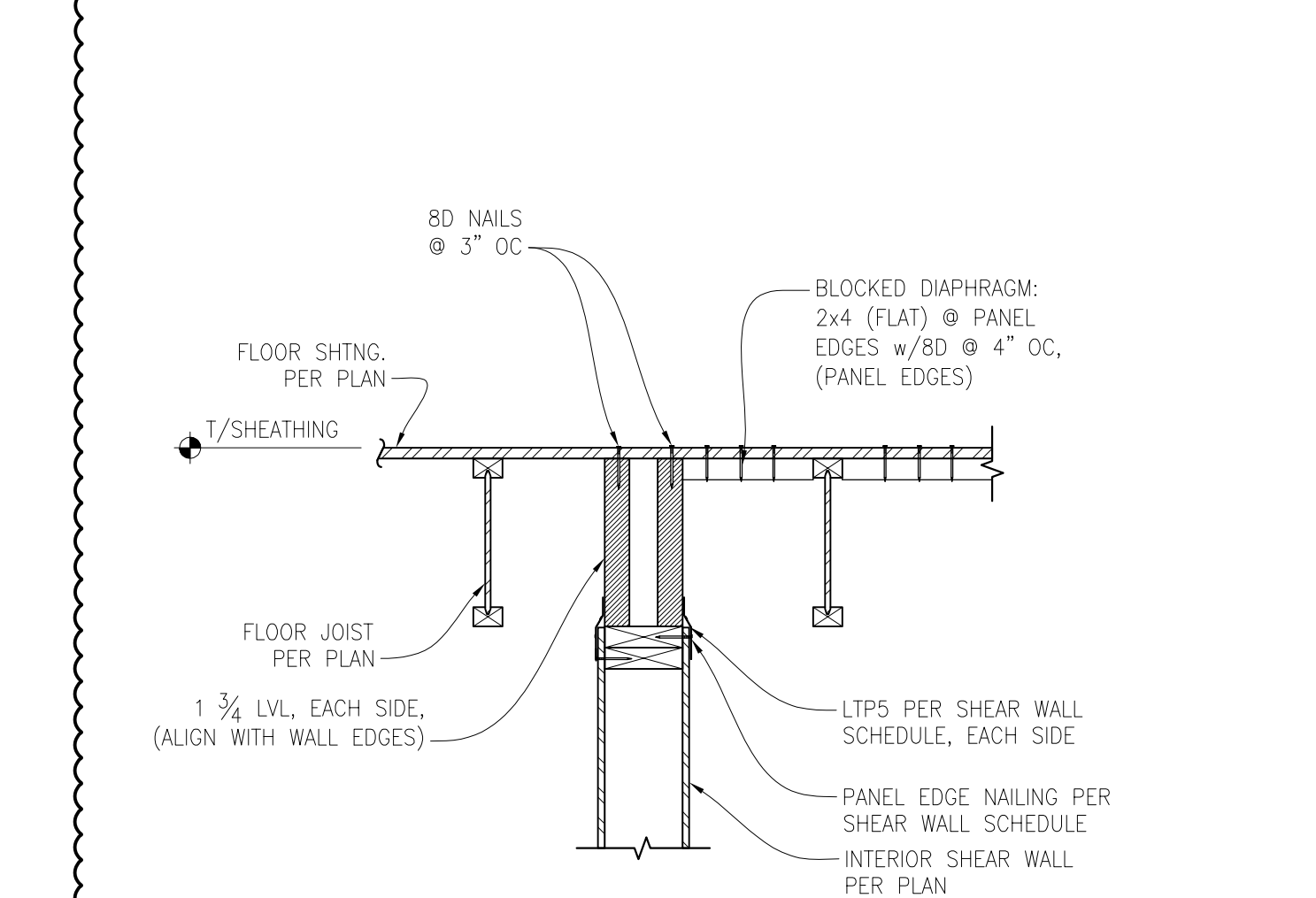
FLOOR/DECK JOIST PARALLEL TO BEAM CON. 9
 SCALE: 1" = 1'-0"



FLOOR JOIST/TOP FLUSH BEAM CONNECTION 10
 SCALE: 1" = 1'-0"

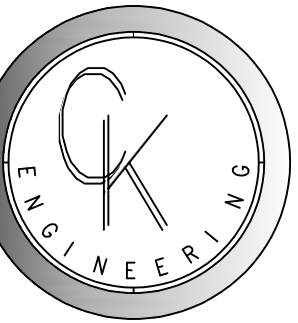


FLOOR JOIST BLOCKING 11
 SCALE: 1" = 1'-0"



FLORO JOISTS PARALLEL TO INTERIOR SHEAR WALL CONNECTION 12
 SCALE: 1" = 1'-0"





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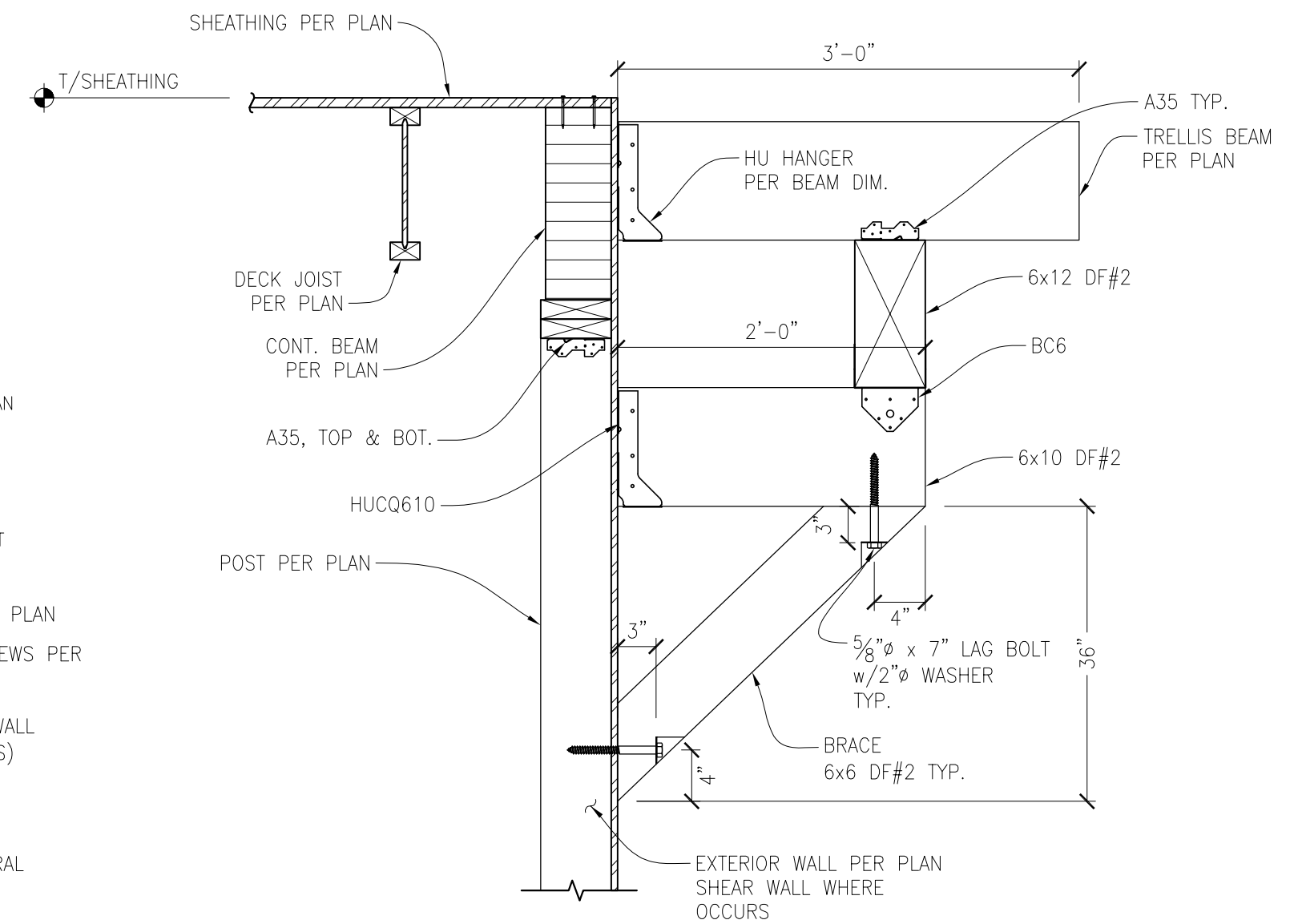
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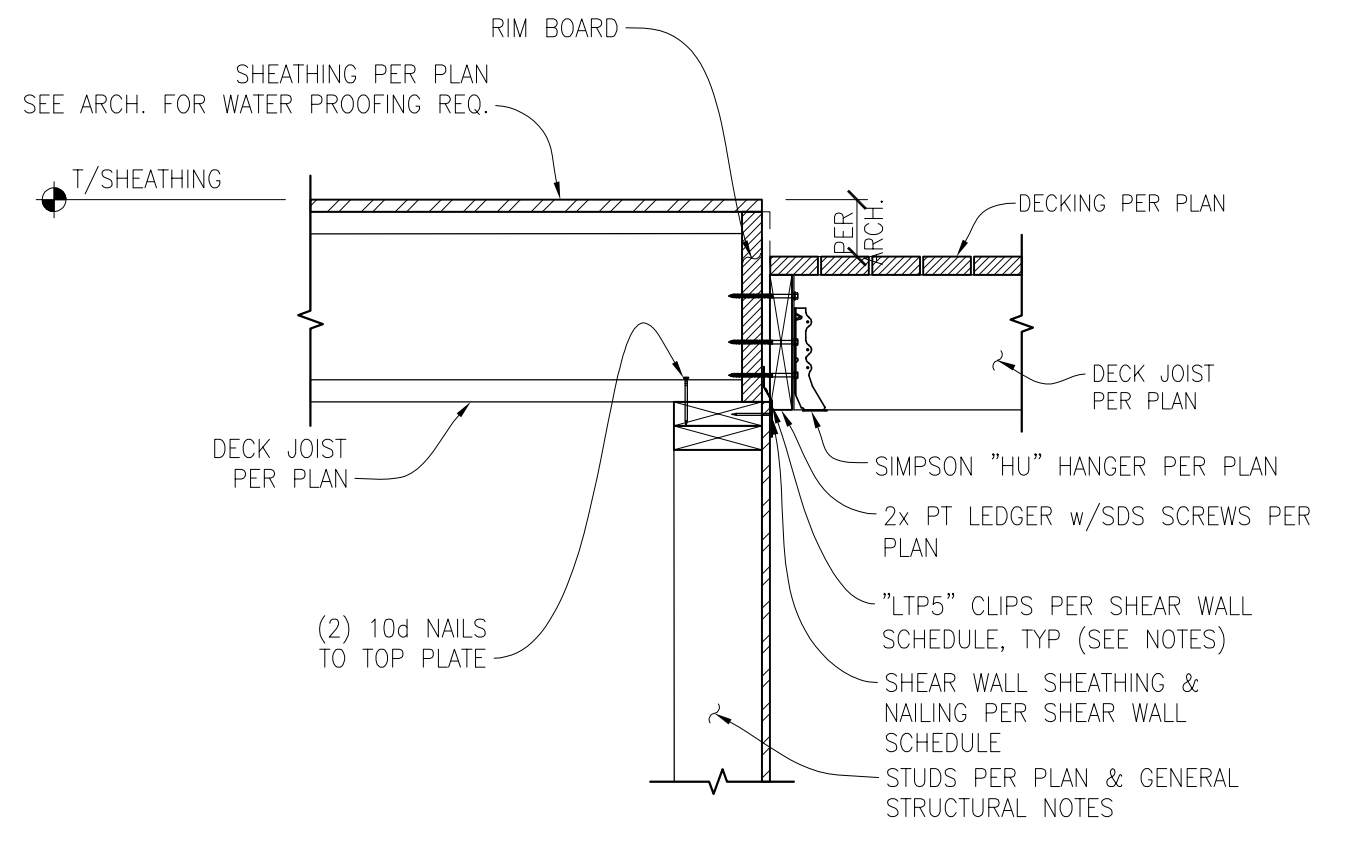
CK JOB NO.
23-043

STRUCTURAL
 DETAILS

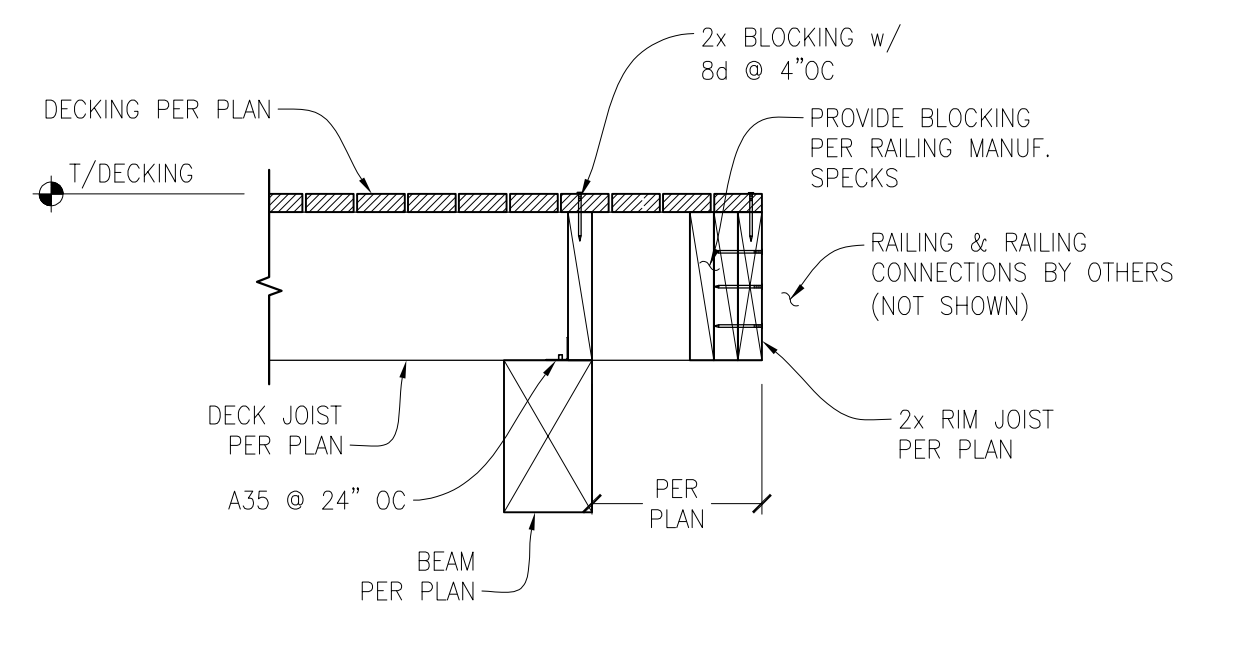
S-3.1



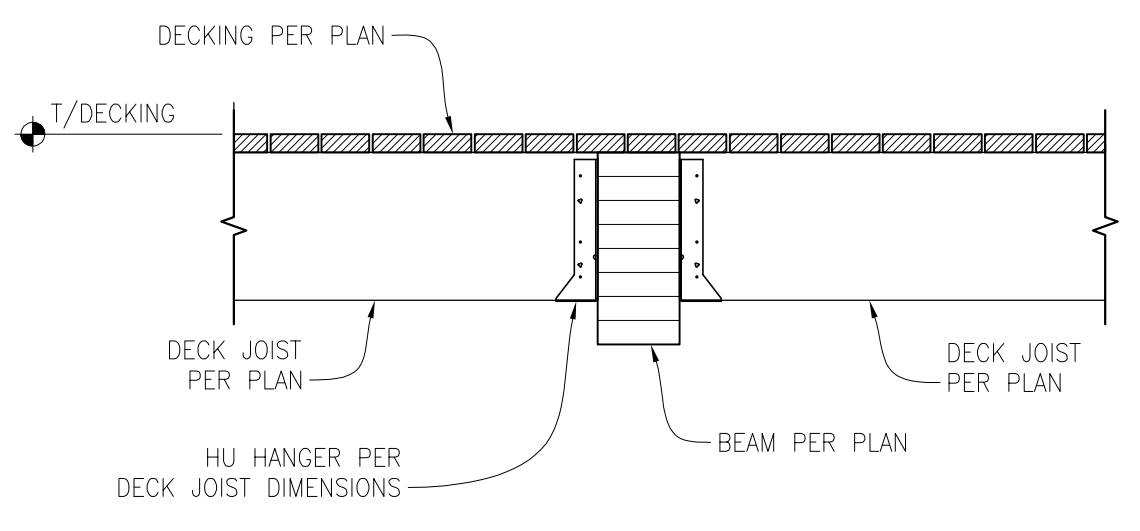
4 TYPICAL KNEE BRACE AT TRELLIS CONNECTION
 SCALE: NTS



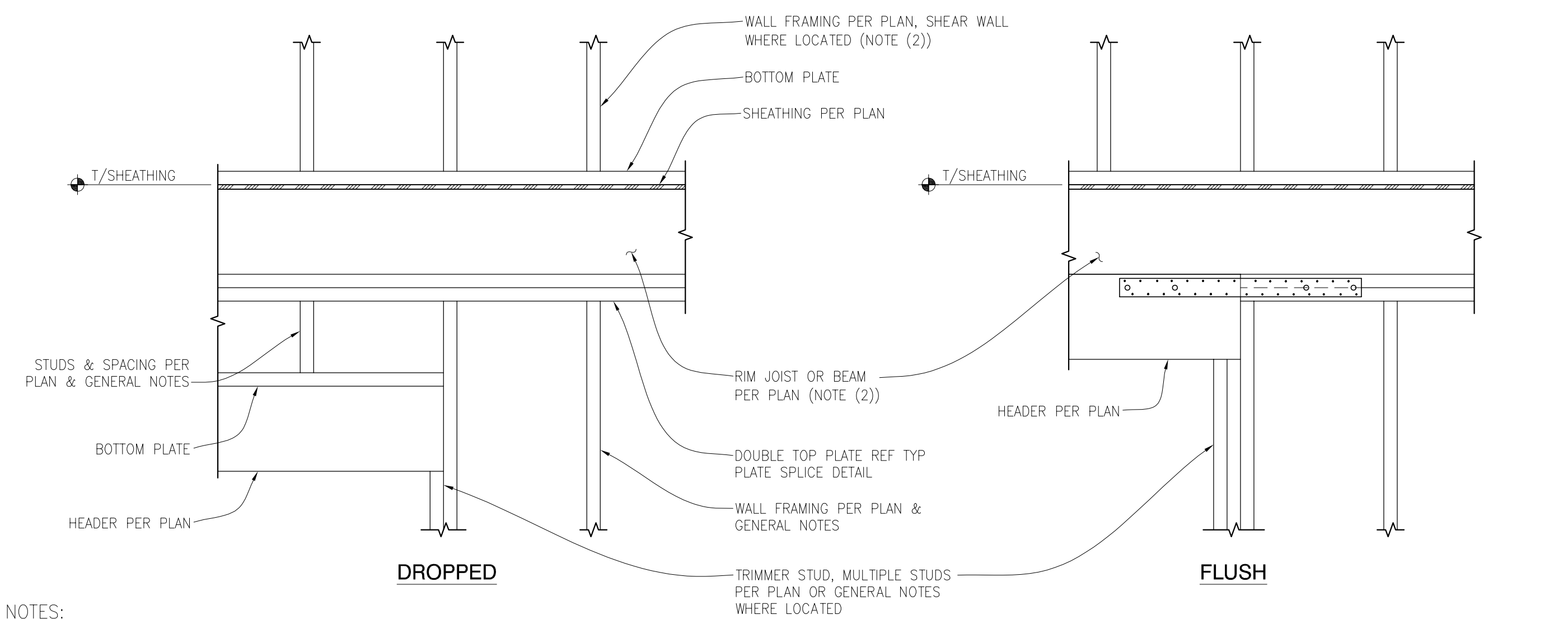
3 DECK JOIST/SHEAR WALL CONNECTION
 SCALE: 1" = 1'-0"



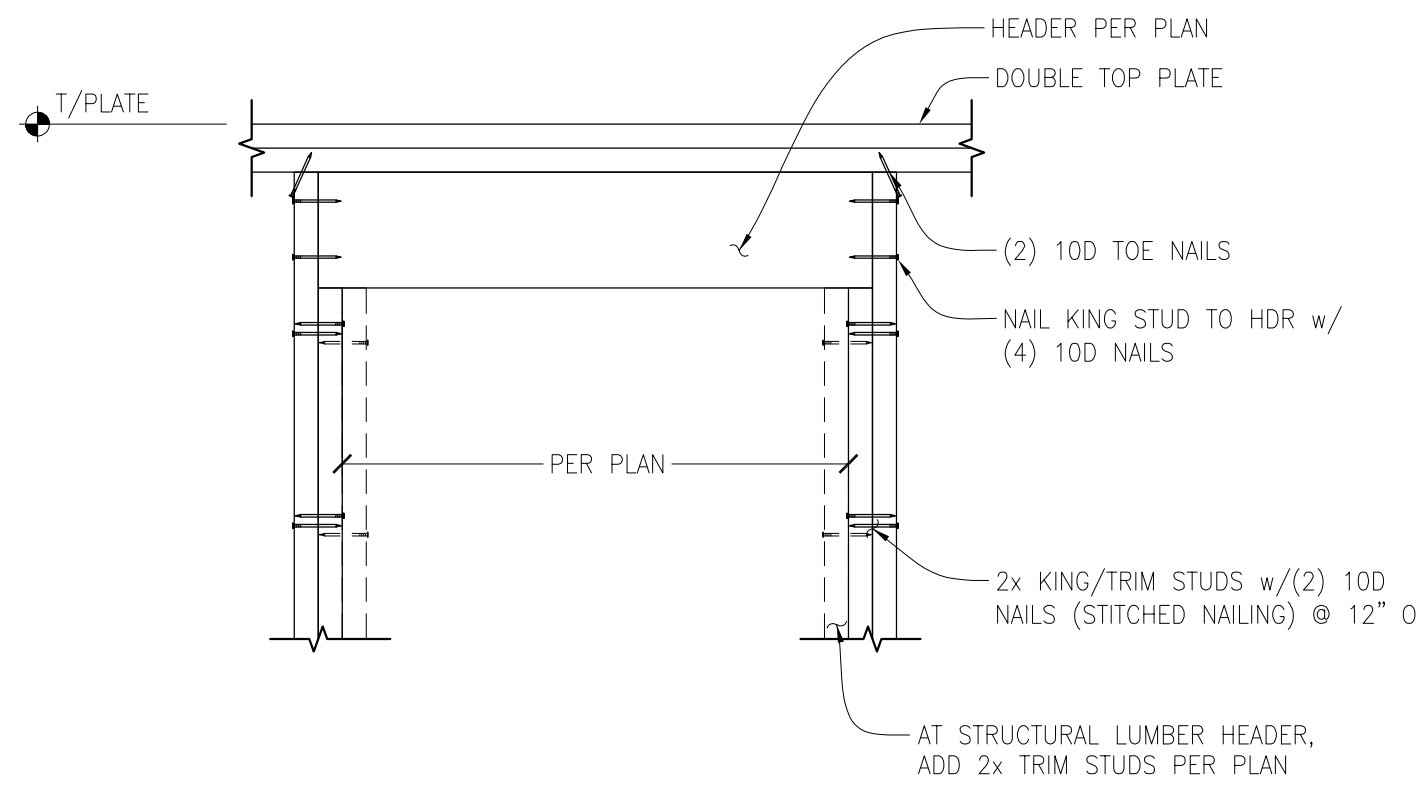
2 DECK JOIST TO DECK BEAM CONNECTION
 SCALE: 1" = 1'-0"



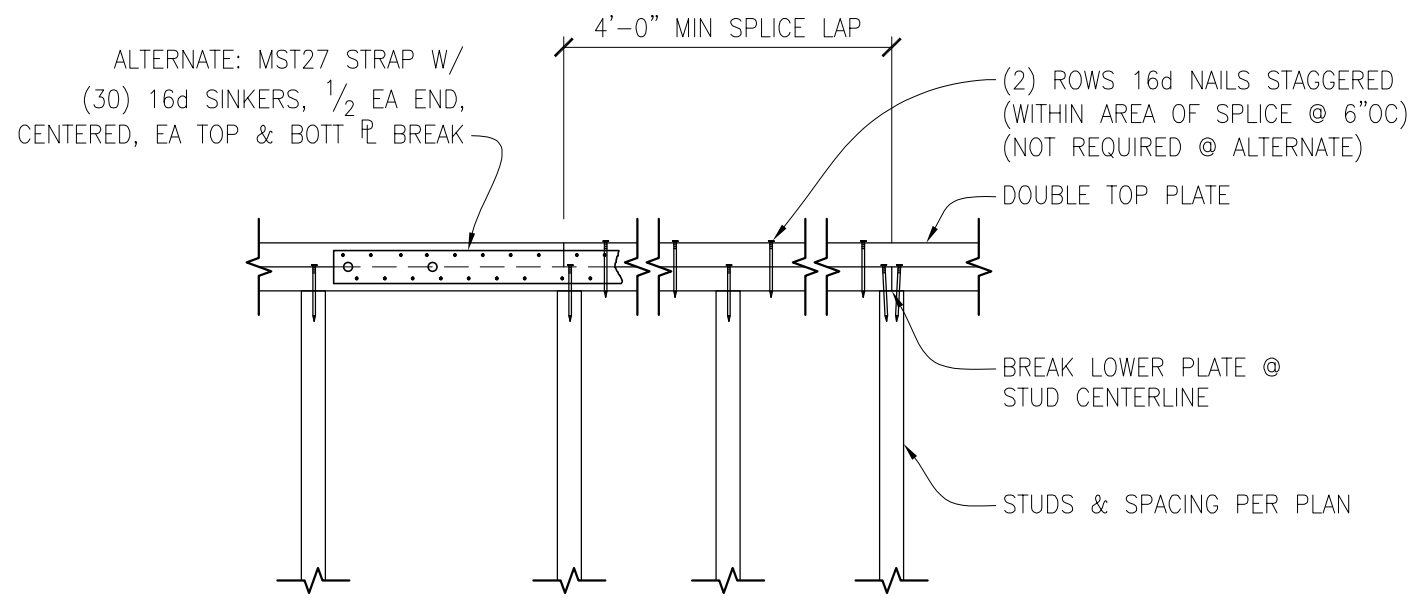
1 DECK JOIST MID BEAM CONNECTION
 SCALE: 1" = 1'-0"



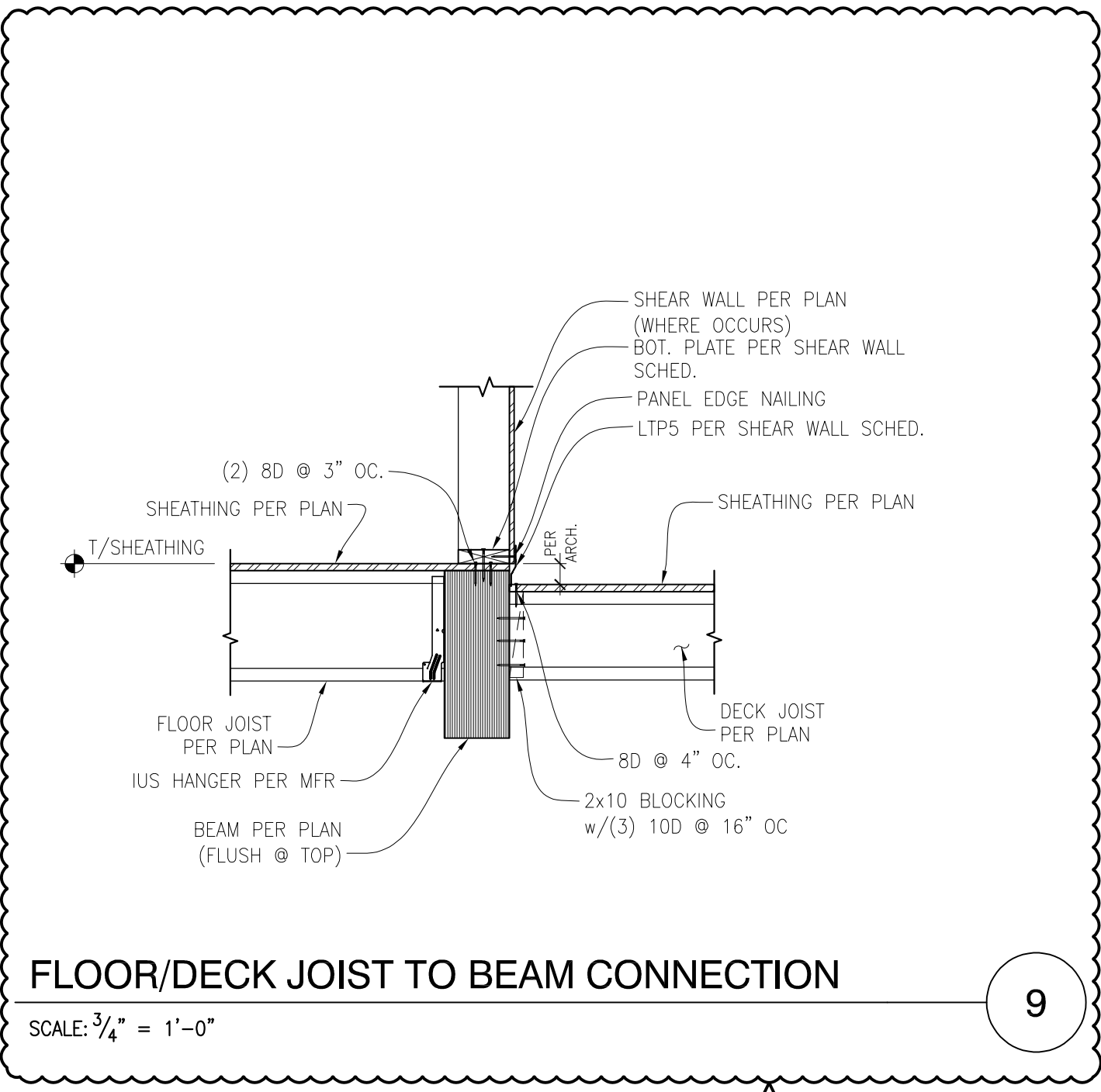
8 TYPICAL HEADER FRAMING
 SCALE: 1" = 1'-0"



6 TYPICAL HEADER CONNECTION
 SCALE: N.T.S.

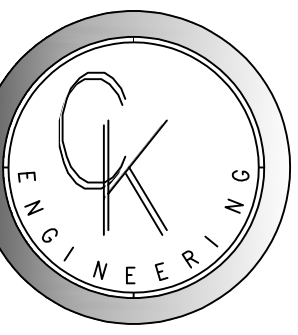


5 TYPICAL PLATE SPLICE DETAIL
 SCALE: N.T.S.



9 FLOOR/DECK JOIST TO BEAM CONNECTION
 SCALE: 3/4" = 1'-0"



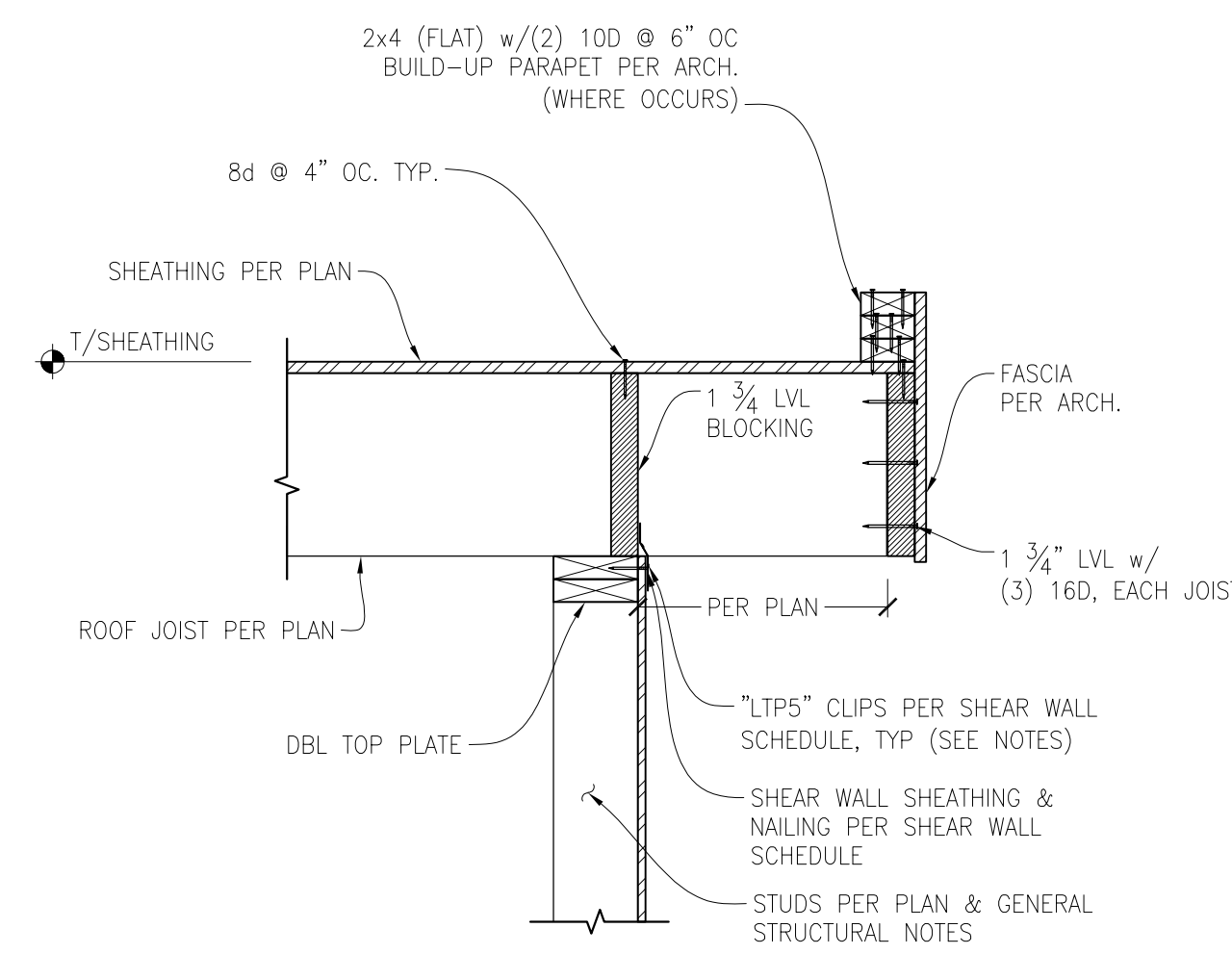


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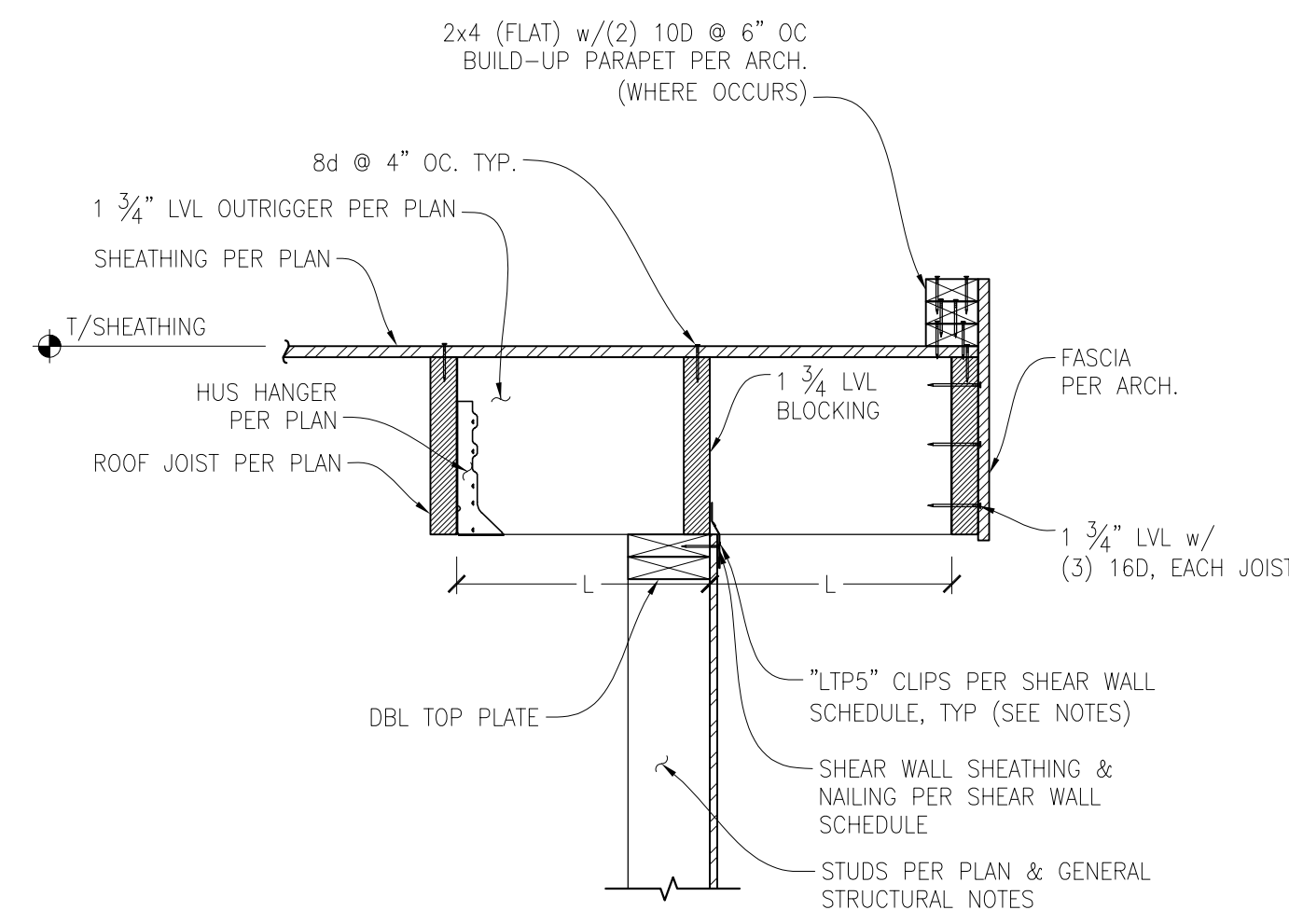


10/20/2024

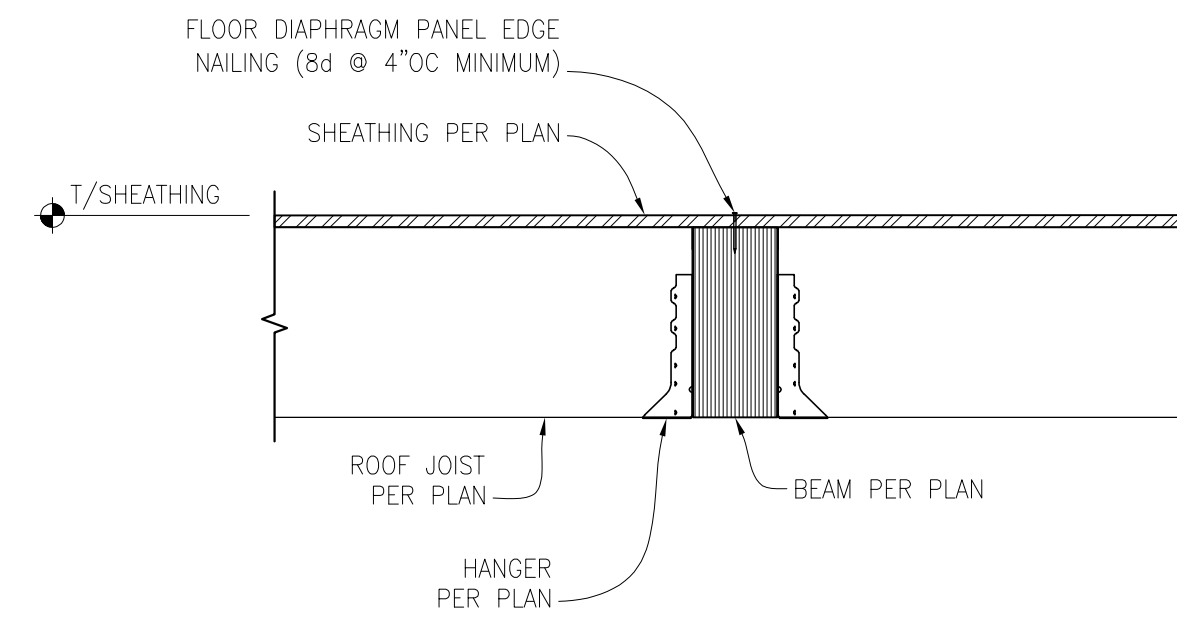
NEW HOME AT:
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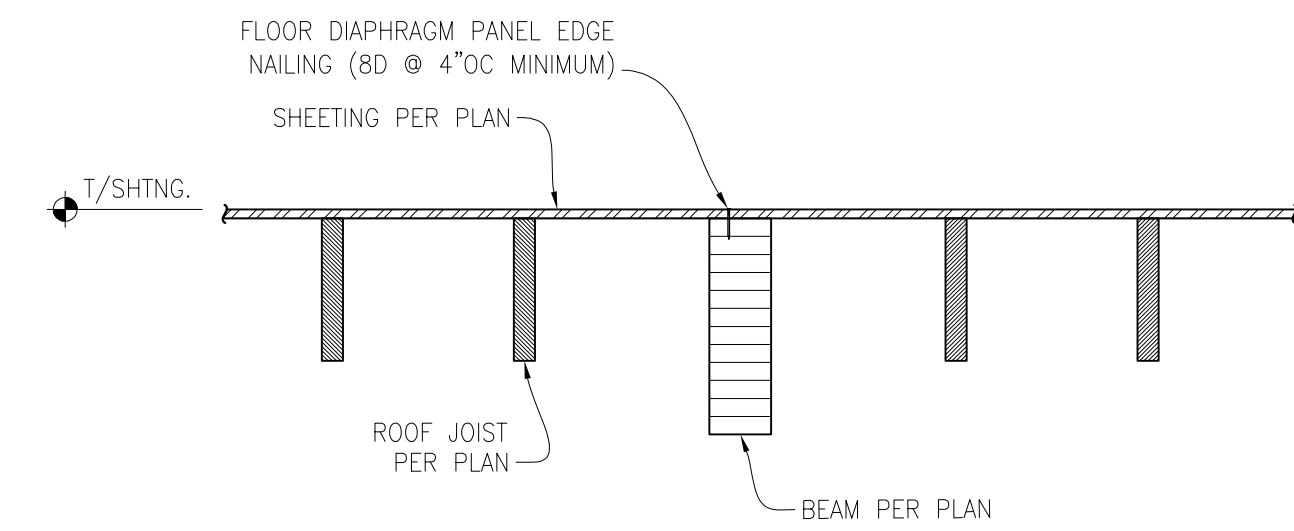
ROOF JOIST PERPENDIC. TO BEARING/SHEAR WALL 1
 SCALE: 1" = 1'-0"



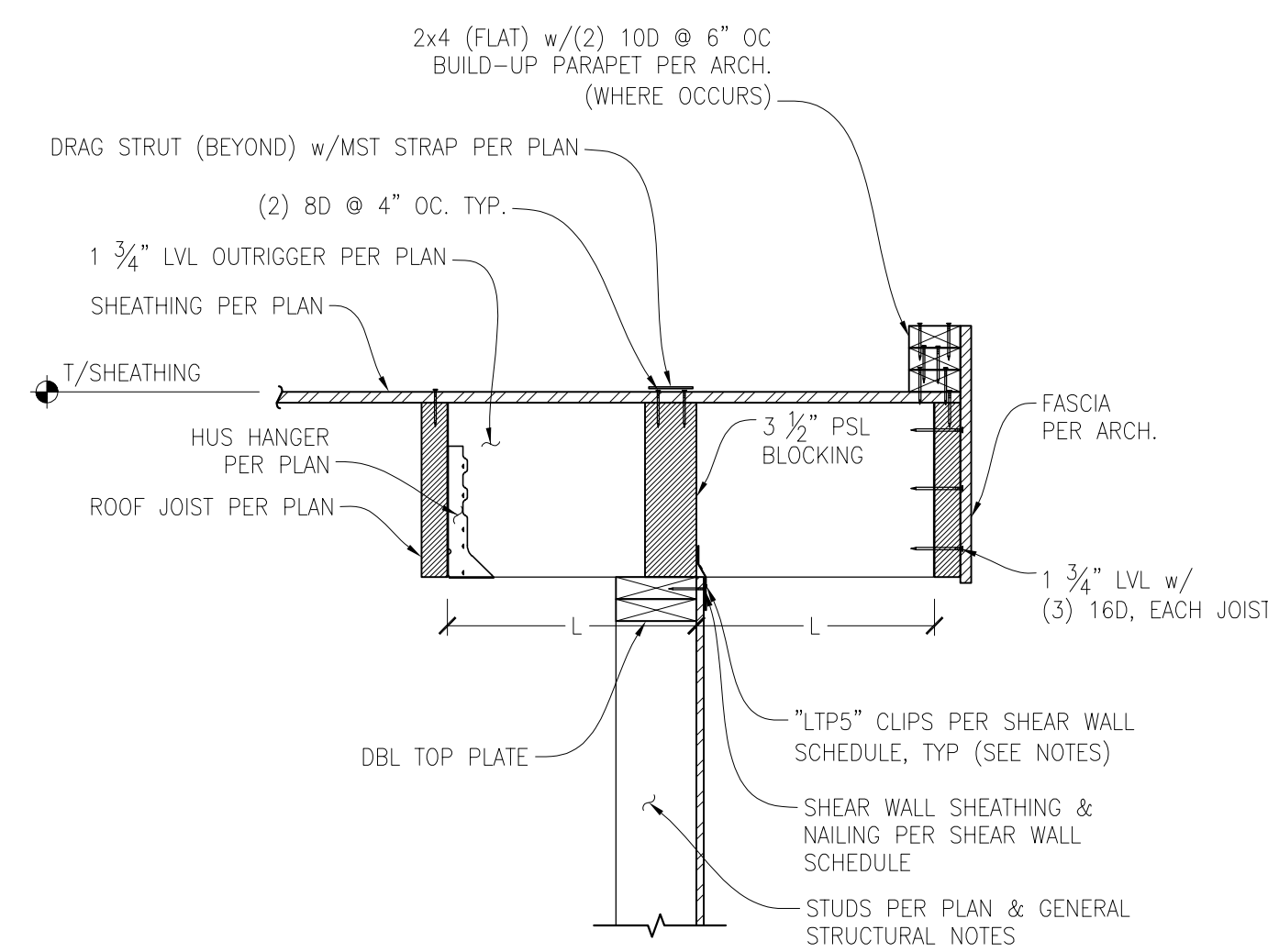
ROOF JOIST PARALLEL TO BEARING/SHEAR WALL 2
 SCALE: 1" = 1'-0"



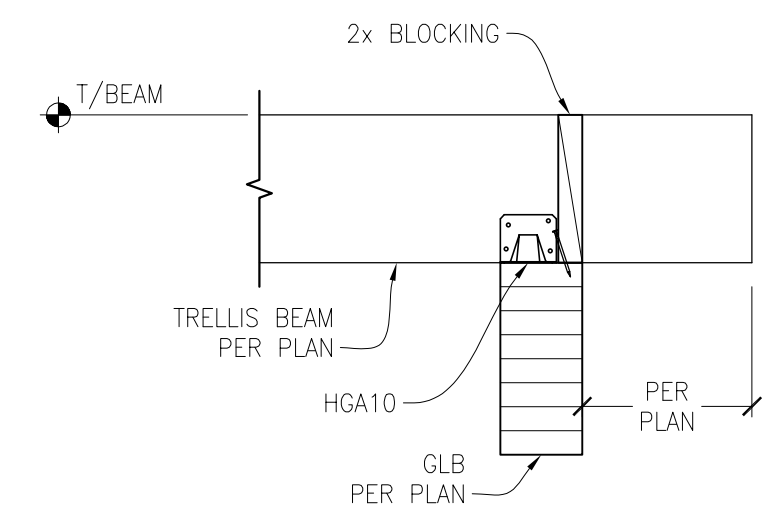
ROOF JOIST/TOP FLUSH BEAM CONNECTION 3
 SCALE: 1" = 1'-0"



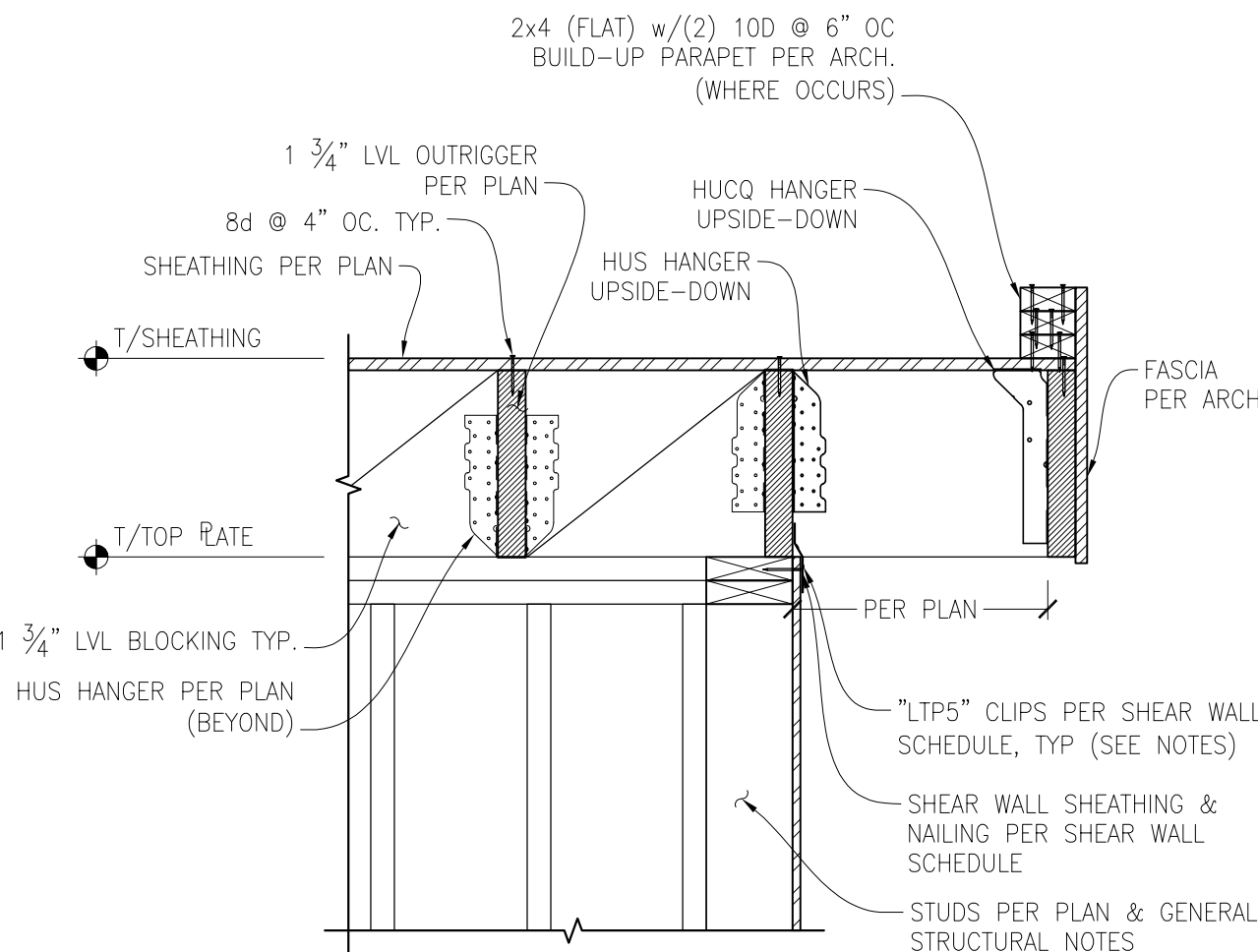
ROOF BEAM (TOP FLUSH) CONNECTION 4
 SCALE: 3/4" = 1'-0"



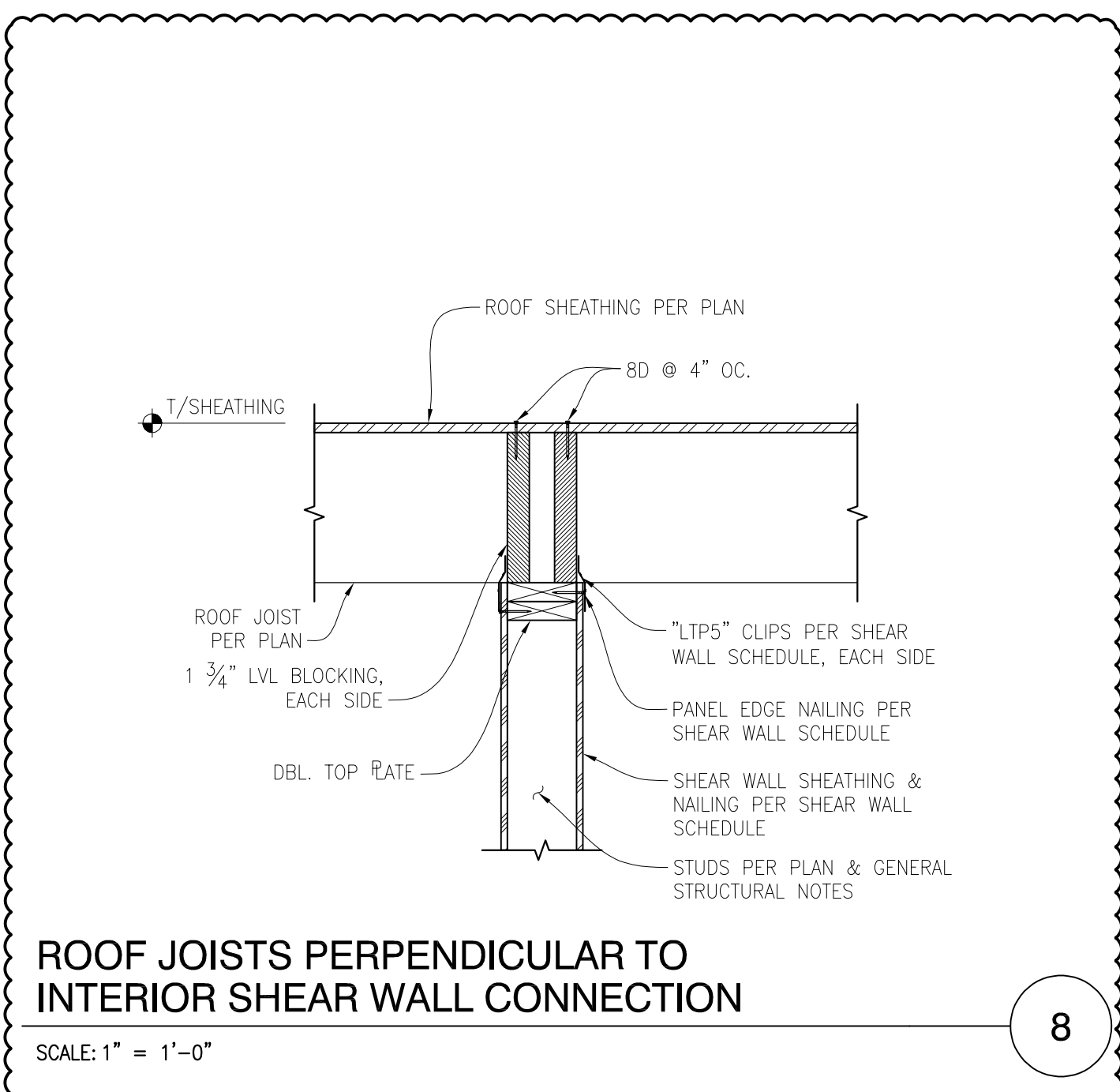
DRAG STRUT TO ROOF JOIST BLOCKING SHEAR WALL CONNECTION 5
 SCALE: 1" = 1'-0"



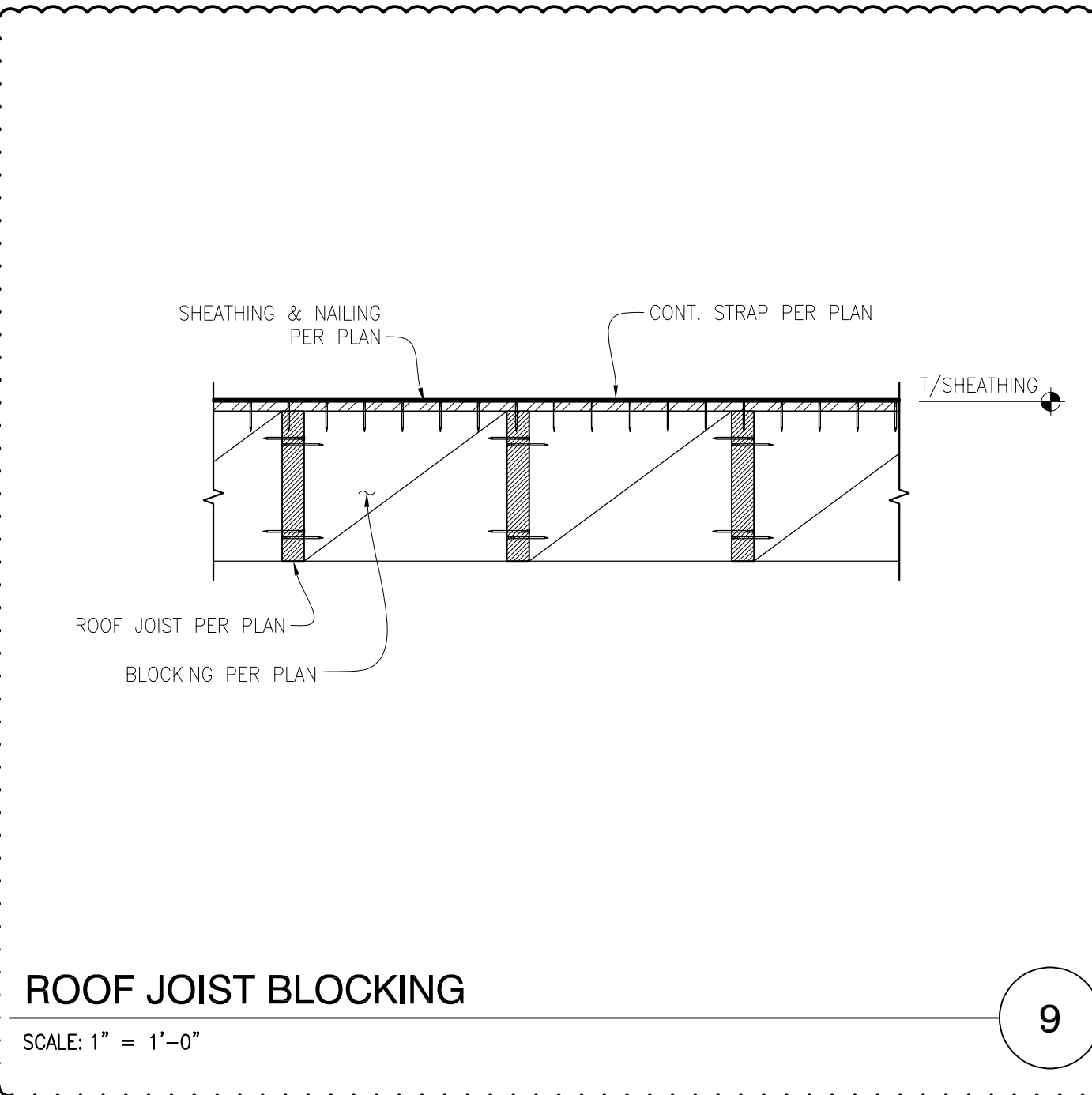
TRELLIS BEAM TO BEAM CONNECTION 6
 SCALE: 1" = 1'-0"



ROOF JOIST CORNER CONNECTION 7
 SCALE: 1" = 1'-0"



ROOF JOISTS PERPENDICULAR TO INTERIOR SHEAR WALL CONNECTION 8
 SCALE: 1" = 1'-0"



ROOF JOIST BLOCKING 9
 SCALE: 1" = 1'-0"

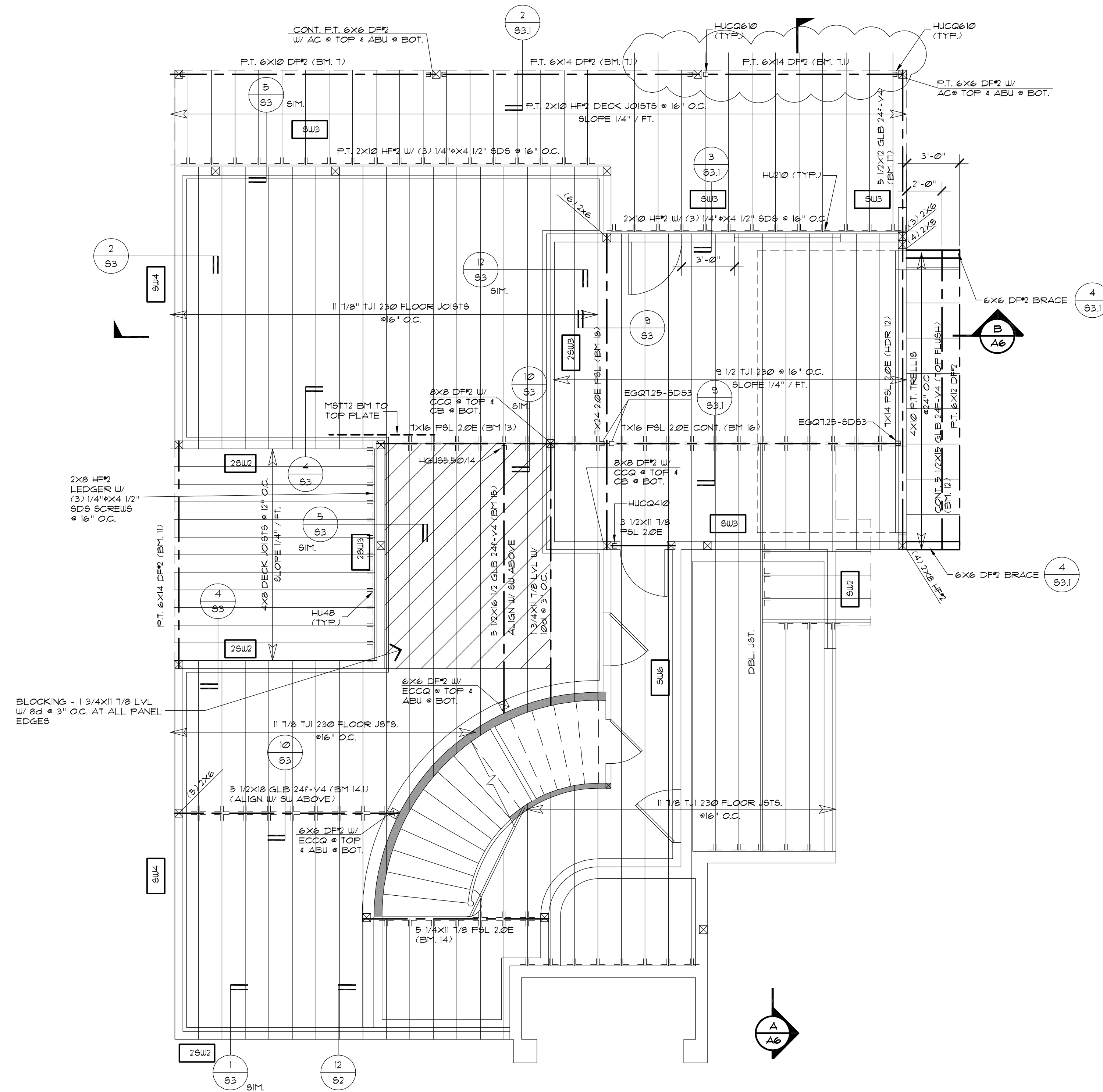
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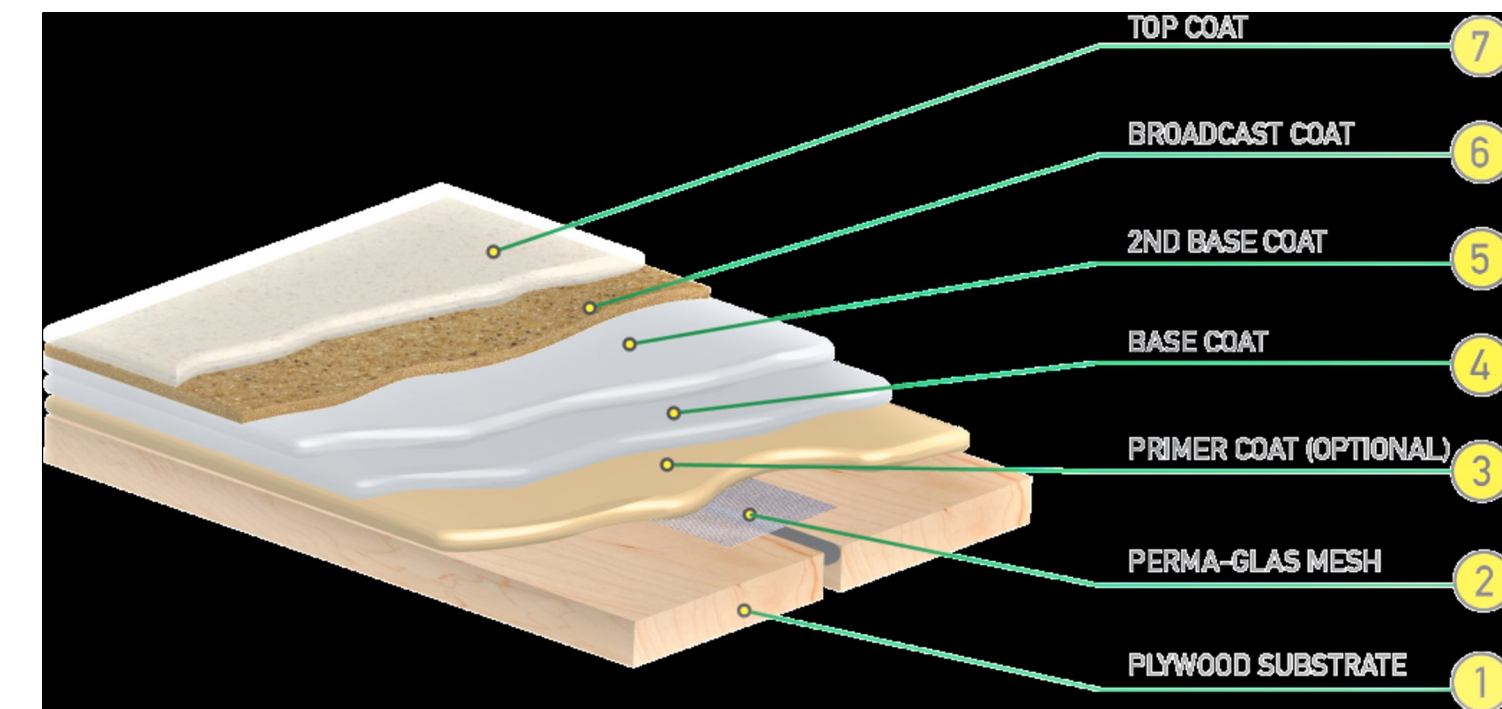
CK JOB NO.
23-043

STRUCTURAL
 DETAILS

S-4.0



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



WATERPROOF DECK DETAIL

FLOOR FRAMING NOTES:

1. ALL BEAMS AND HEADERS TO BE 4x8 DF#2 UNLESS NOTED OTHERWISE.
2. PROVIDE SOLID PRESSURE BLOCKING AT ALL POINT LOADS FROM ABOVE.
3. PROVIDE SOLID BLOCKING OR BRIDGING AT MID-SPAN OF ALL FLOOR JOISTS WITH SPANS OVER 10'-0" PER JOIST SPECIFICATIONS PER JOIST MANUFACTURER.
4. PROVIDE BLOCKING OR OTHER APPROVED MEANS OF LATERAL SUPPORT AT ALL JOIST BEARING LOCATIONS.
5. [xxx] DENOTES SHEARWALL CALLOUT PER SHEARWALL TABLE.
6. ALL HEADERS TO HAVE (1) 2x BEARING STUD AND (1) 2x KING STUD AT EACH END UNLESS NOTED OTHERWISE.

Joists shall be laterally supported at the ends by full-depth solid blocking not less than 2 inches nominal thickness or by attachment to a full-depth header, band or rim joist, or to an adjoining stud to provide lateral support to prevent rotation. Additionally, in Seismic Design Categories D0, D1, and D2, lateral restraint shall be provided at each intermediate support. See IRC Sections 106.11 and 502.7.

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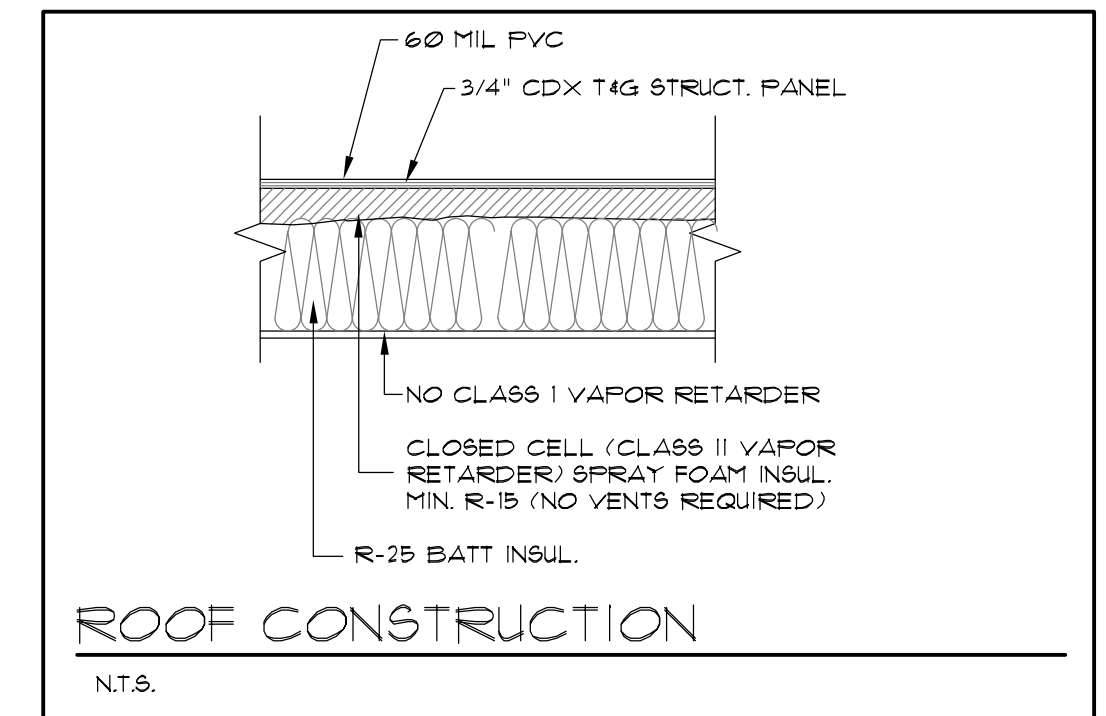
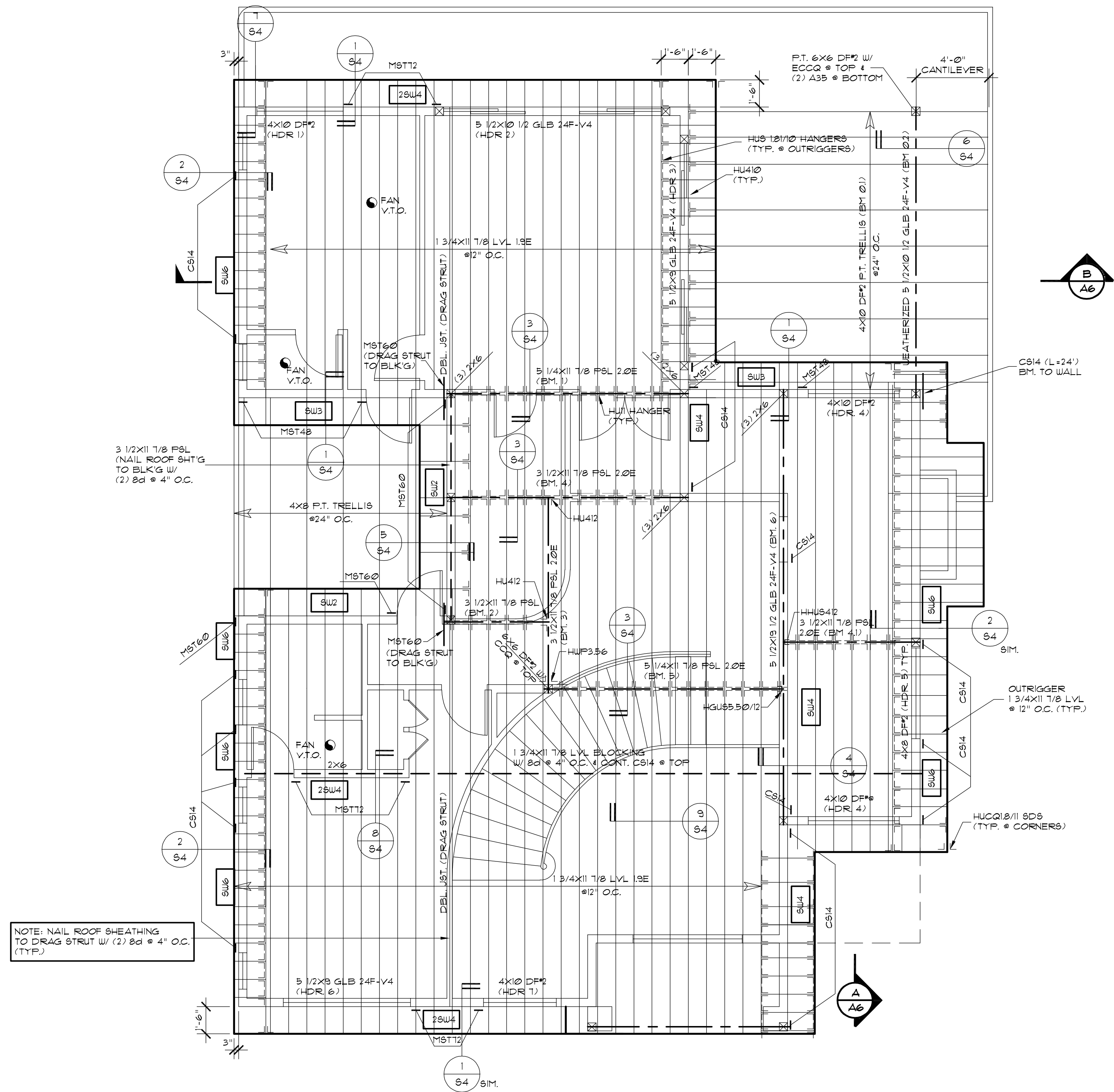
JOB NO: 23006
DATE: 12/11/23
DRWN. BY: TH
REVISED: 5/18/24
8/20/24

SHEET NO.

S6

SW TYPE	SW SHEATHING APA-RATED	NAIL SIZE & SPACING @ PANEL EDGES	RIM JOIST OR BLOCKING ATTACHMENT TO TOP PLATE BELOW	BOTTOM PLATE & EDGE MEMBER REQUIREMENTS		SILL PLATE REQUIREMENTS		SHEAR LOAD CAPACITY (PLF)
				SHEAR NAILING TO WOOD FRAMING BELOW	BOTTOM R AT FRAMING	ANCHOR BOLT TO CONCRETE FOUNDATION	SILL R AT FOUNDATION	
SW-6	15/32" CD-EXT	0.131" x 2 1/2" @ 6"OC	CLIP @ 18"OC	0.148" x 3 1/2" @ 4"OC	2x	5/8" @ 48"OC	P.T. 2x	242
SW-4	15/32" CD-EXT	0.131" x 2 1/2" @ 4"OC	CLIP @ 14"OC	0.148" x 3 1/2" @ 4"OC	3x	5/8" @ 32"OC 5/8" @ 48"OC	P.T. 2x P.T. 3x	353
SW-3	15/32" CD-EXT	0.131" x 2 1/2" @ 3"OC, STAGGERED	CLIP @ 12"OC	0.148" x 3 1/2" @ 4"OC & CLIP @ 18"OC	3x	5/8" @ 24"OC 5/8" @ 32"OC	P.T. 2x P.T. 3x	456
SW-2	15/32" CD-EXT	0.131" x 2 1/2" @ 2"OC, STAGGERED	CLIP @ 6"OC	0.148" x 3 1/2" @ 4"OC & CLIP @ 16"OC	3x	5/8" @ 16"OC 5/8" @ 24"OC	P.T. 2x P.T. 3x	595
ZSW-4	15/32" CD-EXT BOTH SIDE	0.131" x 2 1/2" @ 4"OC, STAGGERED	CLIP @ 6"OC	0.148" x 3 1/2" @ 4"OC & CLIP @ 12"OC	3x	5/8" @ 24"OC	P.T. 3x	707
ZSW-3	15/32" CD-EXT BOTH SIDE	0.131" x 2 1/2" @ 3"OC, STAGGERED	CLIP @ 8"OC BOTH SIDES, STAGGERED	0.148" x 3 1/2" @ 4"OC & CLIP @ 8"OC	3x	5/8" @ 16"OC	P.T. 3x	911
ZSW-2	15/32" CD-EXT BOTH SIDE	0.131" x 2 1/2" @ 2"OC, STAGGERED	CLIP @ 6"OC BOTH SIDES, STAGGERED	0.148" x 3 1/2" @ 4"OC & CLIP @ 5"OC	3x	5/8" @ 12"OC	P.T. 3x	1190

- NOTES:
1. INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY.
 2. 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.
 3. BLOCKING IS REQUIRED AT ALL PANEL EDGES.
 4. 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.
 5. SHEAR WALLS DESIGNATED AS PERFORATED SHEAR WALLS REQUIRE SHEATHING, SHEAR WALL NAILING, ETC. ABOVE AND BELOW ALL OPENINGS.
 6. 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.
 7. INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.148" x 2 1/2" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.148" x 2 1/2" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC.
 8. BASED ON 0.131" x 1 1/2" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131" x 2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.
 9. FRAMING CLIPS: SIMPSON "AS3" OR "1TP5" OR APPROVED EQUIVALENT.
 10. 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 1/2"x1 1/2". PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NAIL, PLATE WASHER TO EXTEND TO WITHIN 1/2" OF THE EDGE OF THE SILL PLATE ON THE SIDES WITH SHEATHING. WHERE SHEAR WALLS ARE SHEATHED ON BOTH SIDES OF 2x6 WALL FRAMING, USE 4.5"x4.5"x0.229"(MIN) PLATE WASHERS. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.
 11. 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.
 12. WHERE WOOD SHEATHING IS APPLIED OVER GYPSUM SHEATHING, CONTACT THE ENGINEER OF RECORD FOR ALTERNATE NAILING REQUIREMENTS.
 13. AT ADDING 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 PLAT NAILING.
 14. CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR ADHESIVE OR EXPANSION BOLT ALTERNATIVES TO CAST-IN-PLACE ANCHOR BOLTS. SPECIAL INSPECTION MAY BE REQUIRED.
 15. NAIL STUDS TO 3x BOTTOM/SILL PLATES WITH EITHER (2) 0.148"x4 (4) 0.131"x2 1/2" TOENAILS.



- ROOF FRAMING NOTES:
1. ALL BEAMS AND HEADERS TO BE 4x8 DF#2 UNLESS NOTED OTHERWISE.
 2. NO TRUSS SHALL BE FIELD MODIFIED WITHOUT PRIOR CONSENT OF THE TRUSS ENGINEER AND THE BUILDING DEPARTMENT.
 3. ROOF SHEATHING TO BE 1/2" APA RATED SHEATHING WITH 10d NAILS AT PERIMETER AND ALL SUPPORTED PANEL EDGES AT 6" ON CENTER AND AT 12" ON CENTER AT FIELD.
 4. [XXX] DENOTES SHEARWALL CALLOUT PER SHEARWALL TABLE.
 5. [X] DENOTES SOLID 2x STUD BEARING BELOW END OF HEADER OR GIRDER.
 6. ALL HEADERS TO HAVE (1) 2x BEARING STUD AND (1) 2x KING STUD AT EACH END UNLESS NOTED OTHERWISE.
 7. PROVIDE SOLID BEARING STUDS AT ALL BEARING LOCATIONS INCLUDING GIRDER TRUSSES AND BEAMS.

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

HDR: 4x8 DF#2 TYP. (U.N.O.)
POST: (2) 2x6 HF#2 TYP. (U.N.O.)

A NEW HOME AT:
6175 SE 27TH STREET
MERCER ISLAND, WA 98040

JOB NO: 23006
DATE: 12/11/23
DRAWN BY: TH
REVISED: 5/18/24
8/20/24

SHEET NO.

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