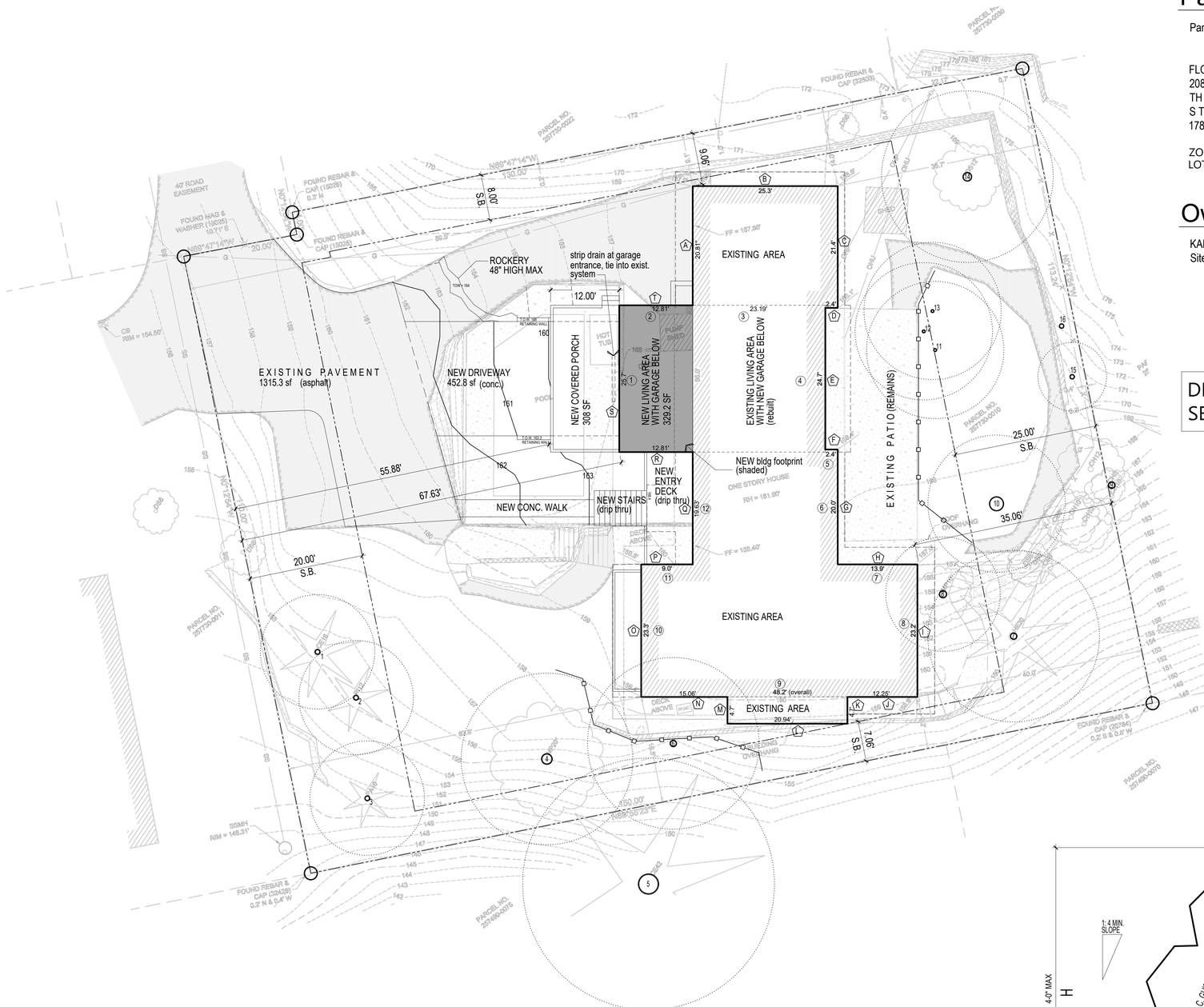


A. SITE PLAN

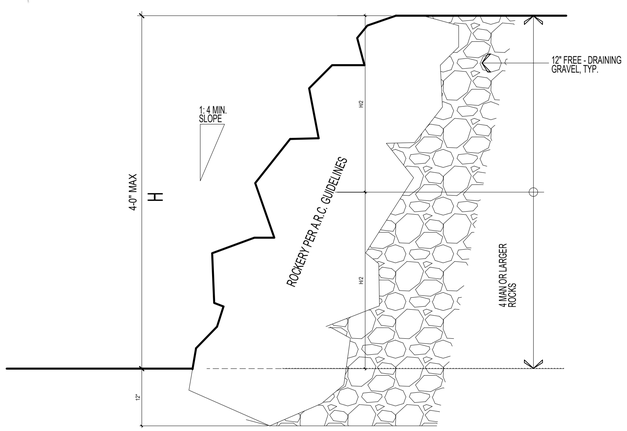
1/10" = 1'-0"

NORTH

caller north

Ⓐ = WALL SEGMENT TAG FOR HEIGHT CALCULATION & REMODEL CALC.
① = WALL SEGMENT TAG FOR BASEMENT FAR EXCEPTION
= EAVE/ROOF LINE
= REVISED TOPO (FINISHED GRADES)
= EXISTING TOPOGRAPHY (SURVEY SHOWN IN BACKGROUND)

= TREE FENCING, CHAIN LINK
= GROUND PROTECTION AREA - (9" OF WOOD CHIPS)
SEE ARBORISTS REPORT FOR FULL TREE PROTECTION NOTES
= TREE NUMBER PER ARBORIST'S REPORT
= EXCEPTIONAL TREE
= TREE LIMIT OF DISTURBANCE



A. ROCKERY

NTS

Parcel Number/Legal

Parcel # 2577300010

FLOODS ACRE GARDENS ADD POR 5-6-7-8 BEG AT PT 208.25 FT S OF NE COR OF SEC 24-24-4 TH W 627 FT TH N 111.41 FT TH E 289 FT TH N 4 FT TH E 338 FT TH S TO BEG LESS CO RD LESS W 269 FT THOF LESS E 178 FT THOF

ZONING = R-15
LOT sf = 16,963

Owner

KAM DERAKSHANI
Site Address 8151 SE 48TH ST 98040

Structural Engineer

Javid Abdi, PE, SE Atlas Consulting Structural Engineers
6810 NE 149th St Kenmore WA 98028
Phone: (206) 427-7233

Contractor

Farhad (Frank) Imani
SILVER BASIN CONSTRUCTION LLC
16223 SE 31ST ST BELLEVUE, WA 98008
lic. # SILVEBC814K8
206-910-7959

Project Description

Remodel of existing single family residence. New garage (in new basement - 908.5 sf) and new living area at main floor (329.2sf) with new covered porch (308sf)

DRAINAGE EXEMPT
SEE SHEET 1C

CONTINUOUS GEOTECHNICAL INSPECTION IS REQUIRED DURING EXCAVATION.

All 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, shall be removed from the property.

development proposals for a new single-family home shall remove japanese knotweed (polygonum cuspidatum) and regulated class a, regulated class b, and regulated class c weeds identified on the king county noxious weed list, as amended, from required landscaping areas established pursuant to subsection 19.02.020(f)(3)(a). new landscaping associated with new single-family home shall not incorporate any weeds identified on the king county noxious weed list, as amended. provided, that removal shall not be required if the removal will result in increased slope instability or risk of landslide or erosion.

ABE CALCULATION

	EL @ MIDPOINT	segment	wtd sgmnt
A	168.00	20.81	3496.08
B	169.00	25.30	4275.70
C	169.00	21.40	3616.60
D	169.00	2.40	405.60
E	169.00	24.70	4174.30
F	169.00	2.40	405.60
G	168.00	20.00	3360.00
H	167.50	13.90	2328.25
I	162.50	23.20	3770.00
J	159.00	12.25	1947.75
K	159.00	4.70	747.30
L	159.00	20.94	3329.46
M	159.00	4.70	747.30
N	159.60	15.06	2403.58
O	159.60	23.30	3718.68
P	160.00	9.00	1440.00
Q	168.00	19.63	3297.84
R	168.00	12.81	2152.08
S	**159.80**	25.70	4106.86
T	167.50	12.81	2145.68
		315.01	51868.65

AVG. EL = 164.6572
BOLD = NEW EL LOWER THAN EXIST

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CONTENTS

Site Plan

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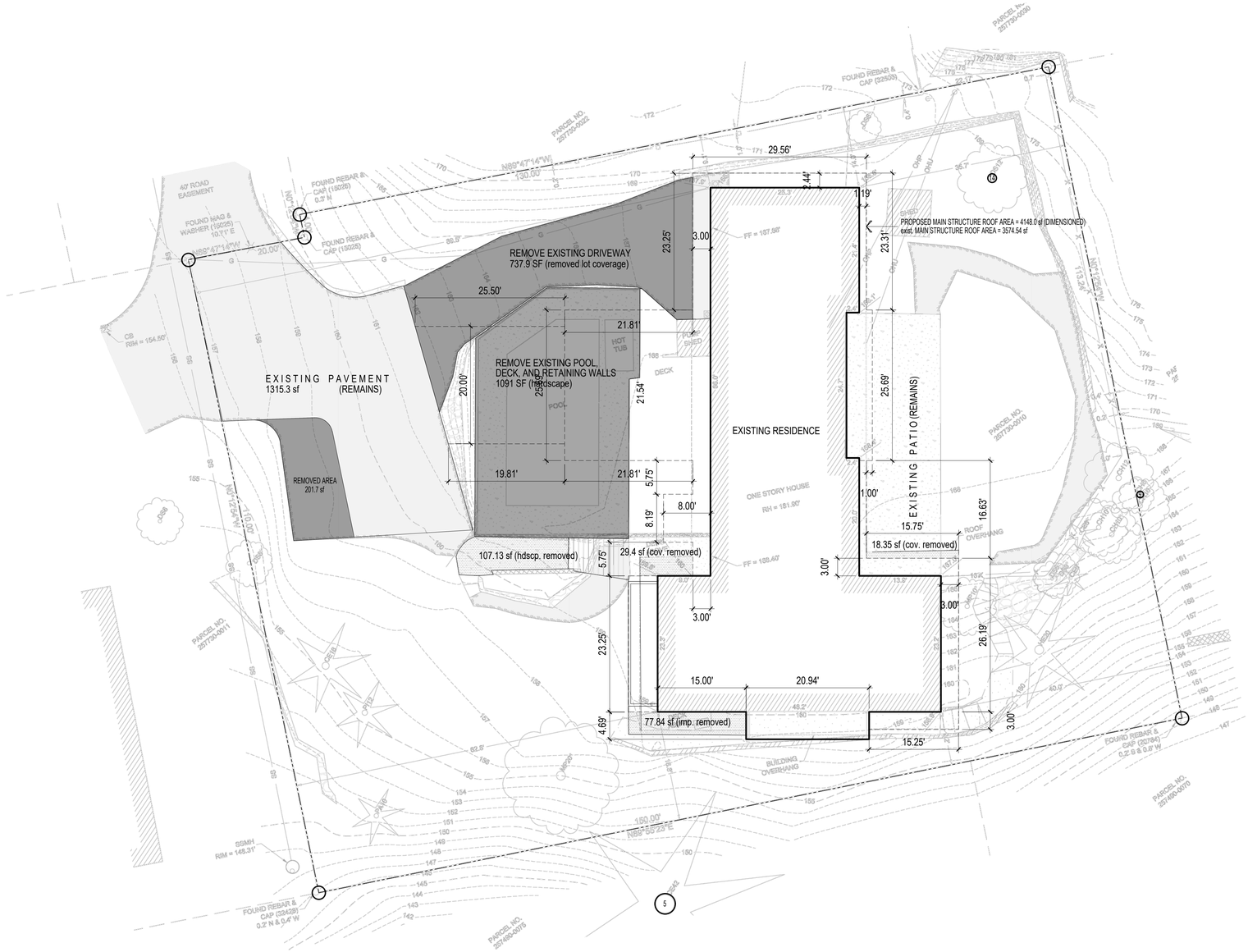
1A



REMODEL CALC.

	exist wall	new wall
A	20.81	
B	25.30	
C	21.40	
D	2.40	
E		24.70
F	2.40	
G	20.00	
H	13.90	
I	23.20	
J	12.25	
K	4.70	
L	20.94	
M	4.70	
N	15.06	
O	23.30	
P	9.00	
Q	19.63	
R		12.81
S		25.70
T		12.81
	238.99	76.02

e/n = 31.81% <40%, ok

TOTAL REMOVED LOT COVERAGE

DRIVE = 939.6 sf
MISC. roof = 232.68 sf

PROJECT TOTAL = 1172.28 sf

SUPPLEMENTAL
A. SITE PLAN

1/10" = 1'-0"

NORTH
parallel north

(A) = WALL SEGMENT TAG FOR HEIGHT CALCULATION
= EAVE/ROOF LINE
= REVISED TOPO (FINISHED GRADES)
= EXISTING TOPOGRAPHY (SURVEY SHOWN IN BACKGROUND)

= TREE FENCING, CHAIN LINK
= GROUND PROTECTION AREA - (9" OF WOOD CHIPS)
SEE ARBORISTS REPORT FOR FULL TREE PROTECTION NOTES
(#) = TREE NUMBER PER ARBORIST'S REPORT
(#) = EXCEPTIONAL TREE
= TREE LIMIT OF DISTURBANCE

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LOT COVERAGE CALC.

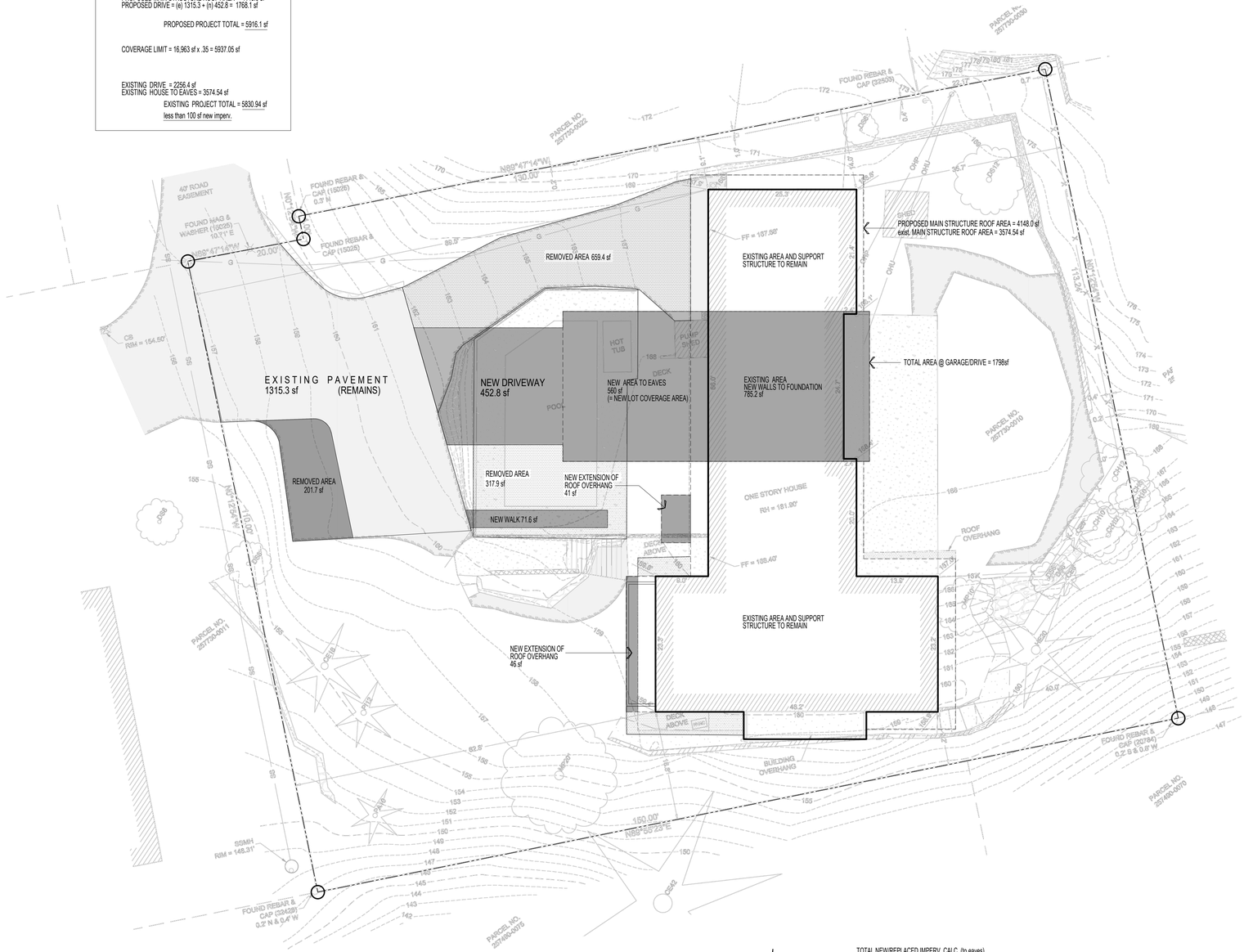
PROPOSED MAIN STRUCTURE ROOF AREA = 4148.0 sf
PROPOSED DRIVE = (e) 1315.3 + (n) 452.8 = 1768.1 sf

PROPOSED PROJECT TOTAL = 5916.1 sf

COVERAGE LIMIT = 16,963 sf x .35 = 5937.05 sf

EXISTING DRIVE = 2256.4 sf
EXISTING HOUSE TO EAVES = 3574.54 sf

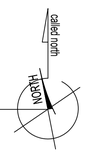
EXISTING PROJECT TOTAL = 5830.94 sf
less than 100 sf new imperv.



A. IMPERVIOUS SITE PLAN

1/10" = 1'-0"

= NEW/RE-BUILT IMPERVIOUS AREA
= EXISTING IMPERVIOUS AREA REMOVED
= EXISTING TOPOGRAPHY + SURVEY SHOWN IN BACKGROUND



TOTAL NEW/REPLACED IMPERV. CALC. (to eaves)

NEW / REPLACED AREA AT GARAGE / DRIVEWAY = 1798 sf
ADDITIONAL EAVES = 67 sf
NEW WALK = 71.6 sf

PROJECT TOTAL = 1956.6 sf

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1C

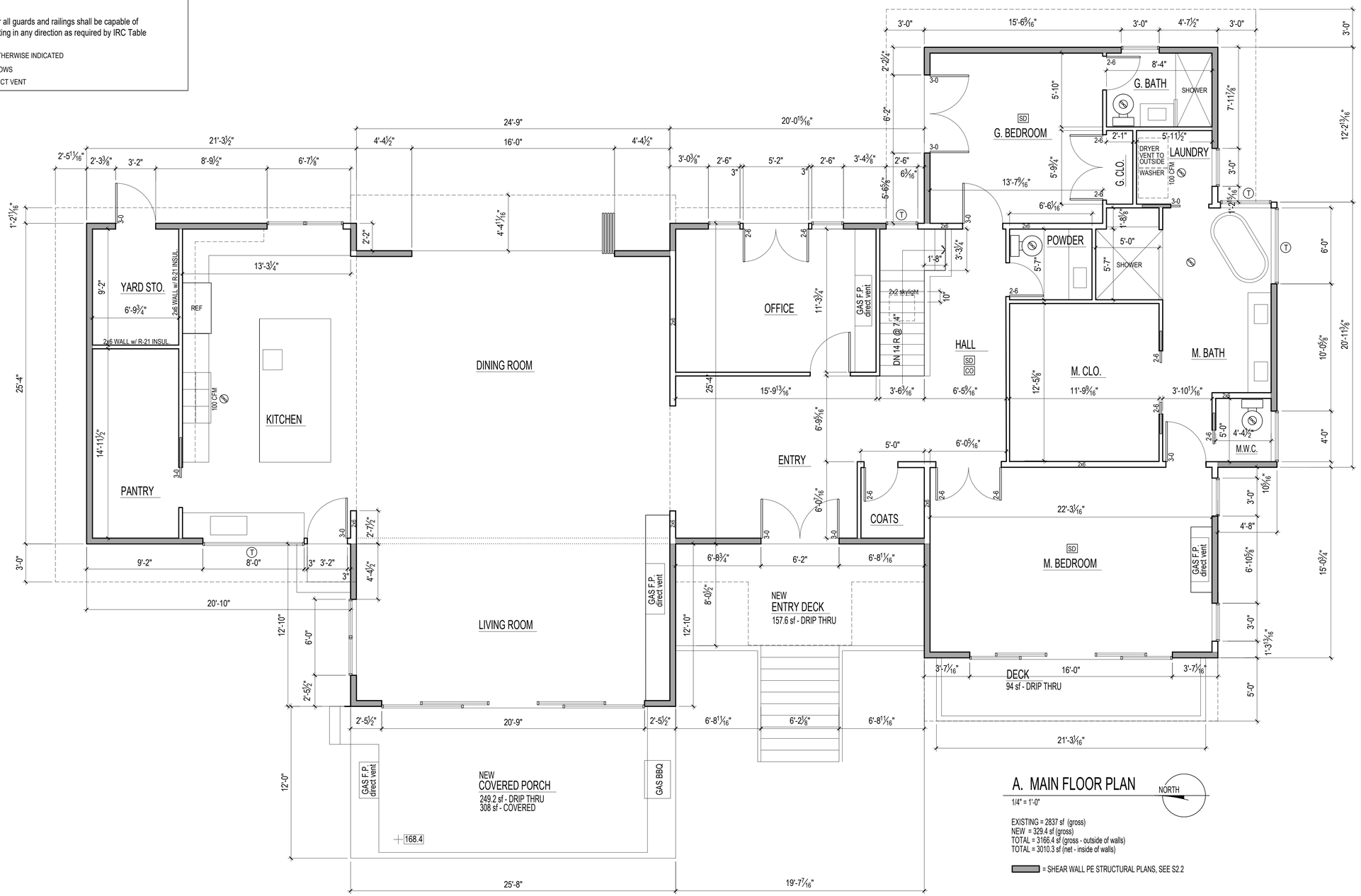
NOTES

SD = SMOKE DETECTOR, HARDWIRE, INTERCONNECTED w/ BATTERY BACK-UP
CO CARBON MONOXIDE DETECTOR, HARDWIRE w/ BATTERY BACK-UP

DOORS ARE 3-0 x 6-8 (r.o. = 3'-2" x 6'-10") unless otherwise indicated
= FAN, 50 CFM UNLESS OTHERWISE INDICATED
FOR SHEAR WALL INFORMATION SEE STRUCTURAL PLANS
ALL INTERIOR WALLS TO BE 2x4, EXTERIOR WALLS 2x6, EXCEPT AS INDICATED, OR EXISTING
(E) =EGRESS WINDOWS

Contractor shall verify to Inspector all guards and railings shall be capable of resisting 200 lb load on top rail acting in any direction as required by IRC Table R301.5.

ALL WALLS FULL HIEGHT UNLESS OTHERWISE INDICATED
(T) =TEMPER/SAFETY GLAZE WINDOWS
ALL GAS F.P. TO BE APPROVED DIRECT VENT



A. MAIN FLOOR PLAN

1/4" = 1'-0"

NORTH

EXISTING = 2837 sf (gross)
NEW = 329.4 sf (gross)
TOTAL = 3166.4 sf (gross - outside of walls)
TOTAL = 3010.3 sf (net - inside of walls)

= SHEAR WALL PE STRUCTURAL PLANS, SEE S2.2

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Main Floor Plan

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02

Energy Code Info

2018 WA STATE PRESCRIPTIVE PATH FOR ALL
CLIMATE ZONES
ENERGY CREDIT OPTIONS =
1.7(.5),2(1),2.1(.5),3.6(2),5.5(2) = 6 CREDITS
Vertical fenestration U = 0.30
Floor R-30

PRIMARY RESIDENCE HVAC NOTES

DUCTED HEAT PUMP (HSPF>9.0) INT. AIR HANDLER
INTEGRATED VETILATION
REQUIRED VENTING = CONTINUOUS 120CFM
SET TO OPERATE AT 240 CFM FOR 2 HOURS IN EA. 4 HR PERIOD (50%)
PROVIDED BY VARIABLE SPEED HIGH EFF. FAN (MAX .35 WATTS/CFM)
CONTOLLED TO OPERATE AT LOW SPEED IN VENTILATION
MODE ONLY.

design professional or builder shall complete and post an "Insulation Certificate for Residential Construction" within 3' of the electrical panel prior to final inspection.

A minimum of 75 percent of permanently installed lamps in lighting fixtures shall be high-efficacy lamps.

Maximum flow rates for shower heads and kitchen sink - 1.75 GPM or less. All other lavatory faucets - 1.0 GPM or less.

Air leakage shall not exceed 3 air changes/ hour and shall be tested as such. A written report of the test results, shall be signed by the testing party and provided to the building inspector, prior to call for final inspection.

Per WSEC R402.4, The building thermal Envelope shall be constructed to limit air leakage to 3.0 air changes per hour maximum. The results of the test shall be signed by the party conducting the test and provided to the code official (R402.4.1.2). Per WSEC R403.1.1, at least one thermostat per dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule. Per WSEC R403.2.2, Ducts, air handlers, and filter boxes shall be sealed. Per WSEC R404.1, A minimum of 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps.

All Climate Zones (Table R402.1.1)		
	R-Value [a]	U-Factor [a]
Fenestration U-Factor [b]	n/a	0.30
Skylight U-Factor [b]	n/a	0.50
Glazed Fenestration SHGC [b,e]	n/a	n/a
Ceiling [e]	49	0.026
Wood Frame Wall [g,h]	21 int	0.056
Floor	30	0.029
Below Grade Wall [c,h]	10/15/21 int + TB	0.042
Slab [d,f] R-Value & Depth	10, 2 ft	n/a

a	*R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix Table A101.4 shall not be less than the *R*-value specified in the table.
b	The fenestration *U*-factor column excludes skylights.
c	"10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.
d	R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
e	For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
f	R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
g	For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for *climate zone* 5 of ICC 400.
h	Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

NOTES

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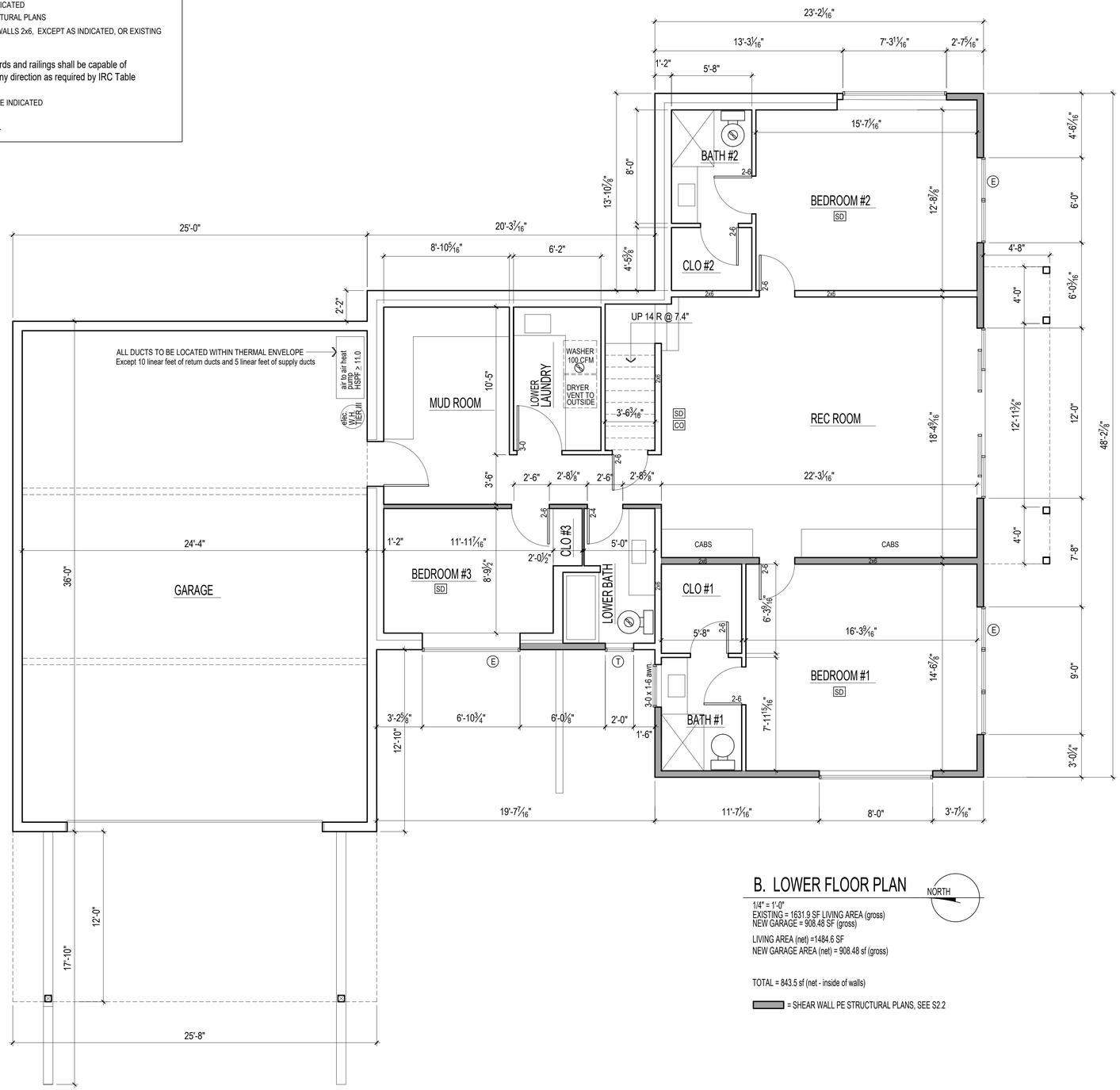

B. LOWER FLOOR PLAN

NORTH

1/4" = 1'-0"
EXISTING = 1631.9 SF LIVING AREA (gross)
NEW GARAGE = 908.48 SF (gross)

LIVING AREA (net) =1484.6 SF
NEW GARAGE AREA (net) = 908.48 sf (gross)

TOTAL = 843.5 sf (net - inside of walls)

= SHEAR WALL PE STRUCTURAL PLANS, SEE S2.2

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Lower Floor Plan

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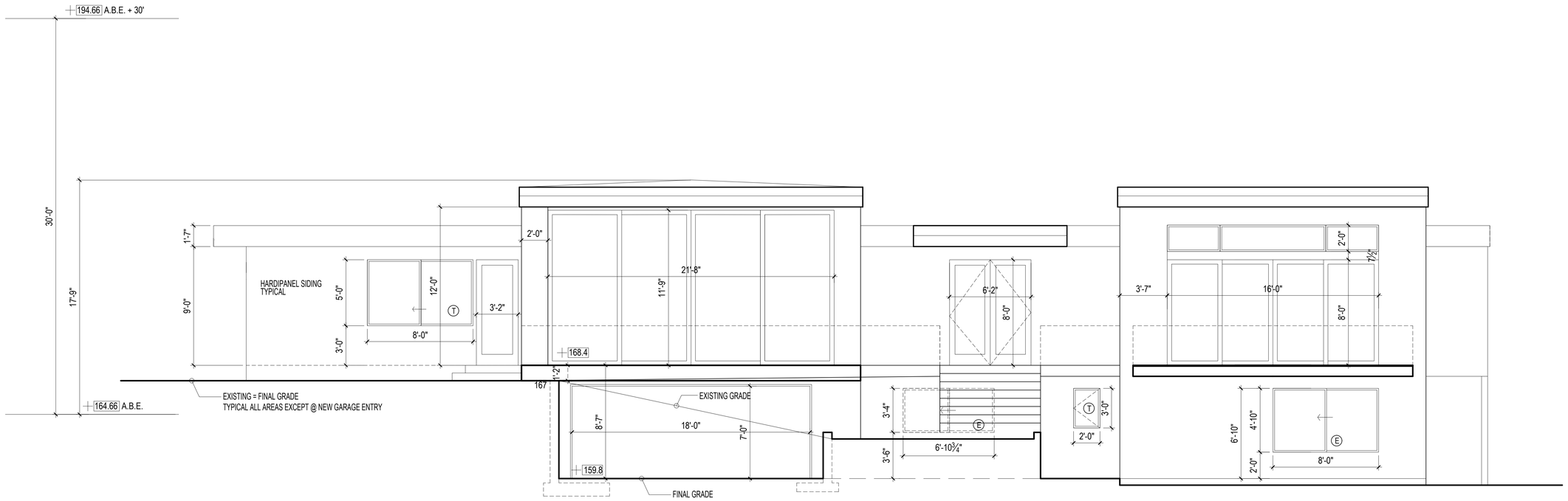
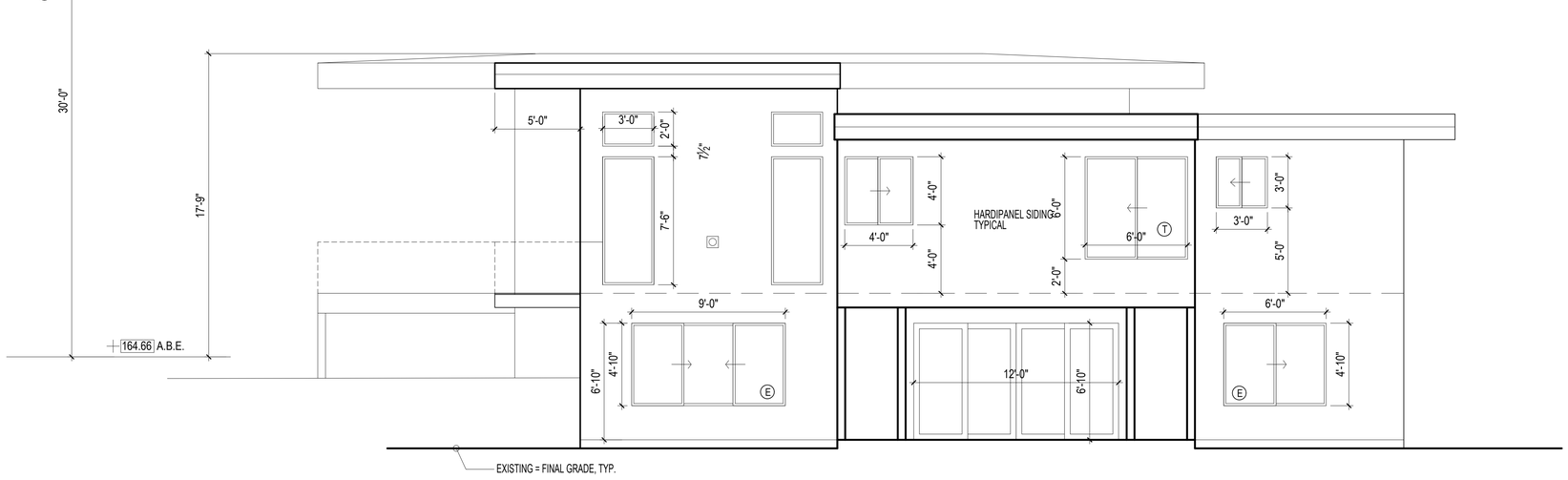


WEST ELEVATION

1/4" = 1'-0"



SOUTH ELEVATION

1/4" = 1'-0"

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S and W Elevations

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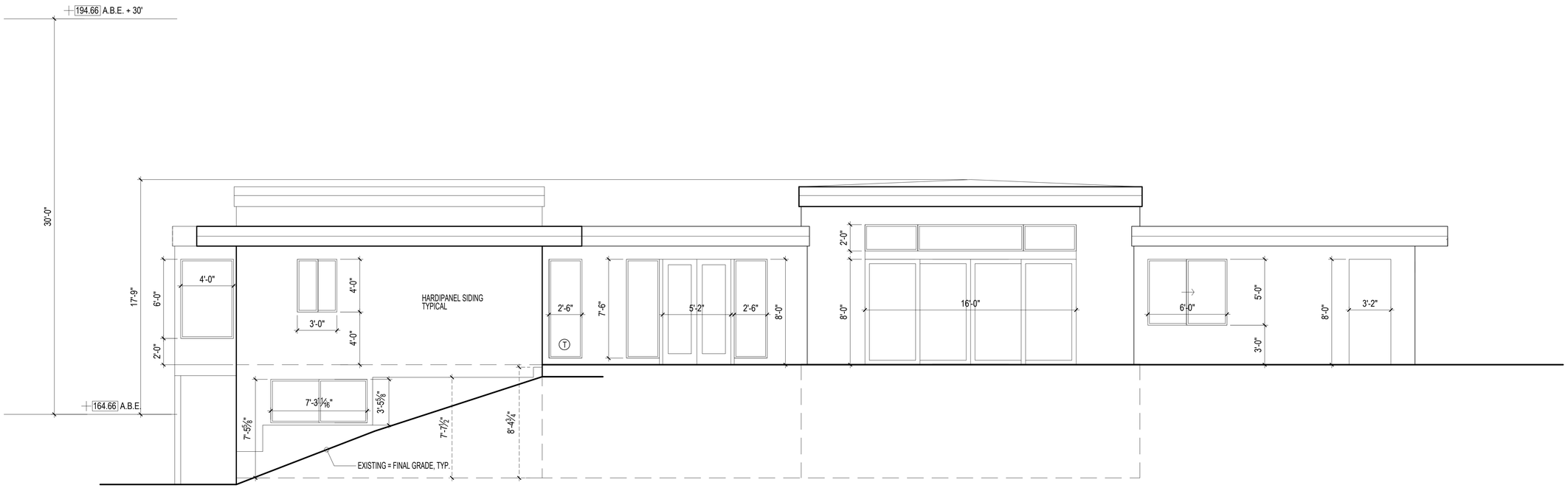
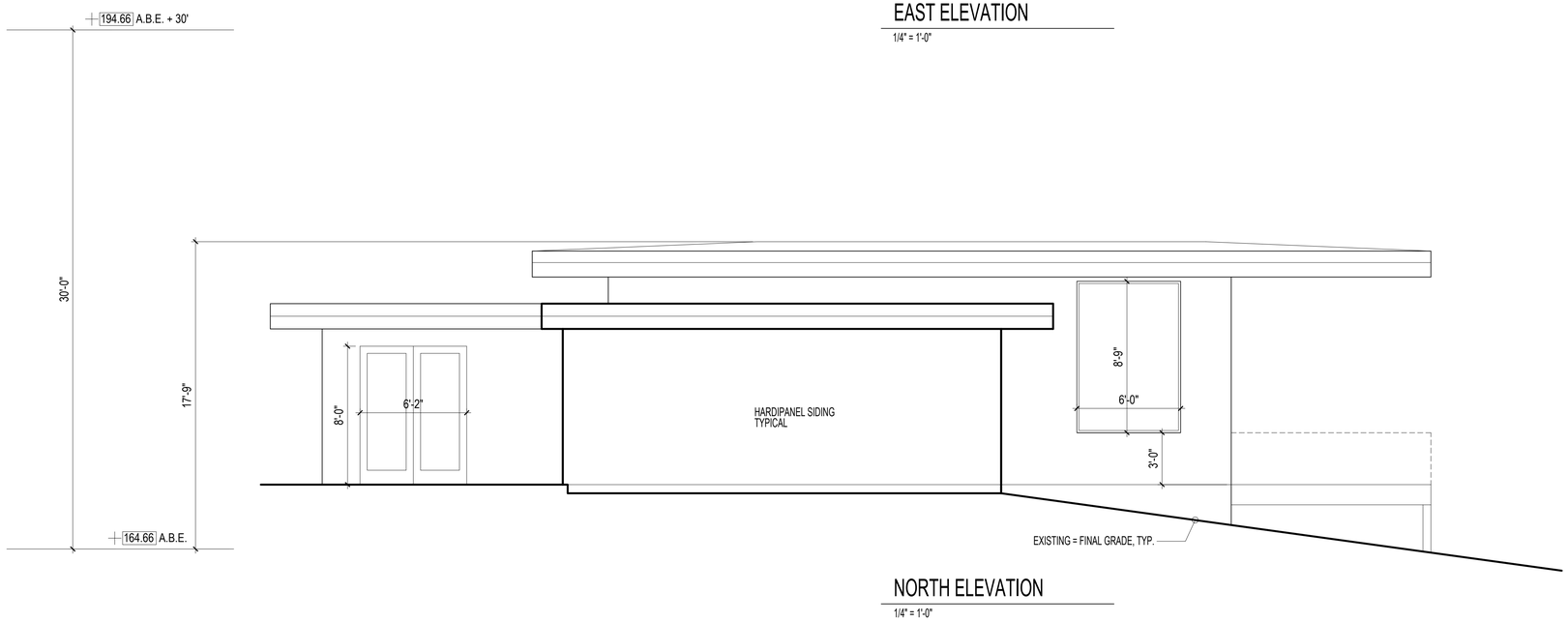


EAST ELEVATION

1/4" = 1'-0"



NORTH ELEVATION

1/4" = 1'-0"

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N and E Elevations

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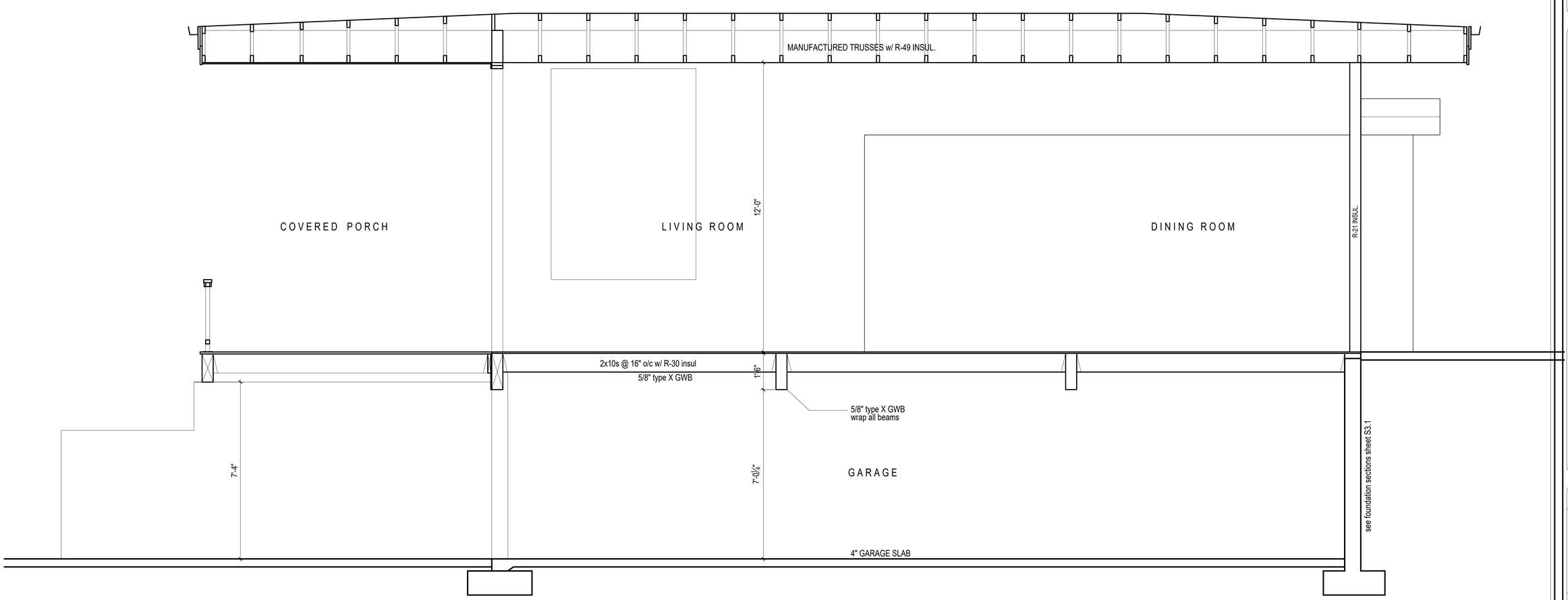

SECTION @ GARAGE/LIVING ROOM

1/2" = 1'-0"

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LR Section

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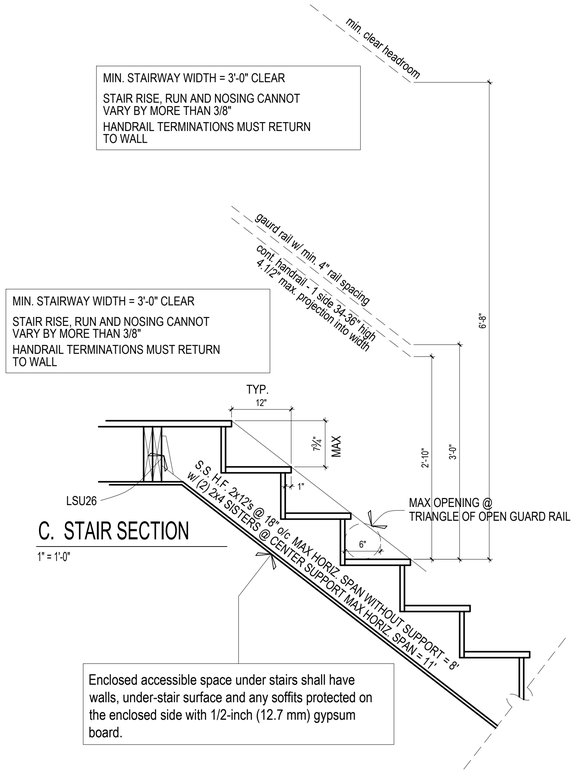
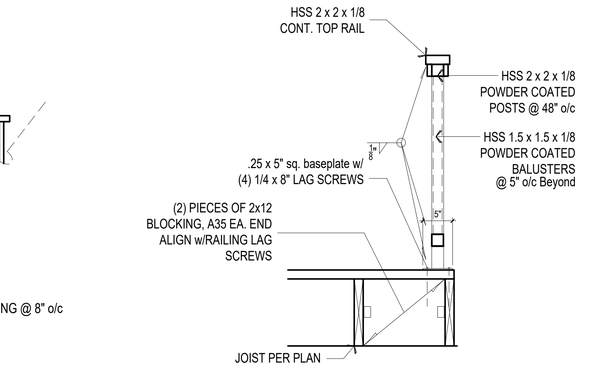
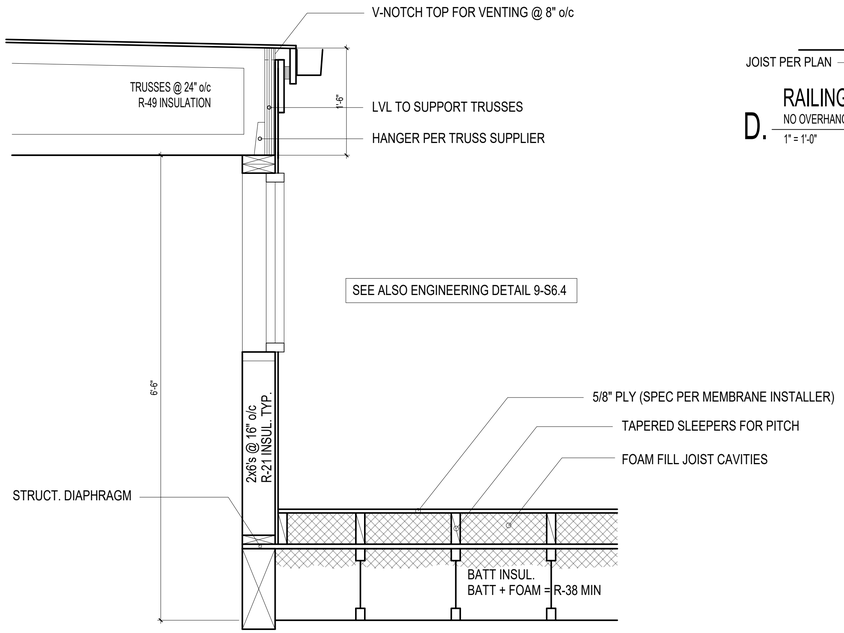


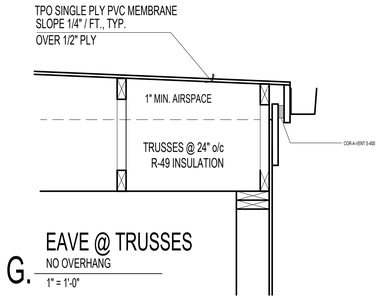
C. STAIR SECTION
1" = 1'-0"



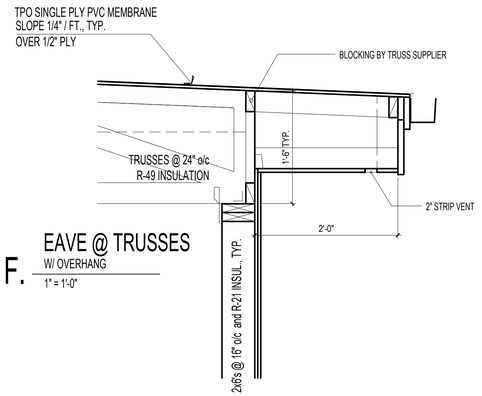
D. RAILING DETAIL
NO OVERHANG, perp to jsts.
1" = 1'-0"



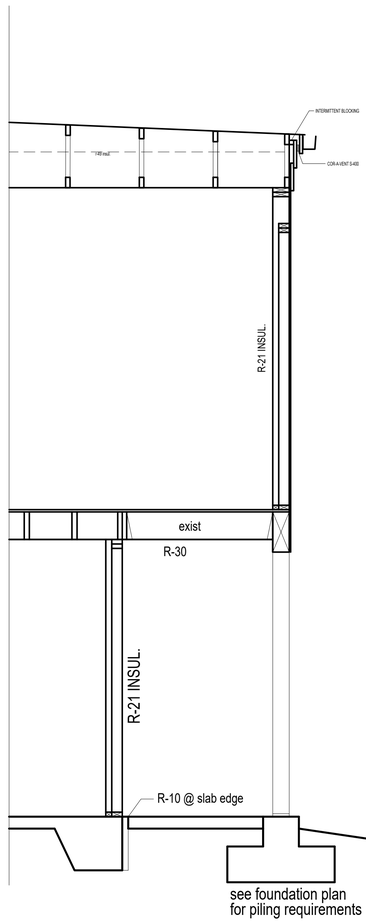
E. LOW/HIGH ROOF SECTION
1" = 1'-0"



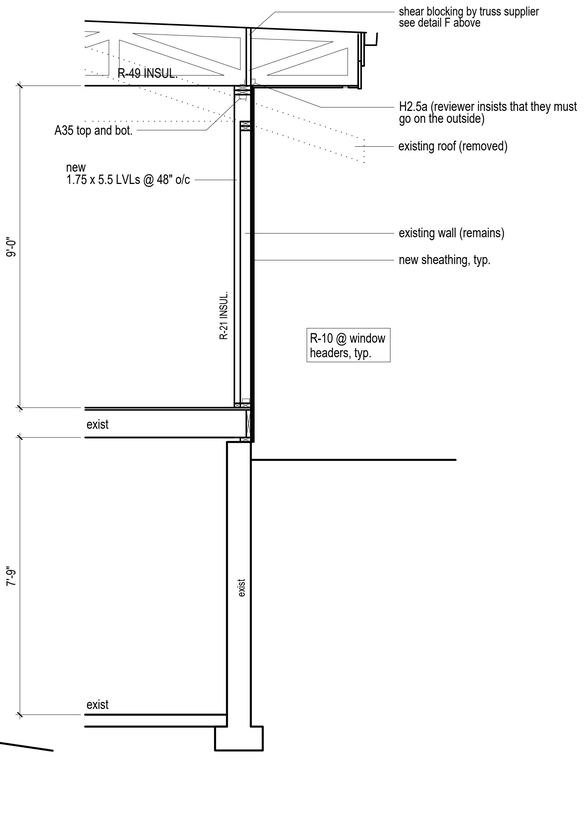
G. EAVE @ TRUSSES
NO OVERHANG
1" = 1'-0"



F. EAVE @ TRUSSES
W/ OVERHANG
1" = 1'-0"



SECTION @ SOUTH BUMP-OUT
1/2" = 1'-0"



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

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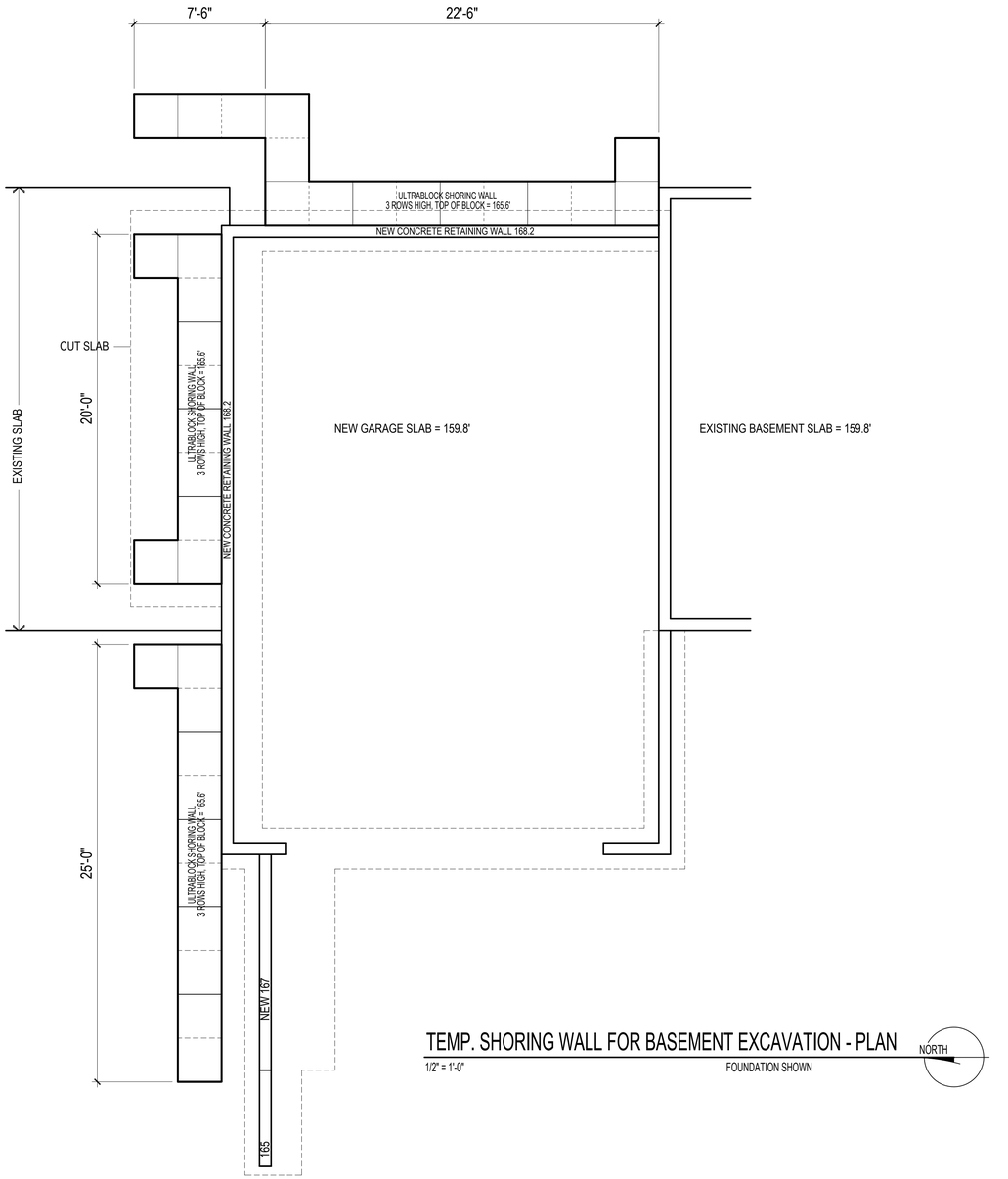
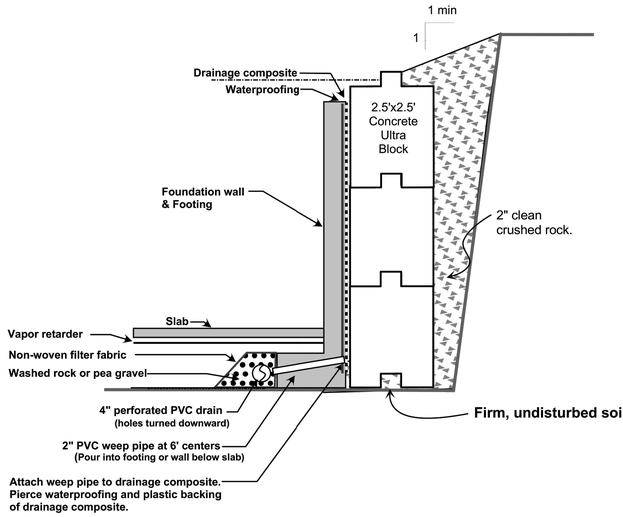


TEMP. SHORING WALL FOR BASEMENT EXCAVATION - PLAN

1/2" = 1'-0" FOUNDATION SHOWN NORTH



General Notes

1) Each Ultra Block should bear on two blocks in the tier below to interlock the blocks.

2) All material (blocks and rock backfill) shall be on site and ready for placement prior to excavation for the wall such that the wall can be excavated, placed and backfilled immediately.

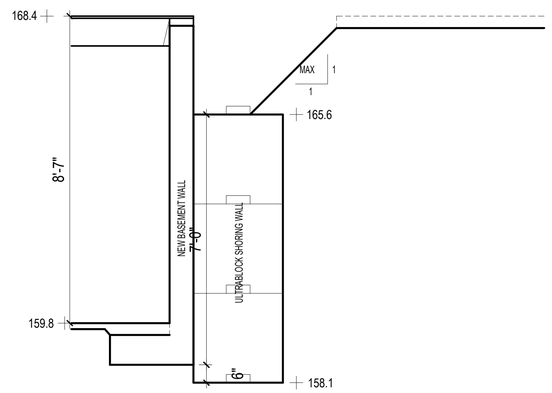
3) The block wall shall return with interlock at least 1 block length at the southern end end of the wall for stability.

GEOTECH CONSULTANTS, INC.

TEMPORARY ULTRA BLOCK SHORING DETAIL

8151 Southeast 48th Street
Mercer Island, Washington

Job No:	Date:		Plate:
21062	Mar. 2021		5



TEMP. SHORING WALL FOR BASEMENT EXCAVATION SECTION

1/2" = 1'-0"

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Shoring Layouts

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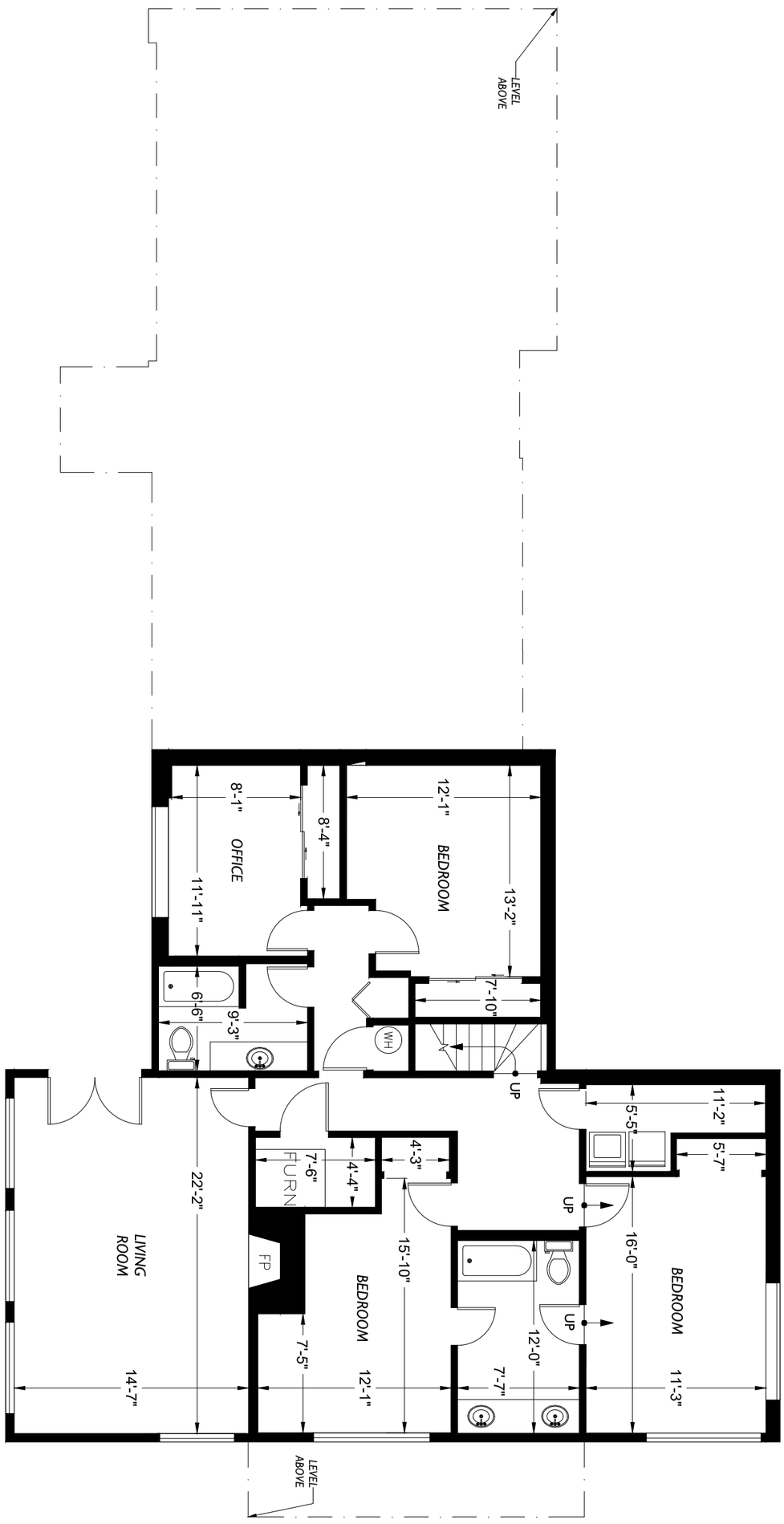
Adjacent Property

Driveway

Backyard



Kam Deraksahni	Residence 8151 SE 48th St Mercer Island, WA 98040	Floor Plan BSMT	0 5 10	2DFLOORPLANS.COM 425-677-7511 600 NW Gilman Blvd. Suite E Issaquah, WA 98027
Client	**Subject**	**Floor**	**Scale**	**Measured:** October 2020 **Project:** C20-897

Backyard

Adjacent Property

44'-10"

22'-2"

16'-0"

DECK

14'-8"

BEDROOM

27'-9"

17'-7"

FP

14'-10"

DINING AREA

14'-3"

12'-0"

5'-11"

7'-10"

3'-11"

6'-10"

7'-1"

15'-5"

12'-7"

DN

22'-3"

GARAGE

FAMILY ROOM

13'-0"

12'-0"

FURN

22'-0"

9'-7"

3'-8"

11'-8"

FP

22'-7"

4'-9"

30'-7"

DW

14'-6"

BONUS

NO ACCESS ASSUMED WALL THICKNESS (TYP.)

37'-3"

22'-2"

3'-7"

DECK

13'-7"

4'-7"

DN

Driveway

2DFLOORPLANS.COM
425-677-7511
600 NW Gilman Blvd. Suite E
Issaquah, WA 98027

2-D AS-BUILT FLOOR PLANS

Measured:October 2020

Project: C20-897

Scale

Floor Plan

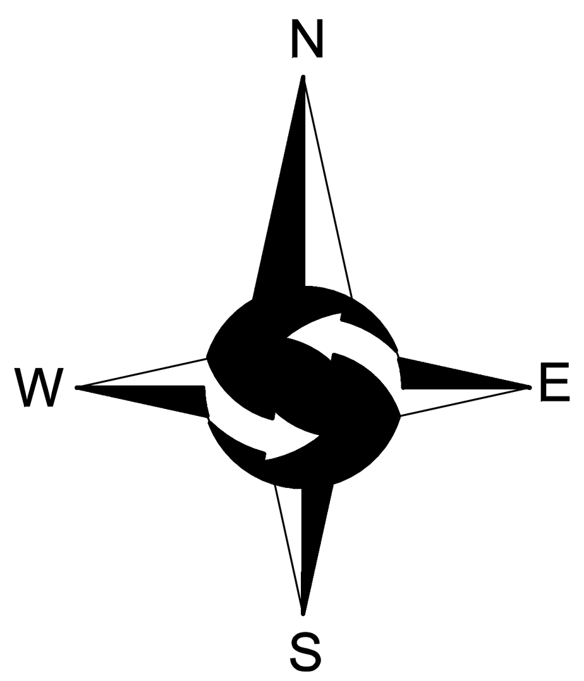
Floor

Residence
8151 SE 48th St
Mercer Island, WA 98040

Subject

Kam Deraksahni

Client



GRAPHIC SCALE

5 0 5 10 20

1INCH = 10 FT.

LEGEND

Symbol	Description	Symbol	Description
	FOUND MONUMENT AS DESCRIBED	—OHP—	OVERHEAD POWER
	FOUND REBAR AS DESCRIBED	—OHU—	OVERHEAD UTILITIES
	FOUND MAG & WASHER	—X—	CHAINLINK FENCE
	SET 5/8" X 24" IRON ROD W/1" YELLOW PLASTIC CAP		WOOD FENCE
	SET MAG NAIL AS DESCRIBED		CONCRETE WALL
	GUY WIRE		ROCKERY
	POWER METER		ASPHALT SURFACE
	UTILITY POLE		CONCRETE SURFACE
	GAS METER		GRAVEL SURFACE
	SANITARY SEWER MANHOLE	CE	CEDAR
	CATCH BASIN	CH	CHERRY
—G—	APPROXIMATE LOCATION UNDERGROUND GAS LINE	DS	DECIDUOUS
—SS—	APPROXIMATE LOCATION SANITARY SEWER LINE	HE	HEMLOCK
—SD—	APPROXIMATE LOCATION STORM DRAIN LINE	MP	MAPLE
	TIMBER WALL	PA	PALM
		PI	PINE

* INDICATES MULTI-TRUNK

LEGAL DESCRIPTION

THAT PORTION OF GOVERNMENT LOT 7, SECTION 24, TOWNSHIP 24 NORTH, RANGE 4 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTHEAST CORNER OF GOVERMENT LOT 7 IN SAID SECTION 24,
THENCE SOUTH 0°00'35" WEST ALONG THE EAST LINE THEREOF, 96 FEET;
THENCE NORTH 89°33'45" WEST PARALLEL WITH THE NORTH LINE OF SAID SECTION, 208 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 89°33'45" WEST 130 FEET;
THENCE SOUTH 0°00'35" WEST 4 FEET;
THENCE NORTH 89°33'45" WEST 20 FEET;
THENCE SOUTH 0°00'35" WEST 110.05 FEET TO A POINT BEARING NORTH 89°51'58" WEST FROM A POINT ON THE EAST LINE FO SAID SECTION 208.4 FEET SOUTH OF THE NORTHEAST CORNER THEREOF;
THENCE SOUTH 89°51'08" EAST TO A POINT BEARING SOUTH 0°00'35" WEST FROM THE TRUE POINT OF BEGINNING;
THENCE NORTH 0°00'35" EAST 113.00 FEET, MORE OR LESS, TO THE TRUE POINT OF BEGINNING;
TOGETHER WITH AN EASEMENT FOR ROAD PURPOSES OVER THE WEST 40 FEET OF THE EAST 378 FEET OF THE NORTH 100 FEET OF SAID SECTION 24.

BASIS OF BEARINGS

RECORD OF SURVEY FOR HELEN SCHWEDENBERG BY NORTH POINTE SURVEYING AS RECORDED UNDER RECORDING NUMBER 20111108900002, RECORDS OF KING COUNTY, WASHINGTON.

PROJECT INFORMATION

SURVEYOR:	SITE SURVEYING, INC. 21923 NE 11TH ST SAMMAMISH, WA 98074 PHONE: 425.298.4412
PROPERTY OWNER:	KAM DERAKSHANI 8151 SE 48TH STREET MERCER ISLAND, WA 98040
TAX PARCEL NUMBER:	257730-0010
PROJECT ADDRESS:	8151 SE 48TH STREET MERCER ISLAND, WA 98040
ZONING:	R-15
JURISDICTION:	CITY OF MERCER ISLAND
PARCEL ACREAGE:	16,963 S.F. (0.389 ACRES) AS SURVEYED

GENERAL NOTES

1. THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A CURRENT TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST ON THIS PROPERTY THAT ARE NOT SHOWN HEREON.
2. INSTRUMENTATION FOR THIS SURVEY WAS A 3-SECOND SPECTRAPRECISION FOCUS 35 TOTAL STATION. PROCEDURES USED IN THIS SURVEY MEET OR EXCEED STANDARDS SET BY WAC 332-130-090.
3. THE INFORMATION ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN AUGUST 2020 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
4. UTILITIES SHOWN ON THIS SURVEY ARE BASED UPON ABOVE GROUND OBSERVATIONS AND AS-BUILT PLANS WHERE AVAILABLE. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MAY VARY AND UTILITIES NOT SHOWN ON THIS SURVEY MAY EXIST ON THIS SITE.
5. ALL MONUMENTS WERE LOCATED DURING THIS SURVEY UNLESS OTHERWISE NOTED.

VERTICAL DATUM & CONTOUR INTERVAL

DATUM

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY WCCS SURVEY CONTROL DATABASE.

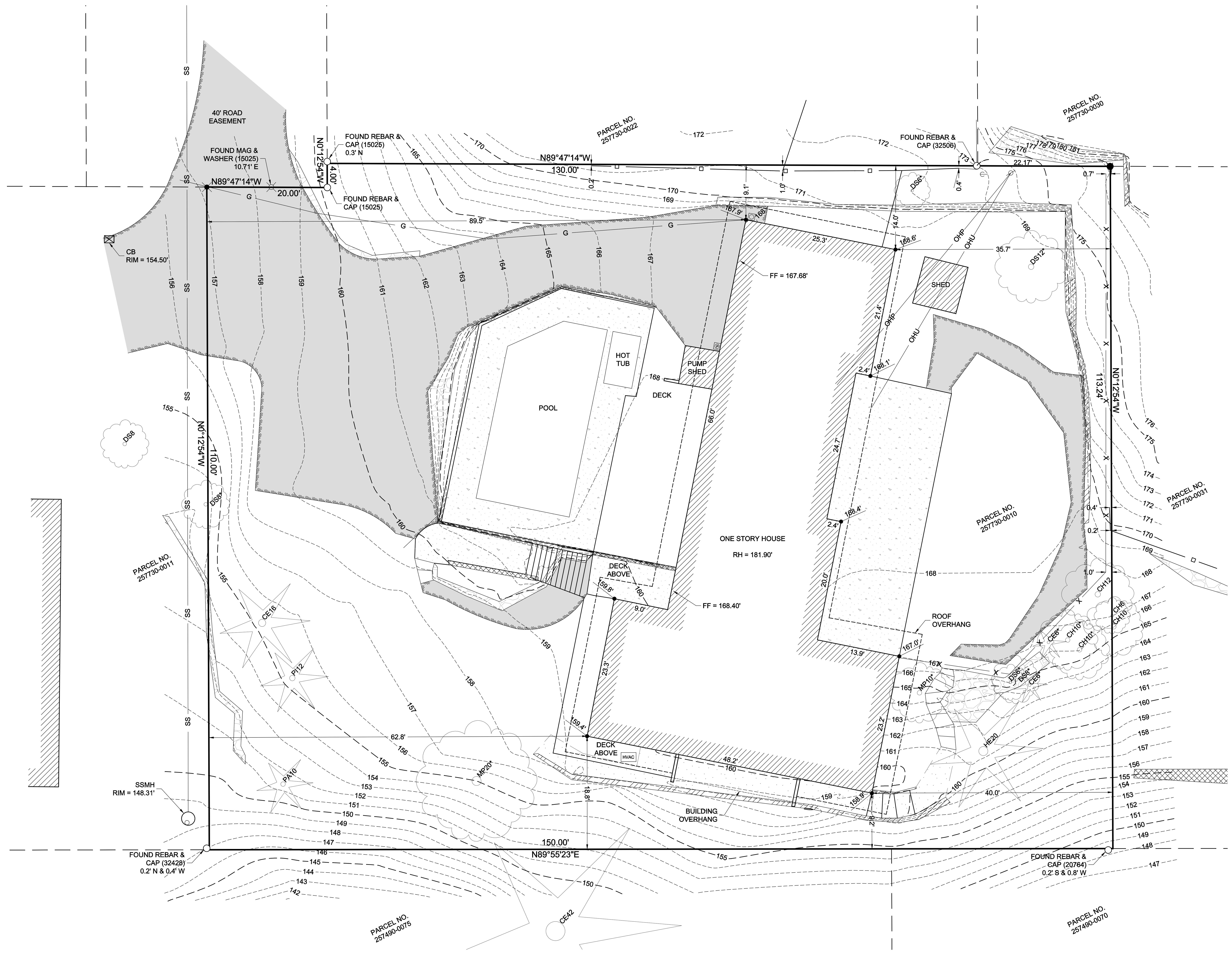
THE MARK IS A MONUMENT IN CASE AT THE NE CORNER OF SECTION 24.

POINT ID NO. 8;
ELEVATION: 202.49 FEET NAVD 88

1.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO 1/2 THE CONTOUR INTERVAL OR PLUS / MINUS 0.5' FOR THIS PROJECT.

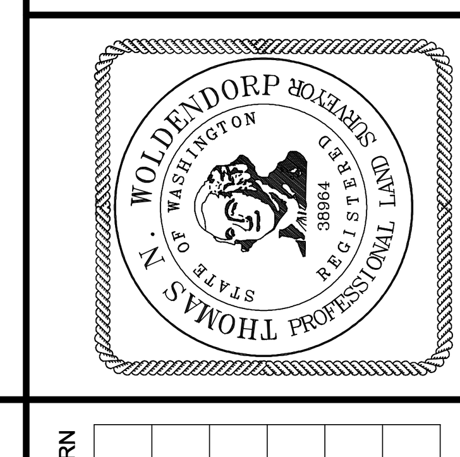
VICINITY MAP

NTS



NE 1/4, NE 1/4, SEC 24, TWP 24N, RNG 4E, W.M.

Site Surveying, Inc.
21923 NE 11th Street Sammamish, WA 98074
Phone: 425.298.4412
www.sitesurveymapping.com



DATE	REVISION	DRN

TOPOGRAPHIC SURVEY

FRANK IMANI
8151 SE 48TH STREET
MERCER ISLAND, WA 98040

PROJECT NO. 20-346

DRAWN BY:	MTS
CHECKED BY:	TNW
DATE:	8/18/2020
SHEET 1	OF 1

General Structural Notes (GSN's)

CRITERIA:

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC) WITH WASHINGTON STATE ADMINISTRATIVE CODE AMENDMENTS, 2015 EDITION.

2. DESIGN LOADING CRITERIA
   RISK CATEGORY IBC TABLE 1604.5 II
   ROOF SNOW LOAD . . . . 25 PSF (I_S = 1.0)
   ROOF DEAD LOAD . . . . 20 PSF
   LIVE LOAD . . . . 40 PSF
   DECK LIVE LOAD . . . . 60 PSF
   FLOOR DEAD LOAD . . . . 25 PSF

   EARTHQUAKE . . . . SEISMIC DESIGN CATEGORY D
   S_S = 1.443, S_1 = 0.501, S_{DS} = 1.155, S_{D1} = 0.601
   EQUIVALENT LATERAL FORCE PROCEDURE
   LIGHT FRAME (WOOD) WALLS AND ROOFS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR
   R = 6.5, Ω_0 = 2½, I_E = 1.0, C_d = 4, C_s = 0.178
   BASE SHEAR V = 39.0 K – LRFD
   WIND . . . . 110 MPH, EXPOSURE "C", Kzt = 1.0
   COMPONENTS & CLADDING . . . . –34.4/–20.7 PSF MAX. AT WALLS (LRFD/ASD)
   –58.3/–35.0 GROSS UPLIFT AT ROOF (LRFD/ASD)
   WIND PRESSURES BASED ON LESS THAN 10 SQUARE FOOT TRIBUTARY AREAS NEAR WALL CORNERS OR ROOF EDGES (EXCLUDING CORNER ZONES AT ROOF). REDUCED DESIGN PRESSURES MAY BE CALCULATED IN ACCORDANCE WITH ASCE 7–10 CHAPTER 30.

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ENGINEER OF ALL DISCREPANCIES PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE BUILDING LAYOUT DIMENSIONS (GRID LAYOUTS, SITE COORDINATES, ETC.) AMONGST ALL TRADES, INCLUDING SHOP FABRICATED ITEMS.

4. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING, BOTH FOR VERTICAL LOADS AND LATERAL STABILITY, FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS.

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

6. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

7. ALL STRUCTURAL SYSTEMS COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

8. SEISMIC BRACING AND/OR GRAVITY SUPPORT AND ANCHORAGE OF ALL MECHANICAL OR ELECTRICAL EQUIPMENT SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON, EXCEPT FOR ELEMENTS SPECIFICALLY SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS. THE MECHANICAL/ELECTRICAL CONTRACTOR MUST HIRE THE ENGINEER AND IS RESPONSIBLE FOR ALL COSTS RELATED TO THE PURCHASE AND INSTALLATION OF NECESSARY SUPPORTS, BRACING AND ANCHORAGE. SEISMIC BRACING AND ANCHORAGE DESIGN AND CONSTRUCTION SHALL COMPLY WITH CHAPTER 13 OF ASCE 7–10.

9. SHOP DRAWING REVIEW: SHOP DRAWINGS FOR TRUSSES SHALL BE SUBMITTED TO THE CONTRACTOR, ARCHITECT, AND ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS. DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY. THE REPRODUCIBLE SHALL BE MARKED AND RETURNED. SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

10. DEFERRED SUBMITTALS SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF WASHINGTON. THE COMPONENT DESIGNER SHALL BE A REGISTERED STRUCTURAL ENGINEER IF REQUIRED BY THE BUILDING OFFICIAL OF THE LOCAL JURISDICTION. BUILDING COMPONENT SUBMITTALS SHALL INCLUDE THE DESIGNING PROFESSIONAL ENGINEER'S STAMP AND SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO CURSORY REVIEW BY THE ENGINEER OF RECORD FOR LOADS IMPOSED ON THE BASIC STRUCTURE. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE INCLUDING ACCOMMODATION FOR STRUCTURAL DISPLACEMENT PER ASCE 7–10 SECTION 13.3.2. AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. DEFERRED SUBMITTALS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE INCLUDED IN THE SUBMITTAL. THE CONTRACTOR SHALL FORWARD DEFERRED SUBMITTALS TO THE BUILDING OFFICIAL AND HAVE THE DEFERRED SUBMITTALS ON SITE FOR THE GOVERNING JURISDICTIONS INSPECTORS USE AND REFERENCE. THE FOLLOWING BUILDING COMPONENTS SHALL BE DEFERRED SUBMITTALS FOR THIS PROJECT:
    PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES (SEE NOTE 23)

GEOTECHNICAL:

11. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH THE RECOMMENDATIONS GIVEN IN THE SPECIFICATIONS OR AS DIRECTED BY THE OWNER APPOINTED GEOTECHNICAL ENGINEER. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH OR CONTROLLED, COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. THE OWNER APPOINTED GEOTECHNICAL ENGINEER SHALL APPROVE FOOTING EXCAVATION/PREPARATION PRIOR TO PLACEMENT OF ALL FOOTINGS. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SPECIFICATIONS OR AS DIRECTED BY THE OWNER APPOINTED GEOTECHNICAL ENGINEER
    ALLOWABLE SOIL PRESSURE . . . . 3,000 PSF
    LATERAL EARTH PRESSURE (RESTRAINED / UNRESTRAINED) . . . . 45 PCF / 35 PCF
    PASSIVE EARTH PRESSURE . . . . 300 PCF
    SEISMIC SURCHARGE . . . . 8H PSF (UNIFORM)
    BASE COEFFICIENT OF FRICTION 0.50
    SOIL PROFILE TYPE . . . . SITE CLASS D
    GEOTECHNICAL REPORT REFERENCE: "Geotech Consultants, Inc. ... Geotechnical Engineering Study and Critical Area Study...Project JN21062...March 29, 2021"

11b. PIPE PILES SHALL BE 2"ø EXTRA-STRONG STEEL WITH AN ALLOWABLE COMPRESSIVE LOAD OF 3-TONS. INSTALLATION, FINAL PENETRATION RATE, FINISH, CONNECTION, ETC. SHALL CONFORM STRICTLY WITH THE RECOMMENDATIONS GIVEN IN THE ABOVE GEOTECHNICAL REPORT REFERENCE. PIPES SHALL BE DRIVEN TO REFUSAL USING A METHOD APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER. ACTUAL LENGTH OF PILES TO ACHIEVE RECOMMENDED REFUSAL RATE SHALL NOT BE LESS THAN 7 FEEL BELOW THE EXISTING GRADE PER GEOTECHNICAL REPORT. PIPE PILE DEPTHS ARE SUBJECT TO ON-SITE VERIFICATION AND APPROVAL BY THE PROJECT GEOTECHNICAL ENGINEER. BATTERED PILES SHALL BE BATTERED DOWN TOWARD THE SOUTH AT A 1:5 (H:V) INCLINATION. DUE TO THE GROUND SURFACE SLOPING AWAY FROM THE SOUTHERN EDGE OF THE RESIDENCE, NO PASSIVE PRESSURE WAS ACCOUNTED FOR AGAINST THE PILE CAPS/GRADE BEAMS FOR THE SOUTHERN BUMP OUT ADDITION. THE LATERAL CAPACITY OF A BATTERED PILE IS EQUAL TO ONE-HALF OF THE LATERAL COMPONENT OF THE ALLOWABLE COMPRESSIVE LOAD, WITH A MAXIMUM ALLOWABLE LATERAL CAPACITY OF 500 POUNDS. THE ALLOWABLE VERTICAL CAPACITY OF BATTERED PILES DOES NOT NEED TO BE REDUCED IF THE PILES ARE BATTERED STEEPER THAN 1:5 (HORIZONTAL:VERTICAL).

ANCHORAGE:

12. DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC-ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS INCLUDING MINIMUM EMBED REQUIREMENTS: "TE SERIES" (0.157" DIAMETER) AS MANUFACTURED BY ITW RAMSET (ICC-ES NO. 1799); OR "X-U" (0.157" DIAMETER) AS MANUFACTURED BY HILTI, INC. (ICC-ES NO. 2269); OR "STRONG-TIE PDPA" (0.157" DIAMETER) AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES NO. 2138); OR "CSI PIN" (0.157" DIAMETER) AS MANUFACTURED BY DEWALT/POWERS (ICC-ES NO. 2024); OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3-1/2" TO NEAREST CONCRETE EDGE.

CONCRETE:

13. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 318–14 CHAPTER 26 AND ACI 301. CONCRETE SHALL ATTAIN A 28–DAY STRENGTH OF f'c = 4,000 PSI (4,500 PSI AT ALL CONCRETE EXPOSED TO WEATHER). MAXIMUM WATER–CEMENTITIOUS MATERIAL RATIO FOR INTERIOR SLABS SHALL BE BETWEEN 0.40 AND 0.44. ALL CONCRETE SHALL BE EXPOSURE CLASSES F0, S0, W0, AND C0 PER ACI 318–14 TABLES 19.3.1.1 AND 19.3.2.1 EXCEPT AS NOTED BELOW.
    ALL CONCRETE EXPOSED TO EARTH (FOUNDATIONS, ETC.): (F0, S0, W0, C1)
    ALL CONCRETE EXPOSED TO WEATHER: (F1, S0, W0, C1)
    SEE SPECIFICATIONS FOR SHRINKAGE REDUCING CONCRETE MIX CRITERIA WHERE INDICATED ON DRAWINGS. CONCRETE MIXES SHALL MEET OR EXCEED THE REQUIREMENTS SPECIFIED ABOVE. MIXES SHALL BE SUBMITTED TO THE ENGINEER AND BUILDING OFFICIAL FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE AND SHALL INCLUDE THE AMOUNTS OF CEMENT, CEMENTITOUS MATERIAL, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES, AS WELL AS THE WATER–CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318–14, CHAPTER 26 AND 27. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

14. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, fy = 60,000 PSI. GRADE 60 REINFORCING BARS WHICH ARE TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCEMENT COMPLYING WITH ASTM A615(S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A.W.S. D1.4 ARE SUBMITTED. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064.

15. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315–99 AND 318–14. LAP ALL CONTINUOUS REINFORCEMENT IN ACCORDANCE WITH "REINFORCEMENT SPLICE AND DEVELOPMENT LENGTH SCHEDULE" OF 10/S3.1. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 12" AT SIDES AND ENDS. NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.

16. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
    FOOTINGS AND OTHER UNFORMED SURFACES
    CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . 3"
    FORMED SURFACES EXPOSED TO EARTH
    (i.e. WALLS BELOW GROUND)OR WEATHER (#5 BARS OR SMALLER). . . . . 1 ½"

17. BONDING AGENT SHALL BE "MASTEREMACO ADH 326" BY BASF CORPORATION. OR EQUIVALENT, AND SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST HARDENED CONCRETE. PLACE IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, INCLUDING PREPARATION OF EXISTING SURFACES. CONCRETE SHALL BE CONSIDERED HARDENED AFTER 56 DAYS.

18. NON–SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (6,000 PSI MINIMUM).

WOOD:

19. FRAMING LUMBER SHALL BE KILN DRIED OR MC–19, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.I.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17 OR W.W.P.A. WESTERN LUMBER GRADING RULES. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:
    PLATES, LEDGERS & MISC. — DOUGLAS FIR NO. 3 OR STUD GRADE
    LIGHT FRAMING: — MIN. BASIC DESIGN STRESS, F_b = 525 PSI, E = 1400 KSI; F_c = 775 PSI, F_t = 325 PSI
    JOISTS, BEAMS & POSTS: — DOUGLAS FIR NO. 1; MIN. BASIC DESIGN STRESS, F_b = 1000 PSI, E = 1700 KSI; F_c = 1500 PSI, F_t = 1000 PSI

20. MANUFACTURED LUMBER SHALL BE AS MANUFACTURED BY TRUS JOIST OR APPROVED EQUAL. REQUESTS FOR APPROVAL AS EQUAL WILL REQUIRE SUBMITTAL OF ICC REPORT EQUIVALENT TO ESR–1387 FOR LAMINATED VENNER LUMBER (LVL, LAMINATED STRAND LUMBER (LSL), OR PARALLEL STRAND LUMBER (PSL). THE MINIMUM ALLOWABLE DESIGN VALUES ARE AS FOLLOWS:
    LVL – F_b = 2,600 F_v = 290 PSI E = 2,000,000 PSI
    LSL – F_b = 1,900 F_v = 150 PSI E = 1,300,000 PSI

21. ENGINEERED WOOD I–JOISTS SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS, STIFFENERS, ETC., SHALL BE DETAILED AND FURNISHED BY THE MANUFACTURER. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH ENGINEERED WOOD I–JOISTS PROVIDED. DESIGN SHOWN ON THE DRAWINGS IS BASED ON RESIDENTIAL JOISTS MANUFACTURED BY WEYERHAUSER IN ACCORDANCE WITH ICC–ES REPORT NO. ESR–1153. ALTERNATE ENGINEERED WOOD I–JOISTS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD

22. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND A.I.T.C. STANDARDS IN ACCORDANCE WITH IBC SECTION 2303.1.3. EACH MEMBER SHALL BEAR AN A.I.T.C. IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN A.I.T.C. CERTIFICATE OF CONFORMANCE. HORIZONTAL MEMBERS AND INCLINED MEMBERS OF LESS THAN 1:1 SLOPE SHALL HAVE A RADIUSED CAMBER OF 3,500 FT. UNLESS OTHERWISE NOTED.
    SIMPLE SPAN BEAMS DOUGLAS FIR COMBINATION 24F–VR
    F_b = 2400 PSI; F_v = 265 PSI; E = 1,800,000 PSI
    GLUED LAMINATED MEMBERS EXPOSED TO WEATHER OR MOISTURE SHALL BE TREATED WITH A NON–CORROSIVE, APPROVED PRESERVATIVE.

23. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH ANSI/TPI I–2007 AND IBC SECTION 2303.4 FOR THE SPANS AND CONDITIONS SHOWN ON THE DRAWINGS.
    DESIGN LOADS SHALL BE AS FOLLOWS:
    TOP CHORD LIVE LOAD 25 PSF, SNOW
    BOTTOM CHORD LIVE LOAD 0 PSF
    TOP CHORD DEAD LOAD 15 PSF
    BOTTOM CHORD DEAD LOAD 5 PSF
    WIND UPLIFT (TOP CHORD) SEE NOTE#2 COMPONENTS & CLADDING ROOF LOADS

    THE TRUSS MANUFACTURER SHALL COORDINATE LOCATIONS AND SUPPORT CONFIGURATIONS OF PLUMBING, MECHANICAL UNITS, DUCTS, AND/OR OTHER MISCELLANEOUS ITEMS WITH THE CONTRACTOR PRIOR TO TRUSS FABRICATION. THE TRUSS MANUFACTURER SHALL DESIGN TRUSSES TO SUPPORT ALL LOADS ASSOCIATED WITH SUCH ITEMS. THE TRUSS SHOP DRAWINGS SHALL INCLUDE ALL DESIGN LOADS AND APPROVED HANGER CONNECTION DETAILS TO TRUSS CHORDS FOR SUPPORT OF HUNG MECHANICAL SYSTEM COMPONENTS AS APPLICABLE.

    WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED AS A DEFERRED SUBMITTAL TO THE CONTRACTOR AND STRUCTURAL ENGINEER OF RECORD PER GENERAL STRUCTURAL NOTE 13. SHOP DRAWINGS SHALL INDICATE SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP–DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE TRUSS MANUFACTURER SHALL PROVIDE ALL TRUSS–TO–TRUSS BEAM/JOIST CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. THE TRUSS MANUFACTURER SHALL DESIGN AND PROVIDE DETAILS FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

24. ROOF & WALL SHEATHING SHALL BE APA RATED, EXTERIOR OR EXPOSURE 1 PLYWOOD OR ORIENTED STRAND BOARD (OSB) IN CONFORMANCE WITH IBC SECTION 2303.1.5. SHEATHING SHALL BE MANUFACTURED UNDER THE PROVISIONS OF VOLUNTARY PRODUCT STANDARDS DOC PS 1–09, PS 2–10, OR APA PRP–108 PERFORMANCE STANDARDS AND POLICIES FOR STRUCTURAL USE PANELS. SEE DRAWINGS FOR THICKNESS, SPAN RATING, AND NAILING REQUIREMENTS.

25. AT NON–SHEAR WALL EXTERIOR WALLS, UNLESS OTHERWISE NOTED, WALL SHEATHING SHALL BE ½" (NOMINAL) WITH SPAN RATING OF 24/0; WITH 8d @ 6" oc PANEL NAILING (APPLIES TO ALL SHEATHING PANEL EDGES); AND 8d @ 12" oc TO INTERMEDIATE FRAMING.

26. ALL PRESSURE–TREATED (P.T.) WOOD MEMBERS SPECIFIED ON THE DRAWINGS THAT OCCUR ABOVE GROUND AND CONTINUOUSLY PROTECTED FROM MOISTURE (INTERIOR LOCATIONS) SHALL BE PRESSURE–TREATED WITH DOT SODIUM BORATE (SBX) WITHOUT $NaSiO_2$. AT LOCATIONS PERMANENTLY EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, WOOD MEMBERS SHALL BE PRESSURE–TREATED WITH ALKALINE COPPER QUAT (ACQ–C FOR DOUGLAS–FIR) PRESERVATIVE UNLESS OTHERWISE NOTED. AMMONIACAL COPPER ZINC ARSENATE (ACZA) PRESERVATIVE OR OTHER PRESERVATIVES WITH AMMONIA CARRIERS, SHALL NOT BE USED.
    GLUED LAMINATED MEMBERS EXPOSED TO WEATHER OR MOISTURE SHALL BE TREATED WITH A NON–CORROSIVE, APPROVED PRESERVATIVE.
    SEE NOTE #27 FOR MATERIAL REQUIREMENTS OF CONNECTORS AND FASTENERS IN CONTACT WITH PRESSURE–TREATED MEMBERS.

27. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG–TIE" BY SIMPSON COMPANY, AS SPECIFIED N THEIR WOOD CONSTRUCTION CONNECTORS CATALOG NO. C–C–2017–18. INSTALL NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, CENTER STRAP ON JOINT AND INSTALL NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER, WITH EQUAL NUMBER AND SIZE OF FASTENERS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. INSTALL WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

    ALL TIMBER CONNECTORS IN CONTACT WITH PRESSURE–TREATED WOOD THAT USED PRESERVATIVE CHEMICALS OTHER THAN DOT SODIUM BORATE (SBX) WITHOUT $NaSiO_2$ SHALL BE MANUFACTURED FROM Z_{MAX} STEEL BY SIMPSON (G185 STEEL PER ASTM A653), OR TYPE 304 OR 316 STAINLESS STEEL. ALTERNATIVELY, CONNECTORS CAN BE POST HOT DIP GALVANIZED PER ASTM A123 OR MECHANICALLY GALVANIZED PER ASTM B695, CLASS 55 OR GREATER. STAINLESS STEEL FASTENERS SHALL BE USED WITH STAINLESS STEEL CONNECTORS, AND HOT DIP GALVANIZED FASTENERS PER ASTM A153 SHALL BE USED WITH GALVANIZED CONNECTORS.

28. WOOD FRAMING NOTES: THE FOLLOWING SHALL APPLY UNLESS OTHERWISE NOTED ON THE DRAWINGS:
    A. ALL WOOD FRAMING DETAILS SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING SHALL CONFORM TO IBC TABLE 2304.9.1 OR CURRENT ICC–ES REPORT NER–272. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. INSTALL WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO 2012 NDS SECTION 11.1.4, AND INSTALLATION OF BOLTS SHALL CONFORM TO 2012 NDS SECTION 11.1.3.

    B. WALL FRAMING: TWO STUDS MINIMUM SHALL BE INSTALLED AT THE ENDS OF ALL WALLS, UNLESS NOTED OTHERWISE NOTED. INSTALL SOLID BLOCKING FOR WOOD COLUMN THROUGH FLOOR SPACES TO SUPPORTS BELOW.

    ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS @ 12" oc STAGGERED OR BOLTED TO CONCRETE WITH ⅝"ø ANCHOR BOLTS @ 4'–0" oc PER IBC SECTION 2308.6 (EMBED 7"), UNLESS OTHERWISE NOTED. 3" x 3" x 0.229" PLATE WASHERS SHALL BE USED WITH ALL SILL PLATE ANCHOR BOLTS AND INSTALLED PER AF&PA SDPWS–2008 SECTION 4.3.6.4.3. INDIVIDUAL MEMBERS OF BUILT–UP STUD POSTS SHALL BE NAILED TO EACH OTHER WITH 16d @ 12" oc STAGGERED.

    C. FLOOR AND ROOF FRAMING: INSTALL SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL JOISTS TO SUPPORTS WITH (2)16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI–JOIST BEAMS TOGETHER WITH 16d@12"oc STAGGERED.

    ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AS SHOWN ON THE DRAWINGS. INSTALL APPROVED PANEL EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE–AND–GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING ALLOW ⅛" SPACING AT ALL PANEL EDGES AND ENDS OF LOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d@12"oc. IN ACCORDANCE WITH IBC SECTION 1604.8.3, DECKS SHALL BE POSITIVELY ANCHORED TO THE STRUCTURE BY MEANS OTHER THAN NAILS SUBJECT TO WITHDRAWAL. ANCHOR WITH MINIMUM (1) CS16 STRAP AT EACH END ATTACHED TO DECK JOISTS AND TO A SOLID BLOCKING MEMBER WITHIN THE BUILDING.

POST–INSTALLED ANCHORS AND EPOXY ADHESIVE

29. EPOXY–GROUTED RODS OR REBAR TO CONCRETE SPECIFIED ON THE DRAWINGS SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC–ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS INCLUDING MINIMUM EMBED REQUIREMENTS: "SET–XP" AS MANUFACTURED BY SIMPSON STRONG–TIE COMPANY, INC. (ICC–ES NO. 2508); OR "HIT–HY 200" AS MANUFACTURED BY HILTI, INC. (ICC–ES NO. 3187), "SAFE–SET" INSTALLATION WITH HOLLOW CARBIDE DRILL BIT IS PERMITTED; OR "PURE110+" AS MANUFACTURED BY DEWALT/POWERS (ICC–ES NO. 3298). SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC–ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. IN ADDITION, SUBSTITUTIONS SHALL MEET ICC–ES ACCEPTANCE CRITERIA AC308. SPECIAL INSPECTION OF EPOXY–GROUTED ANCHOR INSTALLATION IS REQUIRED. EPOXY GROUTED RODS OR REBAR SHALL NOT BE USED AS SUBSTITUTES FOR CAST–IN–PLACE ANCHOR BOLTS OR REINFORCING STEEL UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. NOTIFY ENGINEER IF ANCHOR LOCATIONS CONFLICT WITH REINFORCING STEEL – DO NOT CUT REINFORCING OR REDUCE EMBEDMENT DEPTHS WITHOUT PRIOR APPROVAL. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY CERTIFIED PERSONNEL IN CONFORMANCE TO ACI 318–14 SECTION 17.8.2.2. HOLES SHALL BE HAMMER DRILLED AND DRY.

30. EXPANSION ANCHORS SHALL BE ONE OF THE APPROVED PRODUCTS BELOW:
    – KWIK BOLT TZ ANCHORS AS MANUFACTURED BY HILTI, INC. AND INSTALLED IN STRICT ACCORDANCE WITH ICC–ES REPORT NO. 1917, OR
    – STRONG–BOLT 2 AS MANUFACTURED BY SIMPSON STRONG–TIE COMPANY, INC. AND INSTALLED IN STRICT ACCORDANCE WITH ICC–ES REPORT NO. 3037
    AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

IBC TABLE 1705.3 REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

REQUIRED?	VERIFICATION & INSPECTION	CONTINUOUS	PERIODIC	REF STD.	IBC REF.
N*	1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS AND VERIFY PLACEMENT.	---	X	ACI 318 CH. 20, 25.2, 25.3, 26.5.1–26.5.3	1908.4
N	2. REINFORCING BAR WELDING: A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706. B. INSPECT SINGLE–PASS FILLET WELDS, MAXIMUM 5/16"; AND C. INSPECT ALL OTHER WELDS	--- X	X X	AWSD1.4 ACI 318 26.5.4	---
YES	3. INSPECT ANCHORS CAST IN CONCRETE.	---	X	ACI 318: 17.8.2	---
YES	4. INSPECT ANCHORS POST–INSTALLED IN HARDENED CONCRETE MEMBERS. A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A	X	X	ACI 318: 17.8.2.4 ACI 318:17.8.2	---
N*	5. VERIFY USE OF REQUIRED DESIGN MIX.	---	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
N*	6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	---	ASTM C 172 ASTM C 31 ACI 318: 26.4.5, 26.12	1908.10
N*	7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	---	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
N*	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	---	X	ACI 318: 26.4.7–26.4.9	1908.9
N	9. INSPECT PRESTRESSED CONCRETE FOR: A. APPLICATION OF PRESTRESSING FORCES; AND B. GROUTING OF BONDED PRESTRESSING TENDONS	X X	--- ---	ACI 318: 26.9.2.1 ACI 218: 26.9.2.3	---
N	10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	---	X	ACI 318: CH. 26.8	---
N*	11. VERIFY IN–SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST–TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	---	X	ACI 318: 26.10.2	---
N*	12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	---	X	ACI318: 26.10.1(b)	---

* EXCEPTIONS 2 PER IBC SECTION 1705.3 APPLIES TO CONCRETE WORK ON THIS PROJECT.

Minimum Connectors and Fasteners for Wood Members per IBC 2015

DESCRIPTION OF BUILDING ELEMENT	NUMBER AND TYPE OF FASTENERS	SPACING & LOCATION
ROOF		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS, OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3–8d COMMON (2½" x 0.131"); or 3–10d BOX (3" x 0.128"); or 3–3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2–8d COMMON (2½" x 0.131") 2–3" x 0.131" NAILS 2–3" x 14 GAGE STAPLES	EACH END, TOENAIL
	2–16d COMMON (3½" x 0.162") 3–3" x 0.131" NAILS 3–3" x 14 GAGE STAPLES	END NAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON (3½" x 0.162") @ 6" oc 3" x 0.131" NAILS @ 6" oc 3" x 14 GAGE STAPLES @ 6" oc	FACE NAIL
2. CEILING JOISTS TO TOP PLATE	3–8d COMMON (2½" x 0.131"); or 3–10d BOX (3" x 0.128"); or 3–3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST, TOENAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITION (NO THRUST) (SEE 2308.7.3.1, TABLE 2308.7.3.1)	3–16d COMMON (3½" x 0.162"); or 4–10d BOX (3" x 0.128"); or 4–3" x 0.131" NAILS; or 4–3" x 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	3–10d COMMON (3" x 0.148"); or 4–10d BOX (3" x 0.128"); or 4–3" x 0.131" NAILS; or 4–3" x 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
6. RAFTER OR ROOF TRUSS TO TOP PLATE (SEE 2308.7.5, TABLE 2308.7.5)	3–10d COMMON (3" x 0.148"); or 3–16d BOX (3½" x 0.135"); or 4–10d BOX (3" x 0.128"); or 4–3" x 0.131" NAILS; or 4–3" x 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" RIDGE BEAM	2–16d COMMON (3½" x 0.162"); or 3–10d BOX (3" x 0.128"); or 3–3" x 0.131 NAILS; or 3–3" x 14 GAGE STAPES, 7/16" CROWN	END NAIL
	3–10d COMMON (3½" x 0.148"); or 3–16d BOX (3½" x 0.135"); or 4–10d BOX (3" x 0.128"); or 4–3" x 0.131 NAILS; or 4–3" x 14 GAGE STAPES, 7/16" CROWN	TOENAIL
WALL		
8. STUD TO STUD (NOT AT SHEARWALL CHORDS)	16d COMMON (3½" x 0.162")"	24" oc FACE NAIL
	10d BOX (3" x 0.128"); or 3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	16" oc FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTION WALL CORNERS	16d COMMON (3½" x 0.162")"; or	16" oc FACE NAIL
	16d BOX (3½" x 0.135")"; or	12" oc FACE NAIL
	3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	12" oc FACE NAIL
10. BUILT–UP HEADER (2" TO 2" HDR.)	16d COMMON (3½" x 0.162")"; or	16" oc EA. EDGE, FACE NAIL
	16d BOX (3½" x 0.135")	12" oc EA. EDGE, FACE NAIL
11. CONTINUOUS HEADER TO STUD	4–8d COMMON (2½" x 0.131"); or 4–10d BOX (3" x 0.128")	TOENAIL
12. TOP PLATE TO TOP PLATE	16d COMMON (3½" x 0.162"); or	16" oc FACE NAIL
	10d BOX (3" x 0.128"); or 3" x 0.131" NAILS; or 3" x 14 GAGE STAPLES, 7/16" CROWN	12" oc FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END JOINTS	8–16d COMMON (3½" x 0.162"); or 12–10d BOX (3" x 0.128"); or 12–3" x 0.131" NAILS; or 12–3" x 14 GAGE STAPLES, 7/16" CROWN	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EA. SIDE OF END JOINT
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST, OR BLOCKING NOT AT SHEARWALL	16d COMMON (3½" x 0.162")"; or	16" oc FACE NAIL
	16d BOX (3½" x 0.135")"; or 3" x 0.131" NAILS; or 3" x 14 GAGE STAPLES, 7/16" CROWN	12" oc FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST, OR BLOCKING AT SHEARWALL	2–16d COMMON (3½" x 0.162"); or 3–16d BOX (3½" x 0.135"); or 4–3" x 0.131" NAILS; or 4–3" x 14 GAGE STAPLES, 7/16" CROWN	16" oc FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	4–8d COMMON (2½" x 0.131"); or 4–10d BOX (3" x 0.128"); or 4–3" x 0.131" NAILS; or 4–3" x 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
	2–16d COMMON (3½" x 0.162"); or 3–10d BOX (3" x 0.128"); or 3–3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	END NAIL
17. TOP OR BOTTOM PLATE TO STUD	2–16d COMMON (3½" x 0.162"); or 3–10d BOX (3" x 0.128"); or 3–3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	END NAIL
18. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2–16d COMMON (3½" x 0.162"); or 3–10d BOX (3" x 0.128"); or 3–3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
19. 1" BRACE TO EACH STUD AND PLATE	2–8d COMMON (2½" x 0.131"); or 2–10d BOX (3" x 0.128"); or 2–3" x 0.131" NAILS; or 2–3" x 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
20. 1" x 6" SHEATHING TO EACH BEARING	2–8d COMMON (2½" x 0.131"); or 2–10d BOX (3" x 0.128"); or	FACE NAIL
21. 1" x 8" AND WIDER SHEATHING TO EACH BEARING	3–8d COMMON (2½" x 0.131"); or 3–10d BOX (3" x 0.128"); or	FACE NAIL

DESCRIPTION OF BLDG. ELEMENT	NUMBER AND TYPE OF FASTENERS	SPACING & LOCATION
FLOOR		
22. JOIST TO SILL, TOP PLATE, OR GIRDER	3–8d COMMON (2½" x 0.131"); or 3–10d BOX (3" x 0.128"); or 3–3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	TOENAIL
23. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL, OR OTHER FRAMING BELOW	8d COMMON (2½" x 0.131"); or 10d BOX (3" x 0.128"); or 3" x .131" NAILS; r 3" x 14 GAGE STAPLES, 7/16" CROWN	6" o.c., TOENAIL
24. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST	2–8d COMMON (2½" x 0.131"); or 2–10d BOX (3" x 0.128")	FACE NAIL
25. 2" SUBFLOOR TO JOIST OR GIRDER	2–16d COMMON (3½" x 0.162")	FACE NAIL
26. 2" PLANKS (PLANK & BEAM – FLOOR & ROOF)	2–16d COMMON (3½" x 0.162")"	EA. BEARING, FACE NAIL
27. BUILT–UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20d COMMON (4" x 0.192")	32" o.c., FACE NAIL TOP & BOT. STAGGERED ON OPPOSITE SIDES
	10d BOX (3" x 0.128"); or 3" x 0.131" NAILS; or 3" x 14 GAGE STAPLES, 7/16" CROWN	24" o.c., FACE NAIL AT TOP & BOT. STAGGERED ON OPP. SIDES
	AND: 2–20d COMMON (4" x 0.192"); or 3–10d BOX (3" x 0.128"); or 3–3" x 0.131" NAILS; or 3–3" x 14 GAGE STAPLES, 7/16" CROWN	ENDS AND AT EACH SPLICE, FACE NAIL
28. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	3–16d COMMON (3½" x 0.162"); or 4–10d BOX (3" x 0.128"); or 4–3" x 0.131" NAILS; or 4–3" x 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST OR RAFTER, FACE NAIL
29. JOIST TO BAND JOIST OR RIM JOIST	3–16d COMMON (3½" x 0.162"); or 4–10d BOX (3" x 0.128"); or 4–3" x 0.131" NAILS; or 4–3" x 14 GAGE STAPLES, 7/16" CROWN	END NAIL
30. BRIDGING OR BLOCKING TO JOIST, RAFTER, OR TRUSS	2–8d COMMON (2½" x 0.131"); or 2–10d BOX (3" x 0.128"); or 2–3" x 0.131" NAILS; or 2–3" x 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL

Derakshani Residence
8151 SE 48th St
Mercer Island, WA - 98040

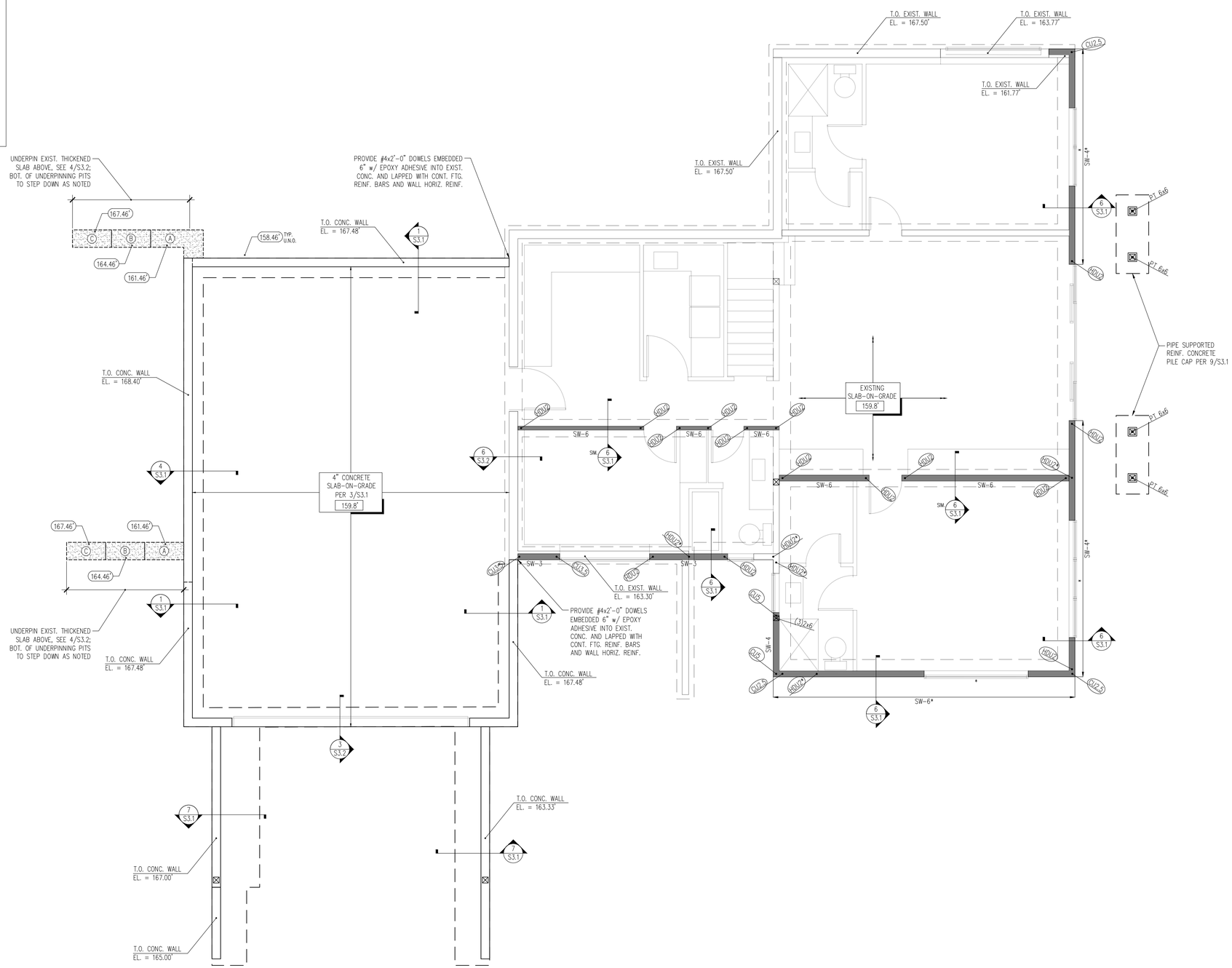
CONTENTS
General Structural Notes

DRAWN BY
JDA
DATE
04.01.21

S1.1

LEGEND

- REINFORCED CONCRETE WALL
- REINFORCED CONCRETE FOOTING
- EXISTING CONCRETE FOOTING
- STRUCTURAL WOOD STUDWALL ABOVE
- EXISTING STRUCTURAL WOOD STUDWALL ABOVE
- POST ABOVE
- EXISTING POST ABOVE
- SW-_ — DENOTES EXTENT OF SHEARWALL TYPE SW-_ PER 1/S6.5
- SW-_* — DENOTES STRAPPED SHEARWALL PER 7/S6.5, WITH * DENOTING LOCATION OF STRAP ABOVE & BELOW OPENING
- HDU_ / MSTC — DENOTES SHEARWALL TENSION TIE PER 4/S6.5
  - * – DENOTES TRANSFER TIE FROM TIE ABOVE
  - ^ – DENOTES TIE ATOP FRAMING MEMBER
  - (E) – DENOTES TIE AT EXIST. CONC. w/ EPOXY
- CU_ — DENOTES CUSTOM TENSION TIE INTO EXIST. CONC. w/ EPOXY PER 7/S6.5
- xx'-xx" — DENOTES BOTTOM OF FOOTING ELEVATION



1 / S2.1 FOUNDATION AND BASEMENT FLOOR PLAN

1/4" = 1'-0"

NORTH

9317 REGISTERED ARCHITECT
CHRIS LUTH
STATE OF WASHINGTON

CENTERLINE DESIGN
4737 37th AVE SW
SEATTLE
206.932.8706
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ATLAS CONSULTING STRUCTURAL ENGINEERS

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CONTENTS

Foundation Plan

DRAWN BY
JDA

DATE
04.01.21

S2.1

LEGEND

- REINFORCED CONCRETE WALL
- REINFORCED CONCRETE WALL BELOW
- EXISTING CONCRETE WALL BELOW
- STRUCTURAL WOOD STUDWALL ABOVE
- STRUCTURAL WOOD STUDWALL BELOW
- EXISTING STRUCTURAL WOOD STUDWALL BELOW
- WOOD JOIST
- EXISTING WOOD JOIST
- WOOD BEAM or HEADER
- EXISTING WOOD BEAM or HEADER
- WOOD RAFTER
- CONNECTOR PLATE WOOD TRUSSES
- POST ABOVE
- POST BELOW
- SW-_ — DENOTES EXTENT OF SHEARWALL TYPE SW-_ PER 1/S6.5
- SW-_* — DENOTES STRAPPED SHEARWALL PER 7/S6.5, WITH * DENOTING LOCATION OF STRAP ABOVE & BELOW OPENING
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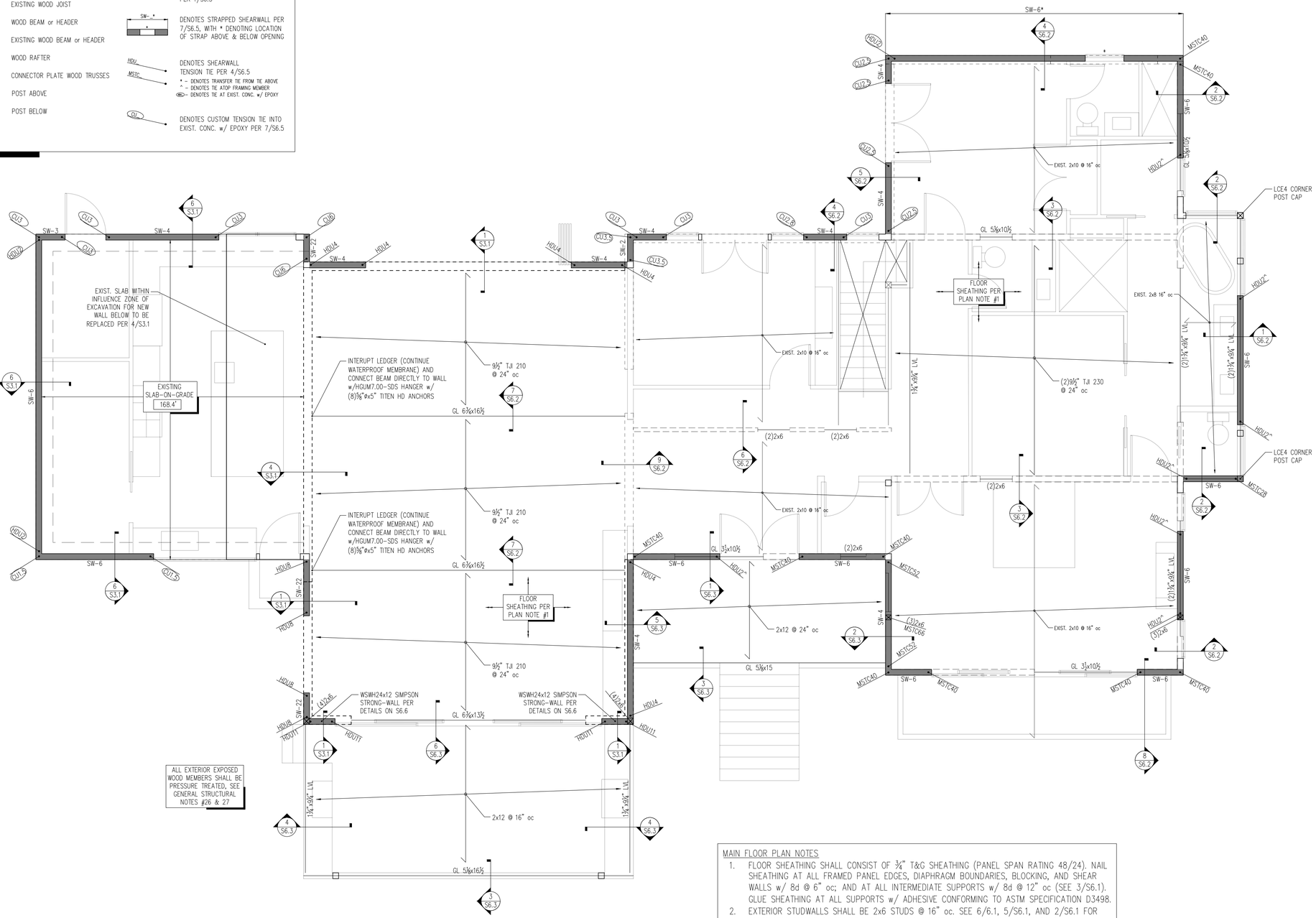
  - ⊛ – DENOTES TIE AT EXIST. CONC. w/ EPOXY
- CU_ — DENOTES CUSTOM TENSION TIE INTO EXIST. CONC. w/ EPOXY PER 7/S6.5



MAIN FLOOR PLAN NOTES

1. FLOOR SHEATHING SHALL CONSIST OF ¾" T&G SHEATHING (PANEL SPAN RATING 48/24). NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES, BLOCKING, AND SHEAR WALLS w/ 8d @ 6" oc; AND AT ALL INTERMEDIATE SUPPORTS w/ 8d @ 12" oc (SEE 3/S6.1). GLUE SHEATHING AT ALL SUPPORTS w/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
2. EXTERIOR STUDWALLS SHALL BE 2x6 STUDS @ 16" oc. SEE 6/6.1, 5/S6.1, AND 2/S6.1 FOR ALLOWABLE HOLES & NOTCHES IN STUDWALL STUDS AND TOP & BOTTOM PLATES.
3. SEE 8/S6.1 FOR CONNECTION DETAILS OF INTERIOR NON-STRUCTURAL PARTITION WALLS.
4. SOLID WALLS AND SHEARWALLS SHOWN IN PLAN ARE ABOVE FRAMING (i.e. FROM MAIN FLOOR LEVEL TO UPPER FLOOR/ROOF LEVEL).
   DASHED WALLS SHOWN IN PLAN ARE LOAD-BEARING ELEMENTS BELOW FRAMING (i.e. FROM FOUNDATION/LOWER FLOOR TO MAIN FLOOR).
   JOISTS AND BEAMS SHOWN IN PLAN ARE AT MAIN FLOOR ELEVATION.
5. SEE GENERAL STRUCTURAL NOTE #20 ON S1.0 FOR ENGINEERED LUMBER REQUIREMENTS.
6. ALL HEADERS/BEAMS SHALL HAVE A MINIMUM OF (2)2x POSTS AND (1)FULL HEIGHT TRIMMER STUD, U.N.O. IN PLAN (STUD DEPTH SHALL MATCH DEPTH OF THE WALL)

1 / S2.2 MAIN FLOOR FRAMING PLAN

1/4" = 1'-0"

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Main Floor Framing Plan

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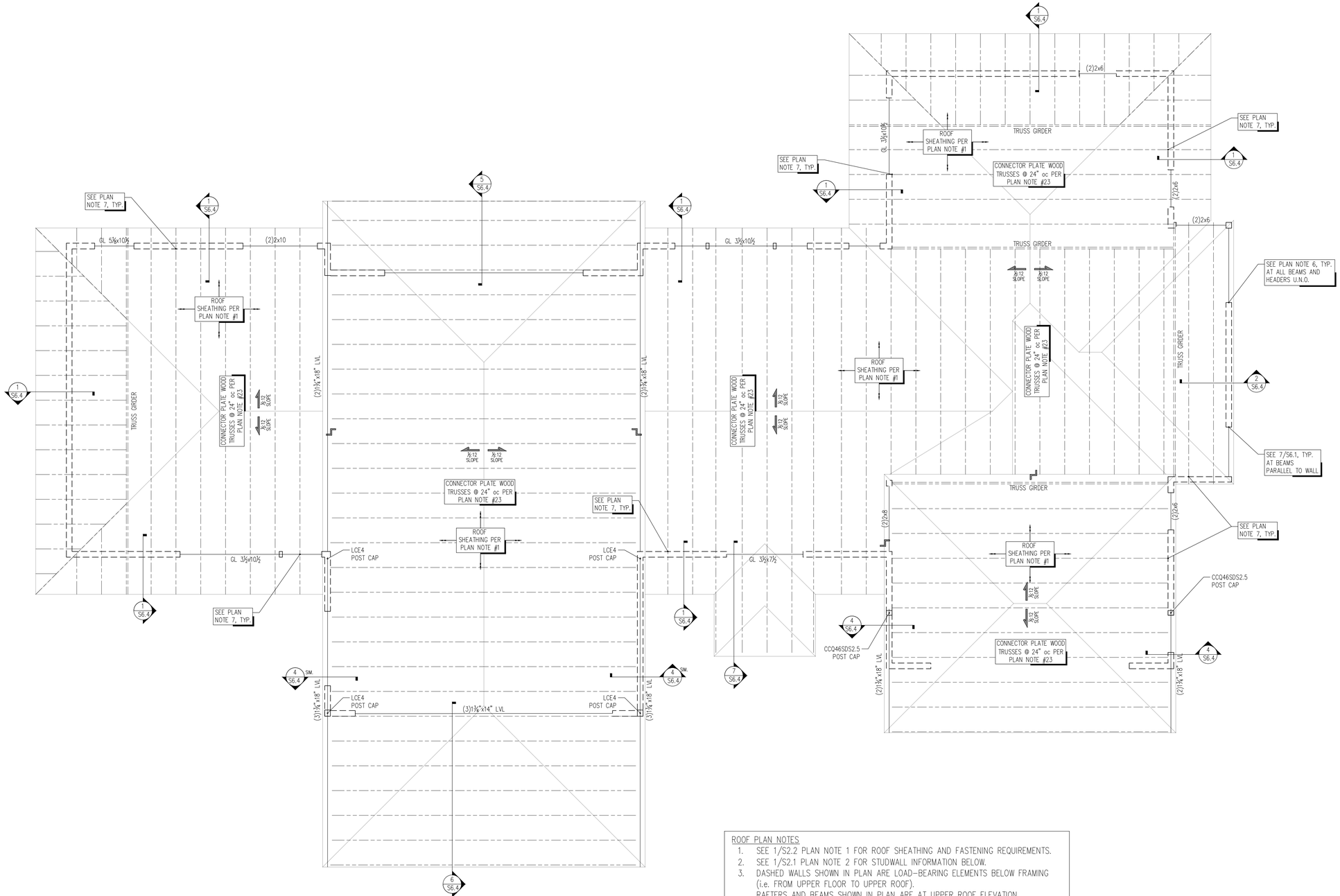
S2.2

LEGEND

- STRUCTURAL WOOD STUDWALL BELOW
- WOOD JOIST
- WOOD BEAM or HEADER
- WOOD RAFTER
- CONNECTOR PLATE WOOD TRUSSES
- POST BELOW



ROOF PLAN NOTES

1. SEE 1/S2.2 PLAN NOTE 1 FOR ROOF SHEATHING AND FASTENING REQUIREMENTS.
2. SEE 1/S2.1 PLAN NOTE 2 FOR STUDWALL INFORMATION BELOW.
3. DASHED WALLS SHOWN IN PLAN ARE LOAD-BEARING ELEMENTS BELOW FRAMING (i.e. FROM UPPER FLOOR TO UPPER ROOF). RAFTERS AND BEAMS SHOWN IN PLAN ARE AT UPPER ROOF ELEVATION.
4. SEE GENERAL STRUCTURAL NOTE #20 ON S1.0 FOR ENGINEERED LUMBER REQUIREMENTS.
5. PROVIDE H2.5A HURRICANE TIES AT END OF ALL RAFTERS AND TRUSSES. NOTE THAT H2.5A HURRICANE TIES MUST BE OBSERVABLE BY CITY INSPECTOR PRIOR TO INSPECTION APPROVAL.
6. ALL HEADERS SHALL HAVE A MINIMUM OF (2)2x POSTS AND (1)FULL HEIGHT TRIMMER STUD, U.N.O. IN PLAN (STUD DEPTH SHALL MATCH DEPTH OF THE WALL)

1 / S2.3 ROOF FRAMING PLAN

1/4" = 1'-0"

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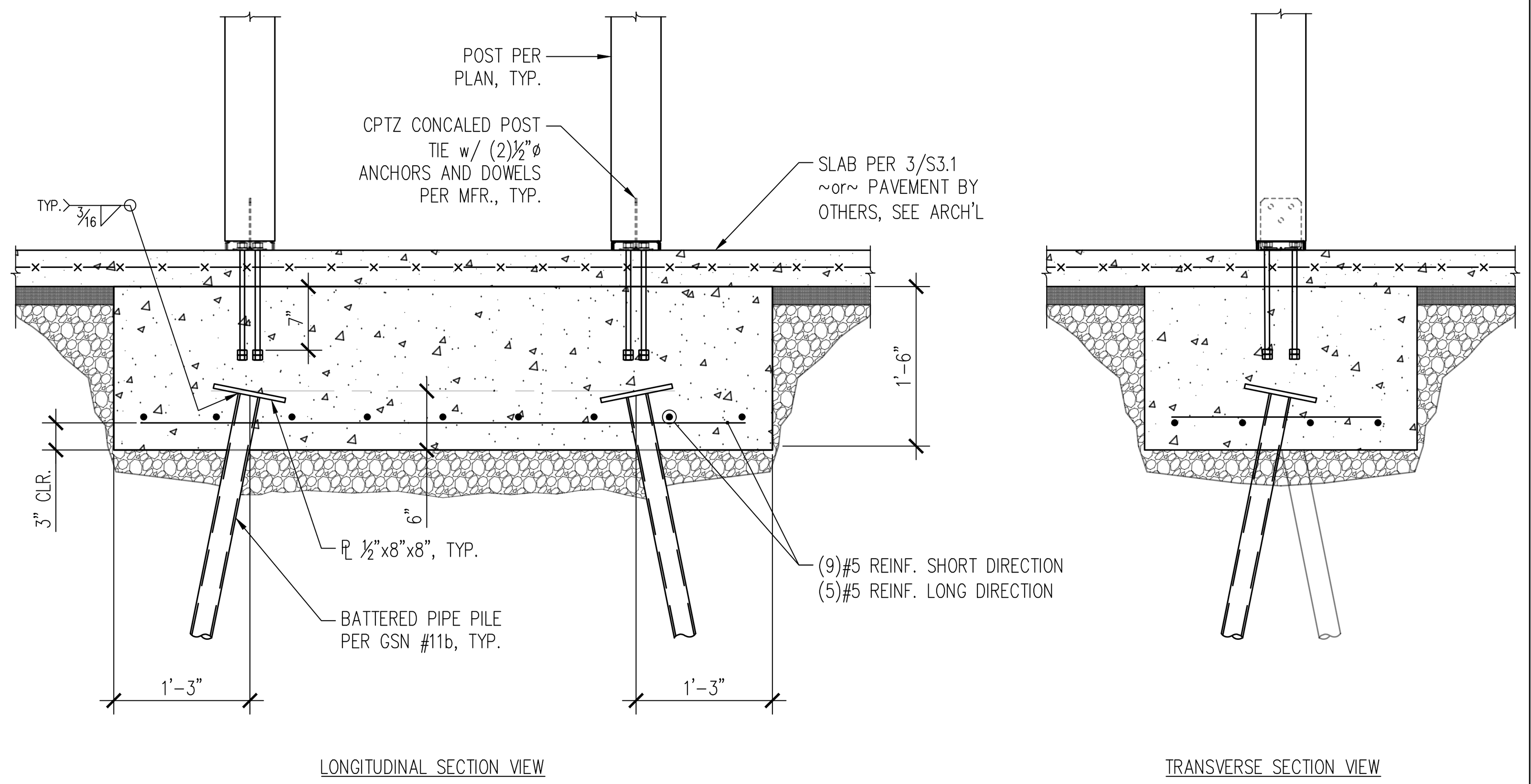
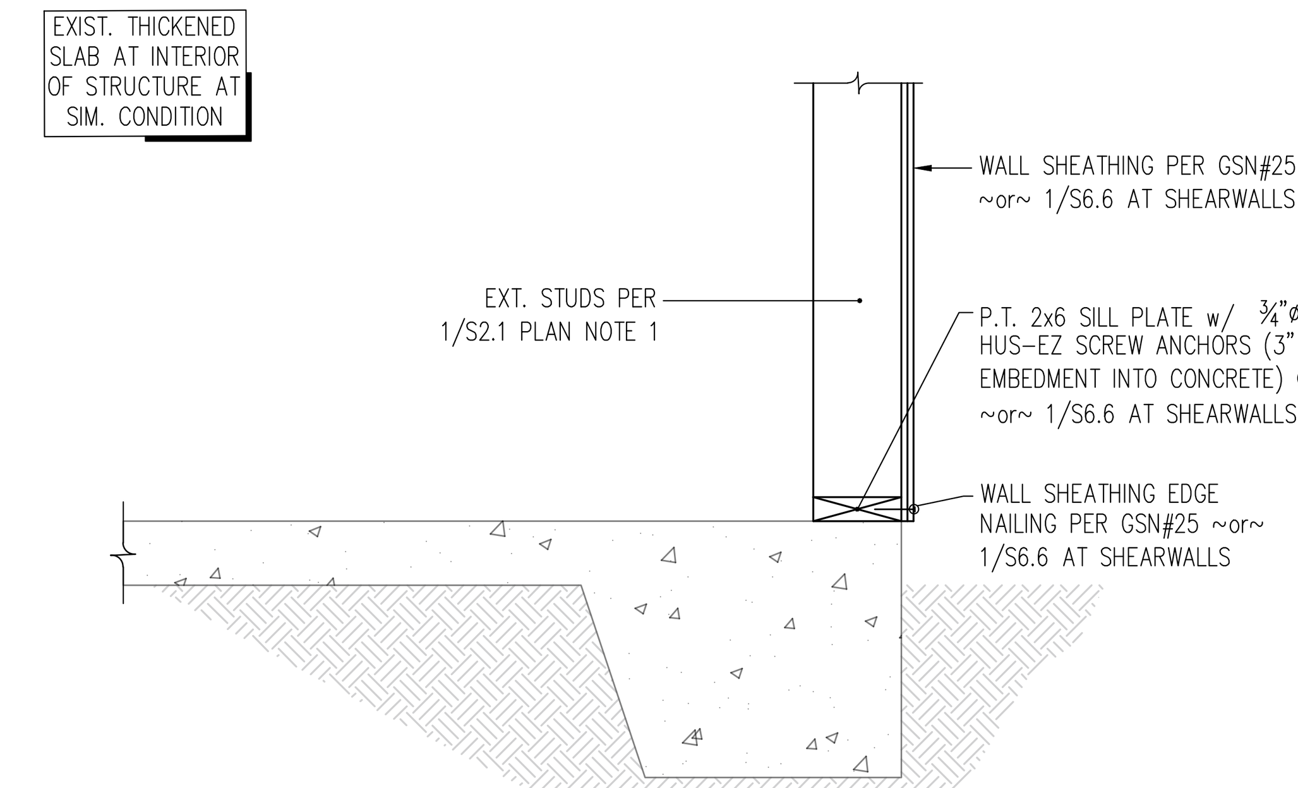
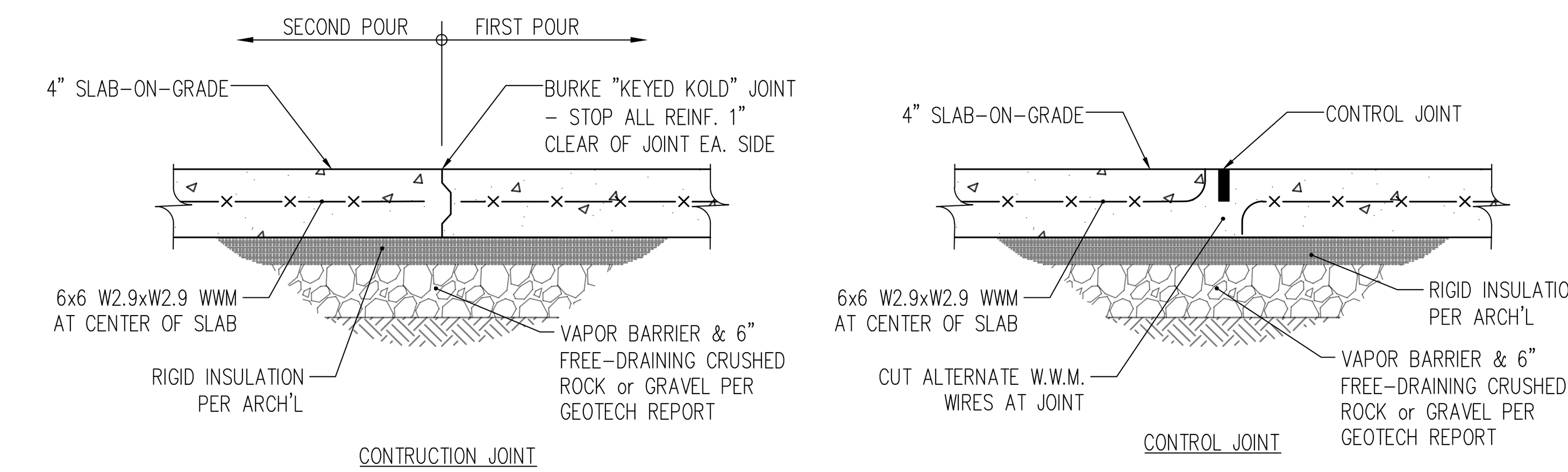
S2.3



9 PIPE SUPPORTED PILE CAP
S3.1 3/4" = 1'-0"



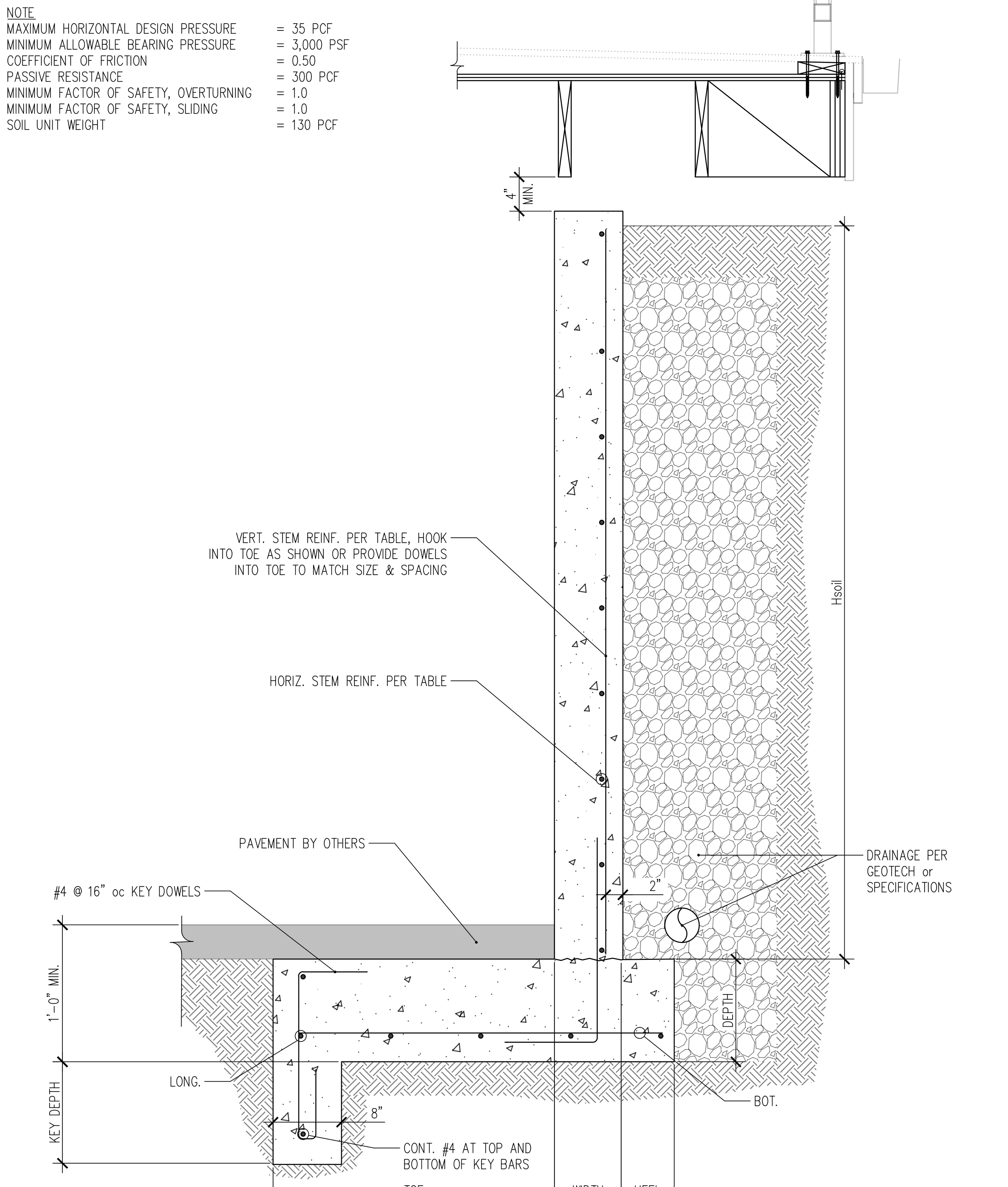
6 NEW SHEAR/BEARING STUD WALL AT EXISTING THICKENED SLAB EDGE
S3.1 1" = 1'-0"



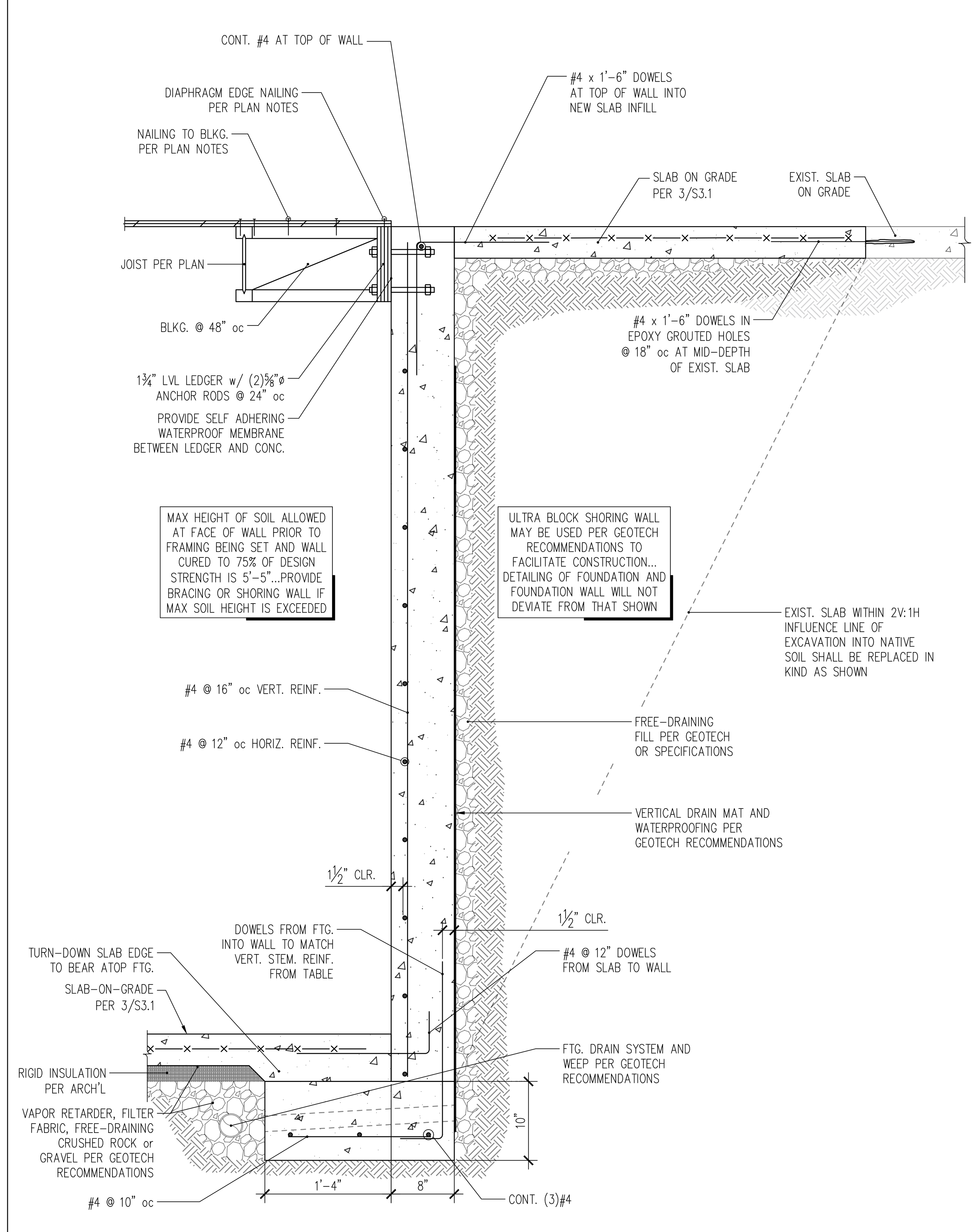
3 TYPICAL SLAB-ON-GRADE JOINTING
S3.1 1" = 1'-0"

Hsoil	TOE	WIDTH	HEEL	DEPTH	STEM REINF.		FTG. REINF.		KEY DEPTH
					VERT.	HORIZ.	LONG.	BOT.	
$H_{soil} \leq$ 4'-6"	2'-0"	8"	–	10"	#4 @ 16" oc	#4 @ 12" oc	(3) #4	#4 @ 12" oc	–
4'-6" < $H_{soil} \leq$ 5'-6"	3'-3"	8"	–	10"	#4 @ 10" oc	#4 @ 12" oc	(5) #4	#4 @ 12" oc	1'-6"
5'-6" < $H_{soil} \leq$ 6'-6"	4'-3"	8"	–	10"	#5 @ 10" oc	#4 @ 12" oc	(5) #5	#5 @ 16" oc	1'-6"
5'-6" < $H_{soil} \leq$ 7'-6"	5'-6"	8"	–	10"	#5 @ 8" oc	#4 @ 12" oc	(5) #5	#5 @ 10" oc	1'-6"
$H_{soil} \leq$ 8'-6"	6'-6"	8"	–	12"	#5 @ 6" oc	#4 @ 12" oc	(5) #5	#5 @ 8" oc	2'-0"

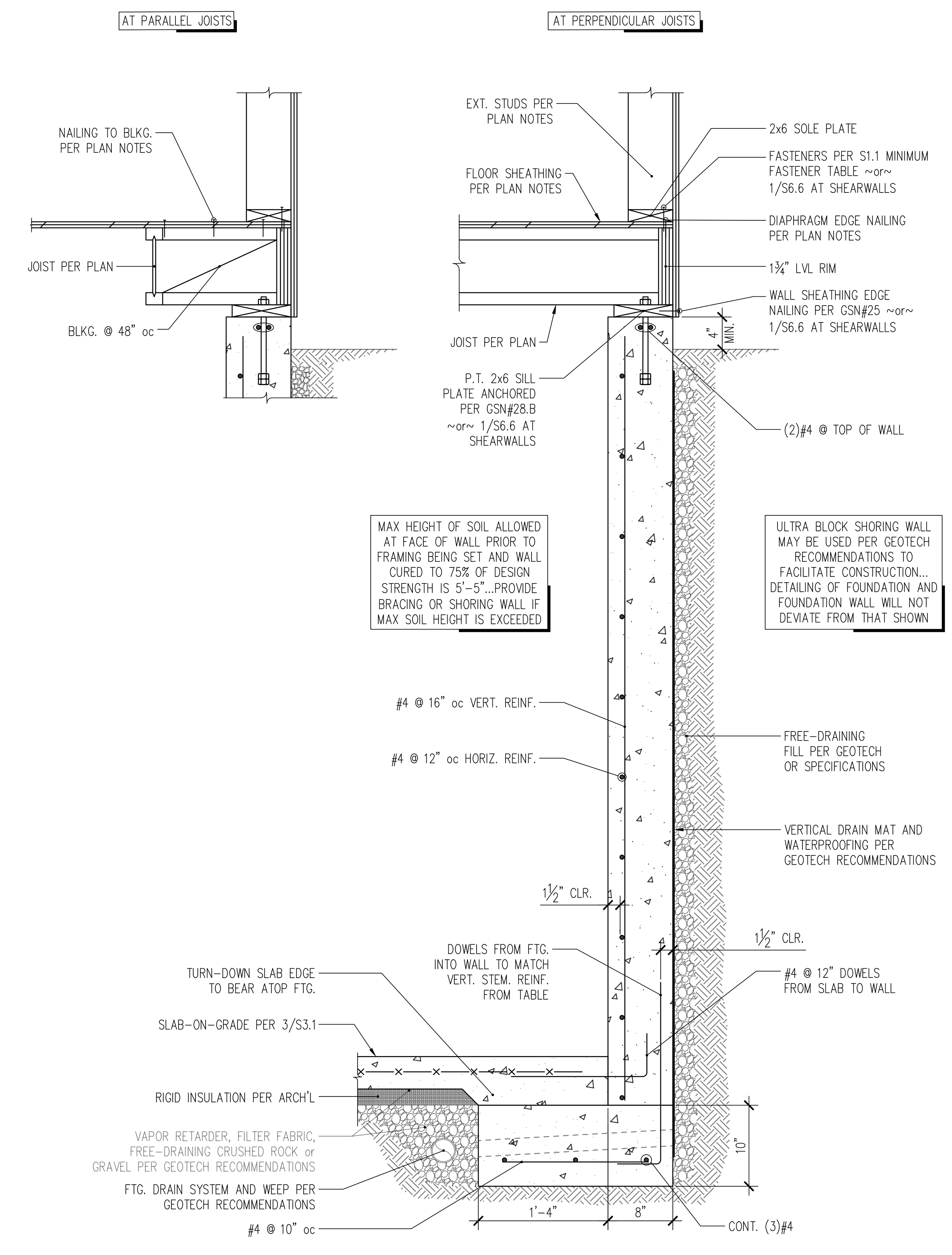
NOTE
MAXIMUM HORIZONTAL DESIGN PRESSURE = 35 PCF
MINIMUM ALLOWABLE BEARING PRESSURE = 3,000 PSF
COEFFICIENT OF FRICTION = 0.50
PASSIVE RESISTANCE = 300 PCF
MINIMUM FACTOR OF SAFETY, OVERTURNING = 1.0
MINIMUM FACTOR OF SAFETY, SLIDING = 1.0
SOIL UNIT WEIGHT = 130 PCF



7 RETAINING WALL
S3.1 1" = 1'-0"



4 SECTION THROUGH FOUNDATION WALL AT BASEMENT SLAB, MAIN FLOOR SLAB AND JOISTS
S3.1 1" = 1'-0"



1 SECTION THROUGH FOUNDATION WALL AT BASEMENT SLAB AND MAIN FLOOR JOISTS
S3.1 1" = 1'-0"

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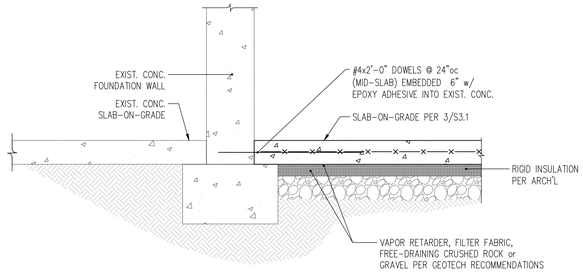
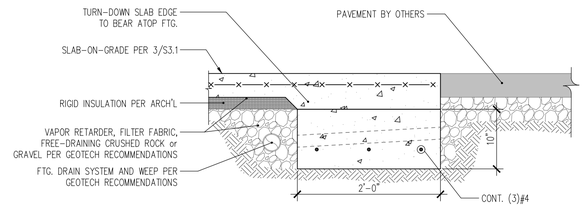
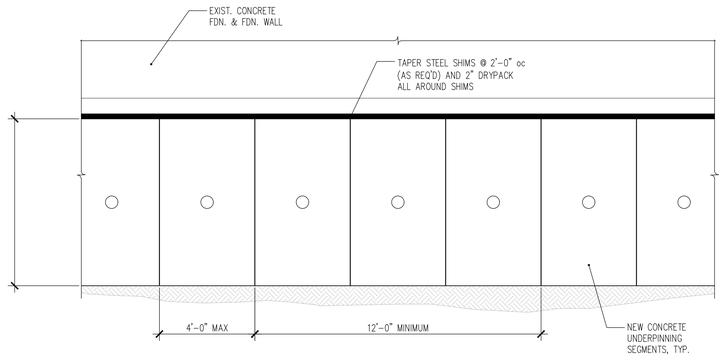
S3.1



6 / S3.2 SECTION AT NEW SLAB AND EXISTING FOUNDATION WALL
1" = 1'-0"

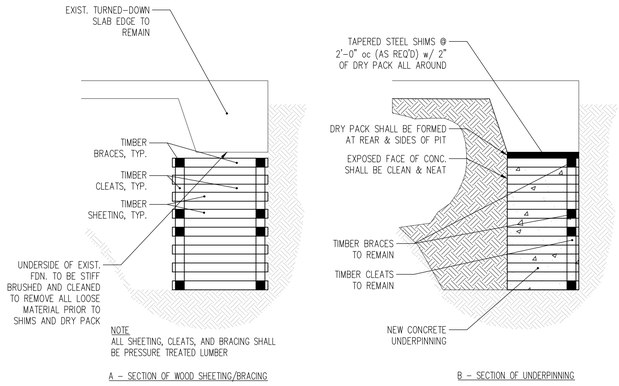


3 / S3.2 SECTION AT GARAGE ENTRANCE
1" = 1'-0"



EXISTING WALL UNDERPINNING SEQUENCE:

1. STARTING WITH SEGMENTS (A) ONLY, DIG PITS 4'-0" WIDE (MAX), SIMULTANEOUSLY PLACING REQUIRED SHEETING AND BRACING. ALL PITS SHALL BE SHEETED ON ALL FOUR SIDES. PACK VOIDS BETWEEN SHEETING AND SOIL WITH SOIL CEMENT. LEAVE A MINIMUM OF 12'-0" OF EXISTING SOIL BETWEEN PITS.
2. CLEAN BOTTOM OF EXISTING FOOTING AND RECOMPACT DISTURBED SOIL AT BOTTOM OF PIT WITH MECHANICAL PAN TAMPERS. COMPACT TO 95% OF THE MAXIMUM DENSITY OF THE SOIL. LOSS OF GROUND SHOULD BE KEPT TO A MINIMUM BY BACKFILLING BEHIND THE BOARDS WHERE AND WHEN POSSIBLE WITH GROUT PUMPED INTO THE VOIDS.
3. THE CONTRACTOR SHALL INSTALL ADEQUATE LATERAL-BRACING SYSTEM(S) TO PREVENT MOVEMENT IN THE EXISTING STRUCTURE(S) AND IN THE NEW UNDERPINNING.
4. POUR NEW CONCRETE UNDERPINNING FOR SEGMENTS (A). AFTER CONCRETE ATTAINS 50% OF THE DESIGN STRENGTH, OR 96 HOURS, PLACE 2"x 4" TAPERED STEEL WEDGES AT 2'-0" O.C. MAX AS NEEDED. THEN PACK SOLID WITH DRYPACK INTO SPACE BETWEEN TOP OF UNDERPINNING AND BOTTOM OF EXISTING FOOTING TO TRANSFER LOAD. ENSURE THE BACK OF VOID IS FORMED SO THAT DRYPACK IS NOT LOST WHEN RAMMED INTO THE GAPS.
5. FOR SEGMENTS (B), DIG PITS 4'-0" WIDE (MAX) WITH REQUIRED SHEETING AND BRACING. REPEAT CONCRETING, CLEANING, COMPACTION, STEEL WEDGES AND DRYPACKING AS DESCRIBED IN NOTES 2, 3 AND 4 FOR SEGMENTS (B).
6. FOR SEGMENTS (C) DIG PITS 4'-0" WIDE (MAX) WITH REQUIRED SHEETING AND BRACING. REPEAT CONCRETING, CLEANING, COMPACTION, STEEL WEDGES AND DRYPACKING AS DESCRIBED IN NOTES 2, 3 AND 4 FOR SEMENTS (C).
7. FOR SEGMENTS (D), DIG OUT SOIL BETWEEN COMPLETED SEGMENTS (C) AND (A). PROVIDE SHEETING AND BRACING AS REQUIRED. REPEAT CONCRETING, CLEANING, COMPACTION, STEEL WEDGES AND DRYPACKING AS DESCRIBED IN NOTES 2, 3 AND 4 FOR SEGMENTS (D).
8. WHERE BOTTOM OF ADJACENT UNDERPINNING PITS ARE AT DIFFERENT ELEVATIONS, THE DEEPER PIT SHALL BE INSTALLED FIRST.
9. UNDERPINNING PITS CLOSER THAN 12'-0" APART SHALL NOT BE EXCAVATED AT THE SAME TIME.



UNDERPINNING NOTES:

1. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL UNDERPINNING REQUIREMENTS IF APPLICABLE.
2. THE UNDERPINNING DETAILS SHOWN HEREWITH ARE A GENERAL GUIDELINE FOR THE CONTRACTOR.
3. THE CONTRACTOR SHALL COMPLY WITH THE ALL RELEVANT PROVISIONS OF THE REFERENCED CODE IN THE GENERAL STRUCTURAL NOTES.
4. ALL FOUNDATIONS AND EARTHWORK OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CODE REFERENCED IN THE GENERAL STRUCTURAL NOTES; AND ALL LOTS, BUILDINGS, AND SERVICE FACILITIES ADJOINING THE FOUNDATION AND EARTHWORK AREAS SHALL BE PROTECTED AND SUPPORTED.
5. THE CONTRACTOR AND/OR SUB-CONTRACTOR(S) SHALL HAVE COMPLETED NO LESS THAN FIVE (5) UNDERPINNING PROJECTS OF A COMPARABLE SIZE AND TYPE TO THIS PROJECT, AND MUST HAVE AT LEAST FIVE (5) YEARS EXPERIENCE IN THE WORK AND/OR APPLICABLE TRADE. SUBMIT EVIDENCE OF SUCH EXPERIENCE FOR REVIEW.
6. THE UNDERPINNING FOUNDATIONS SHALL BEAR ON SUBGRADE HAVING A BEARING CAPACITY EQUAL TO OR GREATER THAN THE SUBGRADE OF THE EXISTING FOUNDATION.
7. DO NOT TRANSFER THE BUILDING LOAD ONTO NEW UNDERPINNING WALLS UNTIL ALL WALLS HAVE ATTAINED 50% OF THE CONCRETE DESIGN STRENGTH, AS CONFIRMED BY THE CYLINDER TESTS, OR 96 HOURS.
8. DO NOT PLACE BACKFILL AGAINST NEW UNDERPINNING WALLS UNTIL WALLS HAVE ATTAINED 50% OF THE CONCRETE DESIGN STRENGTH, AS CONFIRMED BY THE CYLINDER TESTS, OR 96 HOURS.
9. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
10. ALL GROUT SHALL BE NONSHRINK WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
11. ALL DRYPACK SHALL BE A MIXTURE OF 1 PART CEMENT AND 2 PARTS DAMP SAND, WITH 0" SLUMP.
12. ALL UNDERPINNING SHEETING AND BRACING TO REMAIN SHALL BE PRESSURE TREATED LUMBER AND/OR OTHER APPROVED MATERIAL.
13. EXCAVATION BELOW THE WATER TABLE SHOULD BE AVOIDED, IF POSSIBLE. DEWATER THE SITE PRIOR TO EXCAVATION. EXCAVATION MAY ONLY PROCEED AFTER REVIEW BY THE ENGINEER OF RECORD.
14. IF WATER IS ENCOUNTERED IN THE PIT, PROVIDE A WELL POINT NEAR THE PIT.
15. EXCAVATED MATERIAL AND SUPERIMPOSED LOADS SUCH AS EQUIPMENT AND TRUCKS SHALL NOT BE PLACED CLOSER TO THE EDGE OF THE EXCAVATION THAN A DISTANCE EQUAL TO ONE AND ONE-HALF TIMES THE DEPTH OF SUCH EXCAVATION.
16. THE UNDERPINNING SHALL BE INSTALLED IN A MANNER SUCH THAT THE EXPOSED FACE OF THE CONCRETE IS VERTICAL (OR AS OTHERWISE SPECIFIED), CLEAN AND NEAT.
17. THE DEPTH OF THE UNDERPINNING PITS SHALL BE A MAXIMUM OF ONE LIFT. THE LIFT SHALL BE WITHOUT INTERMEDIATE HORIZONTAL CONSTRUCTION JOINTS (COLD JOINTS). MULTIPLE (VERTICAL) LEVELS OF UNDERPINNING SHALL NOT BE PERMITTED.

4 / S3.2 SUGGESTED UNDERPINNING DETAIL
N.T.S.

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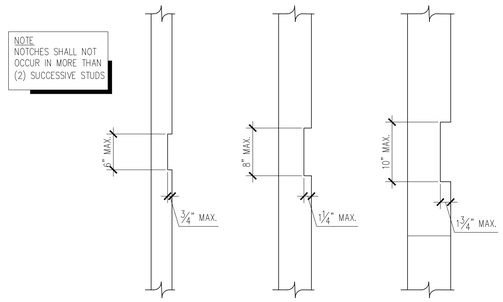
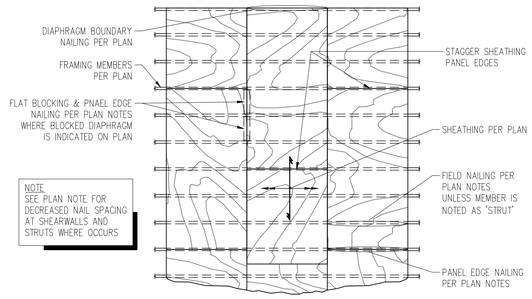
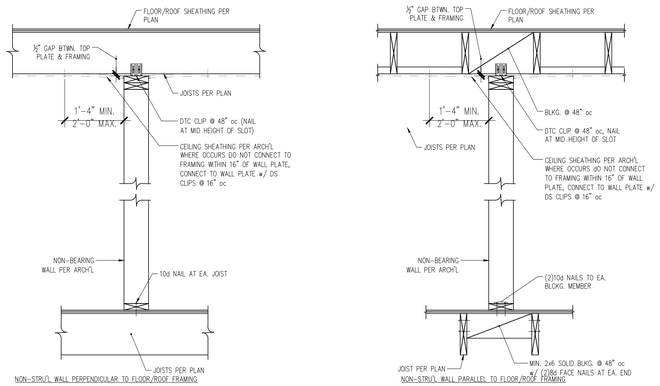


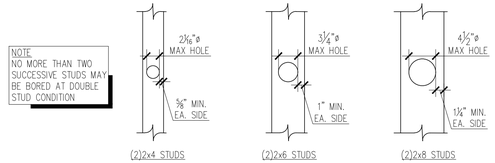
6 S6.1 ALLOWABLE HOLES IN STUDWALL STUDS
NTS



3 S6.1 TYPICAL DIAPHRAGM NAILING
NTS



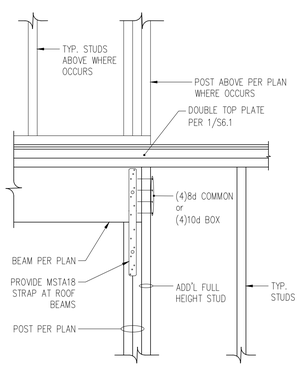
8 S6.1 CONNECTION OF NON-STRUC'L PARTITION WALL TO STRUCTURE
NTS



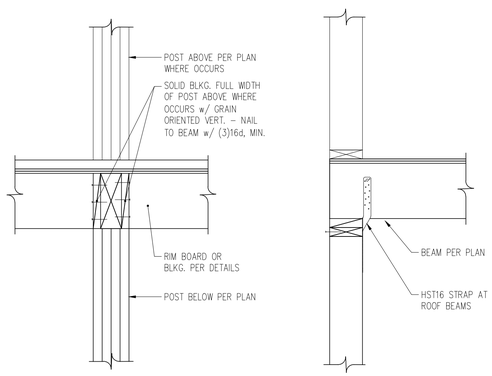
5 S6.1 ALLOWABLE HOLES IN STUDWALL STUDS
NTS

	NO REINF. REQUIRED	STRAP REINF. REQUIRED
2x4 PLATES	1½"ø MAX. HOLE ¾" MIN. EA. SIDE	2⅝"ø MAX. HOLE CMSTC16x3'-0" (CS16x2'-0" AT BOT. PLATES) ⅜" MIN. EA. SIDE
2x6 PLATES	2¼"ø MAX. HOLE 1½" MIN. EA. SIDE	3¾"ø MAX. HOLE CMSTC16x3'-0" (CS16x2'-0" AT BOT. PLATES) ¾" MIN. EA. SIDE
2x8 PLATES	3¼"ø MAX. HOLE 2" MIN. EA. SIDE	5"ø MAX. HOLE CMSTC16x3'-0" (CS16x2'-0" AT BOT. PLATES) 1¼" MIN. EA. SIDE

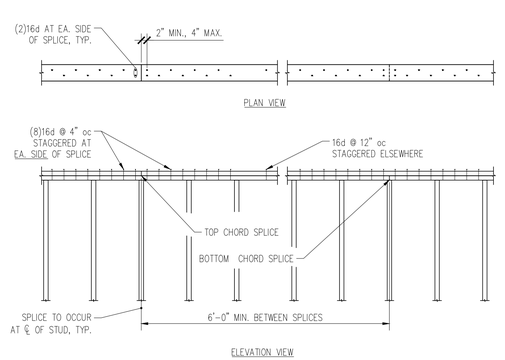
2 S6.1 ALLOWABLE HOLES THROUGH TOP PLATES
NTS



7 S6.1 TYPICAL BEAM PARALLEL TO WALL
NTS



4 S6.1 TYPICAL BEAM PERPENDICULAR TO WALL
NTS



1 S6.1 TOP PLATE SPLICE
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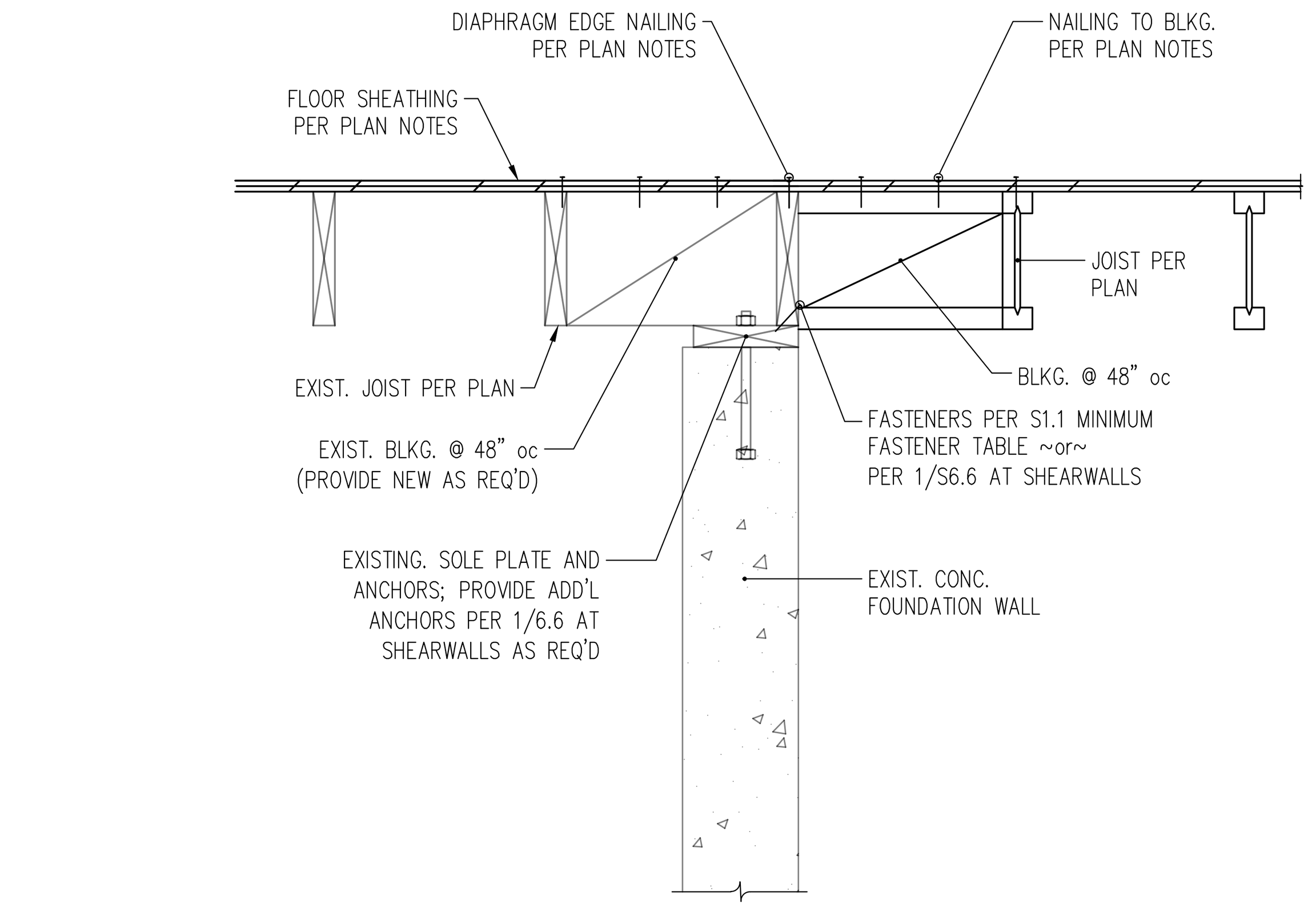
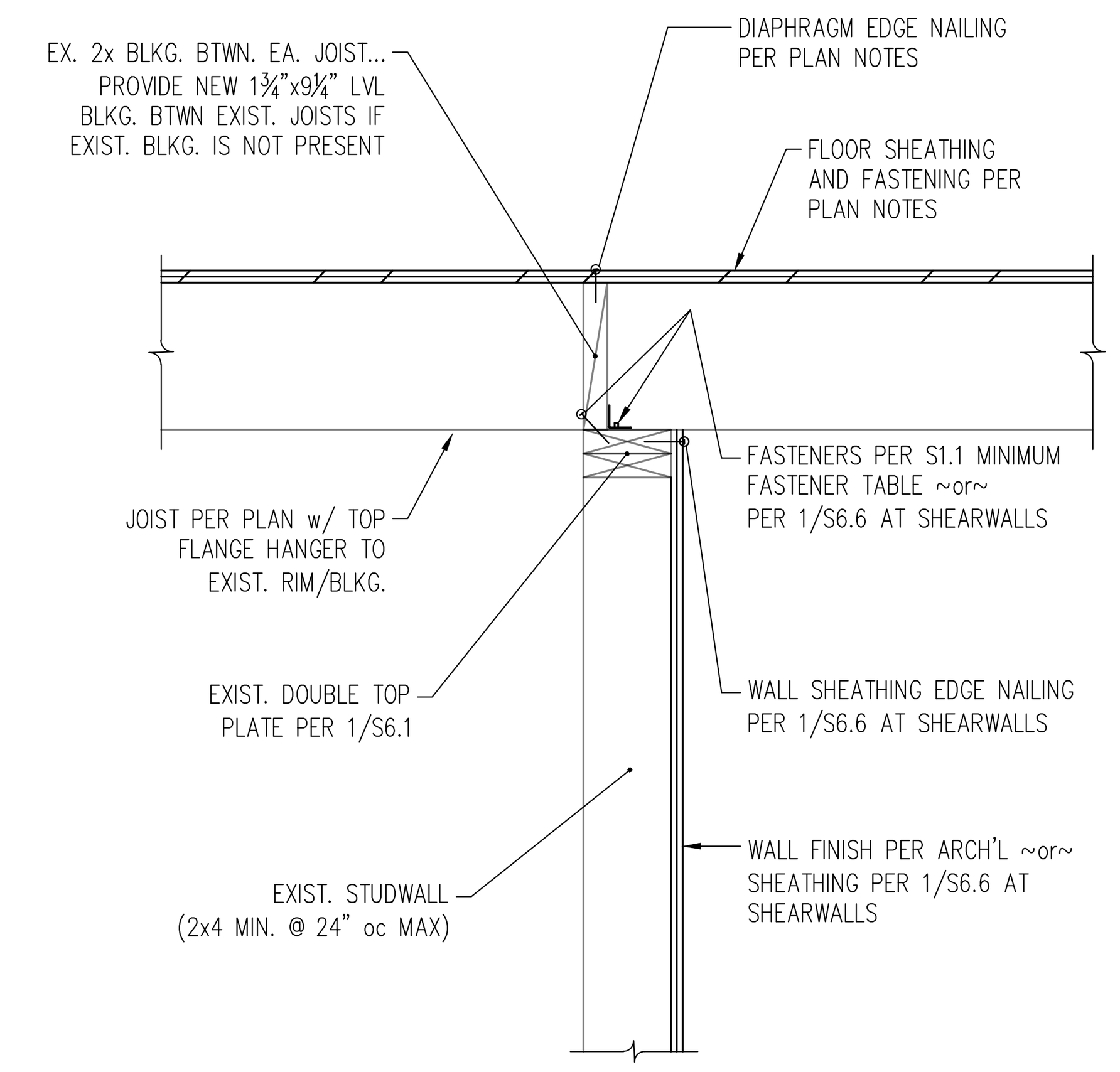


6 / S6.2 SECTION THROUGH INTERIOR SHEAR WALL w/ PERPENDICULAR JOISTS AT EA. SIDE
1" = 1'-0"



6 / S6.2 SECTION THROUGH INTERIOR SHEAR WALL w/ PERPENDICULAR JOISTS AT EA. SIDE
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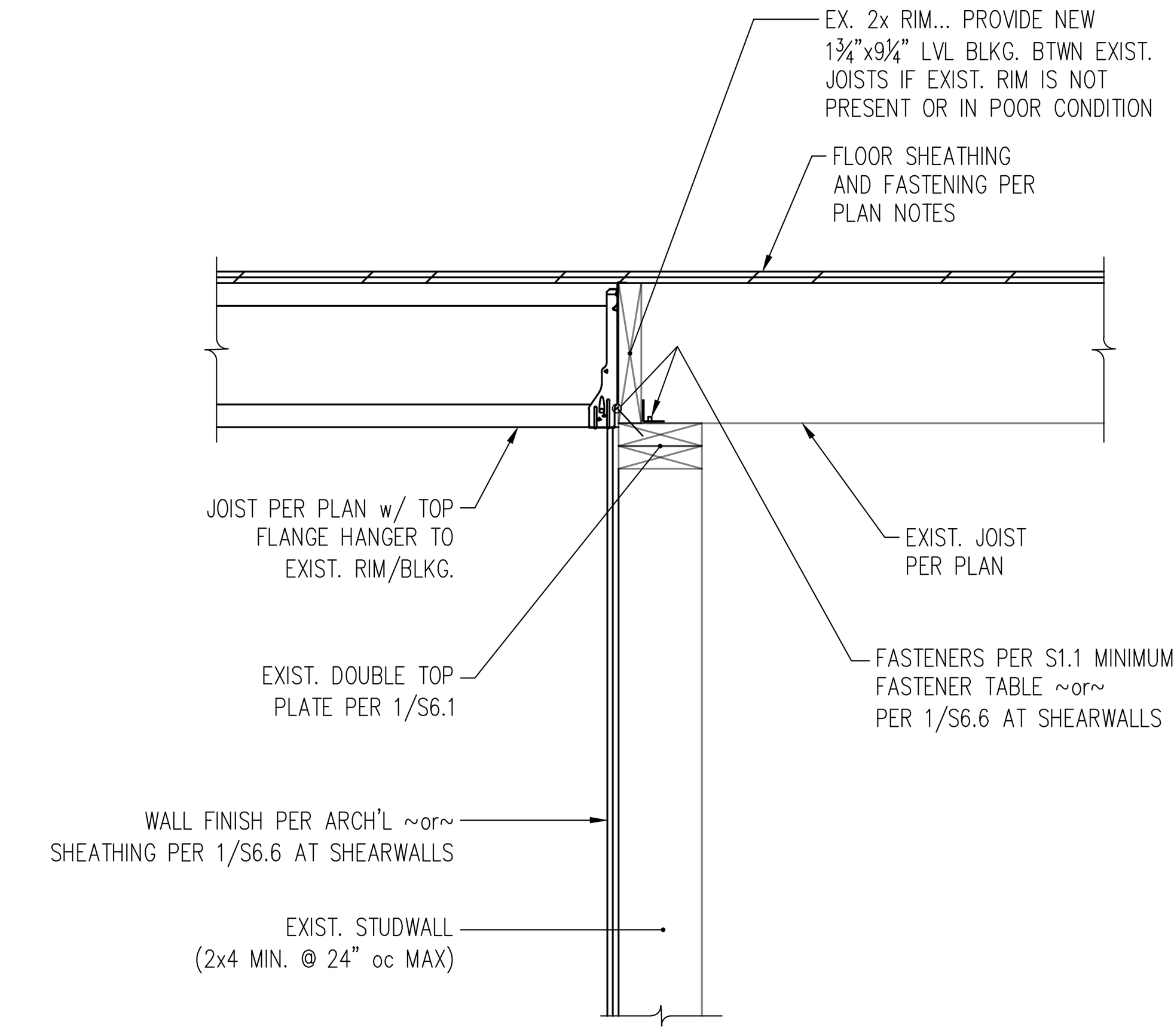
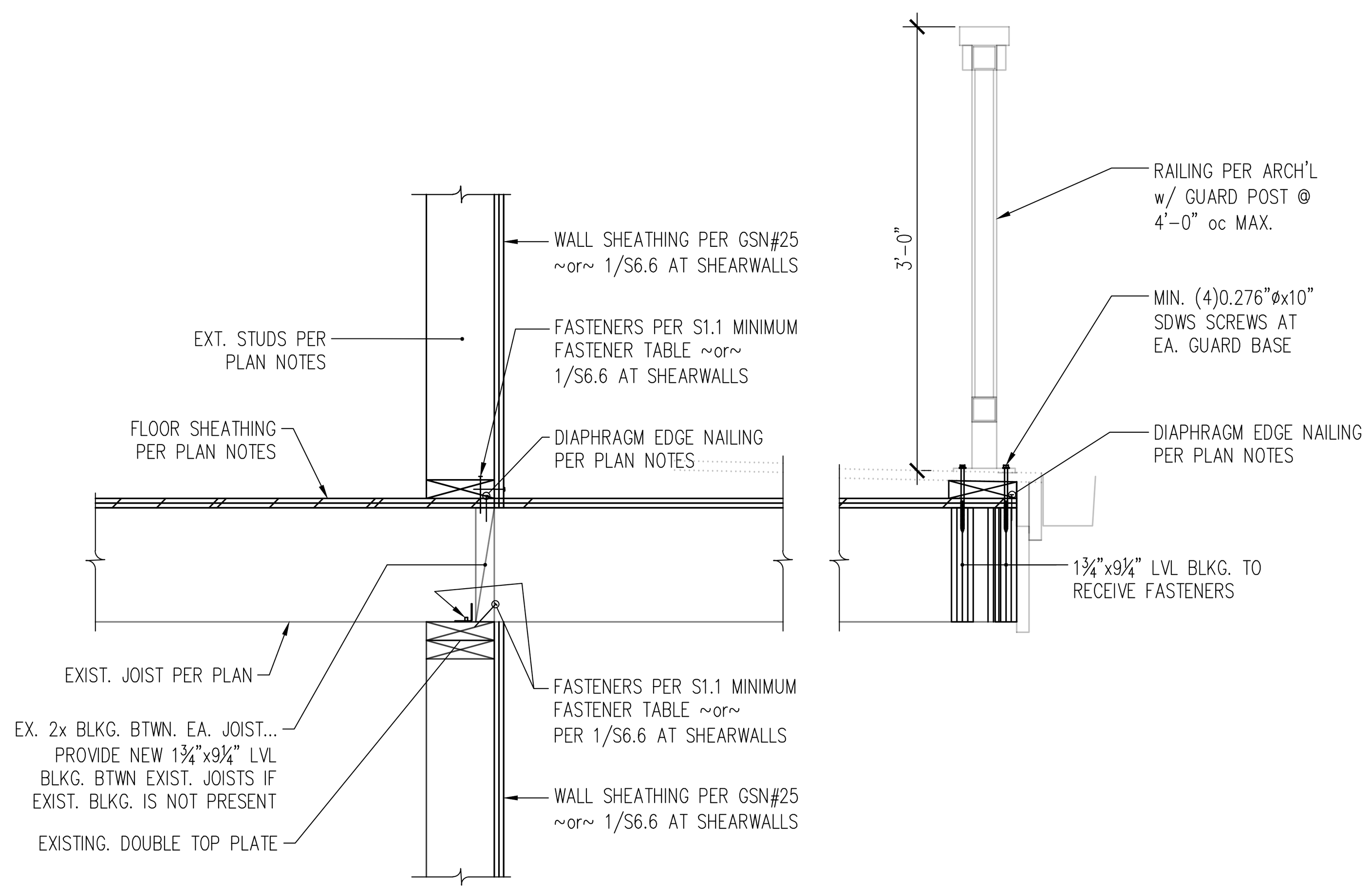
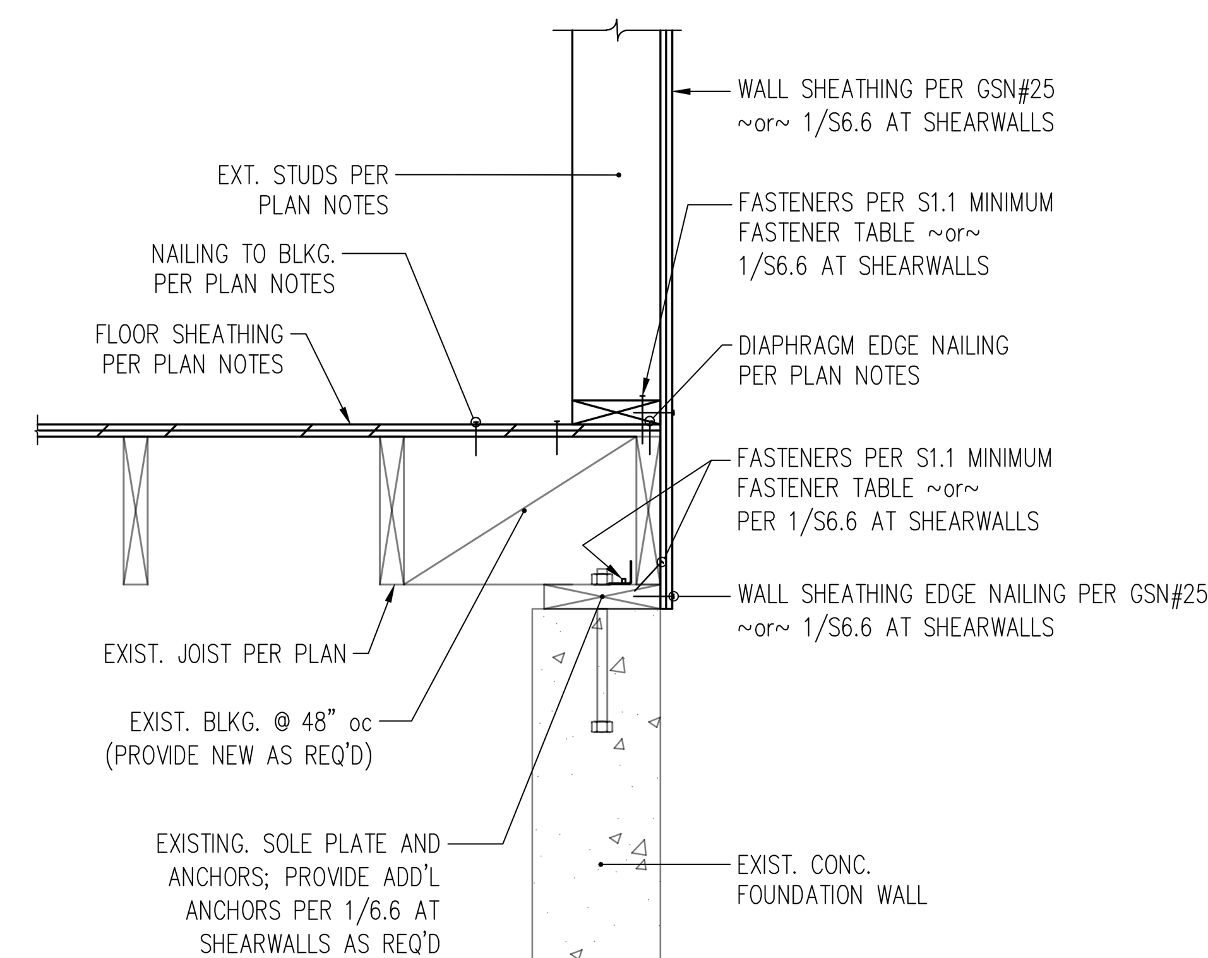


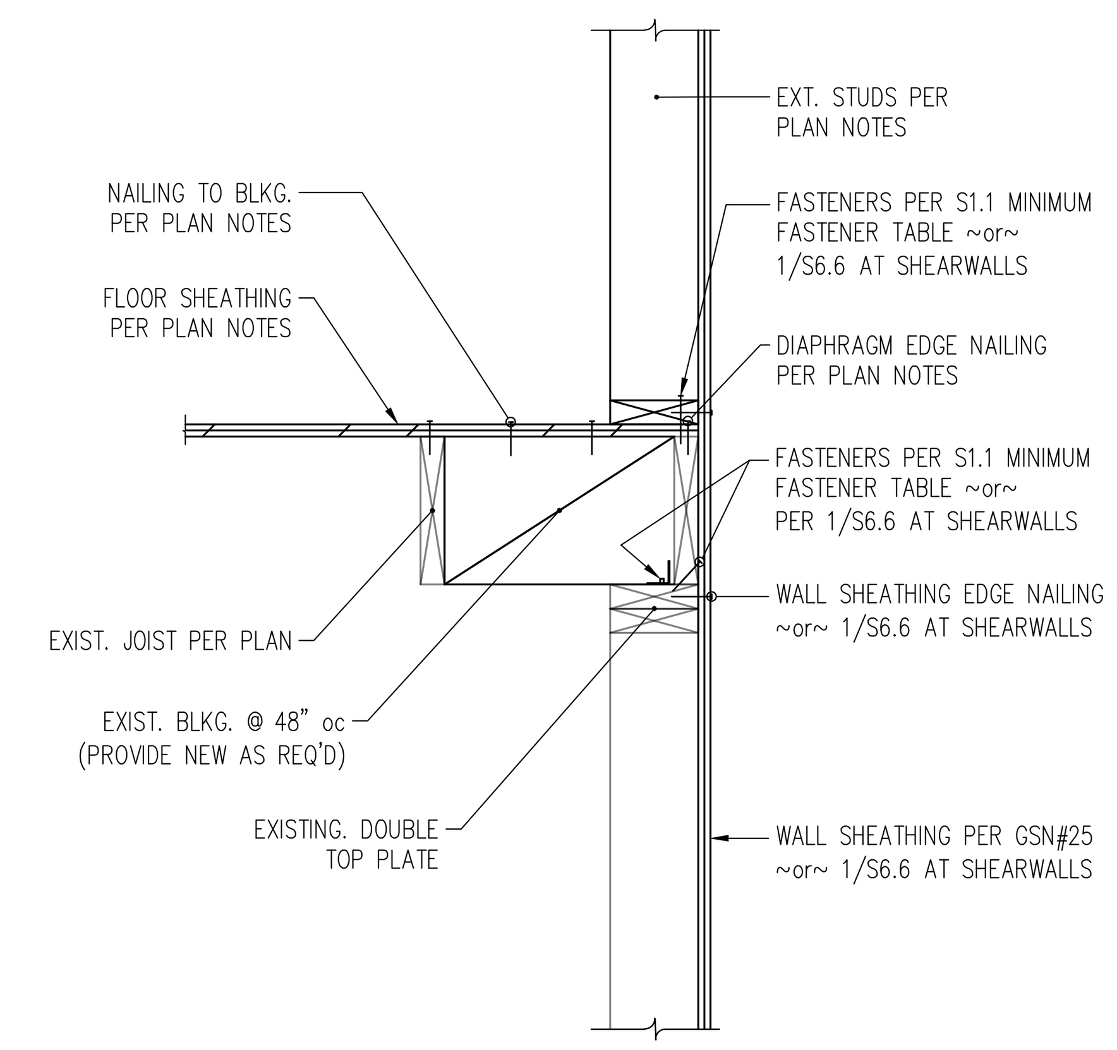
3 / S6.2 SECTION THROUGH INTERIOR BEARING WALL w/ PERPENDICULAR JOISTS AT EA. SIDE
1" = 1'-0"



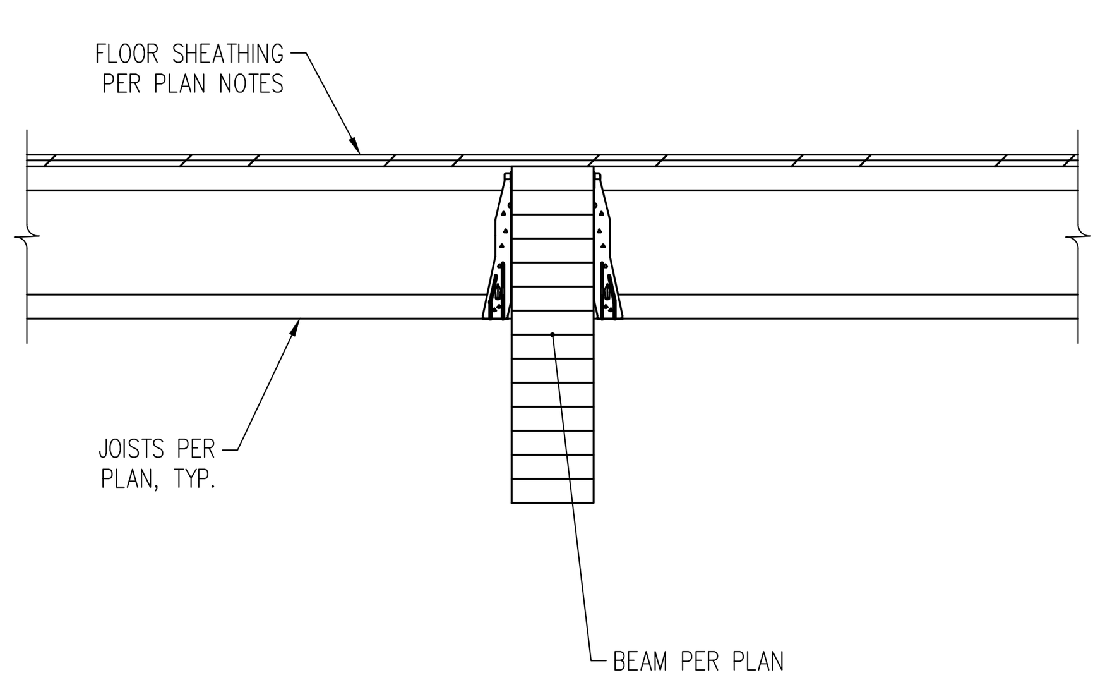
8 / S6.2 SECTION THROUGH BEAM SUPPORTING SHEARWALL ABOVE
1" = 1'-0"



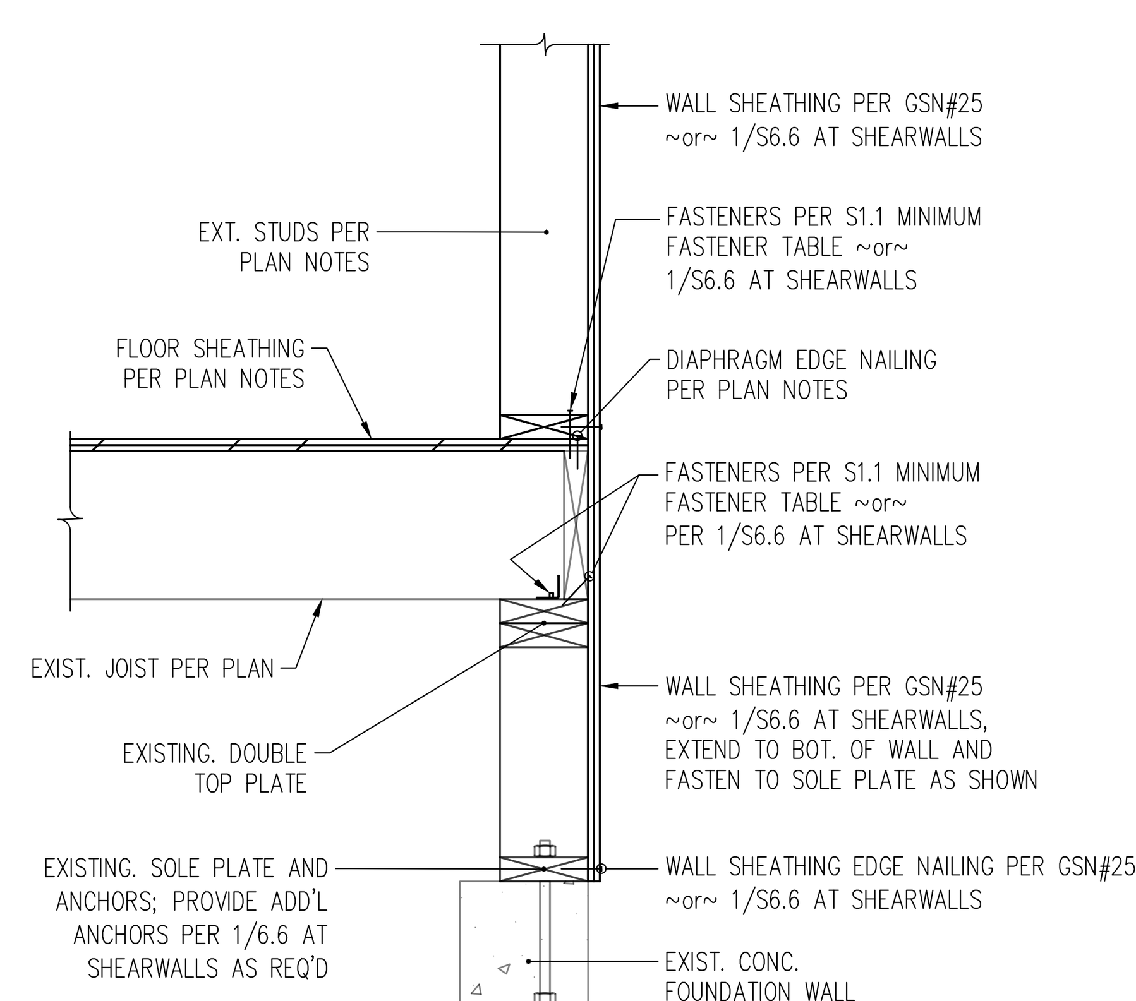
5 / S6.2 SECTION THROUGH EXTERIOR FOUNDATION WALL AT EXISTING PARALLEL JOISTS
1" = 1'-0"



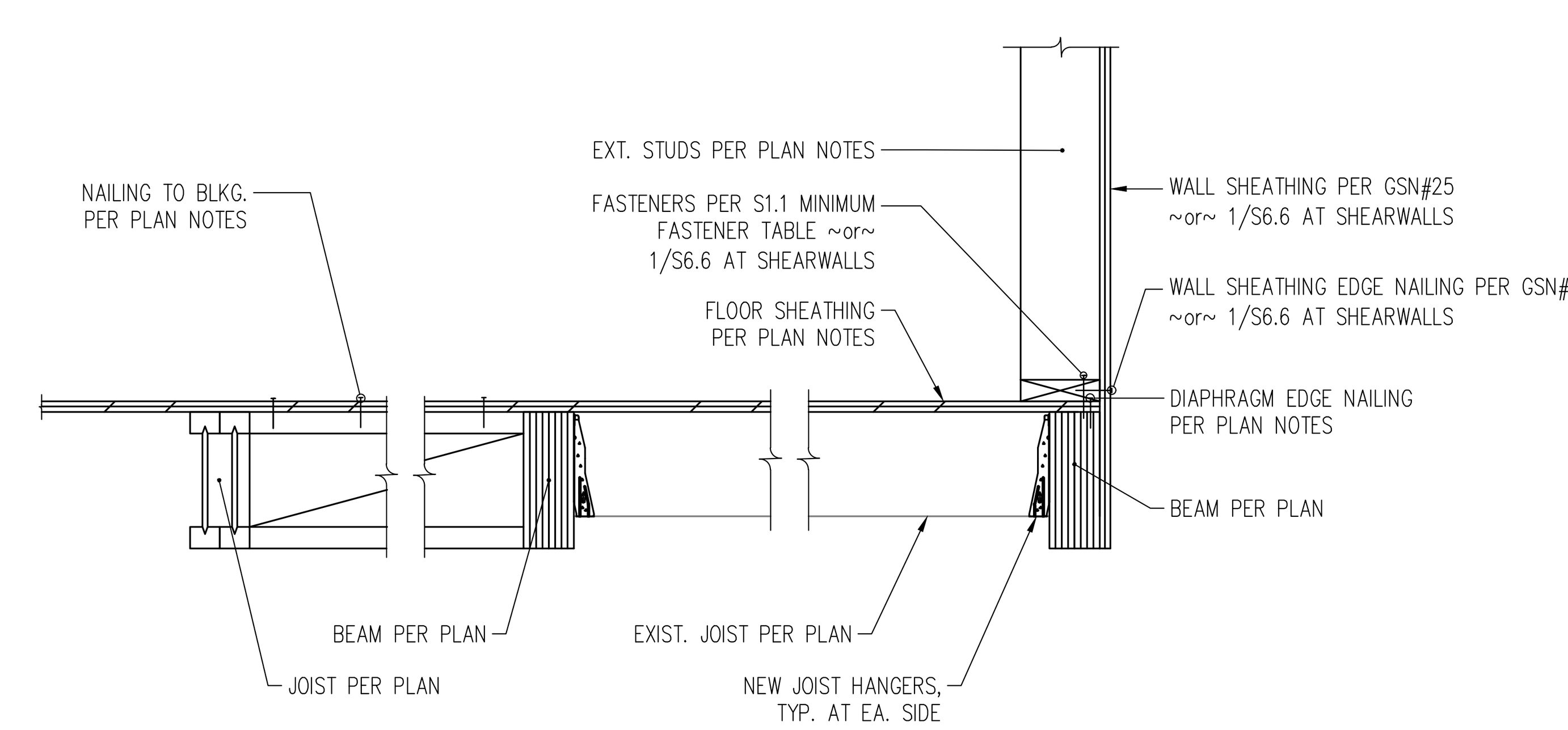
2 / S6.2 SECTION THROUGH EXTERIOR WALL AT EXISTING PARALLEL JOISTS
1" = 1'-0"



7 / S6.2 SECTION THROUGH BEAM SUPPORTING JOISTS
1" = 1'-0"



4 / S6.2 SECTION THROUGH EXTERIOR FOUNDATION WALL AT EXISTING PERPENDICULAR JOISTS
1" = 1'-0"



1 / S6.2 SECTION THROUGH EXTERIOR WALL AT EXISTING PERPENDICULAR JOISTS
1" = 1'-0"

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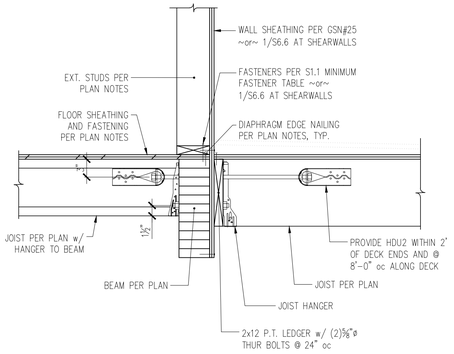
Derakshani Residence
8151 SE 48th St
Mercer Island, WA - 98040

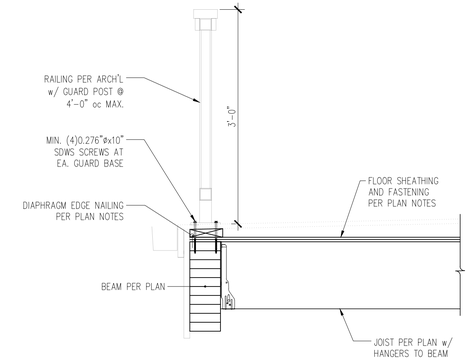
CONTENTS
Wood Floor Framing Details

DRAWN BY
JDA
DATE
04.01.21

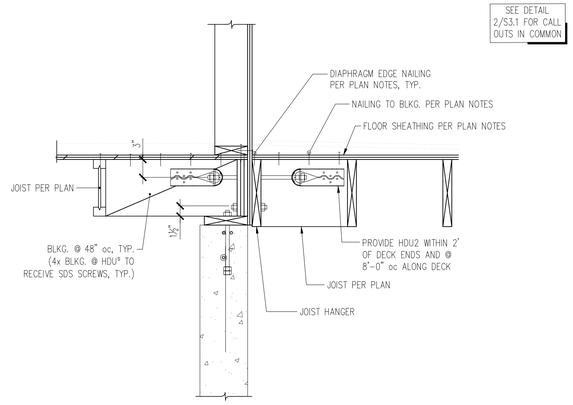
S6.2



6 S6.3 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR JOISTS AND PERPENDICULAR DECK JOISTS
1" = 1'-0"



3 S6.3 SECTION THROUGH DECK EDGE AT PERPENDICULAR JOISTS
1" = 1'-0"



5 S6.3 SECTION THROUGH EXTERIOR FOUNDATION WALL AT PARALLEL. JOISTS AND PARALLEL DECK JOISTS
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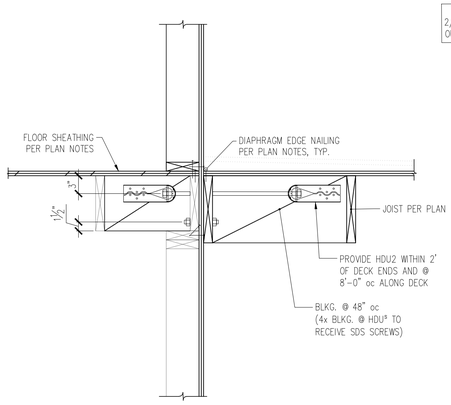

2 S6.3 SECTION THROUGH EXTERIOR WALL AT PARALLEL JOISTS AND PARALLEL DECK JOISTS
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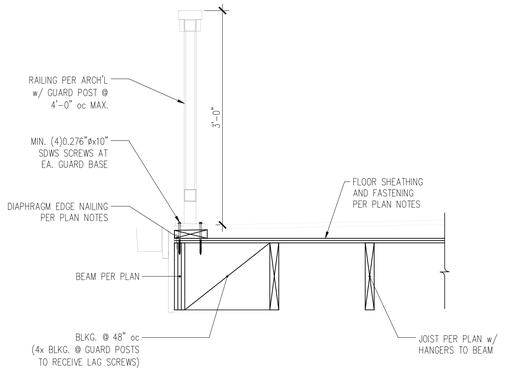

4 S6.3 SECTION THROUGH DECK EDGE AT PARALLEL JOISTS
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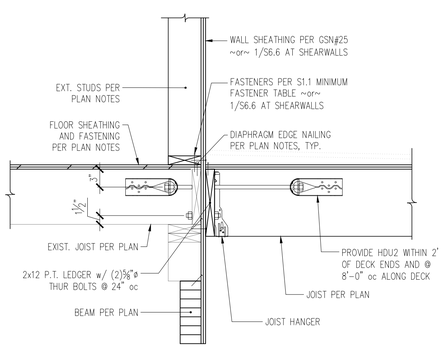

1 S6.3 SECTION THROUGH EXTERIOR WALL AT PERP. EXIST. JOISTS AND PERP. DECK JOISTS
1" = 1'-0"

9317 REGISTERED ARCHITECT
CHRIS LUTH
STATE OF WASHINGTON

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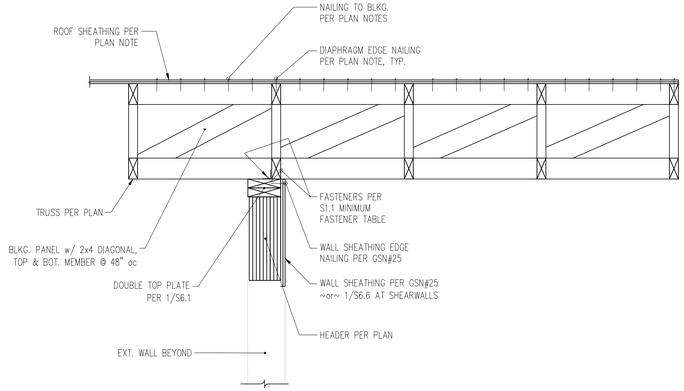

6 S6.4 SECTION THROUGH EXTERIOR WALL AT EXTENDED ROOF OVERHANG AND GARAGE HEADER
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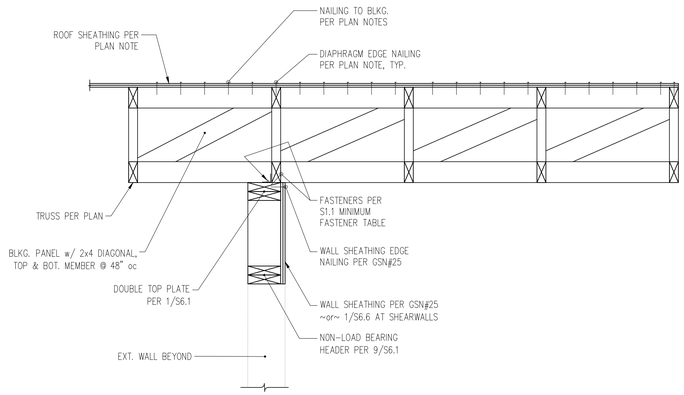
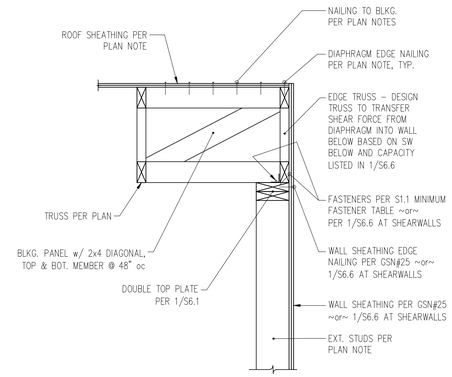
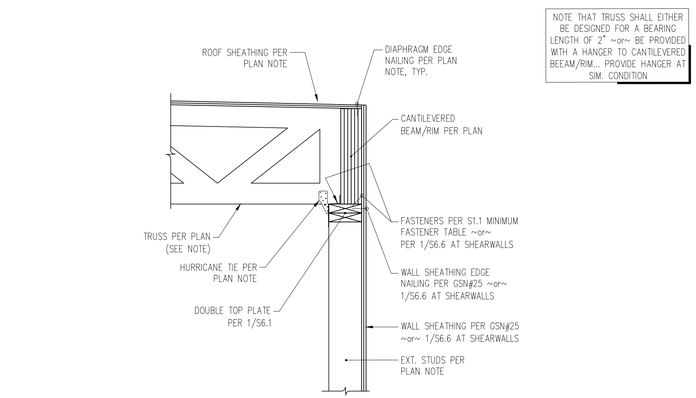


5 S6.4 SECTION THROUGH EXTERIOR WALL AT EXTENDED ROOF OVERHANG
1" = 1'-0"

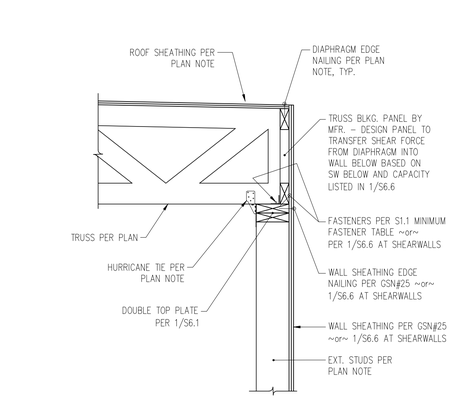


2 S6.4 SECTION THROUGH EXTERIOR WALL AT PARALLEL TRUSSES
1" = 1'-0"

NOTE THAT TRUSS SHALL EITHER BE DESIGNED FOR A BEARING LENGTH OF 2" ~or~ BE PROVIDED WITH A HANGER TO CANTILEVERED BEEAM/RIM... PROVIDE HANGER AT SIM. CONDITION



4 S6.4 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR TRUSSES AND CANTILEVERED BEAM/RIM
1" = 1'-0"



1 S6.4 SECTION THROUGH EXTERIOR WALL AT PERPENDICULAR TRUSSES
1" = 1'-0"

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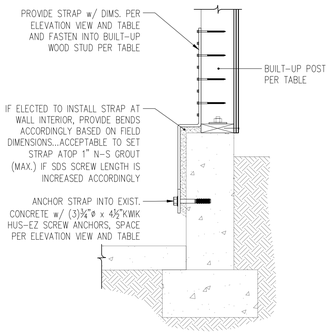
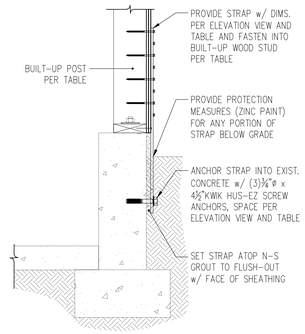
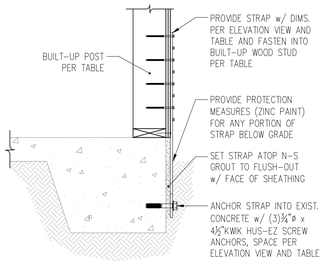


SECTION A – STRAP SET AT WALL INTERIOR



SECTION B – STRAP SET AT WALL EXTERIOR

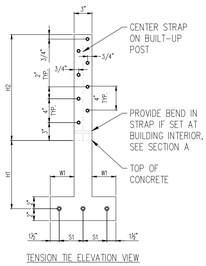


SECTION C – STRAP AT EXISTING THICKENED SLAB EDGE

CUSTOM TENSION TIE SCHEDULE

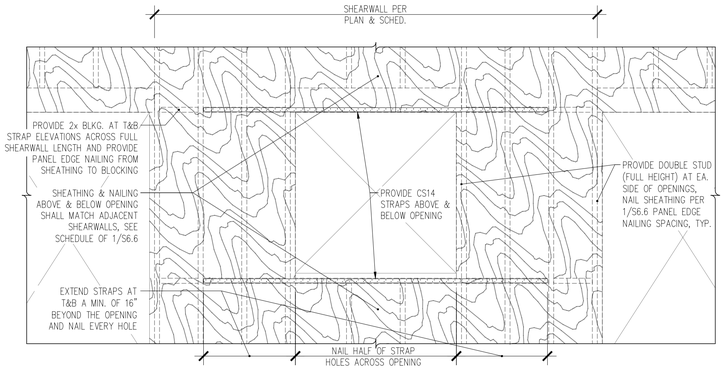
TIE MARK	MIN. ① No. OF STUDS	STRAP DIMENSIONS ② t	H1	H2	W1	S1	No. OF ¼"ø x 3½" SDS SCREWS	No. OF KWIK HUS EZ ANCHORS	ASD CAPACITY
CU1.5	(2)2x	12 ga.	4"	11¾"	2½"	5"	(5)	(2)⅝"ø x 5½"	1,500#
CU2.5	(2)2x	12 ga.	5"	15¾"	4"	4"	(7)	(3)⅝"ø x 5½"	2,500#
CU3	(2)2x	10 ga.	6"	17¾"	4"	4"	(8)	(3)¾"ø x 4½"	3,000#
CU3.5	(2)2x	10 ga.	8"	19¾"	5"	5"	(9)	(3)¾"ø x 4½"	3,500#
CU5	(3)2x	10 ga.	8½"	29¾"	6¾"	4½"	(14)	(4)¾"ø x 4½"	5,000#
CU6	(4)2x	8 ga.	11¼"	33¾"	9"	6"	(16)	(5)¾"ø x 4½"	6,000#

① NAIL PLYWOOD SHEATHING TO STUDS RECEIVING HOLDOWN WITH SCHEDULED PANEL EDGE NAILING. STAGGER NAILS SO THAT EACH STUD IS NAILED.
② STRAPS SHALL BE ASTM A653 OR A1003, GRADE 33 WHERE STRAP THICKNESS IS LESS THAN 12 ga., AND GRADE 50 WHERE STRAP IS 10 ga. AND 8 ga.



TENSION TIE ELEVATION VIEW

8 S6.5 HOLD DOWN DETAIL
1" = 1'-0"

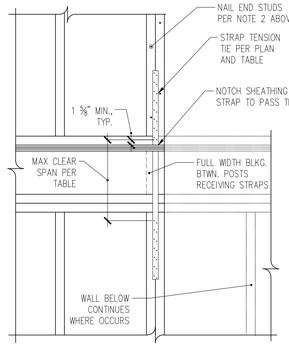


7 S6.5 STRAPPED SHEARWALL DETAIL
N.T.S.

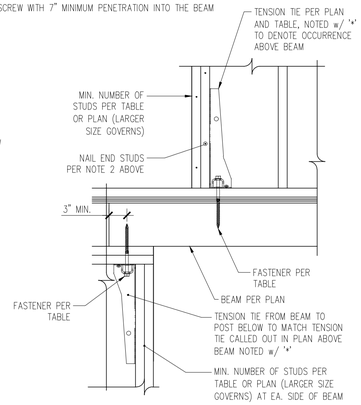
STRAP TENSION TIE SCHEDULE

TIE ① MARK	MIN. NUMBER ② OF STUDS	CLEAR SPAN – TOTAL FASTENERS ③	ASD CAPACITY
HDU2^	(2)2x	(6)¼"ø x 2½" SDS SCREWS	1,500#
MSTC28	(2)2x	16" – (16)0.148"ø x 3¼"	1,330#
MSTC40	(3)2x	16" – (32)0.148"ø x 3¼"	2,655#
MSTC52	(3)2x	16" – (48)0.148"ø x 3¼"	3,985#
MSTC66	(4)2x	16" – (68)0.148"ø x 3¼"	5,850#

① TENSION TIE TYPES REFER TO SIMPSON STRONG-TIE CATALOG CALLOUTS.
② NAIL PLYWOOD SHEATHING TO STUDS RECEIVING HOLDOWN WITH SCHEDULED PANEL EDGE NAILING. STAGGER NAILS SO THAT EACH STUD IS NAILED.
③ FASTENERS NOTED IN TABLE ABOVE REPRESENT THE TOTAL AMOUNT. FOR STRAPS, HALF OF THE FASTENERS SHALL BE PROVIDED INTO EACH STUD.
* DENOTES TENSION TIE THAT OCCURS ATOP OF A FRAMING MEMBER BELOW. FOR HDU2*, PROVIDE A ⅜"ø LAG SCREW WITH 3" MINIMUM PENETRATION INTO THE BEAM; FOR HDU5*, PROVIDE A ⅜"ø LAG SCREW WITH 7" MINIMUM PENETRATION INTO THE BEAM



ELEVATION VIEW – TYPICAL CONDITION

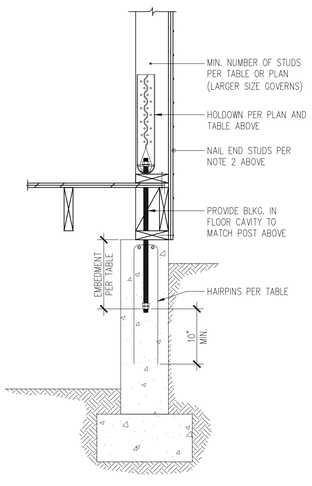


ELEVATION VIEW – TENSION TIE ABOVE BEAM

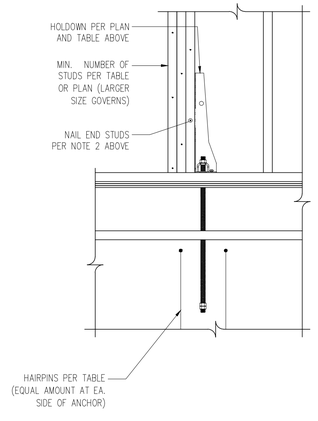
HOLDOWN TENSION TIE SCHEDULE

TIE ① MARK	MIN. NUMBER ② OF STUDS	ANCHOR (ø x EMBEDMENT) and No. OF HAIRPIN DOWELS	③ FASTENERS FROM TIE TO STUD	ASD CAPACITY
HDU2	(2)2x	⅝"ø x 20" – (2)#4 HAIRPIN	(6)¼"ø x 2½" SDS SCREWS	3,075#
HDU4	(3)2x	⅝"ø x 20" – (2)#4 HAIRPIN	(10)¼"ø x 2½" SDS SCREWS	4,565#
HDU5	(3)2x	⅝"ø x 20" – (2)#4 HAIRPIN	(14)¼"ø x 2½" SDS SCREWS	5,645#
HDU8	(4)2x	⅞"ø x 20" – (4)#4 HAIRPIN	(20)¼"ø x 2½" SDS SCREWS	7,870#
HDU11	(5)2x	1"ø x 20" – (4)#4 HAIRPIN	(30)¼"ø x 2½" SDS SCREWS	11,175#

① TENSION TIE TYPES REFER TO SIMPSON STRONG-TIE CATALOG CALLOUTS.
② NAIL PLYWOOD SHEATHING TO STUDS RECEIVING HOLDOWN WITH SCHEDULED PANEL EDGE NAILING. STAGGER NAILS SO THAT EACH STUD IS NAILED.
③ ANCHORS SHALL BE HEAVY HEX HEAD WITH DOUBLE NUT CAST INTO CONCRETE.
ASTM F 1554 Gr. 36 FOR ⅝"ø ANCHOR
ASTM F 1554 Gr. 105 FOR ⅞"ø ANCHOR
ASTM F 1554 Gr. 55 FOR 1"ø ANCHOR



SECTION VIEW



ELEVATION VIEW

4 S6.5 HOLDOWN DETAIL AND SCHEDULE
1" = 1'-0"

SHEARWALL PANEL TYPE	① SHEATHING THICKNESS	② 0.131" x 2½" PANEL NAILING	③ STUD/BLKG. AT ABUTTING PANEL EDGES & SILL PLATE THICKNESS	⑦ CONN. OF BLKG. OR FRAMING to TOP PLATE; AND SOLE PLATE TO SILL PLATE ④ ¼"ø x 3½" SDS SCREWS	⑤ A35 CLIPS	⑥ LTP4 PLATES	⑧ ⑨ ANCHOR BOLTS TO CONC. ⅝"ø	¾"ø	ASD CAPACITY, PLF
SW-6	½"	6" oc	2x	18" oc	30" oc	28" oc	48" oc	48" oc	260
SW-4	½"	4" oc	3x	12" oc	20" oc	19" oc	46" oc	48" oc	380
SW-3	½"	3" oc	3x	9" oc	15" oc	14" oc	36" oc	48" oc	490
SW-2	½"	2" oc	3x	7" oc	12" oc	11" oc	27" oc	38" oc	640
SW-33	½"	3" oc EA. SIDE	3x	4" oc	7" oc	7" oc	18" oc	24" oc	980

① SHEATHING SHALL CONSIST OF ½" PLYWOOD AND HAVE A MINIMUM SPAN RATING OF 24/0; PERMISSIBLE TO RE-USE EXISTING SHEATHING AT EXISTING STUDWALLS IF THICKNESS & SPAN RATING CAN BE VERIFIED AND STUDS & SHEATHING ARE IN SUITABLE CONDITION.

② PANEL NAILING APPLIES TO ALL SHEATHING PANEL EDGES. IF RE-USING EXISTING SHEATHING PER NOTE 1 ABOVE, PROVIDE ADDITIONAL FASTENERS AS REQUIRED TO MEET SPACING REQUIREMENTS. INSTALL BLOCKING AT ALL UNFRAMED PANEL EDGES. ENSURE SHEATHING IS NAILED TO EXISTING INTERMEDIATE FRAMING WITH PANEL NAILS AT 12"oc.

③ DOUBLE 2x MEMBERS MAY BE SUBSTITUTED FOR 3x MEMBERS AT WALLS WITH ONLY ONE LAYER OF SHEATHING. 2x MEMBERS SHALL BE NAILED TOGETHER WITH 8d FACE: @ 5" oc FOR SW-6, @ 3½" oc FOR SW-4, @ 2½" oc FOR SW-3, AND @ 2" oc FOR SW-2 (116#/NAIL)

④ ROWS OF NAILS AND SDS SCREWS SHALL BE OFFSET AT LEAST ½" AND STAGGERED. MINIMUM EDGE DISTANCE FOR NAILS AND SDS SCREWS INTO EDGE OF MEMBERS SHALL BE ⅝" (400#/SCREW)

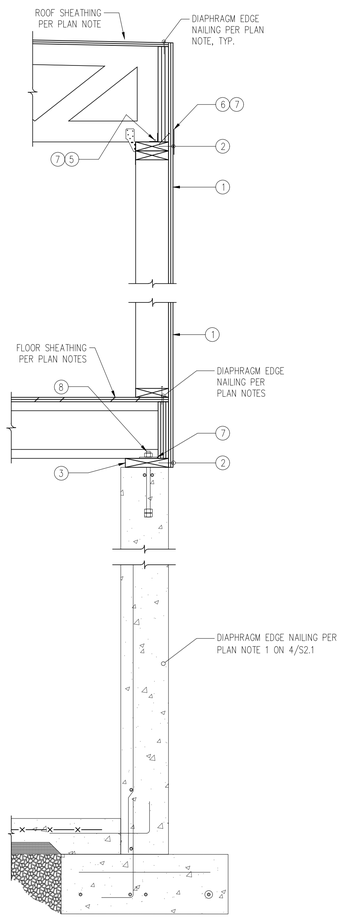
⑤ A35 CLIPS SHALL BE INSTALLED w/ (12)0.131 x 1½ " NAILS (650#/CLIP)

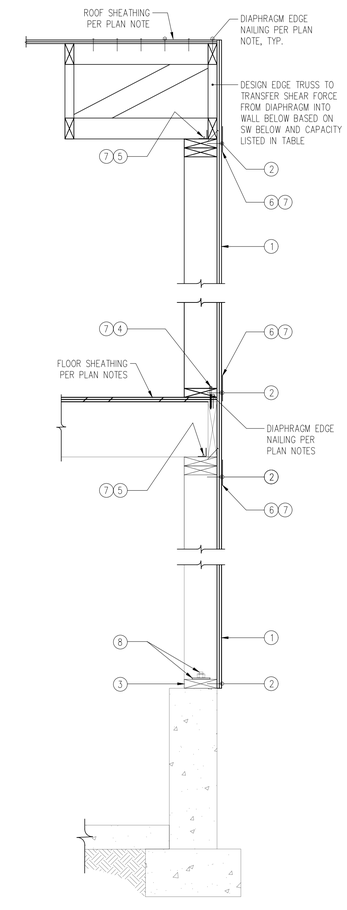
⑥ LTP4 LATERAL TIE PLATES MAY BE INSTALLED OVER SHEATHING w/ (12)0.131 x 2½" NAILS (625#/CLIP)

⑦ CONTRACTOR SHALL USE A35 or LT4P CLIPS TO CONNECT ROOF TO DOUBLE TOP PLATE AND SDS SCRWS or LTP4 CLIPS TO CONNECT SOLE PLATE TO RIM BOARD AT MAIN FLOOR. EXTEND SHEATHING TO BOTTOM OF SOLE PLATE AT MAIN FLOOR FOUNDATION WALL AND PROVIDE EDGE FASTENING AS NOTED IN TABLE.

⑧ PLATE WASHERS IN 2x4 STUD WALLS AND ALL SINGLE SIDED SHEAR WALLS SHALL BE 3"x3"x0.229". DOUBLE SIDED 2x6 SHEAR WALLS SHALL HAVE 4½"x3"0.229" PLATE WASHERS. THE EDGE OF PLATE WASHERS SHALL BE LOCATED WITHIN ½" OF THE EDGE OF BOTTOM PLATE ON THE SIDE WITH SHEATHING.

⑨ CAST ANCHORS A MINIMUM OF 7" INTO CONCRETE. INSTALL ADDITIONAL ANCHOR BOLTS AT EACH SIDE OF PLATE BREAKS AND PENETRATIONS EXCEEDING THE "NO REINFORCING" HOLE SIZE PER 2/S6.1. AT EXISTING STUD WALLS, A COMBINATION OF EXISTING AND NEW ANCHOR BOLTS CAN BE COUNTED TOWARDS THE SPACING REQUIREMENTS NOTE IN THE TABLE PROVIDED THEY ADHERE TO NOTE #8 ABOVE. NEW ANCHOR BOLTS SHALL BE ¾"ø HILTI KWIK HUS-EZ SCREW ANCHORS WITH 3" MINIMUM EMBEDMENT INTO CONCRETE. AS AN ALTERNATIVE TO NEW ANCHOR BOLTS, SIMPSON FRFP RETROFIT FOUNDATION PLATES WITH (5)¼"ø SDS SCREWS THAT PENETRATE THE SILL PLATE 2½" MAY BE USED (#1810/PLATE) IF SPACED ACCORDINGLY: @ 72" oc FOR SW-6, @ 56" oc FOR SW-4, @ 42" oc FOR SW-3,@ 32" oc FOR SW-2, AND @ 20" oc FOR SW-33





1 S6.5 SHEARWALL SECTION AND SCHEDULE
1" = 1'-0"

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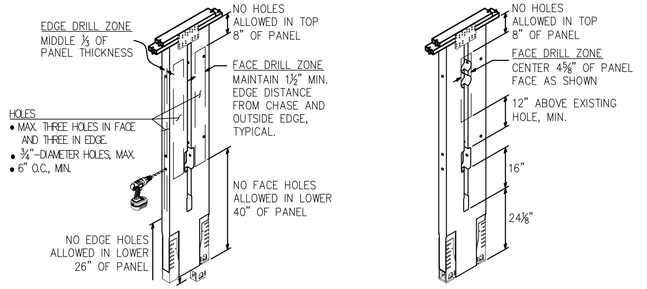
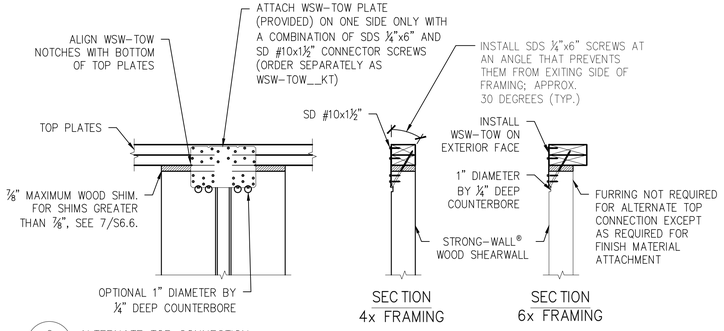


ALLOWABLE SMALL HOLES (FACE & EDGE DRILL ZONES)

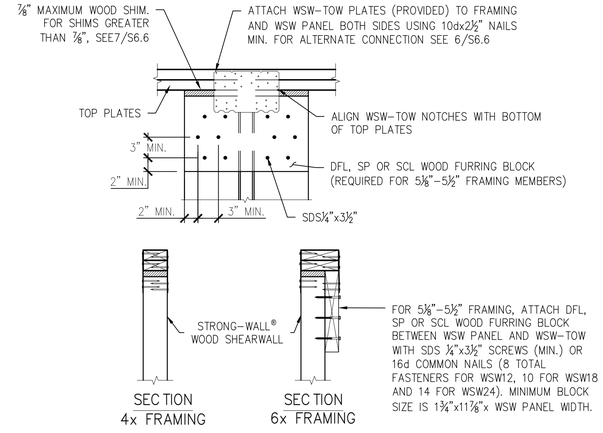
- 4⅝"-DIA. HOLES, MAX.
- MAX. OF TWO 4⅝"-DIA. HOLES OR ONE 4¼"x12" HOLE.
- NO MINIMUM ON-CENTER SPACING REQUIRED.

1 S6.6 TRIM ZONE AND ALLOWABLE HOLES
1" = 1'-0"

WSW-TOW ALTERNATE CONNECTION KIT		
MODEL NO.	FASTENER QUANTITY	
	SD #10x1½"	SDS ¼"x6"
WSW-TOW12KT	20	2
WSW-TOW18KT	28	4
WSW-TOW24KT	40	8



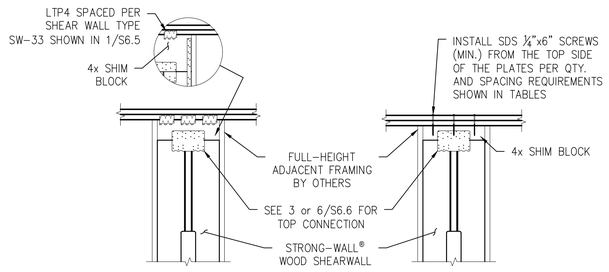
6 S6.5 ALTERNATE TOP CONNECTION
1" = 1'-0"



3 S6.5 STANDARD TOP CONNECTION
1" = 1'-0"

QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSW12	4
WSW18	8
WSW24	12

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12-4:12	2	3
5:12-8:12	1½	4½
9:12-12:12	1½	5½



4⅛" TO 12" SHIM BLOCK 1" TO 4" SHIM BLOCK

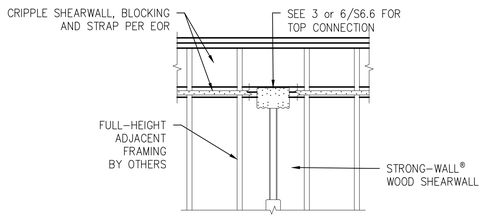
FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSW PANEL (EACH SIDE) USING 10dx1½" NAILS

SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":

- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSW PANEL

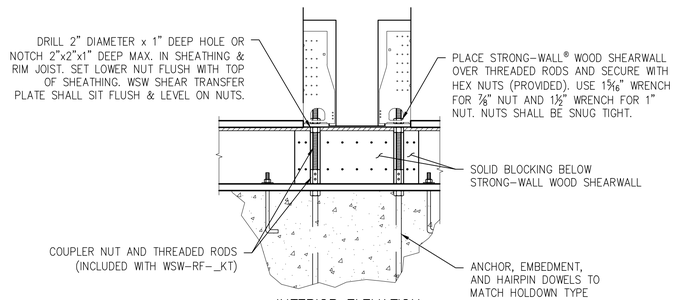
SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":

- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSW PANEL

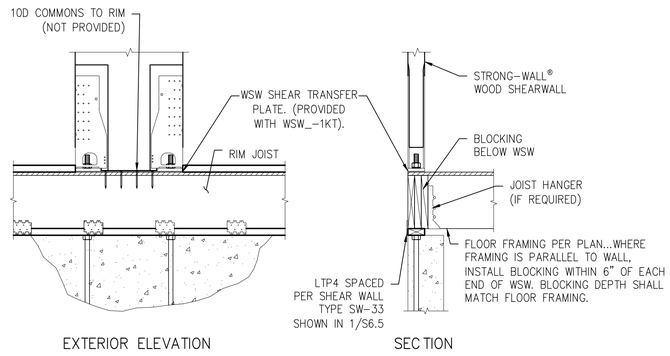


CRIPPLE WALL

7 S6.6 TOP OF WALL HEIGHT ADJUSTMENTS
1" = 1'-0"



INTERIOR ELEVATION

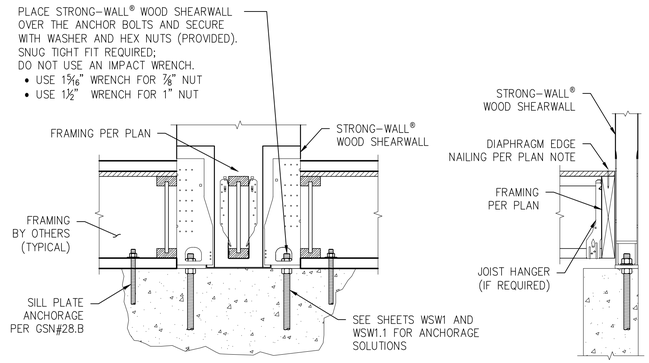


EXTERIOR ELEVATION SECTION

WALL WIDTH (in.)	MODEL NO.	CONTENTS
12	WSW-RF-12KT	EACH KIT CONTAINS (1) SHEAR TRANSFER PLATE (2) ⅞" x 18" OR 1" x 18" THREADED RODS (ASTM A36) (2) COUPLER NUTS (2) HEAVY HEX NUTS INSTALLATION INSTRUCTIONS
18	WSW-RF-18KT	
24	WSW-RF-24KT	

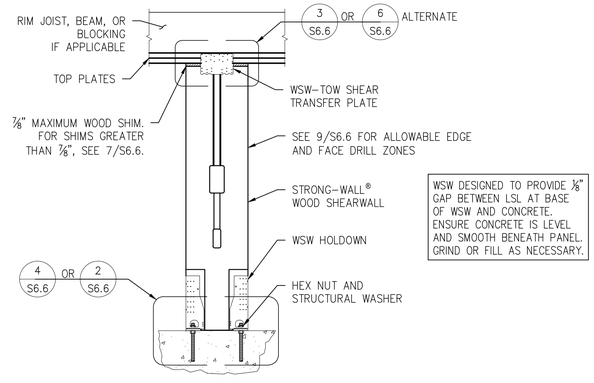
ORDER FIRST FLOOR CONNECTION KIT SEPARATELY. MODEL WSW-RF-_KT. EXAMPLE WSW-RF-18KT

4 S6.6 STANDARD INSTALLATION AT BASE OF STRONG-WALL
1" = 1'-0"



STRONG-WALL® WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

2 S6.6 ALTERNATE INSTALLATION AT BASE OF STRONG-WALL
1" = 1'-0"



1 S6.6 SINGLE STORY WSW ON CONCRETE
1" = 1'-0"

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Derakshani Residence
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Mercer Island, WA - 98040

CONTENTS

Simpson Strong-Wall Details

DRAWN BY
JDA

DATE
04.01.21

S6.6