

PROJECT TEAM

OWNER:
Tom & Kim TSO
8802 SE 37th St.
Mercer Island WA 98040
email:

DESIGNER:
Kesh Design Lines
Tel: 425.361.7325
email: kesh@keshdesignlines.com

ENGINEERING:
As Needed

PROPERTY DETAILS

JOB NAME: TSO ADDITION & ADU
SITE ADDRESS:
8802 SE 37th ST. MERCER ISLAND WA 98040

LEGAL DISCRPTION:
MADRONA CREST ADD

ZONING: R-8.4 Single Family(Res Use/Zone)

PARCEL #: 502190-0455

PROJECT NARATIVE

Proposed is a 2 story Addition above and to the rear of the existing 750 SF garage.
One bedroom and One bath on lower level and Master Bed and Bath on upper level - ADU totaling 899 SF.
Principal dwelling unit will be owner occupied.
New construction details will follow the existing design of the house including windows, siding and roof pitch.
2 Additional on site parking will be designated for the ADU
No trees will be removed or disturbed

SHEET INDEX

- P1 SITE PLAN
- P2 SUPP. SHEET & GFA CALCULATIONS
- A2 GENERAL NOTES
- A3 AS BUILT
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- A5 ELEVATIONS
- A6 FOUNDATION & MAIN FLOOR FRAMING
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- A10 STAIRS & BALCONY DETAILS
- A11 ROOF PLAN
- A12 SHEARWALL DETAILS
- A13 WINDOW SCHEDULE & ENERGY CALCS.
- D1 DETAILS & NOTES
- D2 DETAILS & NOTES

- STRUCTURAL:
- S0 GEN. NOTES
- S1 FRAMING PLAN
- S2 FRAMING DETAILS
- S3 WSW DETAILS
- STRUCTURAL CALCULATIONS:
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LOT COVERAGE

A. Gross Lot Area	12,100	Square Feet
B. Net Lot Area	10,960	Square Feet
C. Allowed Lot Coverage Area	4,840	Square Feet
D. Allowed Lot Coverage	40	% of Lot
E. Existing Lot Coverage:		
1. Main Structure Roof Area	2,837 2,873	Square Feet
2. Accessory Building Roof Area	117 94	Square Feet
3. Vehicular Use (driveway, paved access easements [portion used by the lot for access], parking	790	Square Feet
4. Covered Patios and Covered Decks	216	Square Feet
5. Total Existing Lot Coverage Area (E1+E2+E3+E4)	3,966 3,973	Square Feet
F. (Total Lot Coverage Area Removed)	(147) (94)	Square Feet
G. Proposed Adjustment for Single Story (Area)	0	Square Feet
H. Proposed Adjustment for Flag Lot	0	Square Feet
I. Total New Lot Coverage Area:		
1. Main Structure Roof Area	336 340	Square Feet
2. Accessory Structure Roof Area	0	Square Feet
3. Vehicular Use (driveway, paved access easement [portion used by the lot for access], parking)	0	Square Feet
4. Covered Patios and Covered Decks	0	Square Feet
5. Total New Lot Coverage Area (I1 + I2 + I3 + I4)	336 340	Square Feet
J. Total Project Lot Coverage Area = (E5 - F) + I5	4,246 4,219	Square Feet
K. Proposed Lot Coverage Area = (J/B) x 100	38.46% 38.49%	% of Lot

HARDSCAPE CALCULATIONS

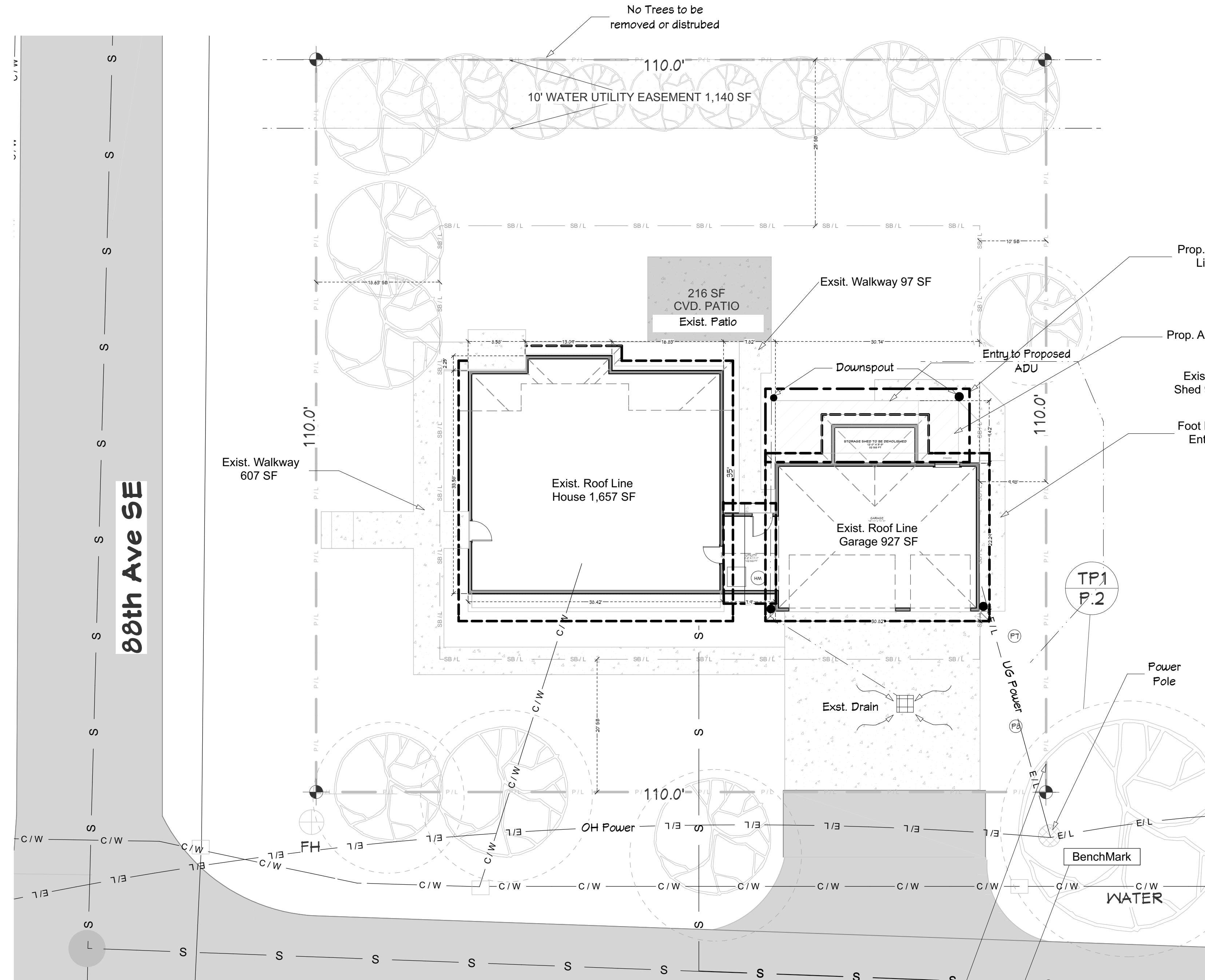
A. Gross Lot Area	12,100	Square Feet
B. Net Lot Area	10,960	Square Feet
C. Area Borrowed from Lot Coverage	0	Square Feet
D. Allowed Hardscape Area = 9% of lot area + C	9	% of Lot
E. Allowed Hardscape Area	986	Square Feet
F. Total Existing Hardscape Area:		
1. Uncovered Decks	0	Square Feet
2. Uncovered Patios	0	Square Feet
3. Walkways	793 704	Square Feet
4. Stairs	0	Square Feet
5. Rockeries and Retaining Walls	0	Square Feet
6. Other	0	Square Feet
7. Total Existing Hardscape Area (F1+F2+F3+F4+F5+F6)	793 704	Square Feet
G. (Total Hardscape Area Removed)	0	Square Feet
H. Total New Hardscape Area:		
1. Uncovered Decks	0	Square Feet
2. Uncovered Patios	0	Square Feet
3. Walkways	94 180	Square Feet
4. Stairs	0	Square Feet
5. Rockeries and Retaining Walls	0	Square Feet
6. Other	0	Square Feet
7. Total New Hardscape Area (H1+H2+H3+H4+H5+H6)	94 180	Square Feet
I. Total Project Hardscape Area = (F7 - G) + H7	887 884	Square Feet
J. Total Project Hardscape Area = (I/B)x100	7.3% 8.07%	% of Lot

LOT SLOPE

According to the Mercer Island City Code, slope is a measurement of the average incline of the lot or other piece of land calculated by subtracting the lowest elevation of the property from the highest elevation and dividing the resulting number by the shortest horizontal distance between these two points. The resulting product is multiplied by 100.

LOT SLOPE CALCULATIONS

Highest Elevation Point of Lot:	301	Feet
Lowest Elevation Point of Lot:	302	Feet
Elevation Difference:	1	Feet
Horizontal Distance Between High and Low Points:	110	Feet
Lot Slope*	0.91	%



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

SHEET NUMBER
P1

DATE: 11.15.22
DRAWN BY: K.C.

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

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APPLICABLE CODES

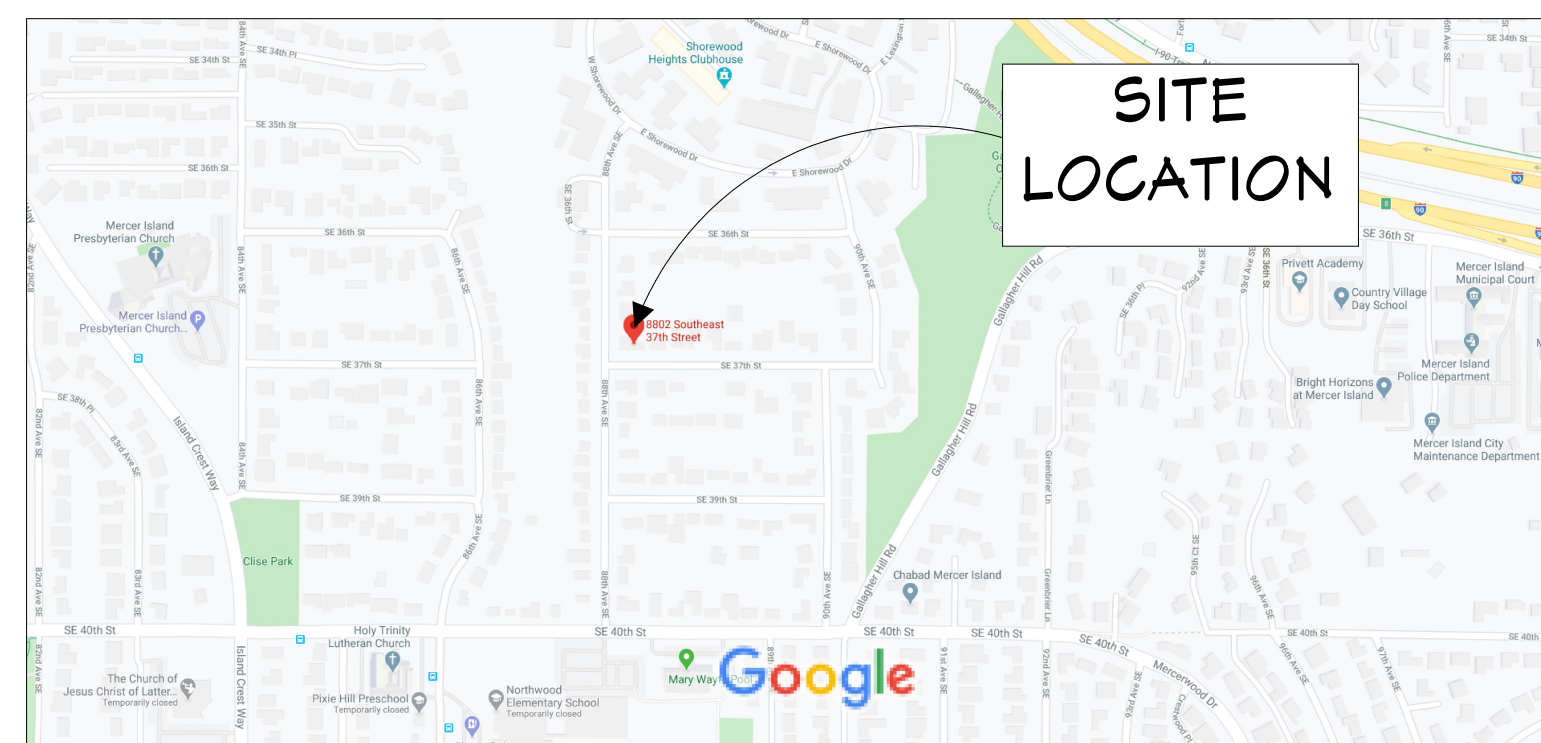
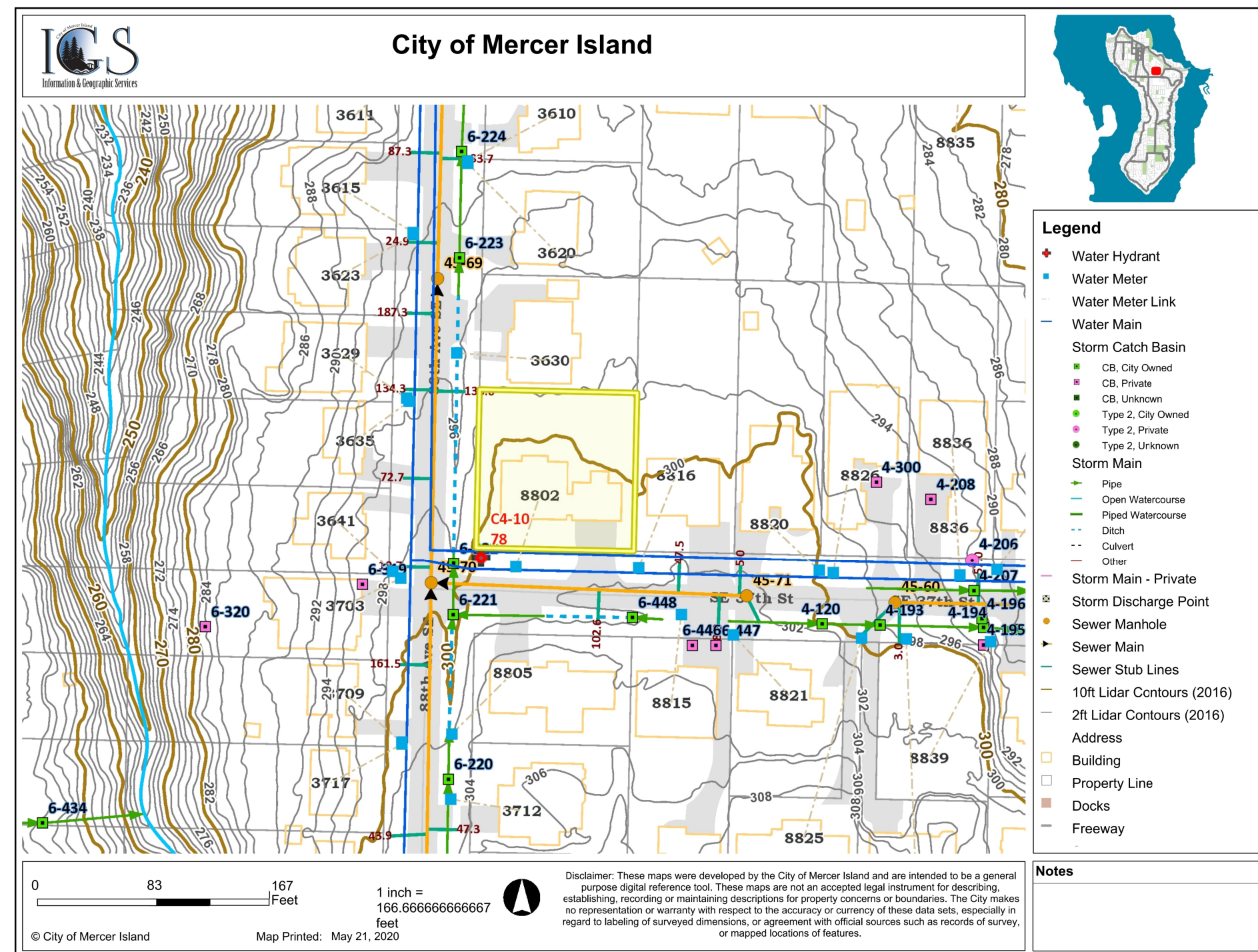
CITY OF MERCER ISLAND MUNICIPAL CODE
 2018 INTERNATIONAL BUILDING CODE
 2018 INTERNATIONAL RESIDENTIAL CODE
 2015 INTERNATIONAL FIRE CODE
 2015 INTERNATIONAL MECHANICAL CODE
 2015 INTERNATIONAL FUEL AND GAS CODE
 2015 UNIFORM PLUMBING CODE
 2012 WASHINGTON CITIES ELECTRICAL CODE
 CITY OF MERCER ISLAND ELECTRICAL CODE
 STATE ENVIRONMENTAL POLICY ACT (SEPA)
 WASHINGTON STATE ENERGY CODE

DESIGN CRITERIA

Wind Speed: 110 mph (IBC Figure 1609A)
 Wind Exposure: Category C
 Kzt Factor: 1.6 Per City of Mercer Island Wind Map
 Ground Snow Load: 25 psf (Snow drift per ASCE 7-10)
 Rain-on-Snow Surcharge: 5 psf added to flat roofs per (ASCE 7-10)
 Seismic Design Category: D2
 Rainfall: 1"/Hr (UPC Table D101.1)
 Soil Bearing Capacity: 1500 psf (IBC Table 1806.2)

COMPLIANCE PATH PRESCRIPTIVE:
 International Residential Code 2018 (IRC 2018)
 with WA State Amendments

TOPO & UTILITIES MAP nts



GROSS FLOOR AREA

EXISTING ROOM AREA - LOWER LEVEL				
ROOM NAME	AREA, INTERIOR (SQ FT)	CEILING HEIGHT	DIMENSIONS	NOTES
FORMAL DINING	225	109 1/8"	16'-4" X 14'-4"	
HALL	129	109 1/8", 121 3/4"	9'-10" X 6'-10"	
(CEILING HGT. MOD. EXIST. ENTRY)	33	18.2'	4'-11" X 6'-9"	GRAY AREA
HALL	31	109 1/8"	4'-8" X 6'-7"	
LAUNDRY	78	109 1/8"	6'-6" X 12'-2"	
LIVING	198	109 1/8"	14'-9" X 13'-6"	
(CEILING HGT. MOD. EXIST. LIVING)	198	18.2'	13'-8" X 14'-6"	GRAY AREA
OFFICE	170	109 1/8"	13'-3" X 12'-11"	
POWDER	31	109 1/8"	4'-8" X 6'-9"	
STAIRWELL	53	121 3/4"	15'-5" X 3'-5"	
STORAGE	15	109 1/8"	4'-6" X 3'-5"	
UTILITY	92	112 5/8"	8'-3" X 11'-6"	
TOTALS:	1,253.0 SF			

EXISTING ROOM AREA - UPPER LEVEL				
ROOM NAME	AREA, INTERIOR (SQ FT)	CEILING HEIGHT	DIMENSIONS	NOTES
BATH	56	121 1/2"	5'-6" X 9'-0"	
BATH	7	121 1/2"	1'-6" X 4'-10"	
BEDROOM 2	121	121 1/2"	9'-1" X 13'-6"	
BEDROOM 1	177	121 1/2"	12'-10" X 12'-11"	
BEDROOM 3	129	121 1/2"	9'-6" X 13'-6"	
CLOSET	10	121 1/2"	2'-9" X 3'-6"	
CLOSET	16	121 1/2"	2'-0" X 7'-10"	
CLOSET	30	121 1/2"	4'-11" X 6'-1"	
CLOSET	55	121 1/2"	9'-4" X 5'-11"	
CLOSET	9	121 1/2"	2'-9" X 3'-5"	
HALL	160	121 1/2"	10'-0" X 11'-4"	
MASTER BATH	130	121 1/2"	15'-2" X 7'-3"	
OPEN BELOW	198	243 1/4"	13'-8" X 14'-6"	
OPEN BELOW	42	243 1/4"	6'-2" X 6'-10"	
OPEN BELOW	53	243 1/4"	15'-8" X 3'-5"	
TOTALS:	1,193 SF			

EXISTING HOUSE TOTAL	
ROOM NAME	AREA, INTERIOR (SQ FT)
LOWER FLOOR	1,253 SF
UPPER FLOOR	1,193 SF
TOTAL:	2,446.0 SF
GARAGE:	833.0 SF

GROSS FLOOR AREA

Building Area	Existing Area	Removed Area	New/Addition Area	Total
Upper Floor	1,193 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	1,193 Sq. Ft.
Main Floor	1,022 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	1,022 Sq. Ft.
Gross Basement Area	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.
Garage/ Carport	833 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	833 Sq. Ft.
Total Floor Area	3,048 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	3,048 Sq. Ft.
Accessory Buildings	82 Sq. Ft.	(82) Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.
Accessory Dwelling Unit	0 Sq. Ft.	0 Sq. Ft.	874 Sq. Ft.	874 Sq. Ft.
2nd & 3rd Story Roofed	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.
Basement Area	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.
Excluded	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.
150% GFA Modifier* (main and upper floor x2)	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.
200% GFA Modifier* (main and upper floor x2)	231 Sq. Ft.	0 Sq. Ft.	26 Sq. Ft.	257 Sq. Ft.
Staircase GFA Modifier* (x2 for a three story staircase, x3 for a four story staircase)	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.	0 Sq. Ft.
TOTAL Building Area	3,361 Sq. Ft. (82)	0 Sq. Ft. (82)	900 Sq. Ft.	4,179 Sq. Ft.

*Enter the actual room area

A. Lot Area	12,100	Square Feet
B. Zone R-8.4 <input type="checkbox"/> R-9.6 <input type="checkbox"/>	R-12 <input type="checkbox"/> R-15 <input type="checkbox"/>	Square Feet
C. Allowed Gross Floor Area (refer to "allowed GFA")	4,840	% of Lot
D. Allowed Gross Floor Area	40%	Square Feet
E. Proposed Gross Floor Area	3,982	% of Lot
F. Proposed Gross Floor Area	32.90%	% of Lot

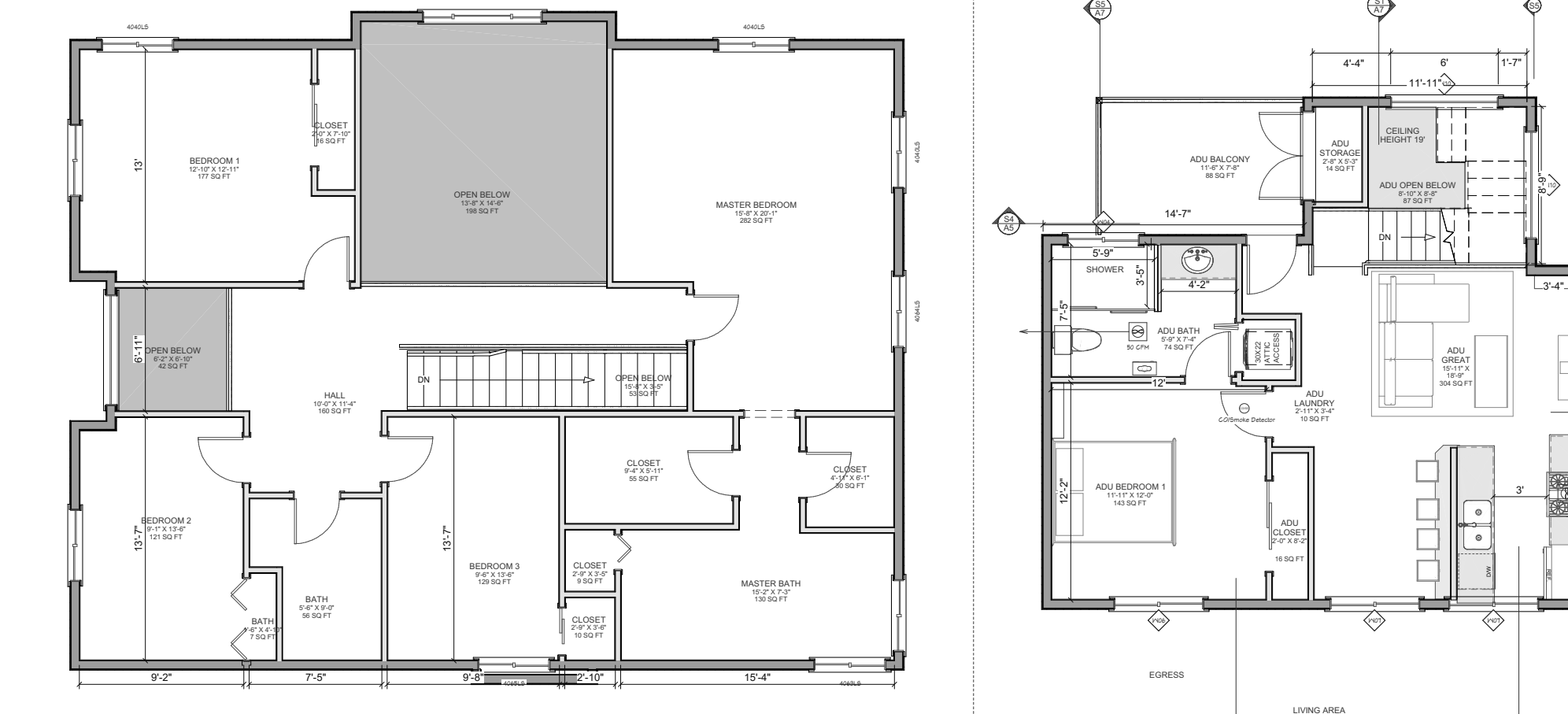
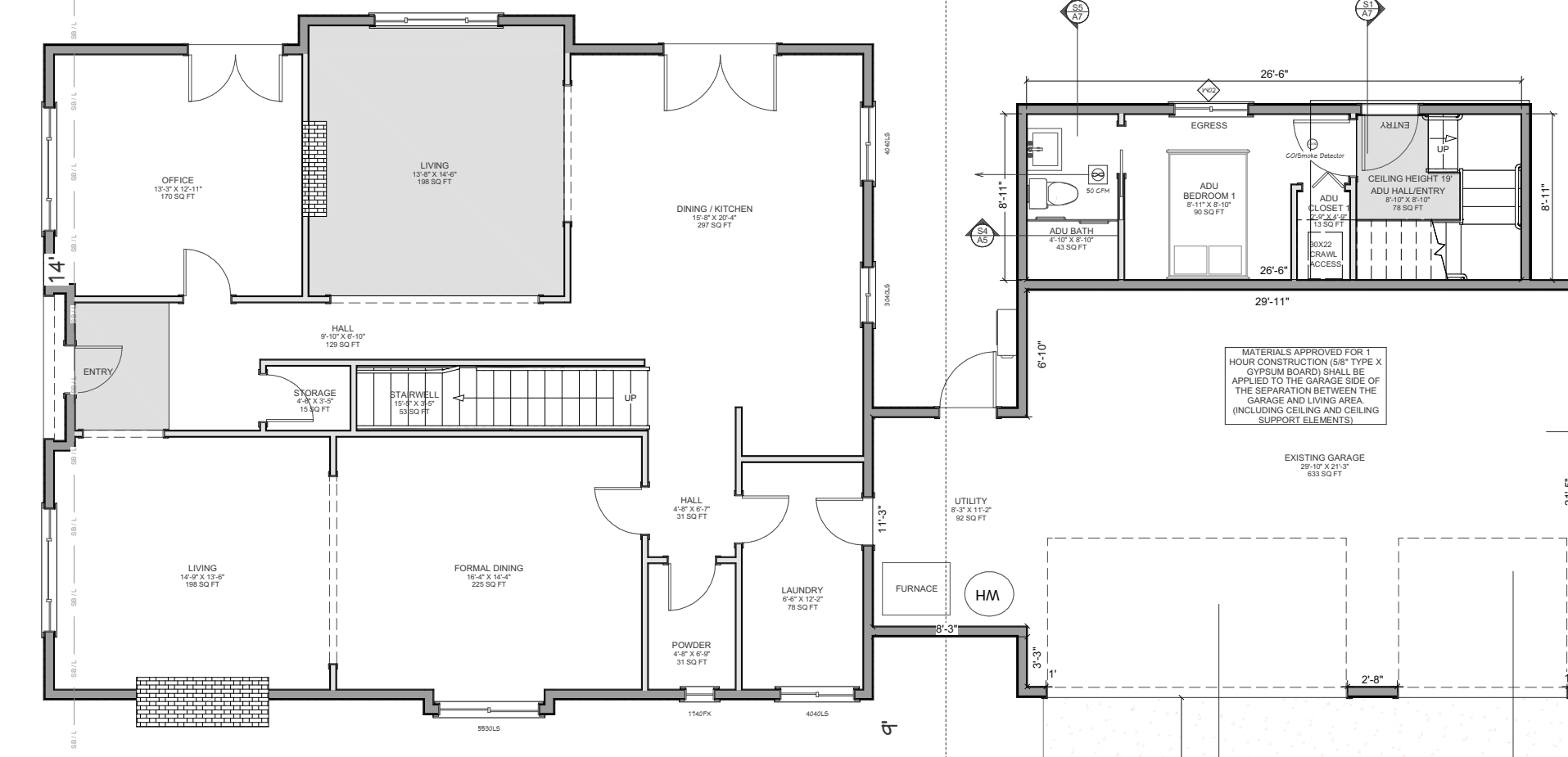
Gross floor area calculations found on Plan Sheet # P2
 Basement exclusion calculations found on Plan Sheet # N/A

ADU LOWER FLOOR		
ROOM NAME	AREA, INTERIOR (SQ FT)	NOTES
ADU BATH	43.0	
ADU BEDROOM 1	90.0	
ADU CLOSET 1	13.0	
ADU HALL/ENTRY	78.0	
(CEILING HEIGHT MODIFIER)	26.0	GRAY AREA
TOTALS:	250.00	

ADU UPPER FLOOR	
ROOM NAME	AREA, INTERIOR (SQ FT)
ADU BALCONY	88.0
ADU BATH	72.0
ADU BEDROOM 1	143.0
ADU CLOSET	16.0
ADU GREAT	307.0
ADU LAUNDRY	10.0
ADU STORAGE	14.0
TOTALS:	650.0

ADU TOTAL	
ROOM NAME	AREA, INTERIOR (SQ FT)
LOWER FLOOR	250.0 SF
UPPER FLOOR	650.0 SF
TOTAL:	900.0 SF
COMPLIES	

GFA TOTAL	
EXISTING	NEW ADU
2,446 SF	900 SF
TOTAL:	3,346.0 SF
3,346 / 12,100 = 27.65% COMPLIES	



SHEET NUMBER
P2

DATE: 11.15.22

DRAWN BY: K.C.

SUPPLEMENTAL SHEET
GFA CALCULATIONS

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 9002 SE 9TH ST. MERCER ISLAND WA 98040

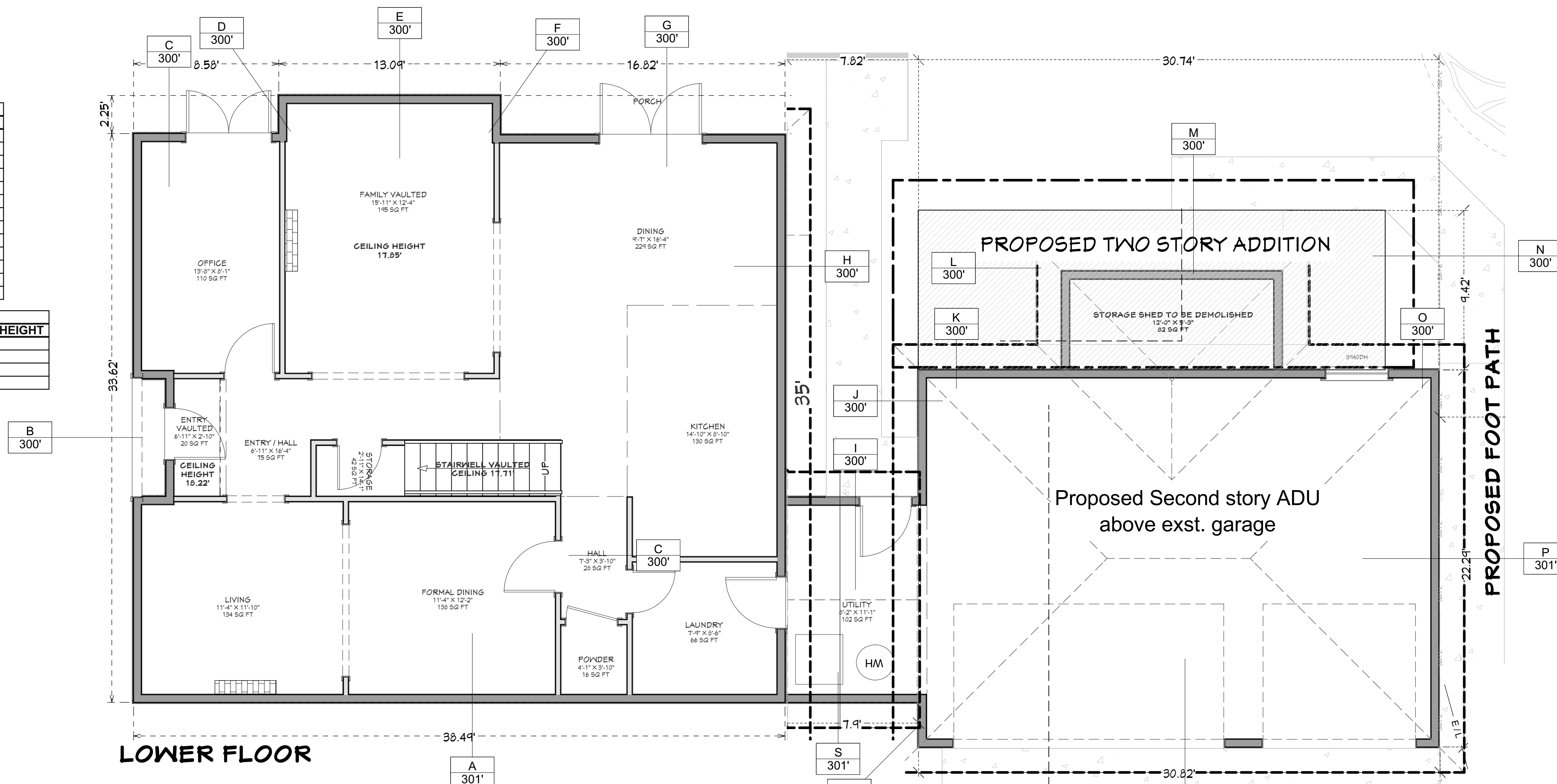
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ROOM SIZE SCHEDULE (LOWER FLOOR)		
ROOM NAME	AREA, INTERIOR (SQ FT)	CEILING FINISH HEIGHT
ENTRY VAULTED	20	120 1/4"
FAMILY VAULTED	195	120 1/4"
STORAGE	42	107 5/8", 120 1/4"
DINING	229	107 5/8"
ENTRY / HALL	75	107 5/8"
FORMAL DINING	138	107 5/8"
HALL	28	107 5/8"
KITCHEN	130	107 5/8"
LAUNDRY	66	107 5/8"
LIVING	134	107 5/8"
OFFICE	110	107 5/8"
POWDER	16	107 5/8"
TOTALS:	1182	

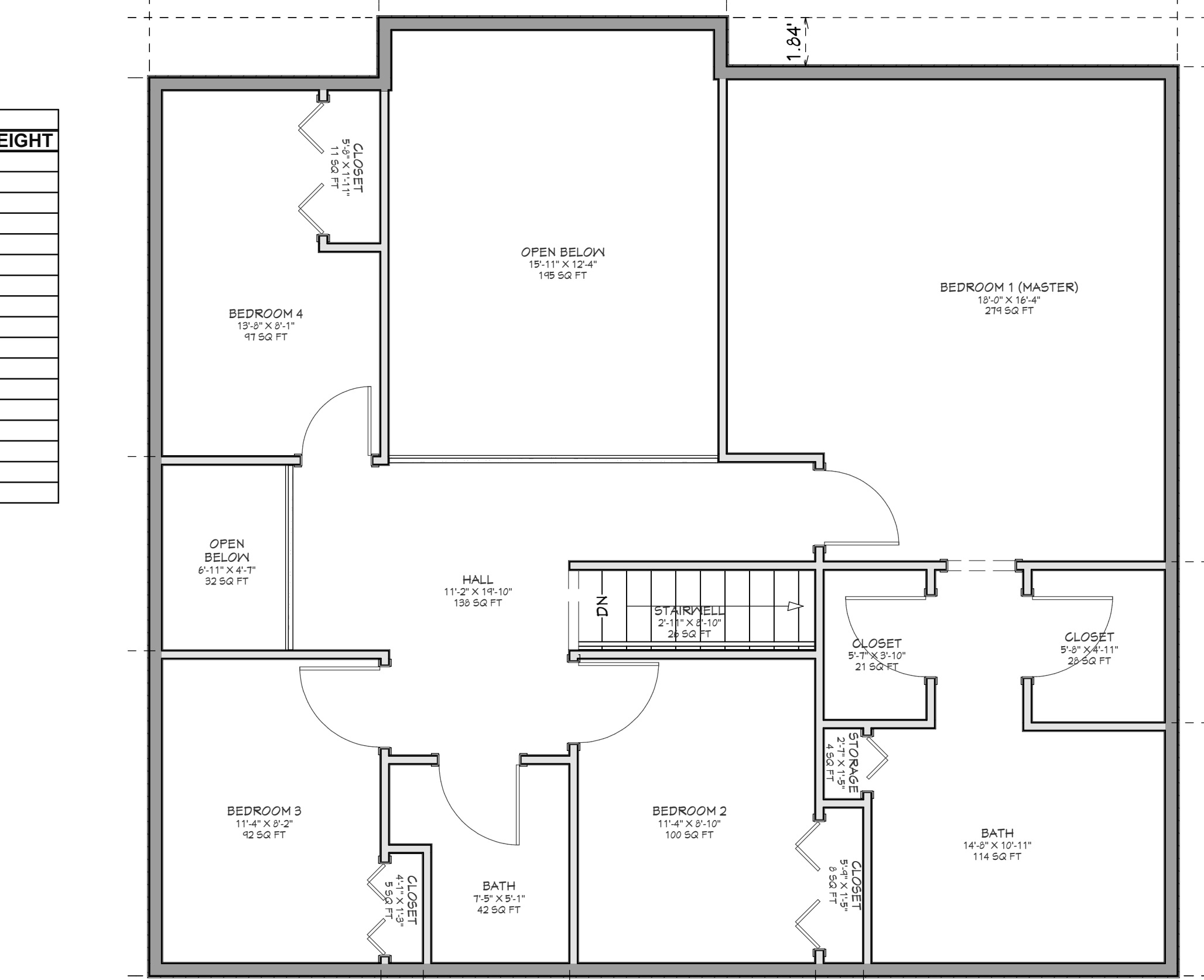
GARAGE SIZE		
ROOM NAME	AREA, INTERIOR (SQ FT)	CEILING HEIGHT
GARAGE	635	109 1/8"
STORAGE SHED TO BE DEMOLISHED	63	109 1/8"
UTILITY	90	97 1/2"
TOTALS:	789	

No change proposed to main house lower & upper floors



LOWER FLOOR

ROOM FINISH SCHEDULE (UPPER FLOOR)		
ROOM NAME	AREA, INTERIOR (SQ FT)	CEILING FINISH HEIGHT
OPEN BELOW	32	218 1/8"
OPEN BELOW	195	
STAIRWELL	26	
BATH	42	96 3/8"
BATH	114	96 3/8"
BEDROOM 1 (MASTER)	279	96 3/8"
BEDROOM 2	100	96 3/8"
BEDROOM 3	92	96 3/8"
BEDROOM 4	97	96 3/8"
CLOSET	21	96 3/8"
CLOSET	28	96 3/8"
CLOSET	8	96 3/8"
CLOSET	5	96 3/8"
CLOSET	11	96 3/8"
HALL	138	96 3/8"
STORAGE	4	96 3/8"
TOTALS:	1192	

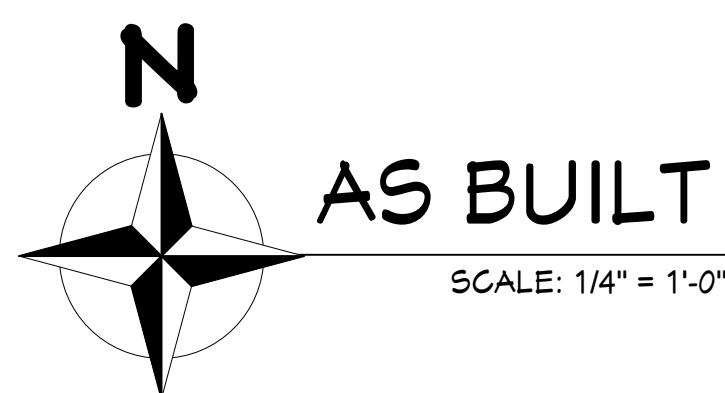


UPPER FLOOR

BUILDING HEIGHT CALCS.

HEIGHT CALCULATIONS			
BENCHMARK: POWER POLE 100'			
LABEL	MIDPOINT ELV. *	WALL SEG.**	* X **
A	101'	39.49'	3,988
B	100'	33.62'	3,362
C	100'	8.58'	858
D	100'	2.25'	225
E	100'	13.09'	1,309
F	100'	2.25'	225
G	100'	16.82'	1,582
H	100'	33.62'	3,362
I	100'	7.82'	782
J	100'	6.91'	691
K	100'	4.25'	425
L	100'	9.34'	934
M	100'	23.17'	2,317
N	100'	9.34'	934
O	100'	3.38'	338
P	101'	21.82'	2,182
Q	101'	30.80'	3,111
R	101'	2.91'	284
S	101'	7.74'	782
TOTAL:	1,905'	277.20'	27,723
(A) X (B) =	27,723		
DIVIDE WALL SEC. =	277.20'		
ABE =	100' + 30' =	130'	
EXIST. HOUSE HEIGHT:	127.21'	CONFORMS	
PROPOSED ADU HEIGHT:	124.38'	CONFORMS	

- A. Average Building Elevation (ABE) calculations located on sheet #: A3
- B. Allowable Building Height (ABE + 30 ft.): 130 Feet
- C. Proposed Building Height: 124.28 Feet
- D. Benchmark Elevation*: 100 Feet
- E. Describe Benchmark Location (must be undisturbed throughout project) Power Pole



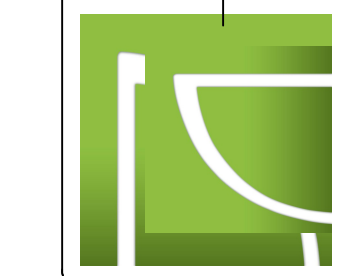
SHEET NUMBER
A3

DATE: 06.12.20
REV #6: 01.01.23
DRAWN BY: K.C.

AS BUILT
HEIGHT CALCULATIONS

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KESH DESIGN LINES LLC
425 344 9906



COMPLIANCE PATH PRESCRIPTIVE:
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SHEET NUMBER
A4

DATE: 06.12.20
REV #6: 01.01.23
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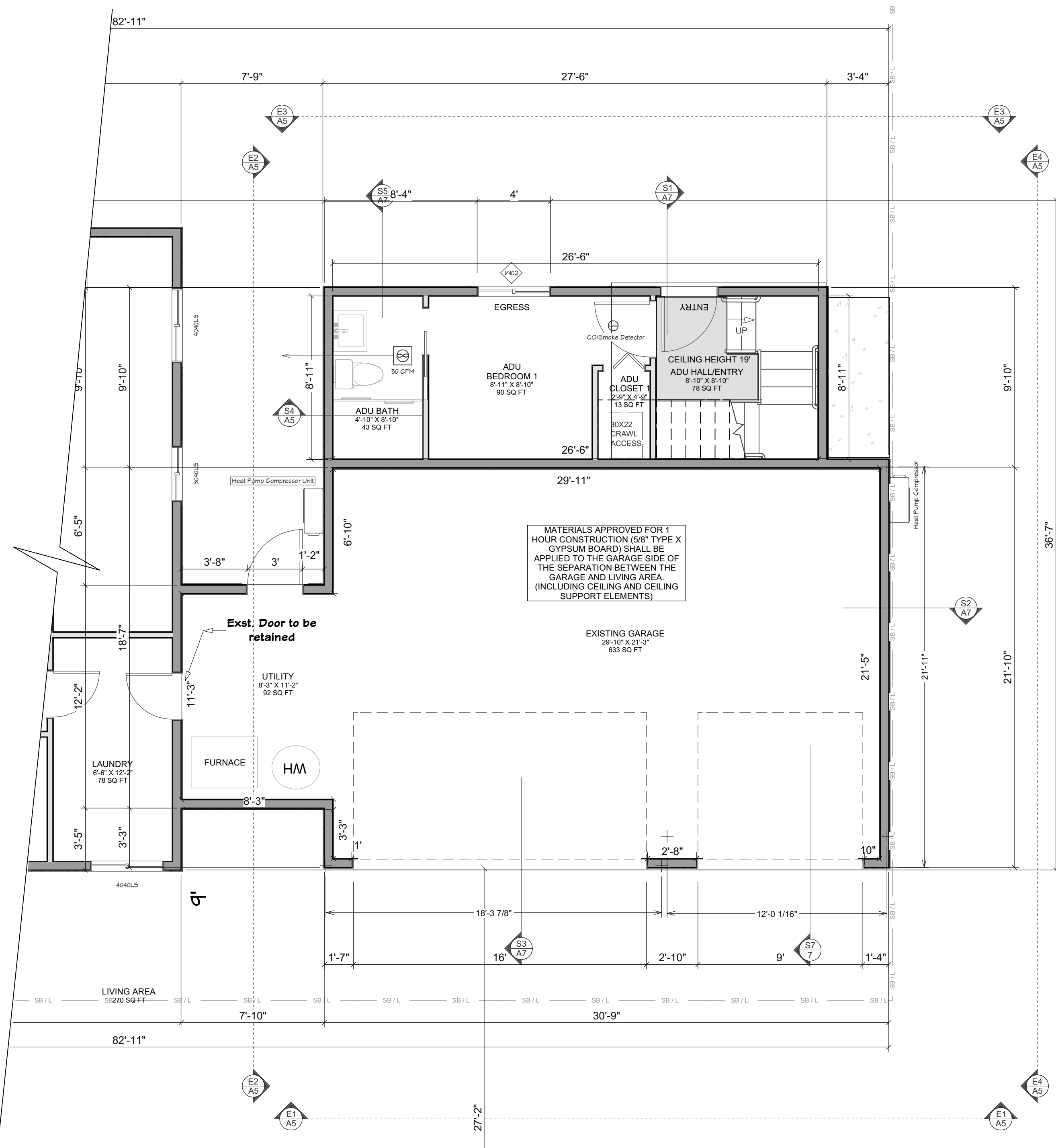
PROPOSED
MAIN & UPPER FLOOR

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9002 SE 9TH ST. MERCER ISLAND WA 98040

KESH DESIGN LINES LLC
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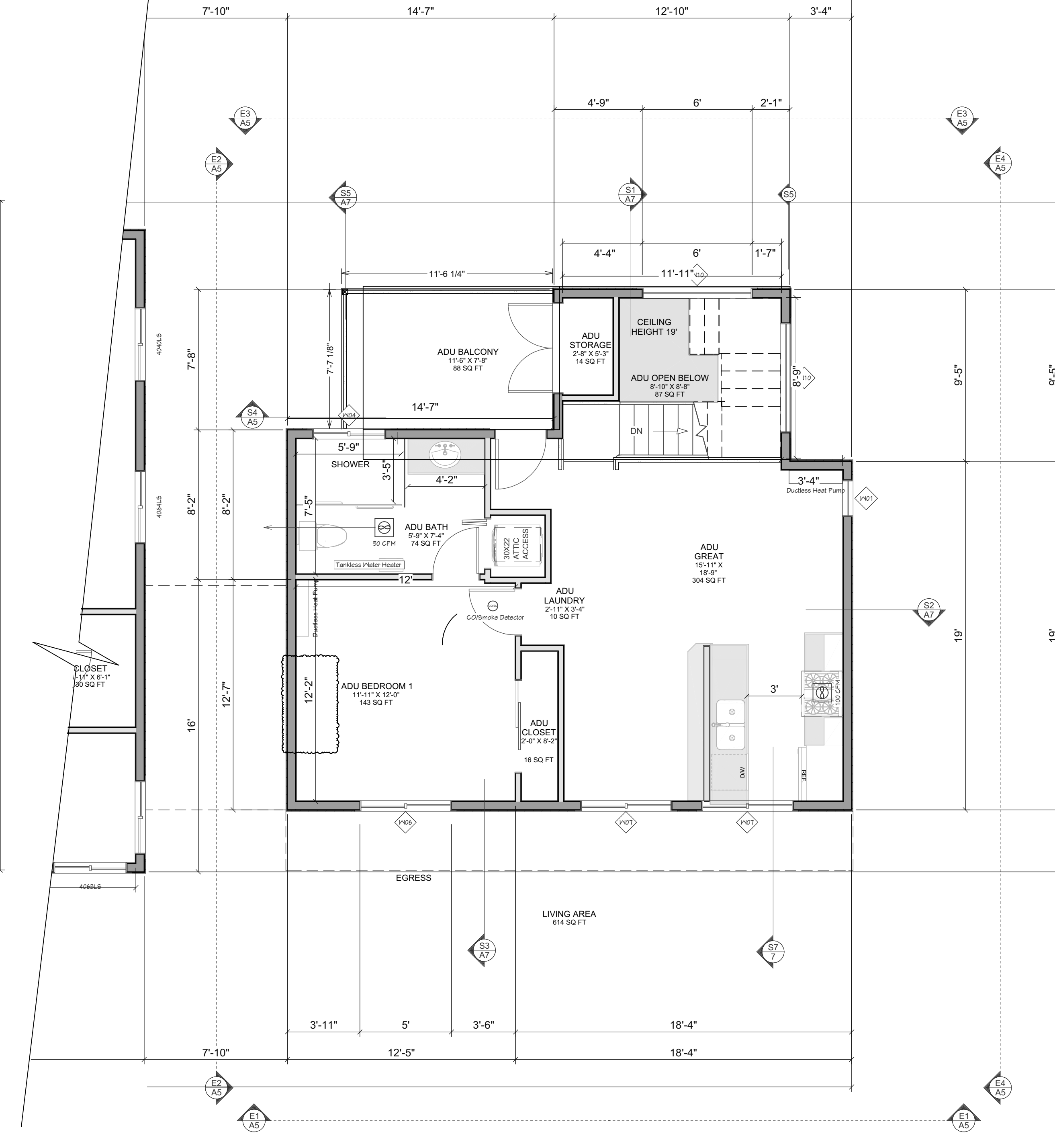


- NOTES**
- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
 - SEE STRUCTURAL PLANS FOR ALL HEADERS AND BEAM SIZES
 - BOTTOM OF HEADERS TO BE 8'-0" THIS FLOOR UNLESS NOTED OTHERWISE.
 - ALL EXTERIOR WALLS 2x6 W/ R-21 INSULATION UNO.
 - ALL FRAME NAILING TO SATISFY CHAPTER 6 IRC BLOCK ALL PL. WOOD EDGES, ALL EXTERIOR SHEATHING NAILLED W/ 10d #8 O.C. (EDGE) AND 12" O.C. (FIELD), UNO, TYP.
 - PROVIDE DOUBLE JOISTS OR BLOCKING WHERE PARTITIONS OCCUR ABOVE.
 - PROVIDE SOLID BLOCKING OVER SUPPORTS.
 - PLATE HEIGHT 9'-0" THIS FLOOR UNO.
 - FIRE BLOCKING TO ALL PLUMBING PENETRATIONS
 - ALL STORAGE AND SPACES UNDER STAIRCASES TO BE FINISHED WITH 5/8" TYPE "X" GYPSUM BOARD.
 - FINISH ALL CEILING WITH 1/2" GYPSUM BOARD
 - AT GARAGE USE 1/2" TYPE "X" GYP. BD. AT ALL CORNER WALLS & SUB TYPE "X" AT ALL CEILING AND ALL EXPOSED BEAMS.
 - PROVIDE 26-GAUGE GALVANIZED SHEET METAL FLASHING ABOVE WINDOW AND DOORS. (TYP.) LAP BUILDING PAPER OVER.
 - HOLD SIDING 6" ABV. FINISHED GRADE, TYP.
 - FASTEN MULTI-LAM 2x BEAMS PER IRC STANDARDS, CHAPTER 6, TABLE R6-02.3(1), TYPICAL DIRECTION.
 - ALL VOIDS TO BE FIRE/DRAFT BLOCKED PER IRC SECTION R6-02.8.
 - INSTALL WATER HEATER PER IRC, CHAPTER 28 AND PER 2019 IMC. THE PILOTS, BURNERS, HEATING ELEMENTS, AND SWITCHES SHALL BE A MIN. OF 18" ABOVE THE GARAGE FLOOR PER 2019 IMC.
 - STRAP THE WATER HEATERS AT POINTS WITH IN THE UPPER 1/3 AND LOWER 1/3 OF ITS VERTICAL DIMENSION. ALL STRAPS SHALL BE MINIMUM 4" ABOVE CONTROLS.
 - FURNACE TO BE PLACED 18" ABV. FLOOR ON 1 HOUR FIRE RATED PLATFORM W/ 1/2" TYPE X GYPSUM BOARD. THE PILOTS, BURNERS, HEATING ELEMENTS AND SWITCHES SHALL ALSO BE A MIN. OF 18" ABOVE THE GARAGE FLOOR. PROTECT FROM IMPACT PER 2019 IMC.
 - DOOR BETWEEN HOUSE AND GARAGE TO BE 20 MIN RATED, SOLID CORE, TIGHT FITTING, WITH SELF-CLOSURE
 - ALL SMOKE DETECTORS TO BE 110 VOLT WITH BATTERY BACKUP, INTERCONNECTED. DENOTED INSTALL CARBON MONOXIDE ALARMS PER IRC R310 (QA AMENDED).
 - 36" I.C.C. APPROVED DIRECT VENT FIREPLACE W/ 20" D. FLUSH HEARTH MIN. 6 SQ. IN. O.S. COMB. AIR. INSTALL DIR. VENT FRPL. PER TERMS OF LISTING AND MFG'S SPECS. PER SECTION R103.1(2).
 - PROVIDE CONT. HANDRAIL AT STAIRS A MIN. OF 1 1/2" FROM WALL. REFER TO DETAIL 12 ON SHEET NO. 3.
 - LIGHTING CONTROLS FOR INTERIOR STAIRWAYS TO BE PROVIDED AT THE TOP AND BOTTOM OF THE STAIR.
 - WALLS W/ GREATER THAN 360 P.L.F. REQUIRE A TRIMMER OR A 3x TRIMMER AT ADJUTING PANEL EDGES AND 6/16 PLATES FOR WALLS BETWEEN 360 AND 600 P.L.F. ANCHOR BOLT BRACING HAS BEEN DECREASED BY 1/2 (USE 2x SILL PLATE) PER IRC R403.1.6.
 - TUBS AND SHOWERS:
 - FIRE BLOCKING BETWEEN STUDS.
 - LIMIT SHOWER FLOW TO 1.8 GPM.
 - LIMIT LAV SINK FLOW TO 1.0 GPM, OR LESS.
 - WATERPROOF WALL TO WITHIN 10" ABOVE DRAIN INLET.
 - VAPOR BARRIER BEHIND GYPSUM BD.
 - ALL GLAZING WITHIN 10" ABOVE DRAIN INLET TO BE SAFETY GLASS.
 - E/DENOTES EGRESSABLE WINDOW W/ A MIN. OF 5.7 SQ. FT. NET CLEAR OPENING 4'4" MAX. ABV. FIN. FLR. MIN. EGRESSABLE WIDTH IS 20". MIN. HEIGHT IS 24".
 - S/DENOTES SAFETY GLAZING REQUIRED IN THE FOLLOWING AREAS:
 - A. GLAZING LESS THAN 60" ABOVE TUB OR SHOWER
 - B. ALL TUB & SHOWER DOORS & ENCLOSURES EXCEPT GLASS BLOCK GREATER THAN 3" SPHERE UNLESS DECORATIVE GLASS
 - C. ALL WINDOWS WITHIN 24" OF A DOOR SINKS LESS THAN 60" ABOVE FLOOR
 - D. FIXED AND SLIDING PANELS OF SLIDING DOORS
 - E. ALL UNFRAMED SWINGING DOORS
 - F. GLAZING LESS THAN 3" HORIZ. OF STAIR OR LANDING LESS THAN 60" ABOVE FIN. FLR.
 - G. GLAZING LESS THAN 60" ABOVE FIN. FLR.
 - H. GLAZING LESS THAN 60" ABOVE STAIRS.
 - ATTIC ACCESS TO BE A MIN. OF 22"x30" W/INSUL. & LEATHER-STRIPPING PER CODE.
 - WHOLE HOUSE FAN WITH AUTO TIMER AND MANUAL OVERRIDE



ADU LOWER FLOOR		
ROOM NAME	AREA, INTERIOR (SQ FT)	NOTES
ADU BATH	43.0	
ADU BEDROOM 1	90.0	
ADU CLOSET 1	13.0	
ADU HALL/ENTRY	78.0	
(CEILING HEIGHT MODIFIER)	26.0	GRAY AREA
TOTALS:	250.00	

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



ADU UPPER FLOOR	
ROOM NAME	AREA, INTERIOR (SQ FT)
ADU BALCONY	88.0
ADU BATH	72.0
ADU BEDROOM 1	143.0
ADU CLOSET	16.0
ADU GREAT	307.0
ADU LAUNDRY	10.0
ADU STORAGE	14.0
TOTALS:	650.0

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

ADU TOTAL	
ROOM NAME	AREA, INTERIOR (SQ FT)
LOWER FLOOR	250.0 SF
UPPER FLOOR	650.0 SF
TOTAL:	900.0 SF
COMPLIES	



PROPOSED MAIN & UPPER FLOOR PLAN

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

COMPLIANCE PATH PRESCRIPTIVE:
International Residential Code 2018 (IRC 2018)
with WA State Amendments

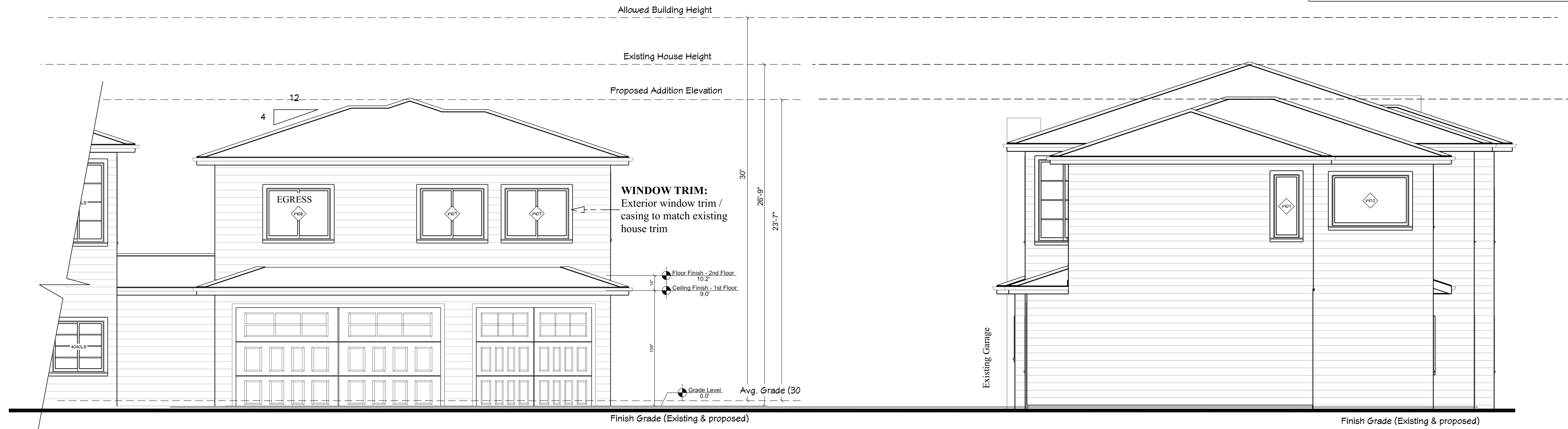
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A5
Revision #:

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ELEVATIONS

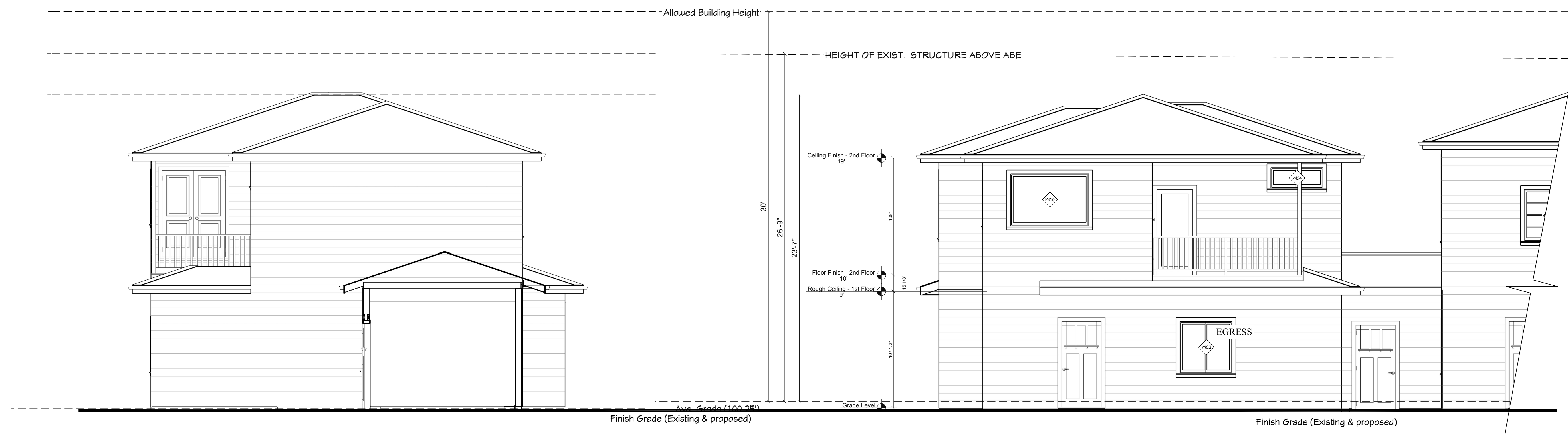
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E1 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

E3 WEST ELEVATION
SCALE: 1/4" = 1'-0"



E2 EAST ELEVATION
SCALE: 1/4" = 1'-0"

E4 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

SEE NEW STRUCTURAL (S) SHEETS



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**FOUNDATION and 1st FLOOR
FRAMING PLAN**

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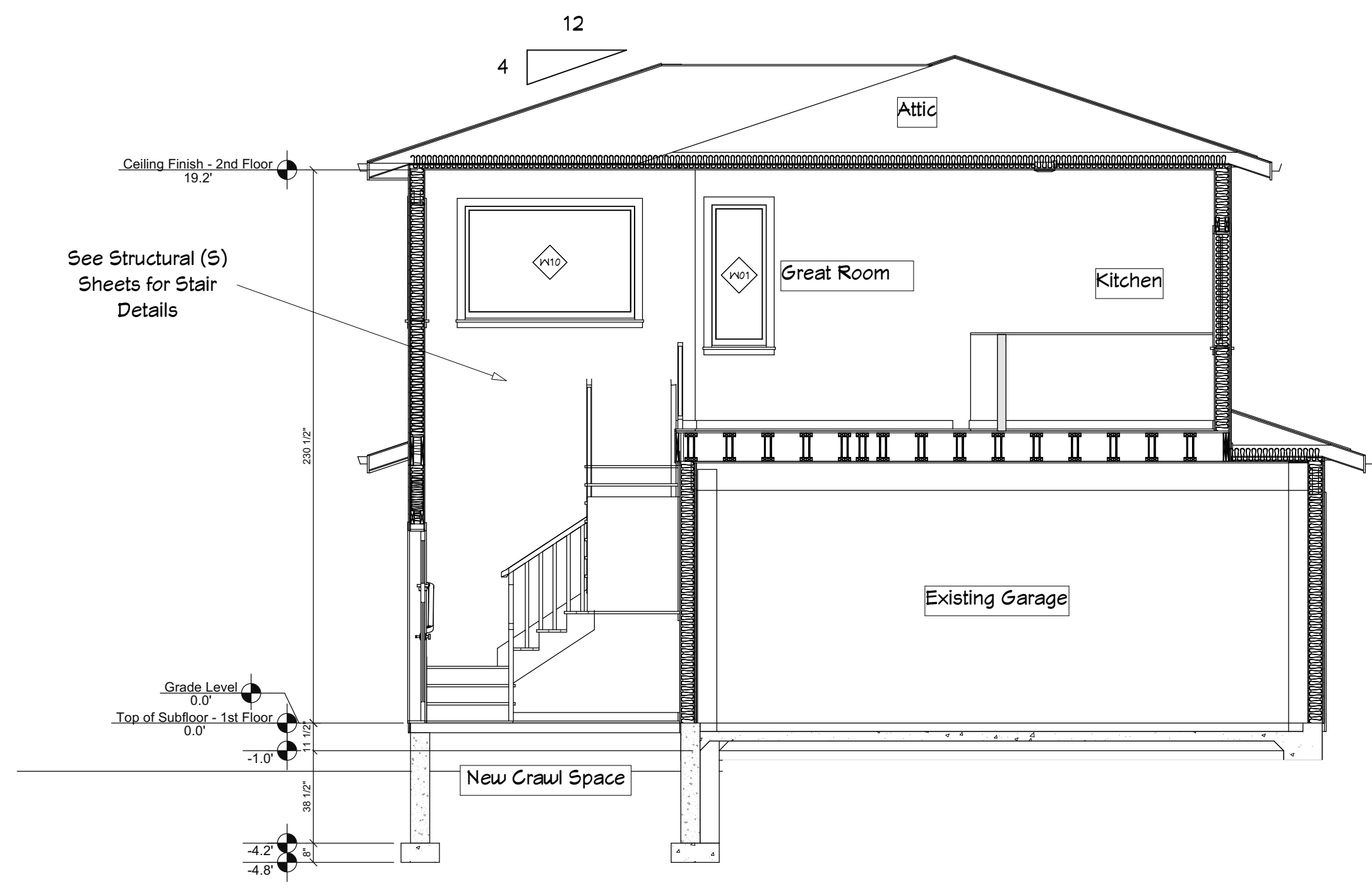
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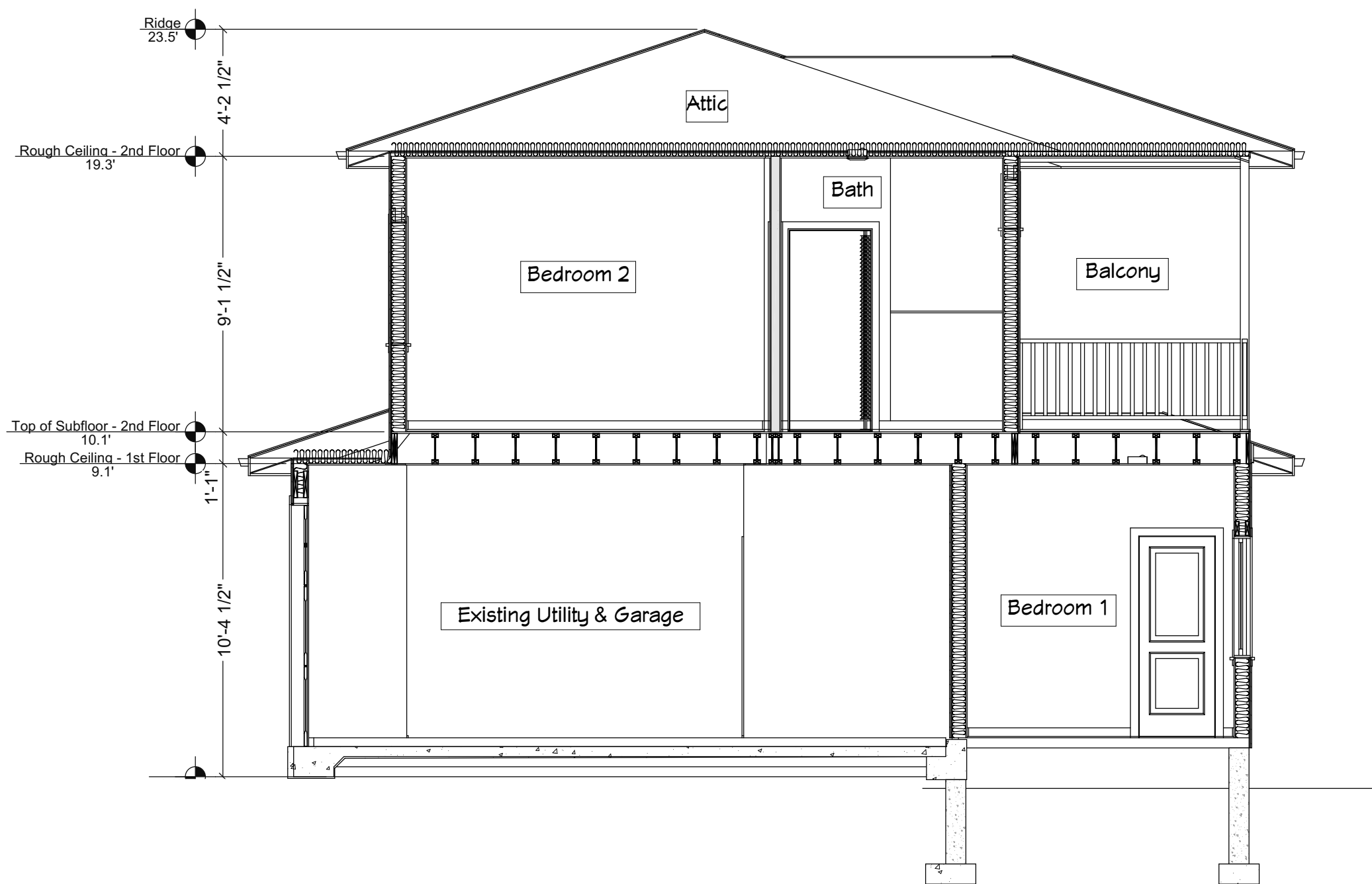
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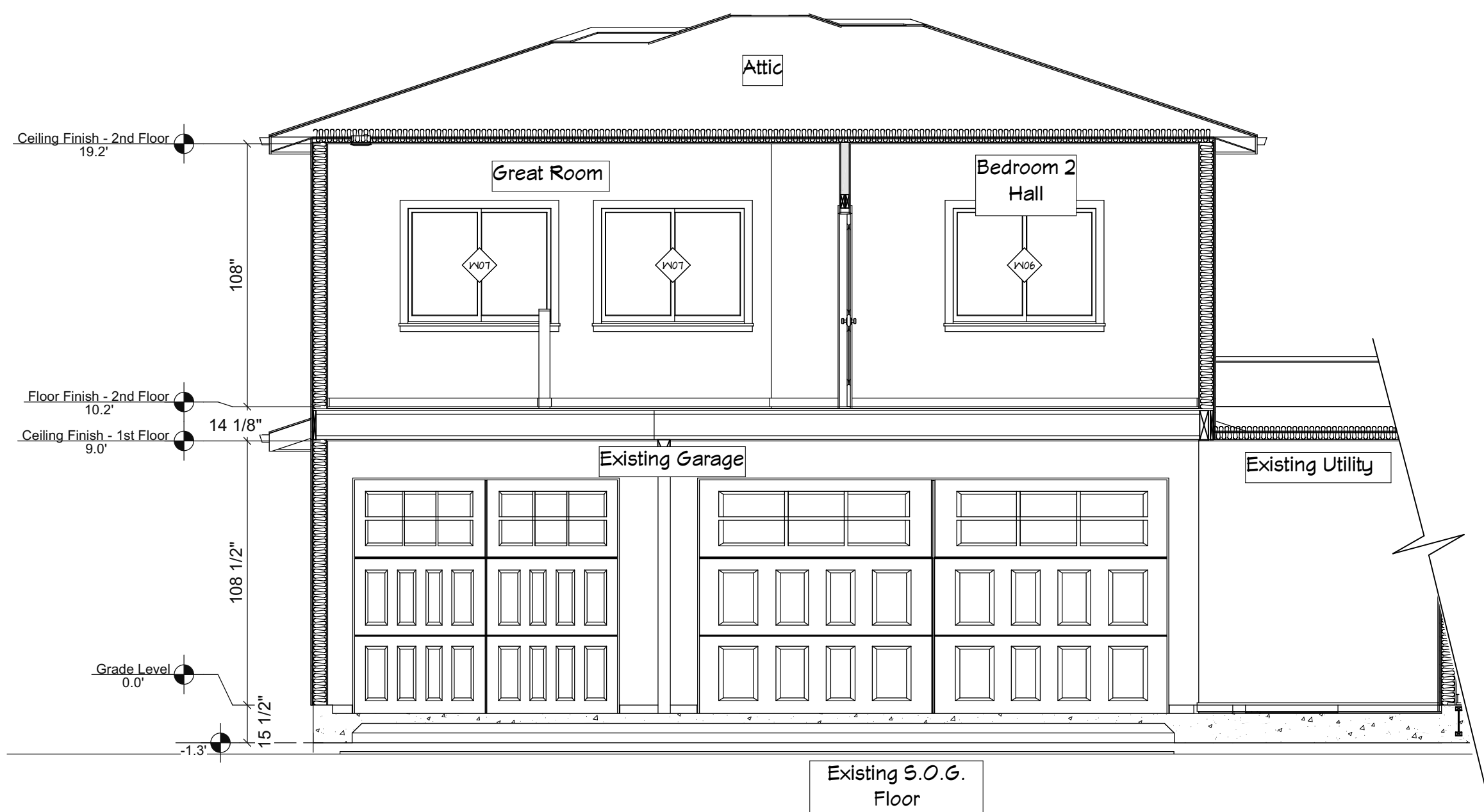
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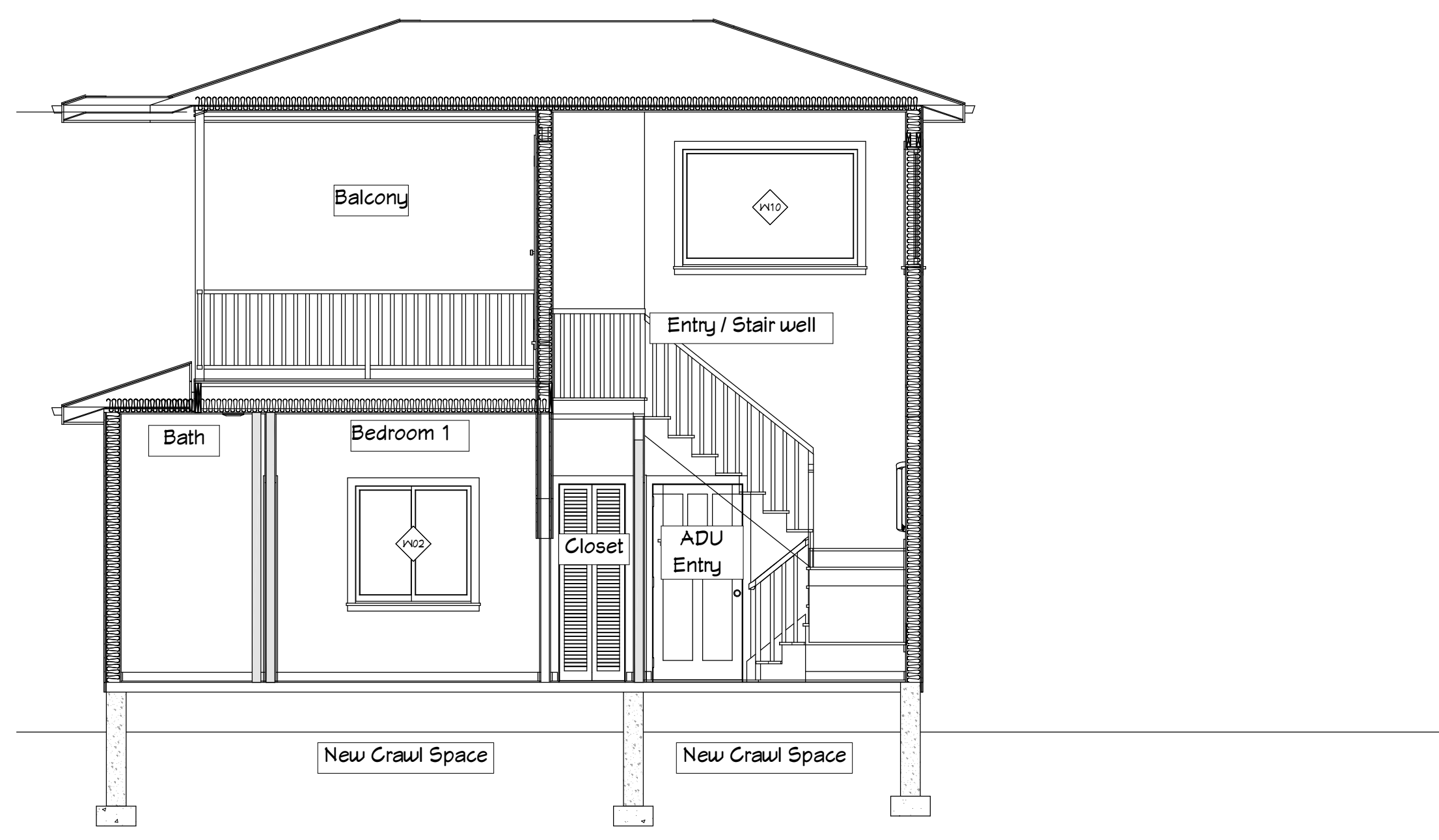
S1 SECTION
SCALE: 1/4" = 1'-0"



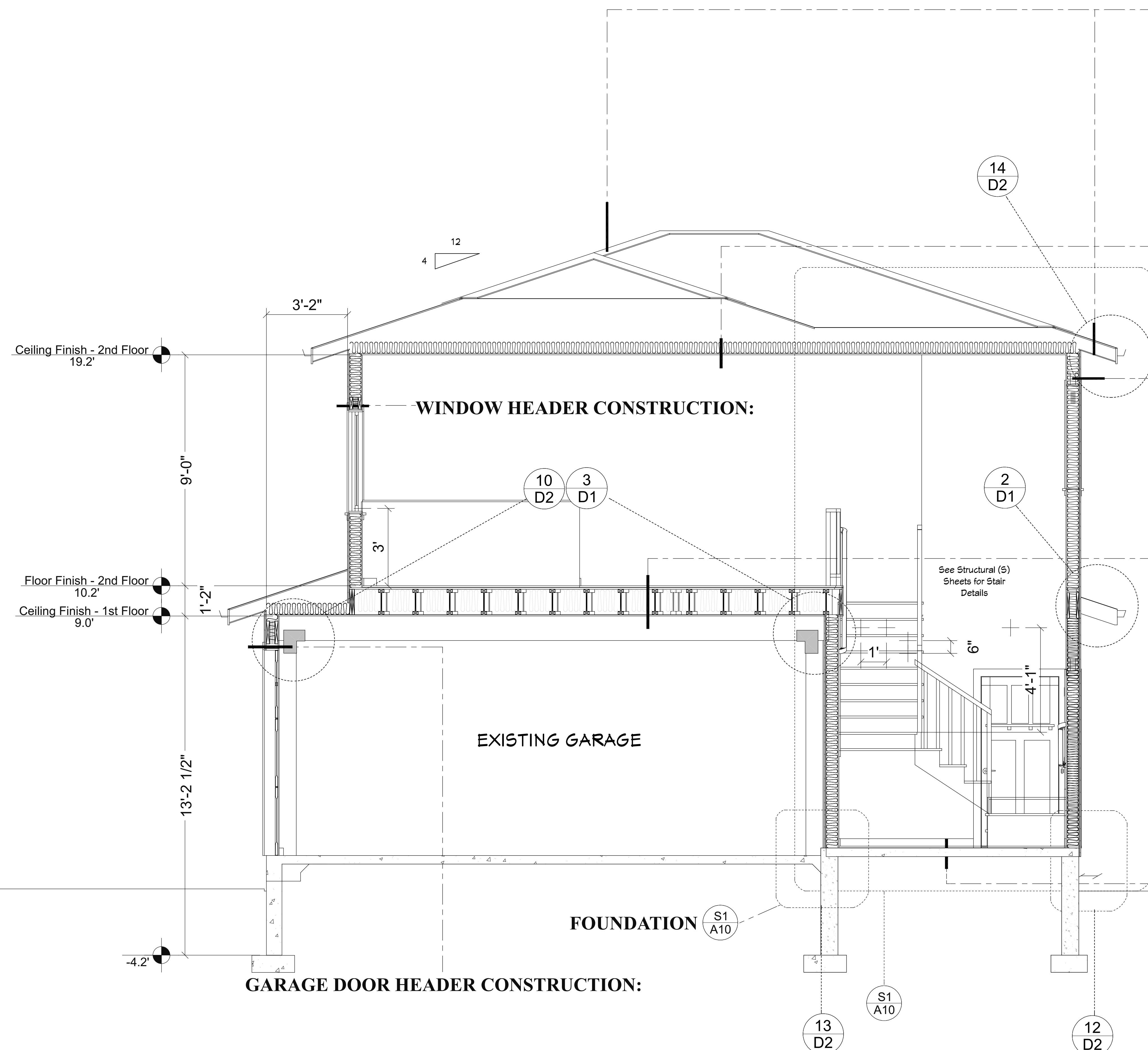
S3 SECTION
SCALE: 1/4" = 1'-0"



S2 SECTION
SCALE: 1/4" = 1'-0"



S4 SECTION
SCALE: 1/4" = 1'-0"



TYP. ROOF CONSTRUCTION:
 Comp. Shingles to match existing house roof
 1/2" CDX Plywood
 Per Manufactured Trusses @ 24" O.C.
 R-49 Batt Insulation
 Insulation Baffle Extended 12" Abv. Insul. 1 1/2" Clr. Airspace
 Provide Intake Vents (as detailed or similar)
 Vented 2x Blocking w/ Toe Nail (Per IRC R806)
 Hurricane Ties per Truss Manuf. Specs @ each truss
 Provide Screened soffit vents 1 sq.ft. per 150 Sq.ft. of attic area.(sq.ft).

UPPER FLOOR CEILING ASSEMBLY:
 Bottom Truss Ceiling
 Min. R-49 Batt Insulation
 1/2" GWB

TYP. EXTERIOR WALL CONSTRUCTION:
 Siding to match existing Wood Lap house siding.
 5# felt building wrap
 2x6 studs @ 16 OC (std framing)
 Min. R-21 Batt Insulation (Heated Spaces)
 1/2" GWB @ inside face per plan

UPPER FLOOR ASSEMBLY:
 2x12 Floor Joists @ 24" O.C. per plan
 5/8" T&G Plywood subfloor
1HR U311 STC 50 - CEILING ASSEMBLY
 U311: Resilient furring channels attached 24" o.c. horizontally to one side of 2x4 wood studs 16" or 24" o.c. with 1-1/4" type W screws. 1/2" x 3" gypsum board filler strips attached to floor and ceiling plates with 1-1/4" type W screws 3'-0" o.c. 5/8" (15.9 mm) Fire-Shield C Gypsum Board applied horizontally to channel with 1" type S screws 12" o.c. on all edges and intermediate channels and attached to top and bottom plates with 1-7/8" type S screws 12" o.c. Vertical butt joints between studs back-blocked with 20" long piece of resilient channel. 5/8" (15.9 mm) Fire-Shield C Gypsum Board applied horizontally on opposite side directly to wood studs with 1-1/4" type W screws spaced 12" o.c. Horizontal joints in line, vertical joints staggered each side. Mineral wool insulation 3" thick friction fit between studs.

FLOOR ASSEMBLY:
 Finish floor by owner
 New S.O.G. Concrete floor
 Min. R10 Rigid Insulation
 Compact Crushed Rock

GARAGE DOOR HEADER CONSTRUCTION:

WINDOW HEADER CONSTRUCTION:

EXISTING GARAGE

FOUNDATION

S3 SECTION
 SCALE: 1/2" = 1'-0"

COMPLIANCE PATH PRESCRIPTIVE:
 International Residential Code 2018 (IRC 2018)
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A8

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SEE NEW STRUCTURAL (S) SHEETS



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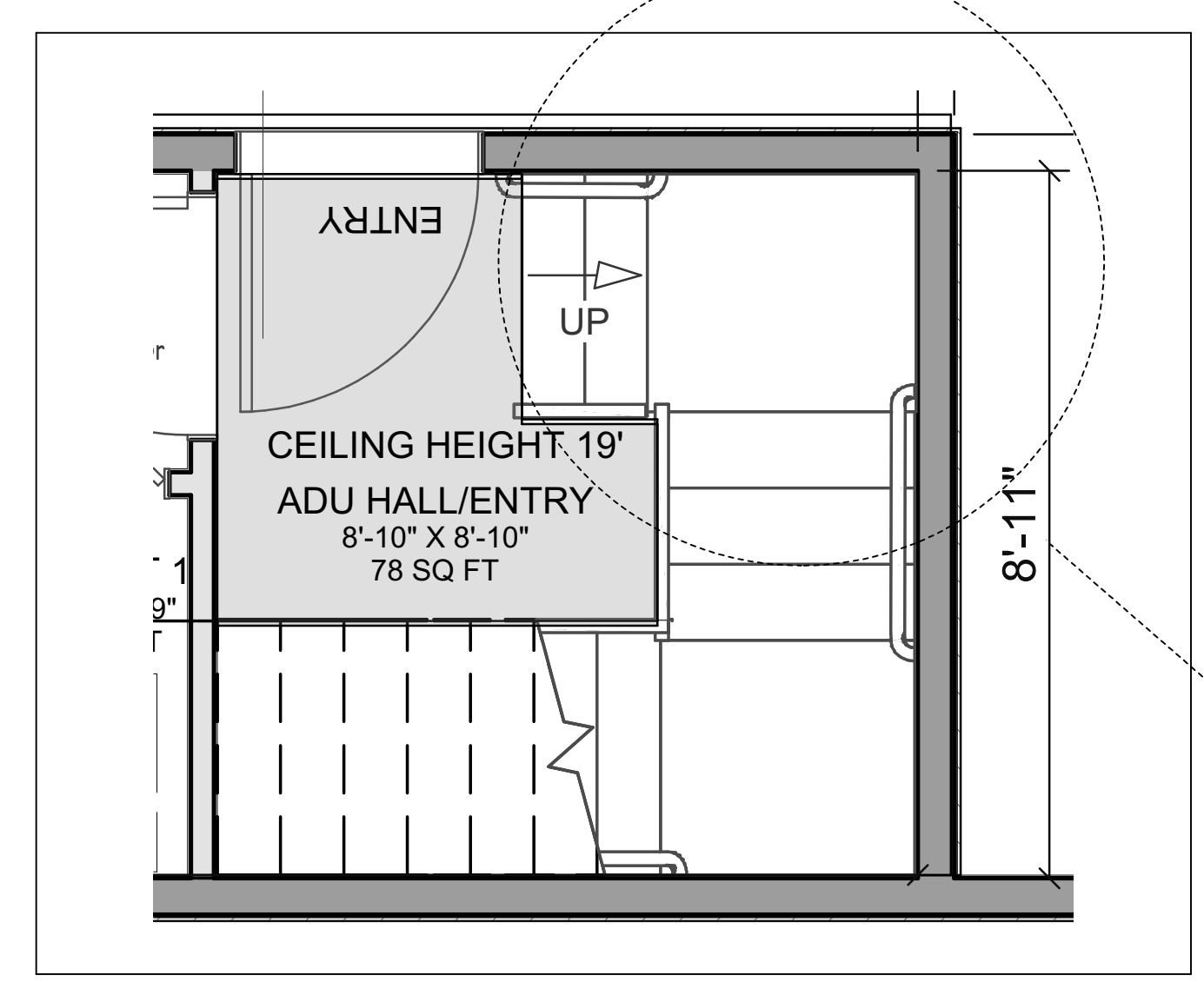
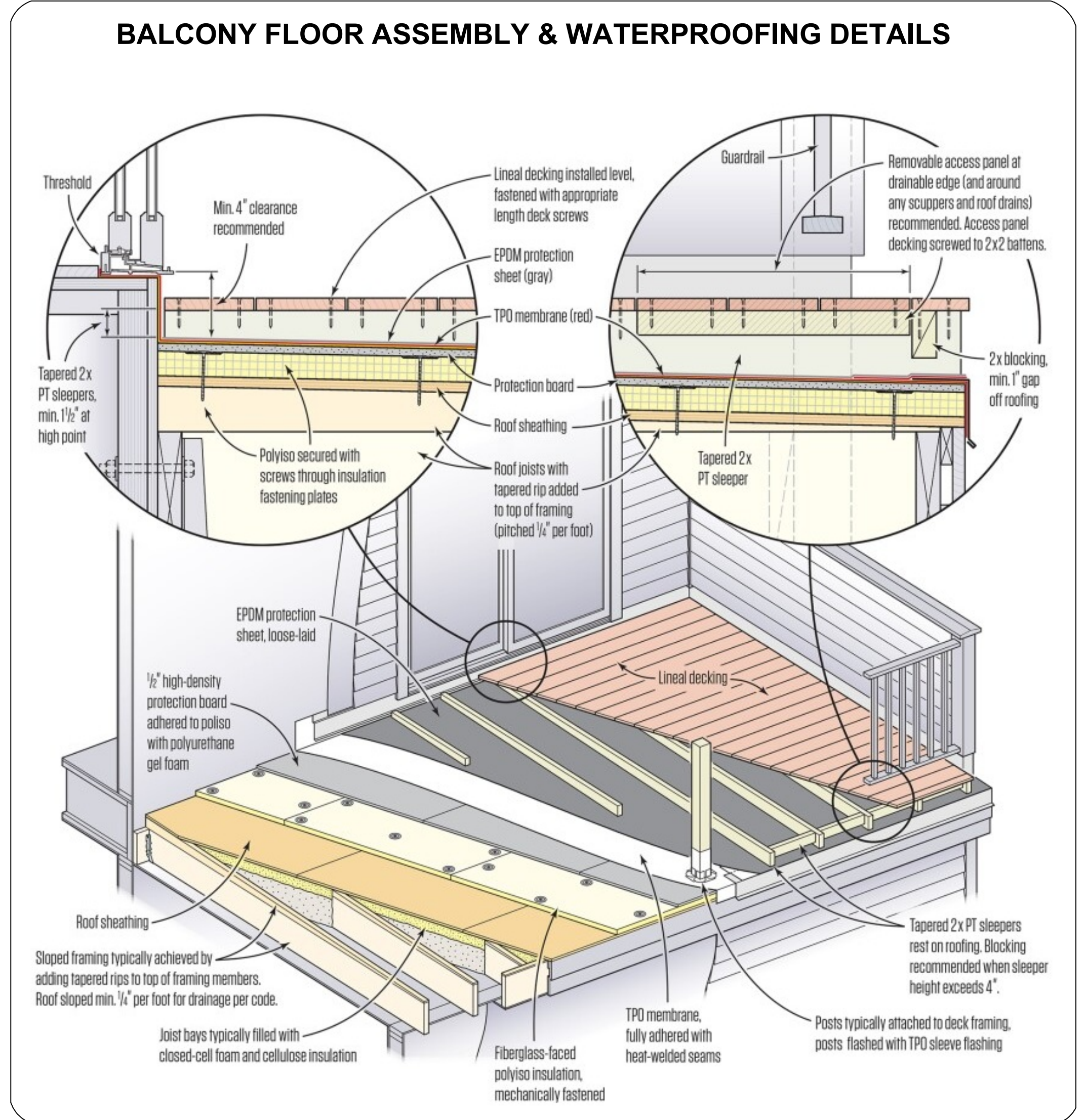
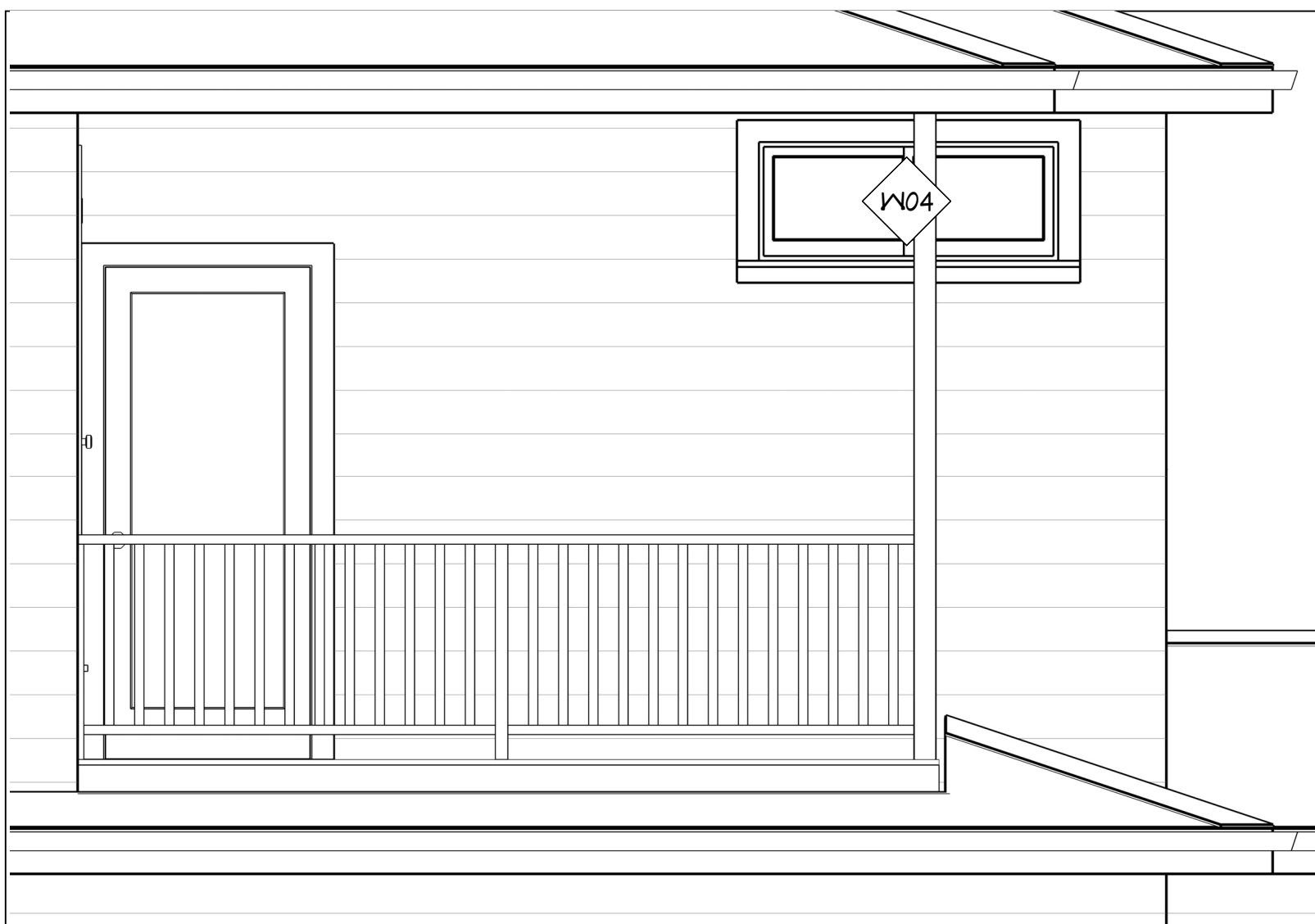
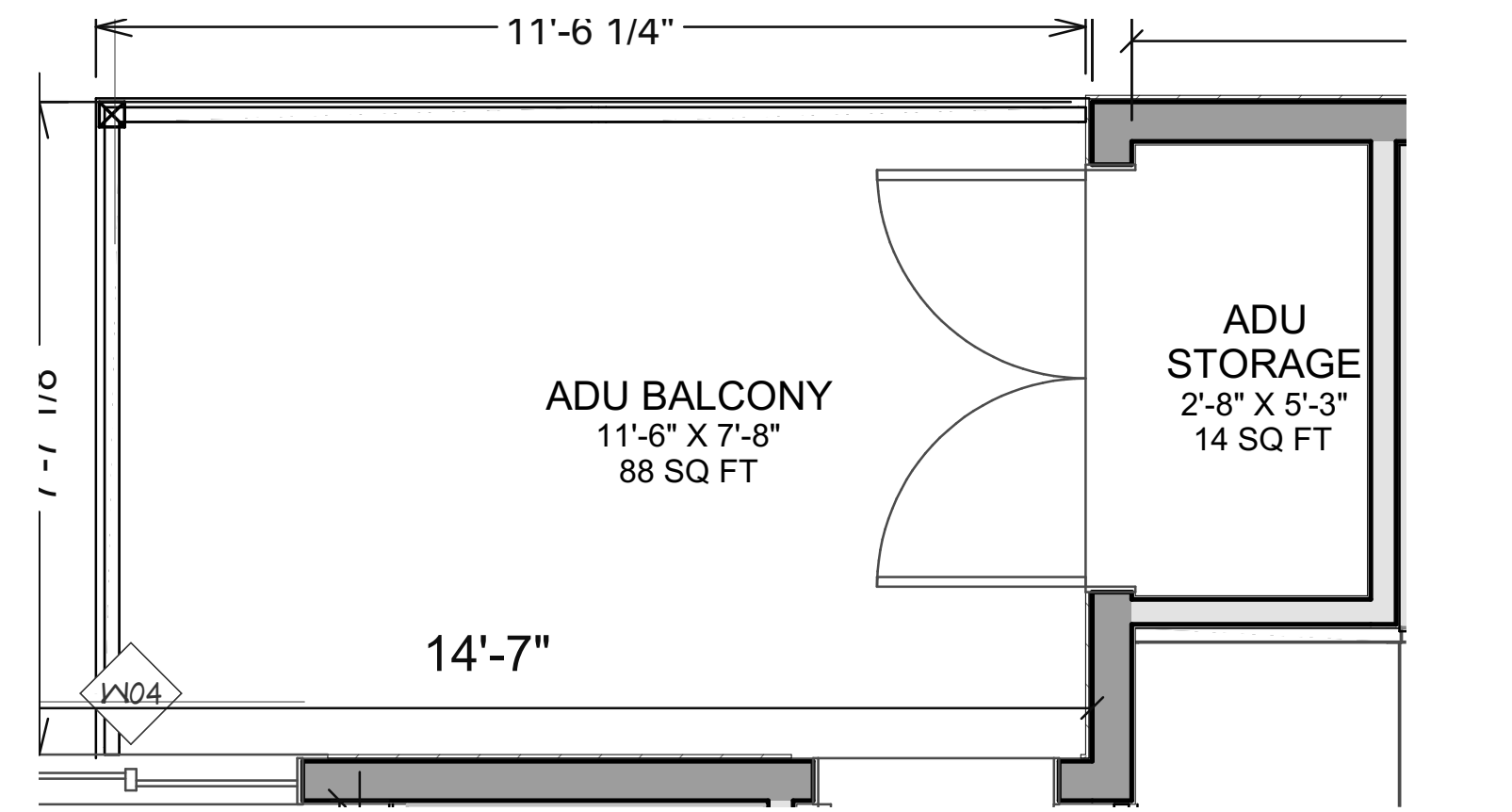
FRAMING PLAN & NOTES

DATE: 06.12.20
REV #6: 01.01.23
DRAWN BY: K.C.

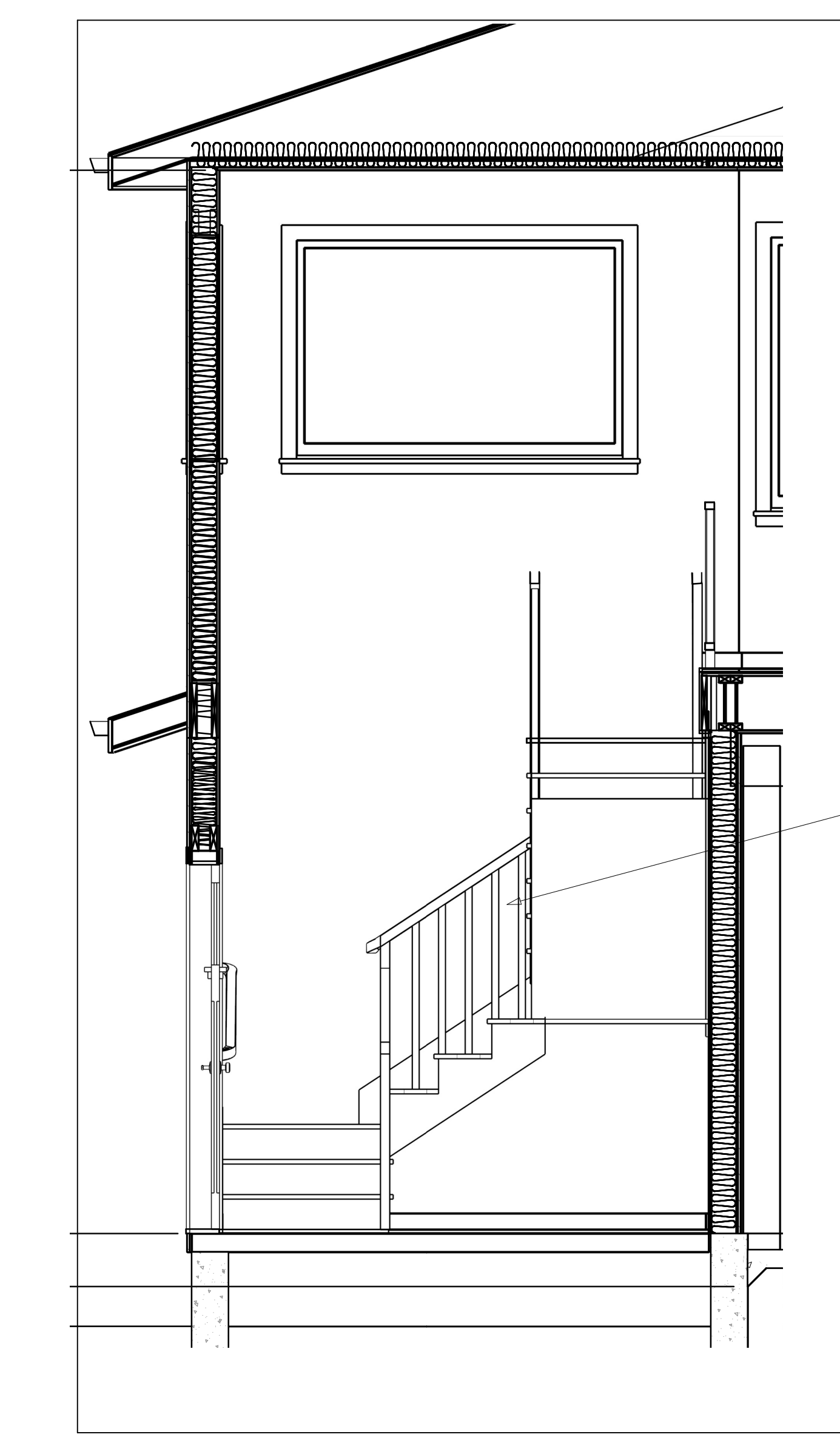
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Revision #:



11
D2
5
D1



See Structural (S) Sheets for Stair Details

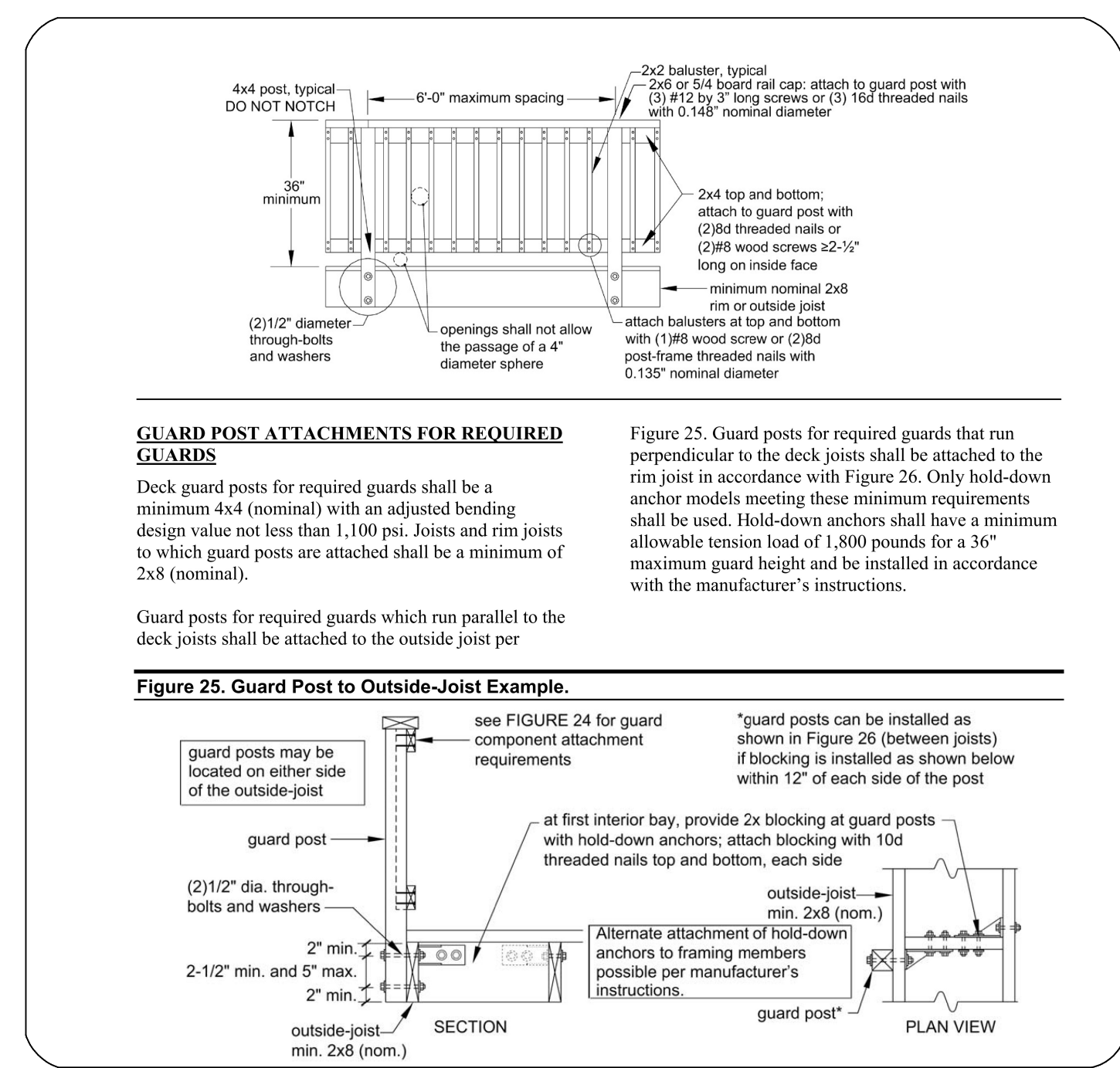


Figure 25. Guard Post to Outside-Joist Example.
Guard posts for required guards which run parallel to the deck joists shall be attached to the outside joist per...
Guard posts for required guards that run perpendicular to the deck joists shall be attached to the rim joist in accordance with Figure 26. Only hold-down anchor models meeting these minimum requirements shall be used. Hold-down anchors shall have a minimum allowable tension load of 1,500 pounds for a 36\"/>

MISCELLANEOUS NOTES:

1. GUARDRAILS TO BE 36" MIN. ABOVE FINISH FLOOR.
2. HANDRAILS TO BE 34" - 38" ABOVE NOSING, WITH HANDGRIP OF 1 1/2" - 2" IN.
3. OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN SUCH THAT A SPHERE 4" IN DIAMETER CANNOT PASS THROUGH.
4. ONE HOUR FIRE SEPARATIONS BETWEEN GARAGE AND DWELLING: INSTALL 1/2" TYPE-X ON ALL WALLS AND CEILINGS, BEARING WALLS. STAGGER JOINTS FROM PLYWOOD BELOW WHERE AFFICABLE.
5. BEDROOM EMERGENCY EGRESS WINDOWS: MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT., WIDTH OF 20" AND MINIMUM 24". MAXIMUM FINISHED SILL HEIGHT OF 44" ABOVE.
6. EACH SLEEPING ROOM SHALL BE PROVIDED W/ A SMOKE DETECTOR (INTERCONNECTED) PER SECTION (F) R313.1. SMOKE DETECTORS SHALL BE PROVIDED W/ A BATTERY BACK-UP PER SEC. (F) R313.1 AND, LOCATED PER SECTION (F) R313.1.
7. ANCHORED VENEER SHALL BE PROVIDED WITH #2 GA. X 3/4" CORROSION RESISTANT ANCHOR TIES. THE ANCHOR TIES SHALL BE SPACED A MAX. OF 24" O.C. AND SUPPORT NO MORE THAN 2 SQ. FT. OF VENEER. IN SEISMIC ZONE 3 & 4 THE EXTENDED LEG OF THE ANCHOR TIE SHALL LOOP AROUND A #3 GA. CONT. HORIZ. JOINT REINFORCEMENT WIRE.

B1 BALCONY GUARD RAIL DETAILS

SCALE: 1/2" = 1'-0"

S1 STAIR DETAILS

SCALE: = 1'-0"

SHEET NUMBER
A10

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STAIR & BALCONY DETAILS

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ROOF FRAMING NOTES

1. USE 4x10 OR 6x8 DF #2 FOR BEAMS AND HEADERS UNO.
2. ALL RAFTERS TO BE 2x12 HF #2 AT 24" O.C. TYPICAL UNO.
3. ALL TRUSSES TO BE AT 24" O.C. TYPICAL UNO.
4. PROVIDE ROOF VENTS PER SEC. R806 IRC.
5. ROOF PITCH TO BE 4 : 12 PICAL UNLESS OTHERWISE NOTED.
6. 36" OH. TYPICAL * EAVES * 6" OH. TYPICAL * GABLE ENDS, RAKES.
7. APPROVED ANCHORS SHALL BE USED AT ALL CONNECTIONS OF RAFTERS, JACK OR HIP TRUSSES TO MAIN GIRDER TRUSS (PER TRUSS MANUF.) WHERE APPLICABLE. PROVIDE "SIMPSON" HI FRAMING ANCHORS AT EVERY RAFTER/TRUSS AT EACH END AND AT GABLE END TRUSSES.
8. VENTED BLOCKING OVER SUPPORTS.
9. CHIMNEY HEIGHT TO BE 2'-0" MIN. ABOVE ANY PORTION OF BUILDING WITHIN 10'-0" PER IRC SECTION R1001.6
10. BRACING: (STICK FRAMED AREAS ONLY)
 - * (2) 2x4 UP TO 10' LONG.
 - * (2) 2x6 10' TO 14' LONG.
 - * (3) 2x6 OVER 14' LONG.
11. PLATE HEIGHTS:
 - * MAIN FLOOR 9'-0", TYP. UNO.
 - * UPPER FLOOR 9'-0", TYP. UNO.
12. TRUSSES:
 - * CARRY MFR. STAMP.
 - * DO NOT ALTER WITHOUT BUILDING DEPARTMENT APPROVAL.
 - * INSTALL AND BRACE PER MFR. SPEC.
 - * NON-BEARING WALLS SHALL BE HELD DOWN FROM THE TRUSS BOTTOM CHORDS WITH AN APPROVED FASTENER (SUCH AS SIMPSON STC).
13. CONTRACTOR TO VERIFY LOCATION OF ALL ROOF SUPPORT BRACING OR POSTING AND PROVIDE ADEQUATE BEARING TO FOUNDATION.
14. HANGERS AT POSITIVE CONNECTIONS TO BE SIMPSON OR EQUAL.

TRUSS FRAMING NOTES

- * TRUSS ENGINEERING: PER IRC R802.10.1 TRUSS ENGINEER OF RECORD WHO WILL REVIEW, APPROVE AND NOTE ON THE DOCUMENTS THAT THEY HAVE FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE ENGINEER-APPROVED DOCUMENTS WILL THEN BE FORWARDED TO THE BUILDING OFFICIAL FOR REVIEW AND APPROVAL PRIOR TO FRAMING INSPECTION. CITY APPROVED DOCUMENTS SHALL BE ON THE JOB SITE AT INSPECTION. TRUSS ENGINEERING SHALL INCLUDE SPECIFIC TRUSS BRACING REQUIREMENTS.

NOTE

VENTILATION CALCULATIONS AND REQUIREMENTS

AT LEAST 40% & NOT MORE THAN 50% OF REQUIRED VENTS SHALL BE IN UPPER PORTION OF VENTILATED ROOF SPACE (MIN. 3' ABOVE EAVE OR CORNICE VENTS) WITH THE BALANCE OF REQUIRED VENTILATION PROVIDED BY EAVE VENTING.

PER IRC 806.1 ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FOR WHERE CEILING ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION OF EACH SEPARATE SPACE BY VENT AT ATTIC VENTILATION PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATING OPENINGS SHALL BE PROVIDED WITH CORROSION RESISTANT WIRE MESH, WITH 1/8" MIN. & 1/4" MAX. OPENINGS.

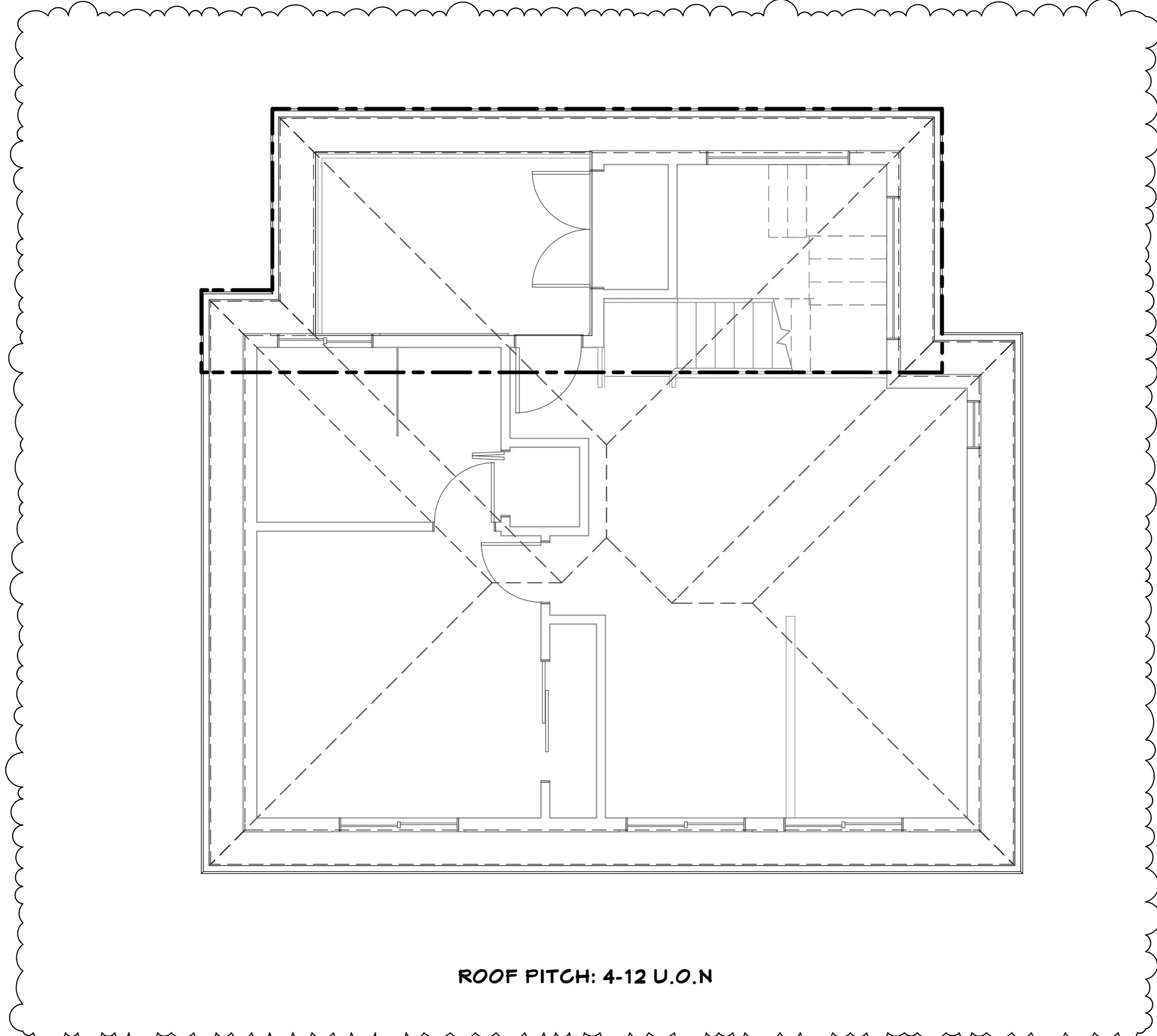
IF EAVE VENTS ARE INSTALLED INSULATION SHALL NOT OBSTRUCT THE FREE FLOW OF AIR (MIN. 1" SPACE BETWEEN INSULATION AND ROOF SHEATHING * VENT LOCATION.

BATTING OF THE VENT OPENINGS SHALL BE INSTALLED BATTING SHALL BE RIGID AND WIND-DRIVEN MOISTURE RESISTANT. IF FEASIBLE BATTING SHOULD BE INSTALLED FROM THE TOP OF THE OUTSIDE OF THE EXTERIOR WALL, EXTENDING INWARD TO A POINT 6" VENTILATION OPENING. THE HEIGHT OF NON-COMPRESSED INSULATION, & 12" VERTICALLY ABOVE LOOSE FILL INSULATION. (ALL CALCULATIONS WILL BE NET FREE AREA.)

1444 SQ. FT. OF ATTIC AREA/300 * 481 SQ. FT. OF VENTILATION REQUIRED (694 SQ. INCHES)
 HIGH VENT * 341 SQ. IN.
 LOW VENT * 341 SQ. IN.

NOTE: EAVE VENTING PROVIDED BY (3) 2" DIAMETER "BIRD HOLES" PER EAVE BLOCK (1 1/2" SQ. IN. PER BLOCK)

NOTE: UPPER ROOF VENTING PROVIDED BY 1"x1" ROOF VENTS. (48 * IN. PER VENT)



ROOF PLAN

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

FIREBLOCKING AND DRAFTSTOPPING

PER IRC SECTION R602.8 FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED VERTICAL AND HORIZONTAL DRAFT OPENINGS AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL BE PROVIDED IN WOOD FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:

- 1) IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS: A) VERTICALLY AT THE CEILING AND FLOOR LEVELS. B) HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.
- 2) AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR IN SOFFITS, DROP CEILINGS, AND COVE CEILINGS.
- 3) IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R312.2.
- 4) AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION.
- 5) FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES SEE IRC SECTION R1003.19
- 6) FIREBLOCKING OF CORNICES OF A TWO FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPERATION. FIREBLOCKING MATERIALS SHALL CONSIST OF MATERIAL LISTED IN IRC SECTION R602.8.1. LOOSE FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED. THE INTEGRITY OF ALL FIREBLOCKS SHALL BE MAINTAINED.

PER IRC SECTION R502.12 DRAFTSTOPPING, WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY, DRAFTSTOPP SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1000 SF. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROX. EQUAL AREAS. WHERE THE ASSEMBLY IS ENCLOSED BY A FLOOR MEMBRANE ABOVE AND A CEILING MEMBRANE BELOW DRAFTSTOPPING SHALL BE PROVIDED IN FLOOR/CEILING ASSEMBLIES UNDER THE FOLLOWING CIRCUMSTANCES:

- 1) CEILING IS SUSPENDED UNDER THE FLOOR FRAMING.
 - 2) FLOOR FRAMING IS CONSTRUCTED OF TRUSS-TYPE OPEN-Web OR PERFORATED MEMBERS.
- DRAFTSTOPPING MATERIALS SHALL CONSIST OF MATERIALS LISTED IN IRC SECTION R502.12.1.

WOOD TRUSSES

TRUSSES SHALL BE DESIGNED BY A REGISTERED WASHINGTON STATE ENGINEER AND FABRICATED FROM ONLY THESE DESIGNS. TRUSSES TO BE STAMPED BY THE MANUFACTURER, OR BY A QUALITY CONTROL AGENCY SUCH AS THE WASHINGTON STATE TRUSS FABRICATORS COUNCIL. ROOF TRUSS DESIGN SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION. NON-BEARING WALLS SHALL BE HELD AWAY FROM THE TRUSS BOTTOM CHORD WITH AN APPROVED FASTENER (SUCH AS SIMPSON STC) TO ENSURE THAT THE TRUSS BOTTOM CHORD WILL NOT BEAR ON THE WALL. APPROVED HANGERS SHALL BE USED AT ALL CONNECTIONS OF RAFTERS, JACK OR HIP TRUSSES TO THE MAIN GIRDER TRUSS. ALL ROOF TRUSSES SHALL BE FRAMED AND TIED INTO THE FRAME WORK AND SUPPORTING WALLS SO AS TO FORM AN INTEGRAL PART OF THE WHOLE BUILDING. ROOF TRUSSES SHALL HAVE JOINTS WELL FITTED AND SHALL HAVE ALL TENSION MEMBERS WELL TIGHTENED BEFORE ANY LOAD IS PLACED UPON THE TRUSS. DIAGONAL AND SWAY BRACING SHALL BE USED TO BRACE ALL TRUSSES. TRUSSES SHALL BE DESIGNED FOR UNIFORM LOADING AS FOLLOWS:

TOP CHORD 35 PSF OF TRIBUTARY AREA
 BOTTOM CHORD 10 PSF OF TRIBUTARY AREA
 TILE ROOF 45 PSF TOP CHORD AND 5 PSF BOTTOM CHORD

5/8" FORE CLAY (OR EQUIVALENT) PER IRC SECTION R1001.8

SEE NEW STRUCTURAL (S) SHEETS

Per R802.10 Wood Trusses

ATTIC VENTILATION: AREA / 300
 PROVIDE 1" MIN. AIR GAP AT EAVES WITH INSULATION Baffles TYP. AT ALL TRUSS BAYS.
 PROVIDE GABLE VENTS ALL GABLE ENDS.
 PROVIDE GALV. ROOF VENTS ON BACKSIDE OF ROOFLINE ABOVE CONDITIONED AREA.

1. ALL TRUSSES SHALL CARRY MANUFACTURERS STAMP.
2. ALL TRUSSES SHALL BE INSTALLED & BRACED TO MANUFACTURERS SPECIFICATIONS.
3. ALL TRUSSES WILL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPT. APPROVAL OF ENGINEERING CALCULATIONS.
4. ALL TRUSSES SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSPECTION.
5. NON BEARING WALLS SHOULD BE HELD DOWN FROM THE TRUSS BOTTOM CHORD W/ SIMPSON STC TO INSURE THAT THE TRUSS BOTTOM CHORD WILL NOT BEAR ON THE WALL.
6. ALL CONNECTIONS OF RAFTERS, JACK OR HIP TRUSSES TO MAIN GIRDER TO BE PROVIDED BY TRUSS MANUFACTURE.
7. ALL ROOF FRAMING 24" O.C.
8. ALL ROOF PITCH 8:12
9. SCISSORS TRUSS CEILING PITCH 2:12.
10. TRUSSES MANUFACTURED BY (TO BE DETERMINED)
11. ALL OVERHANGS 16".

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ROOF PLAN

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SHEARNALL DETAILS

DATE: 06.12.20
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SHEET NUMBER
A12
Revision #:

WINDOW SCHEDULE										
ROOM NAME	NUMBER	QTY	FLOOR	WIDTH	HEIGHT	EGRESS	TEMPERATURE	DESCRIPTION	U-FACTOR	3D EXTERIOR ELEVATION
ADU GREAT	W01	1	2	24"	60"			SINGLE CASEMENT-HR	0.20	
ADU BEDROOM 1	W02	1	1	48"	48"	YES		LEFT SLIDING	0.20	
ADU BATH/ADU BALCONY	W04	1	2	48"	14"			LEFT SLIDING	0.20	
ADU BEDROOM 1	W06	1	2	60"	48"	YES		RIGHT SLIDING	0.20	
ADU GREAT	W07	2	2	60"	48"	YES		RIGHT SLIDING	0.20	
ADU OPEN BELOW	W10	2	2	72"	48"	YES		FIXED GLASS	0.20	

DOORS AND WINDOWS

DOORS TO THE EXTERIOR SHALL HAVE MAX. 1 3/4" STEP TO MIN. 36" DEEP X (1") OPERABLE DOOR WIDTH MIN. LANDING ALL GLAZING TO BE PER USBC TABLE 6-1 UNLESS NOTED OTHERWISE.
ALL SKYLIGHTS AND SKYWALLS TO BE SAFETY LAMINATED GLASS UNLESS NOTED OTHERWISE.
FRENCH DOORS TO BE DOUBLE GLAZED NON TESTED ASSUMED U VALUE OF .30 UNLESS NOTED OTHERWISE WITH SAFETY GLAZING.
FACTORY BUILT WINDOWS TO BE CONSTRUCTED TO PERMIT MAXIMUM INFILTRATION OF 0.5 CFM PER LINEAL FOOT OF OPERABLE SASH PERIMETER AS TESTED BY STANDARD ASTM E 283.13. SITE BUILT AND MILL WORK SHOP BUILT WOODEN SASH ARE EXEMPT FROM INFILTRATION CRITERIA ABOVE BUT MUST BE MADE TIGHTLY FITTING AND WEATHER STRIPPED OR CALKED.

SLIDING GLASS DOORS TO PERMIT MAXIMUM INFILTRATION OF 0.5 CFM INFILTRATION PER SQUARE FOOT OF DOOR AREA. EACH LIGHT SHALL BEAR THE MANUFACTURER'S LABEL DESIGNATING THE TYPE AND THICKNESS OF GLASS. IDENTIFICATION OF GLAZING IN HAZARDOUS LOCATIONS SHALL BE IN ACCORDANCE WITH IRC SECTION (B) 308.4.
PROVIDE SOLID CORE DOORS # ENTRY AND FROM GARAGE TO LIVING AREAS (AS WELL AS ANY OTHER DOORS TO THE EXTERIOR). PROVIDE SELF-CLOSURE DEVICE ON DOOR TO GARAGE. PER IRC. SEE PLANS FOR:
- MAXIMUM GLAZING AREA
- GLAZING UFG AND MODEL NUMBERS
- WEIGHTED UA CALCULATION FOR SUB-STANDARD GLAZING.
SAFETY GLAZING LOCATIONS AS PER IRC SECTION (B) 308.4:
1. INGRESS AND EGRESS DOORS
2. SLIDING GLASS DOORS SWINGING GLASS DOORS
3. SHOWER AND BATH/TUB ENCLOSURES
4. GLAZING W/ THE EXPOSED EDGE WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF A DOOR IN THE CLOSED POSITION. 4 BOTTOM EDGE IS LESS THAN 60" ABOVE THE WALKING SURFACE.
5. GLAZING GREATER THAN 3 SF. LESS THAN 18" ABOVE FINISHED FLOOR
6. GLAZING IN GUARDRAILS
7. GLAZING IN STAIRWELLS AND WITHIN 3' OF TOP / BOTTOM OF STAIRS.
UNLESS NOTED OTHERWISE, INSULATION TO BE PER USBC TABLE 6-1
INSULATION BARRIERS TO MAINTAIN 1" ABOVE INSULATION
BARRIERS TO EXTEND 6" ABOVE BATT INSULATION.
BARRIERS TO EXTEND 7" ABOVE LOOSE FILL INSULATION.
INSULATE BEHIND TUB/SHOWER PARTITIONS AND CORNERS.
FACE STABLE BATTS
FRICION FIT RAGED BATTS
USE 4 MIL POLY VAPOR RETARDER AT WALLS
USE PVA PAINT WITH A DRY GUP PERM RATING OF 1 MAX.
- WALLS BETWEEN HOUSE AND GARAGE HAVE TO HAVE R-21 UNO.
- FLOORS ABOVE DRIVEWAY, SPACES, GARAGE, OR AT CANTILEVERS OVER GRADE HAVE TO HAVE R-30 UNO.
- ALL ATTIC AT CEILINGS HAVE TO HAVE R-38 (MIN) UNO.
- DUCTS IN UNHEATED SPACES HAVE TO HAVE R-8
- GAS WATER HEATERS SHALL MEET REQUIREMENTS OF 2012 UPC AND BE SO LABELED.

MISCELLANEOUS NOTES

- GUARDRAILS TO BE 36" MIN. ABOVE FINISH FLOOR.
- HANDRAILS TO BE 34" - 38" ABOVE NOSING WITH HANDGRIP OF 1 1/2" - 2" IN
- OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN SUCH THAT A SPHERE 4" IN DIAMETER CANNOT PASS THROUGH.
- ONE HOUR FIRE SEPARATIONS BETWEEN GARAGE AND DWELLING. INSTALL 1/2" TYPE-X ON ALL WALLS AND CEILINGS. BEARING WALLS. STAGGER JOINTS FROM PLYWOOD BELOW WHERE APPLICABLE.
- BEDROOM EMERGENCY EGRESS WINDOWS: MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT. WIDTH OF 20" AND MINIMUM 24". MAXIMUM FINISHED SILL HEIGHT OF 44" ABOVE
- EACH SLEEPING ROOM SHALL BE PROVIDED W/ A SMOKE DETECTOR (INTERCONNECTED) PER SECTION (F) R313). SMOKE DETECTORS SHALL BE PROVIDED W/ A BATTERY BACK-UP. PER SEC. (F) R313) AND LOCATED PER SECTION (F) R313).
- ANCHORED VENEER SHALL BE PROVIDED WITH #2 GA. X 3/4" CORROSION RESISTANT ANCHOR TIES. THE ANCHOR TIES SHALL BE SPACED A MAX. OF 24" O.C. AND SUPPORT NO MORE THAN 2 SQ FT OF VENEER IN SEISMIC ZONE 3 & 4. THE EXTENDED LEG OF THE ANCHOR TIE SHALL LOOP AROUND A #3 GA. CONT. HORIZ. JOINT REINFORCEMENT WIRE.

2018 Washington State Energy Code - Residential Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family - New & Additions (effective February 1, 2021) Version 1.1

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Project Information	Contact Information
8802 SE 37th ST. MERCER ISLAND WA 98040	Kesh Chavda - KDL Designs LLC
	425 344 9906

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.
Provide all information from the following tables as building permit drawings: Table R402.1-1. Insulation and Fenestration Requirements by Component, Table R406.2- Fuel Normalization Credits and 406.3- Energy Credits.

Authorized Representative: Kesh Chavda Date: 04/12/2022

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 ^{c,d}	n/a	n/a
Ceiling ^e	49	0.026
Wood Frame Wall ^{e,h}	21 int	0.056
Floor	30	0.029
Below Grade Wall ^{e,h}	10/15/21 int + TB	0.042
Slab ^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.

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Each dwelling unit in a residential building shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

- Small Dwelling Unit: 3 credits**
Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area. Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
- Medium Dwelling Unit: 6 credits**
All dwelling units that are not included in #1 or #3.
- Large Dwelling Unit: 7 credits**
Dwelling units exceeding 5,000 sf of conditioned floor area.
- Additions less than 500 square feet: 1.5 credits**
All other additions shall meet 1-3 above.

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2 and 406.3			
Heating Options	Fuel Normalization Descriptions	Credits - select ONE heating option	User Notes
1	Combustion heating minimum NAECA ^a	0.0	<input type="checkbox"/>
2	Heat pump ^a	1.0	<input type="checkbox"/>
3	Electric resistance heat only - furnace or zonal	-1.0	<input type="checkbox"/>
4	DHP with zonal electric resistance per option 3.4	0.5	<input type="checkbox"/>
5	All other heating systems	-1.0	<input type="checkbox"/>
Energy Options	Energy Credit Option Descriptions	Credits - select ONE energy option from each category ^d	User Notes
1.1	Efficient Building Envelope	0.5	<input type="checkbox"/>
1.2	Efficient Building Envelope	1.0	<input type="checkbox"/>
1.3	Efficient Building Envelope	0.5	<input type="checkbox"/>
1.4	Efficient Building Envelope	1.0	<input type="checkbox"/>
1.5	Efficient Building Envelope	2.0	<input type="checkbox"/>
1.6	Efficient Building Envelope	3.0	<input type="checkbox"/>
1.7	Efficient Building Envelope	0.5	<input type="checkbox"/>
2.1	Air Leakage Control and Efficient Ventilation	0.5	<input type="checkbox"/>
2.2	Air Leakage Control and Efficient Ventilation	1.0	<input type="checkbox"/>
2.3	Air Leakage Control and Efficient Ventilation	1.5	<input type="checkbox"/>
2.4	Air Leakage Control and Efficient Ventilation	2.0	<input type="checkbox"/>
3.1*	High Efficiency HVAC	1.0	<input type="checkbox"/>
3.2	High Efficiency HVAC	1.0	<input type="checkbox"/>
3.3*	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.4	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.5	High Efficiency HVAC	1.5	<input type="checkbox"/>
3.6*	High Efficiency HVAC	2.0	<input type="checkbox"/>
4.1	High Efficiency HVAC Distribution System	0.5	<input type="checkbox"/>
4.2	High Efficiency HVAC Distribution System	1.0	<input type="checkbox"/>

2018 Washington State Energy Code - Residential Prescriptive Energy Code Compliance for All Climate Zones in Washington Single Family - New & Additions (effective February 1, 2021)

Summary of Table R406.2 (cont.)			
Energy Options	Energy Credit Option Descriptions (cont.)	Credits - select ONE energy option from each category ^d	User Notes
5.1 ^d	Efficient Water Heating	0.5	<input type="checkbox"/>
5.2	Efficient Water Heating	0.5	<input type="checkbox"/>
5.3	Efficient Water Heating	1.0	<input type="checkbox"/>
5.4	Efficient Water Heating	1.5	<input type="checkbox"/>
5.5	Efficient Water Heating	2.0	<input type="checkbox"/>
5.6	Efficient Water Heating	2.5	<input type="checkbox"/>
6.1*	Renewable Electric Energy (3 credits max)	1.0	<input type="checkbox"/>
7.1	Appliance Package	0.5	<input type="checkbox"/>
Total Credits		3.0	<input type="checkbox"/>
		<input type="button" value="Calculate Total"/>	<input type="button" value="Clear Form"/>

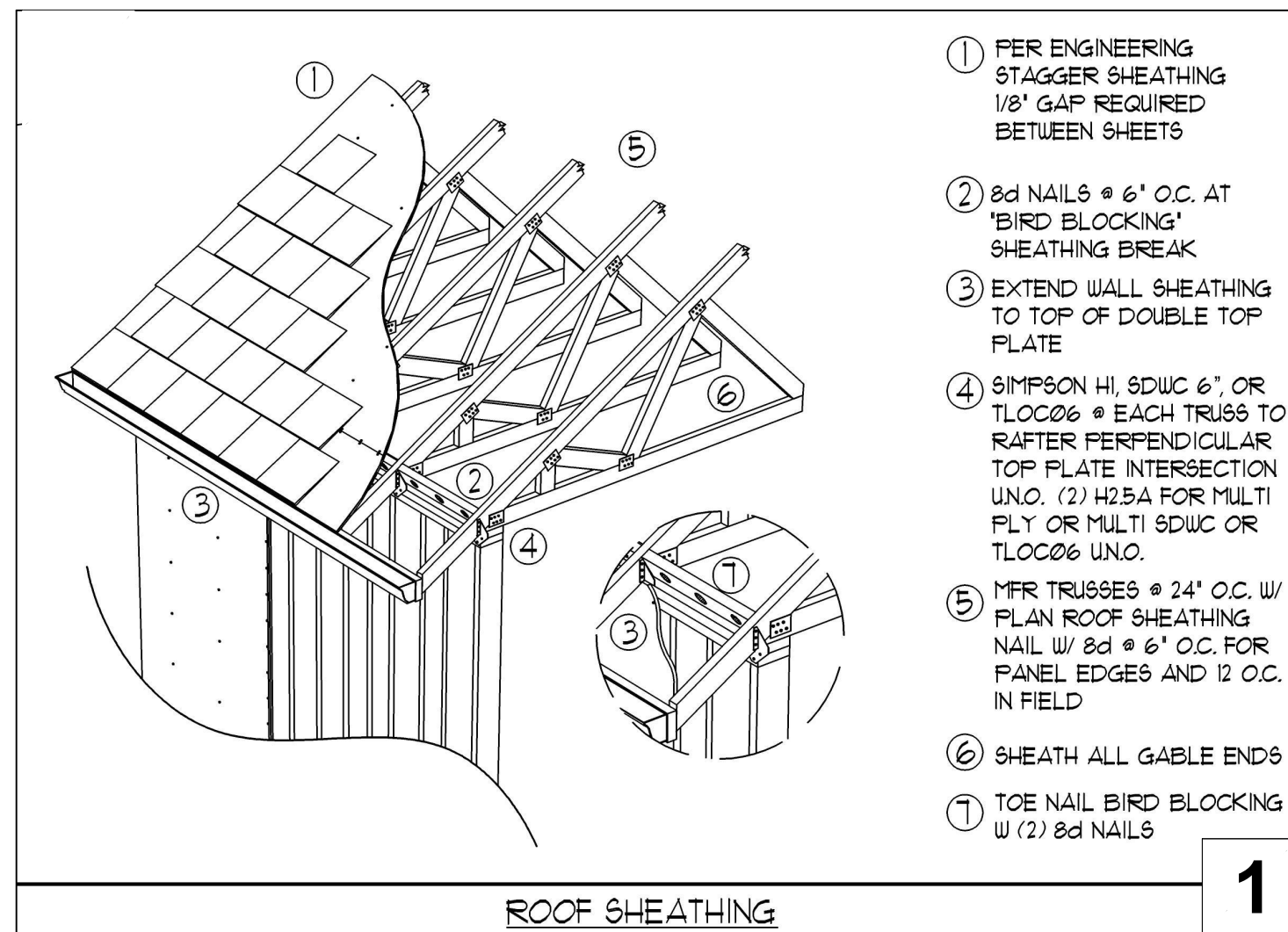
- An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
- Equipment listed in Table C403.3.2(4) or C403.3.2(5)
- Equipment listed in Table C403.3.2(1) or C403.3.2(2)
- You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.
- 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See the complete Table R406.2 for all requirements and option descriptions.
- Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

Please print only pages 1 through 3 of this worksheet for submission to your building official.

For Building Officials Only

NOTE: See Sheet A.02 for:
APPLIANCE SPECS.
HEAT PUMP SPECS.
WATER HEATER SPECS.

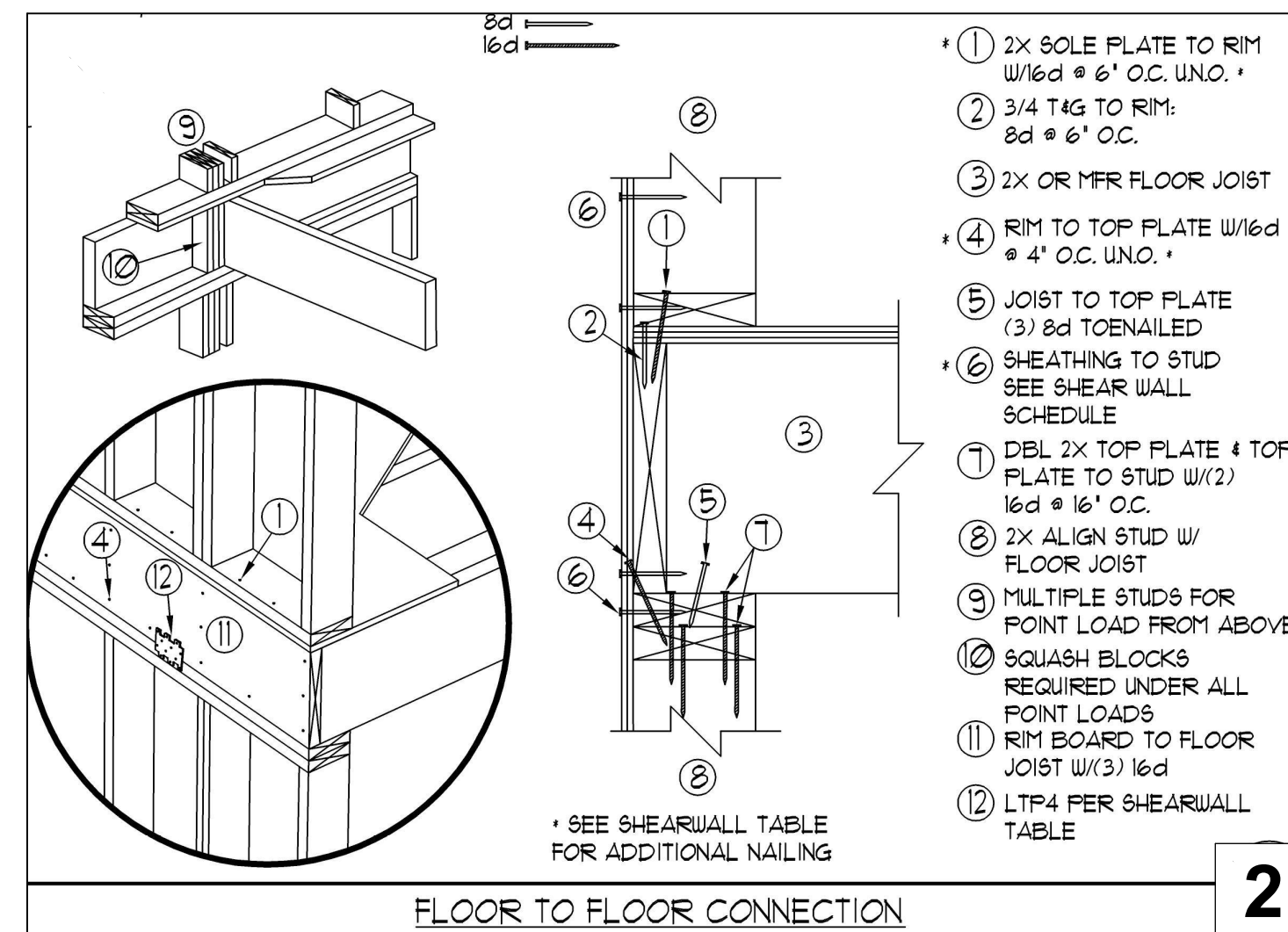




- 1 PER ENGINEERING STAGGER SHEATHING 1/8" GAP REQUIRED BETWEEN SHEETS
- 2 8d NAILS @ 6" O.C. AT 'BIRD BLOCKING' SHEATHING BREAK
- 3 EXTEND WALL SHEATHING TO TOP OF DOUBLE TOP PLATE
- 4 SIMPSON HJ SDUC @ 6' OR TLOC@6 @ EACH TRUSS TO RAFTER PERPENDICULAR TOP PLATE INTERSECTION UNO. (2) H2.5A FOR MULTI FLY OR MULTI SDUC OR TLOC@6 UNO.
- 5 MFR TRUSSES @ 24" O.C. W/ PLAN ROOF SHEATHING NAIL W/ 8d @ 6" O.C. FOR PANEL EDGES AND 12" O.C. IN FIELD
- 6 SHEATH ALL GABLE ENDS
- 7 TOE NAIL BIRD BLOCKING W/ (2) 8d NAILS

ROOF SHEATHING

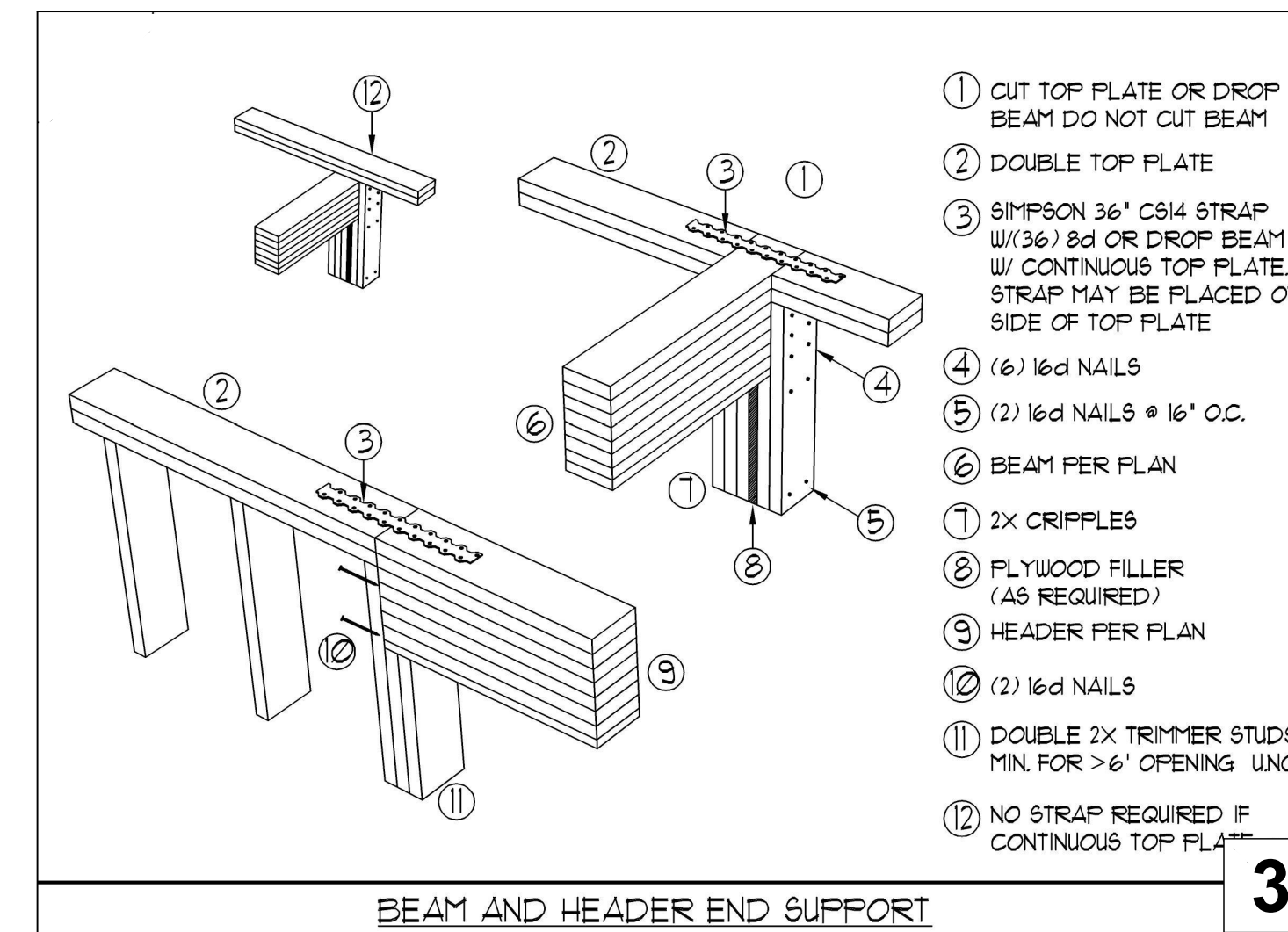
1



- 1 2X SOLE PLATE TO RIM W/ 6d @ 6" O.C. UNO.
- 2 3/4 T&G TO RIM: 8d @ 6" O.C.
- 3 2X OR MFR FLOOR JOIST
- 4 RIM TO TOP PLATE W/ 6d @ 4" O.C. UNO.
- 5 JOIST TO TOP PLATE (3) 8d TOENAIL
- 6 SHEATHING TO STUD SEE SHEAR WALL SCHEDULE
- 7 DBL 2X TOP PLATE + TOP PLATE TO STUD W/ (2) 16d @ 16" O.C.
- 8 2X ALIGN STUD W/ FLOOR JOIST
- 9 MULTIPLE STUDS FOR POINT LOAD FROM ABOVE
- 10 SQUASH BLOCKS REQUIRED UNDER ALL POINT LOADS
- 11 RIM BOARD TO FLOOR JOIST W/ (3) 16d
- 12 LTP4 PER SHEARWALL TABLE

FLOOR TO FLOOR CONNECTION

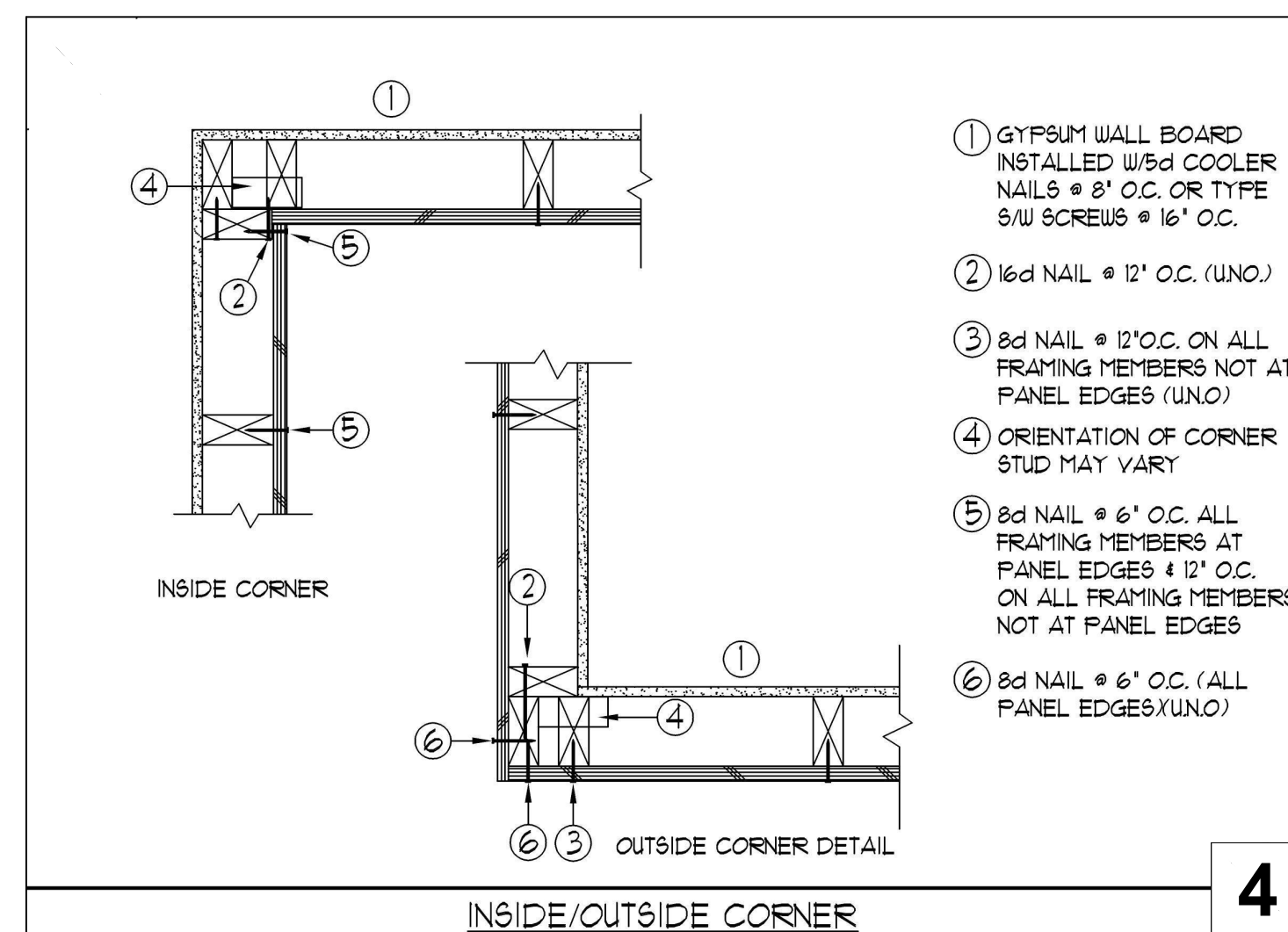
2



- 1 CUT TOP PLATE OR DROP BEAM DO NOT CUT BEAM
- 2 DOUBLE TOP PLATE
- 3 SIMPSON 36" CS14 STRAP W/ (36) 8d OR DROP BEAM W/ CONTINUOUS TOP PLATE. STRAP MAY BE PLACED ON SIDE OF TOP PLATE
- 4 (6) 16d NAILS
- 5 (2) 16d NAILS @ 16" O.C.
- 6 BEAM PER PLAN
- 7 2X CRIPPLES
- 8 PLYWOOD FILLER (AS REQUIRED)
- 9 HEADER PER PLAN
- 10 (2) 16d NAILS
- 11 DOUBLE 2X TRIMMER STUDS MIN. FOR >6" OPENING UNO.
- 12 NO STRAP REQUIRED IF CONTINUOUS TOP PLATE

BEAM AND HEADER END SUPPORT

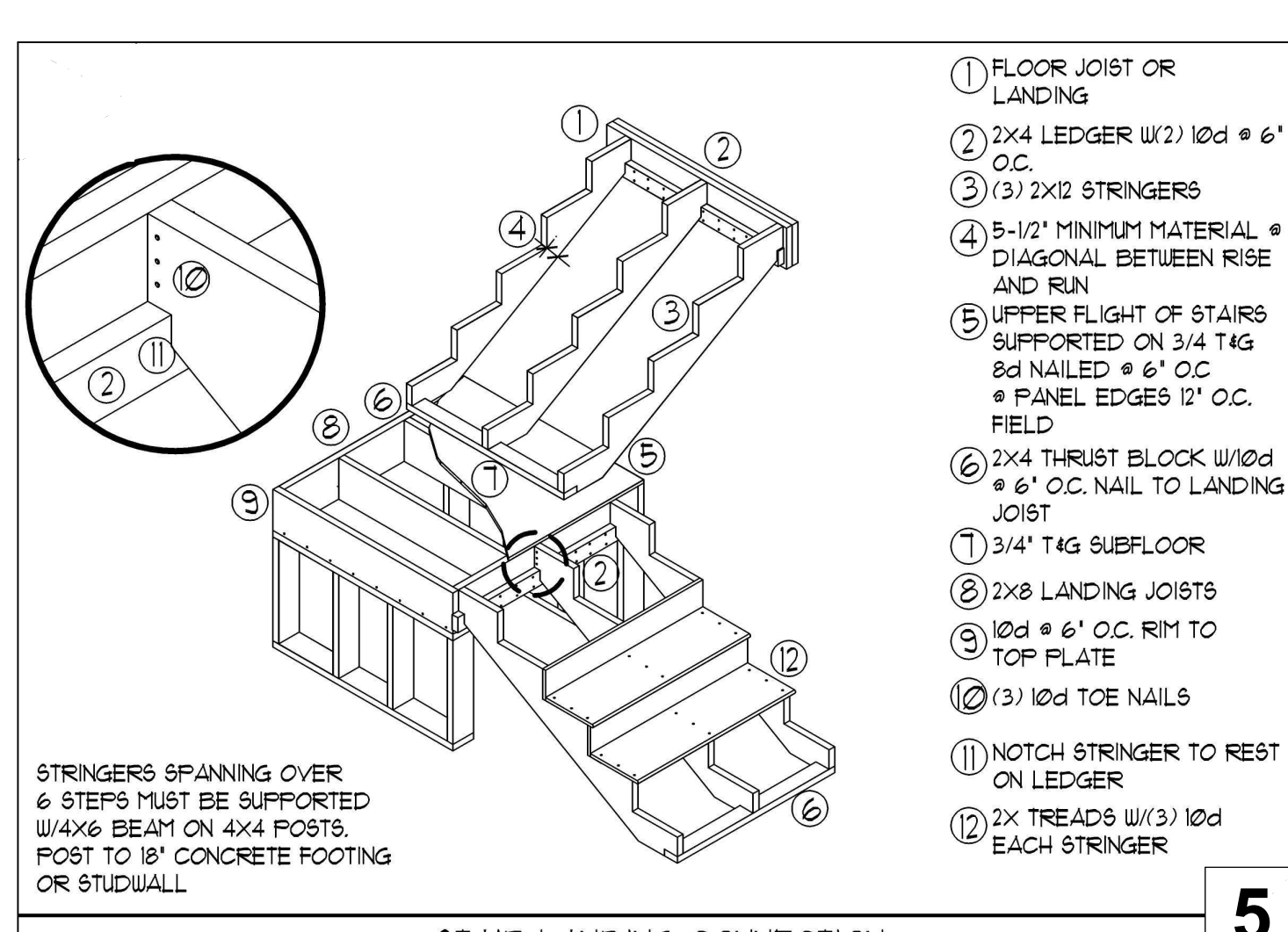
3



- 1 GYPSUM WALL BOARD INSTALLED W/ 8d COOLER NAILS @ 8" O.C. OR TYPE S/W SCREWS @ 16" O.C.
- 2 16d NAIL @ 12" O.C. (UNO)
- 3 8d NAIL @ 12" O.C. ON ALL FRAMING MEMBERS NOT AT PANEL EDGES (UNO)
- 4 ORIENTATION OF CORNER STUD MAY VARY
- 5 8d NAIL @ 6" O.C. ALL FRAMING MEMBERS AT PANEL EDGES + 12" O.C. ON ALL FRAMING MEMBERS NOT AT PANEL EDGES
- 6 8d NAIL @ 6" O.C. (ALL PANEL EDGES UNO)

INSIDE/OUTSIDE CORNER

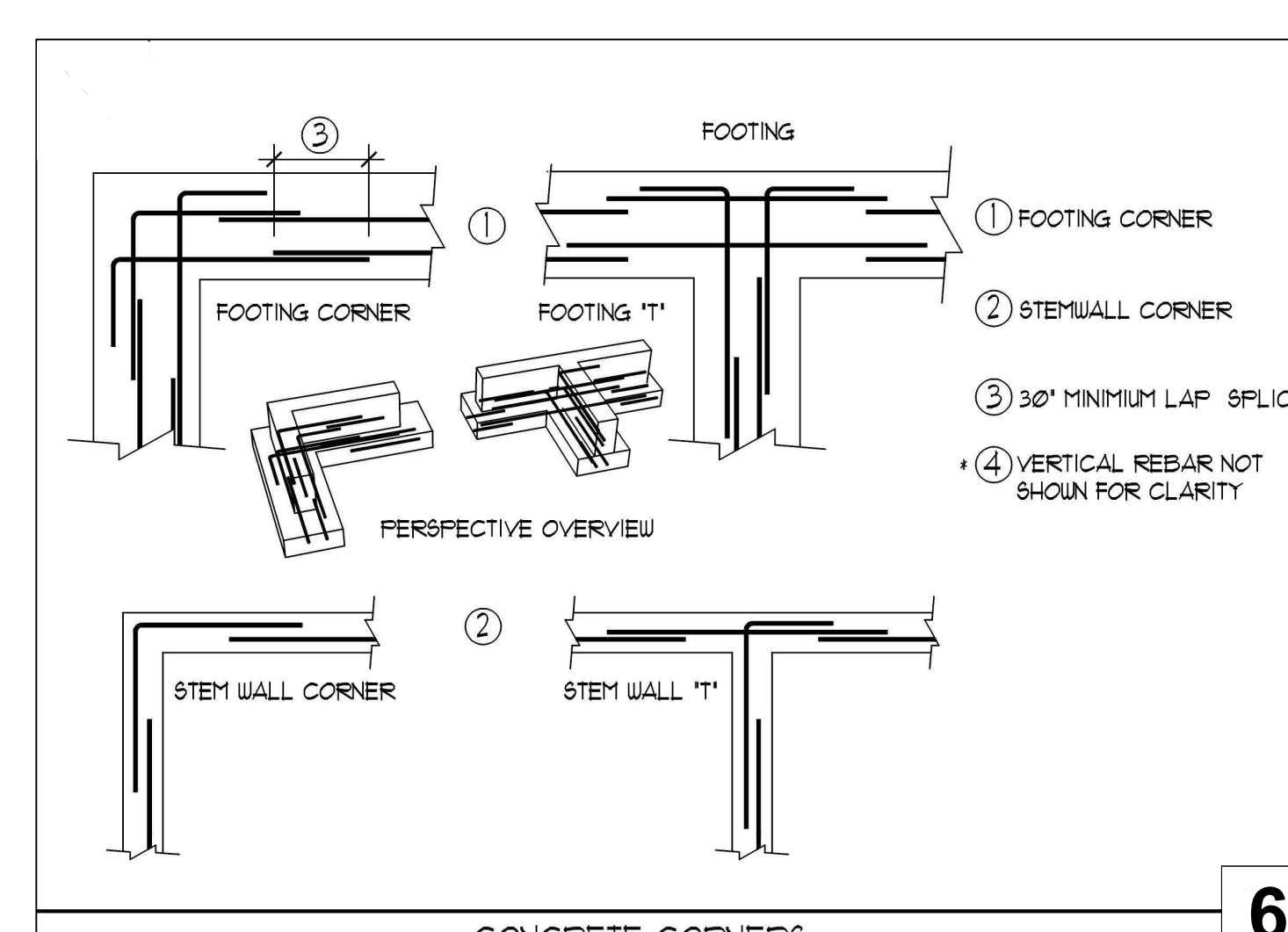
4



- 1 FLOOR JOIST OR LANDING
- 2 2X4 LEDGER W/ (2) 10d @ 6" O.C.
- 3 (3) 2X2 STRINGERS
- 4 5-1/2" MINIMUM MATERIAL @ DIAGONAL BETWEEN RISE AND RUN
- 5 UPPER FLIGHT OF STAIRS SUPPORTED ON 3/4 T&G 8d NAIL @ 6" O.C. @ PANEL EDGES 12" O.C. FIELD
- 6 2X4 THRUST BLOCK W/ 10d @ 6" O.C. NAIL TO LANDING JOIST
- 7 3/4" T&G SUBFLOOR
- 8 2X8 LANDING JOISTS
- 9 10d @ 6" O.C. RIM TO TOP PLATE
- 10 (3) 10d TOE NAILS
- 11 NOTCH STRINGER TO REST ON LEDGER
- 12 2X TREADS W/ (3) 10d EACH STRINGER

STAIR LANDING CONNECTION

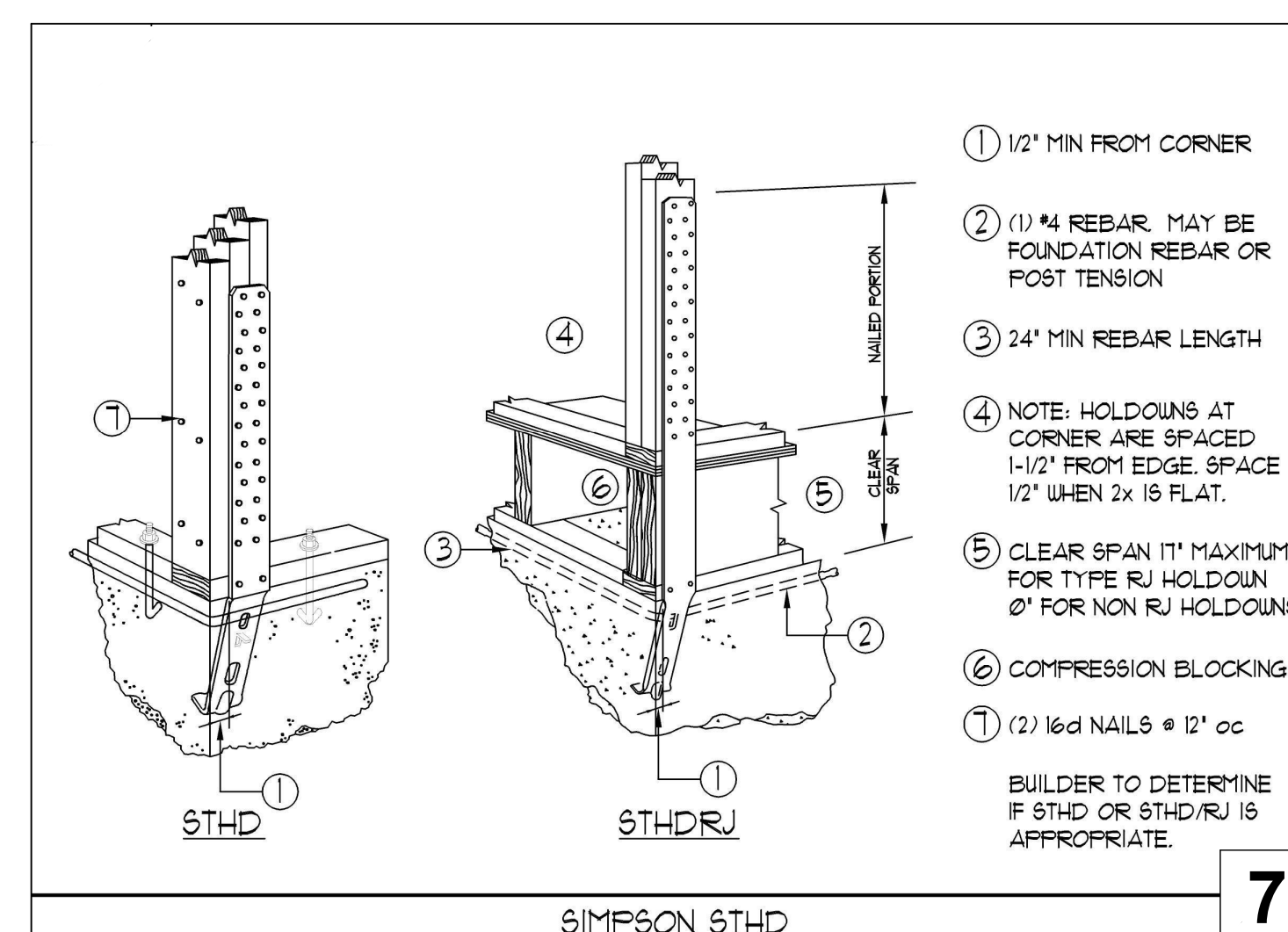
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- 1 FOOTING CORNER
- 2 STEM WALL CORNER
- 3 30" MINIMUM LAP @ SPLICE
- 4 VERTICAL REBAR NOT SHOWN FOR CLARITY

CONCRETE CORNERS

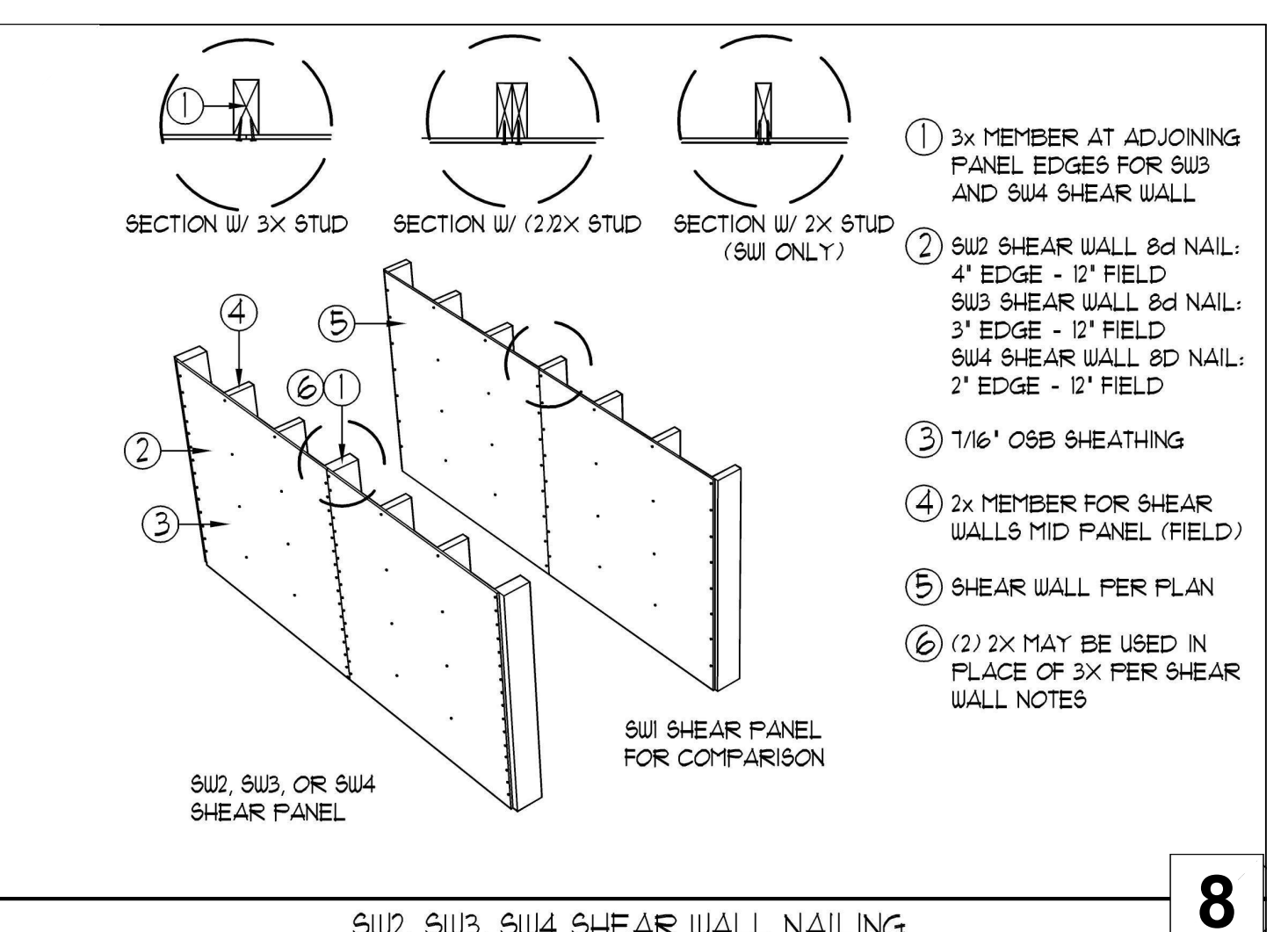
6



- 1 1/2" MIN FROM CORNER
- 2 (1) #4 REBAR. MAY BE FOUNDATION REBAR OR POST TENSION
- 3 24" MIN REBAR LENGTH
- 4 NOTE: HOLDDOWNS AT CORNER ARE SPACED 1-1/2" FROM EDGE. SPACE 1/2" WHEN 2X IS FLAT.
- 5 CLEAR SPAN 1" MAXIMUM FOR TYPE RJ HOLDDOWN 0" FOR NON RJ HOLDDOWNS
- 6 COMPRESSION BLOCKING
- 7 (2) 16d NAILS @ 12" oc

SIMPSON STHD

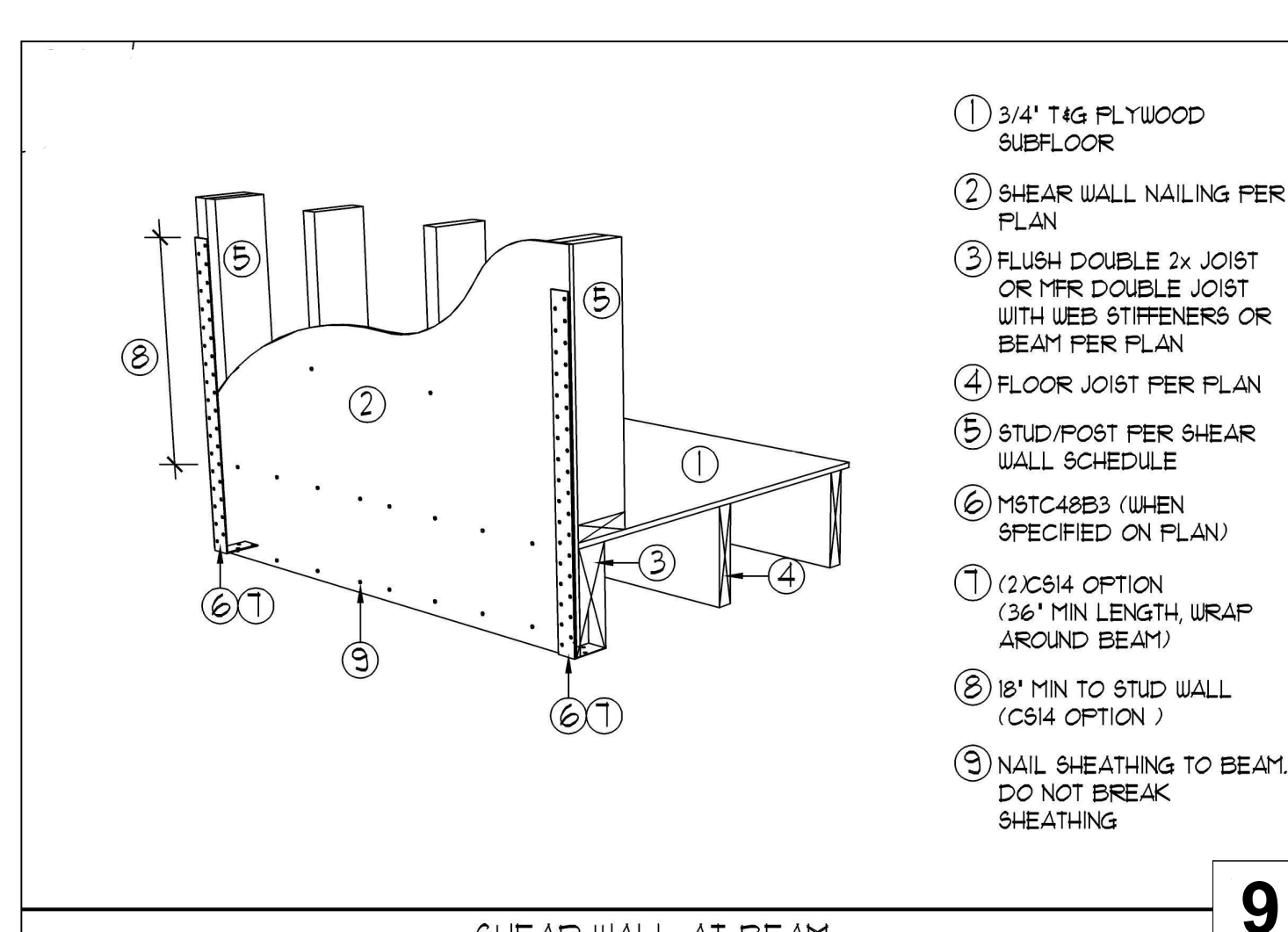
7



- 1 3X MEMBER AT ADJOINING PANEL EDGES FOR SW3 AND SW4 SHEAR WALL
- 2 SW2 SHEAR WALL 8d NAIL: 4" EDGE - 12" FIELD; SW3 SHEAR WALL 8d NAIL: 3" EDGE - 12" FIELD; SW4 SHEAR WALL 8d NAIL: 2" EDGE - 12" FIELD
- 3 1/16" OSB SHEATHING
- 4 2X MEMBER FOR SHEAR WALLS MID PANEL (FIELD)
- 5 SHEAR WALL PER PLAN
- 6 (2) 2X MAY BE USED IN PLACE OF 3X PER SHEAR WALL NOTES

SW2, SW3, SW4 SHEAR WALL NAILING

8

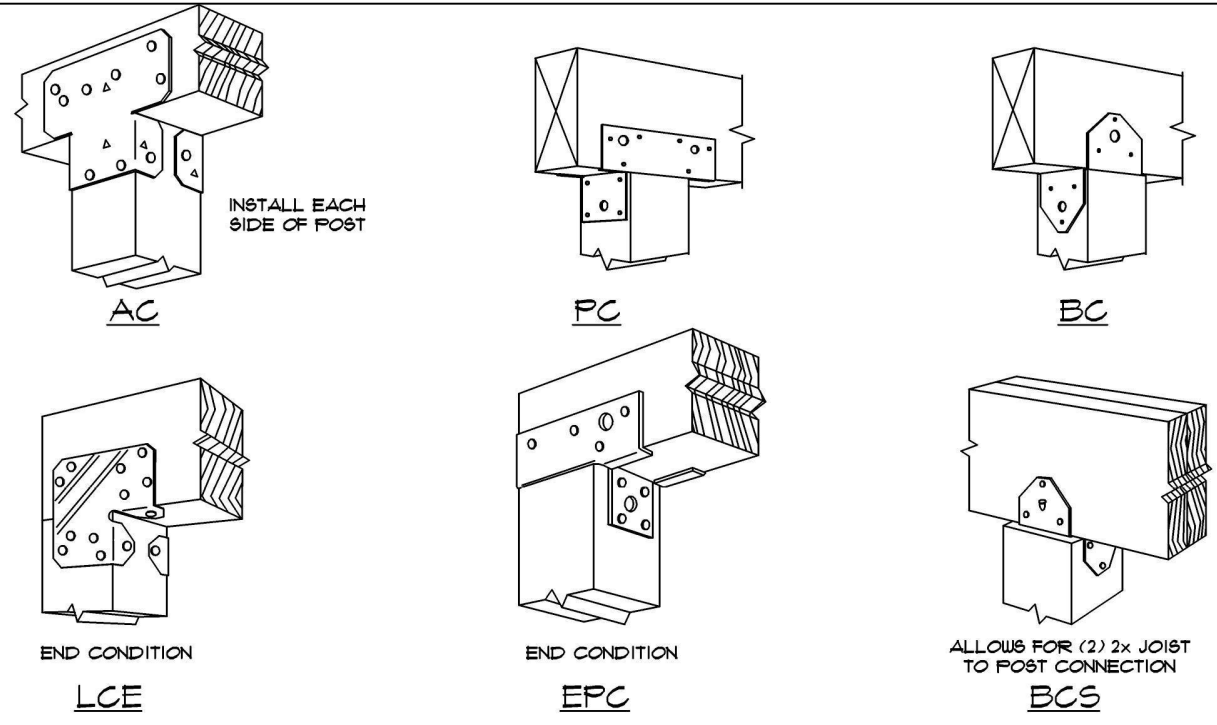


- 1 3/4" T&G PLYWOOD SUBFLOOR
- 2 SHEAR WALL NAILING PER PLAN
- 3 FLUSH DOUBLE 2X JOIST OR MFR DOUBLE JOIST WITH WEB STIFFENERS OR BEAM PER PLAN
- 4 FLOOR JOIST PER PLAN
- 5 STUD/POST PER SHEAR WALL SCHEDULE
- 6 MSTC48B3 (WHEN SPECIFIED ON PLAN)
- 7 (2) CS14 OPTION (36" MIN LENGTH WRAP AROUND BEAM)
- 8 18" MIN TO STUD WALL (CS14 OPTION)
- 9 NAIL SHEATHING TO BEAM. DO NOT BREAK SHEATHING

SHEAR WALL AT BEAM

9

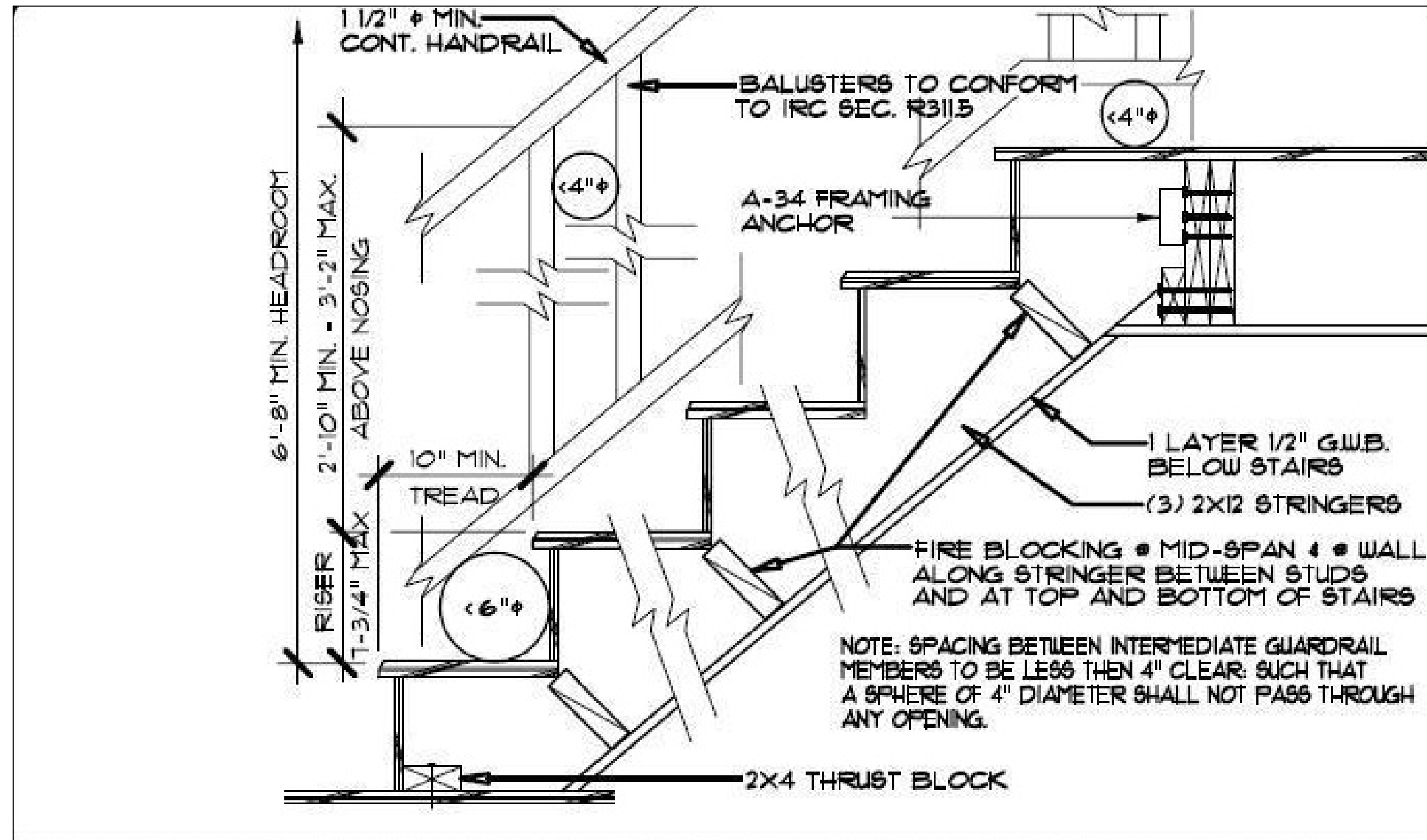




- ① WHERE POSTS AND BEAM OR GIRDER CONSTRUCTION IS USED TO SUPPORT FLOOR FRAMING, POSITIVE CONNECTION SHALL BE PROVIDED TO ENSURE AGAINST UPLIFT AND LATERAL DISPLACEMENT.
- ② ACE/LCE ELIMINATE THE NEED FOR RIGHT AND LEFTS, FOR USE W/ 4x OR 6x LUMBER
- ③ PC/EPC PROVIDES A CUSTOM CONNECTION FOR POST BEAM COMBINATIONS
- ④ PBC/BCS OFFER A LIGHT CAP CONNECTION

BEAM TO POST CONNECTIONS

10

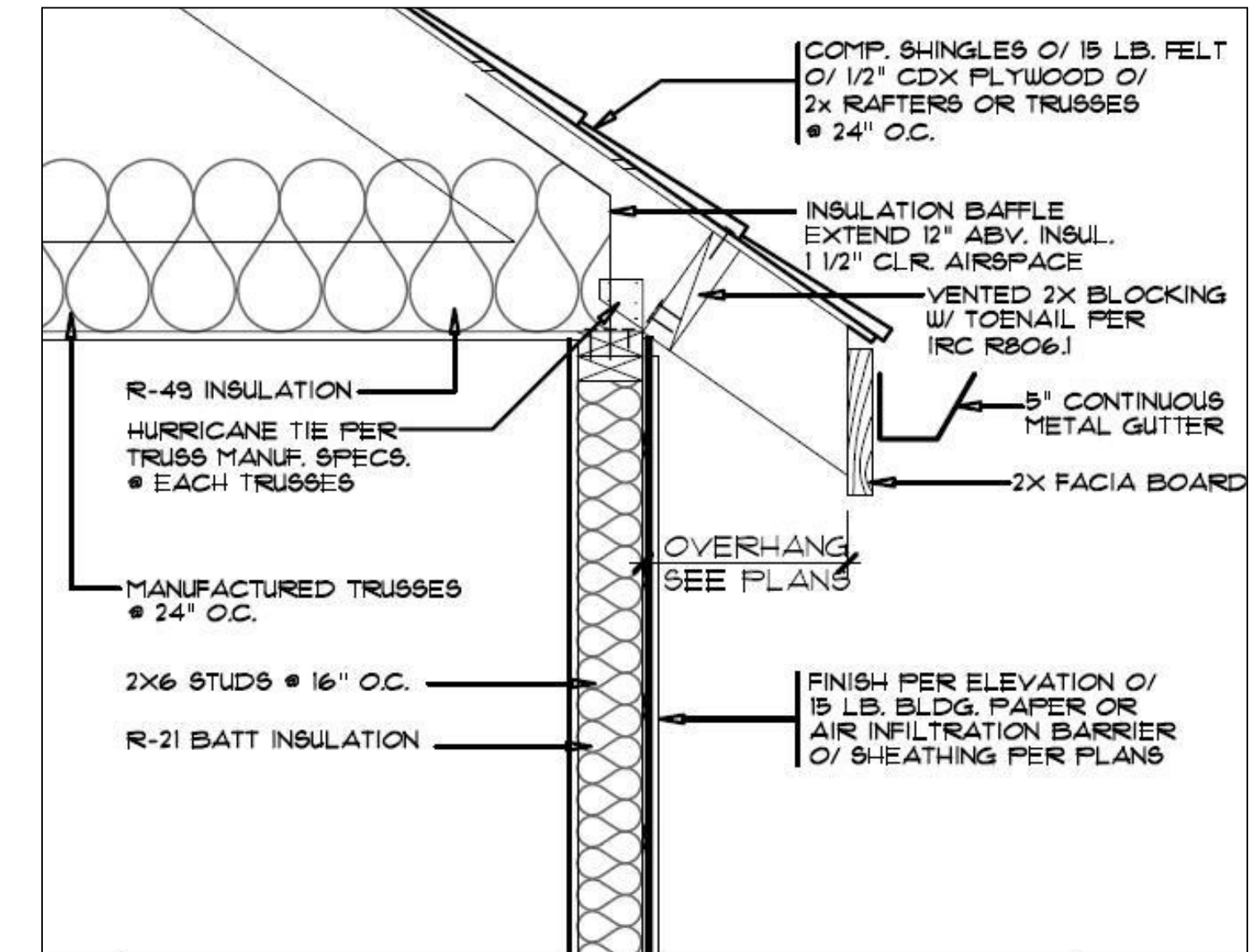


NOTE: SPACING BETWEEN INTERMEDIATE GUARDRAIL MEMBERS TO BE LESS THEN 4" CLEAR. SUCH THAT A SPHERE OF 4" DIAMETER SHALL NOT PASS THROUGH ANY OPENING.

11

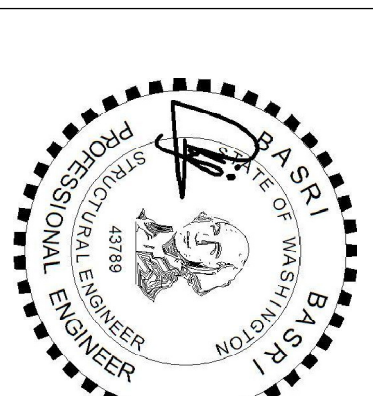
WOOD STAIR DETAIL

SCALE
NTS



14 TOP PLATE TO TRUSS CONNECTION

SCALE
NTS



TSO ADDITION

8802 SE 37TH ST
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98040

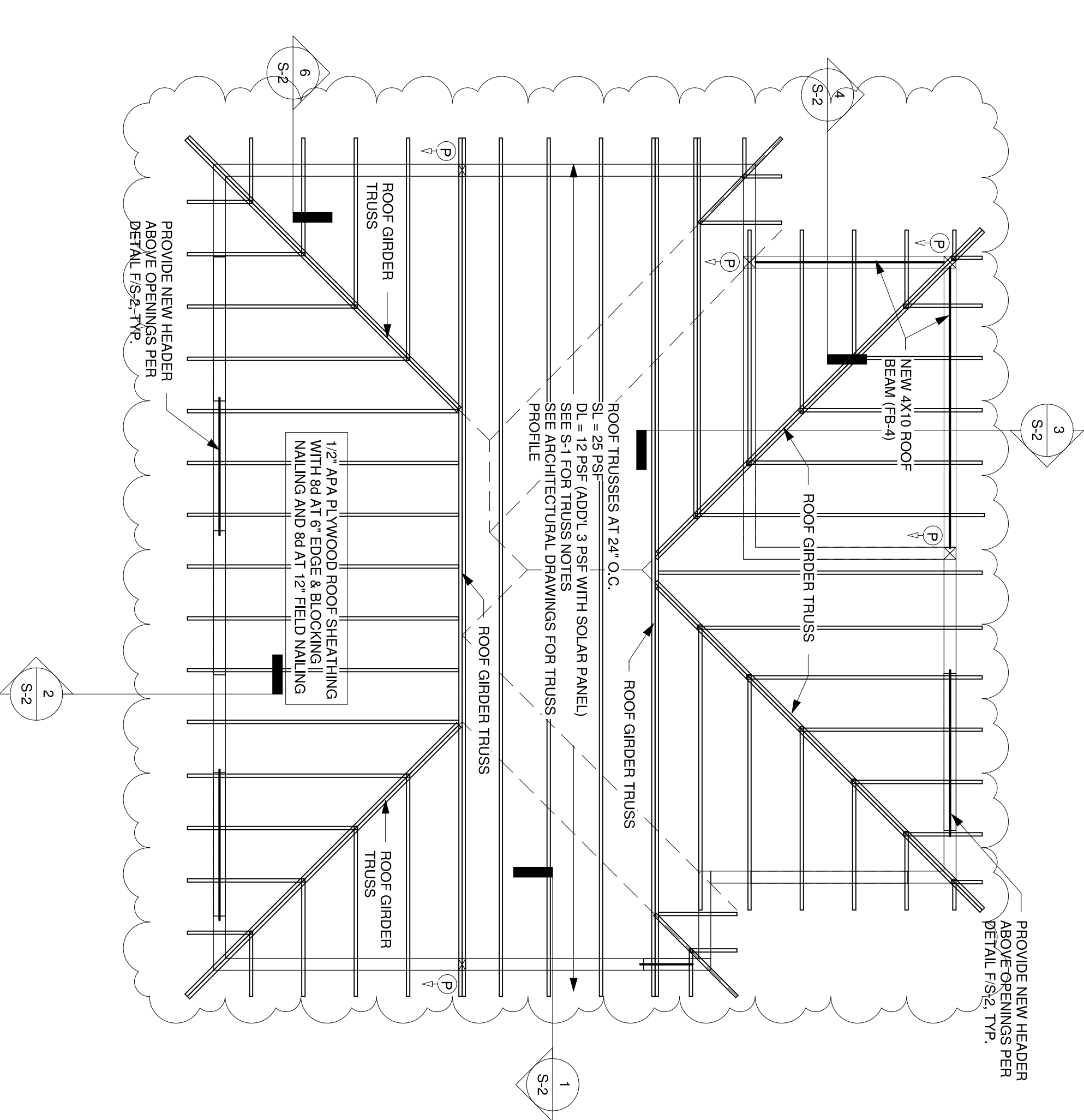
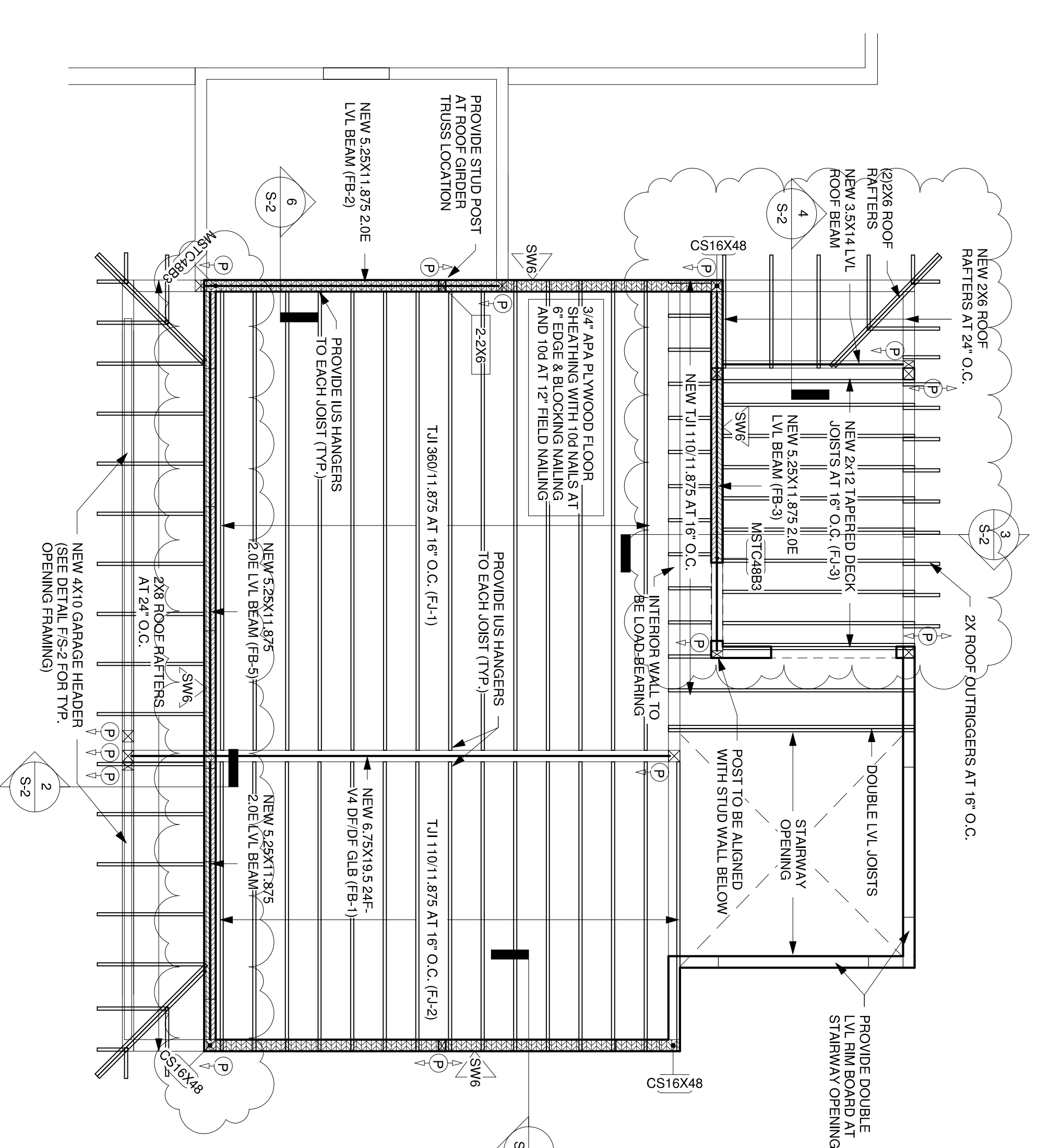
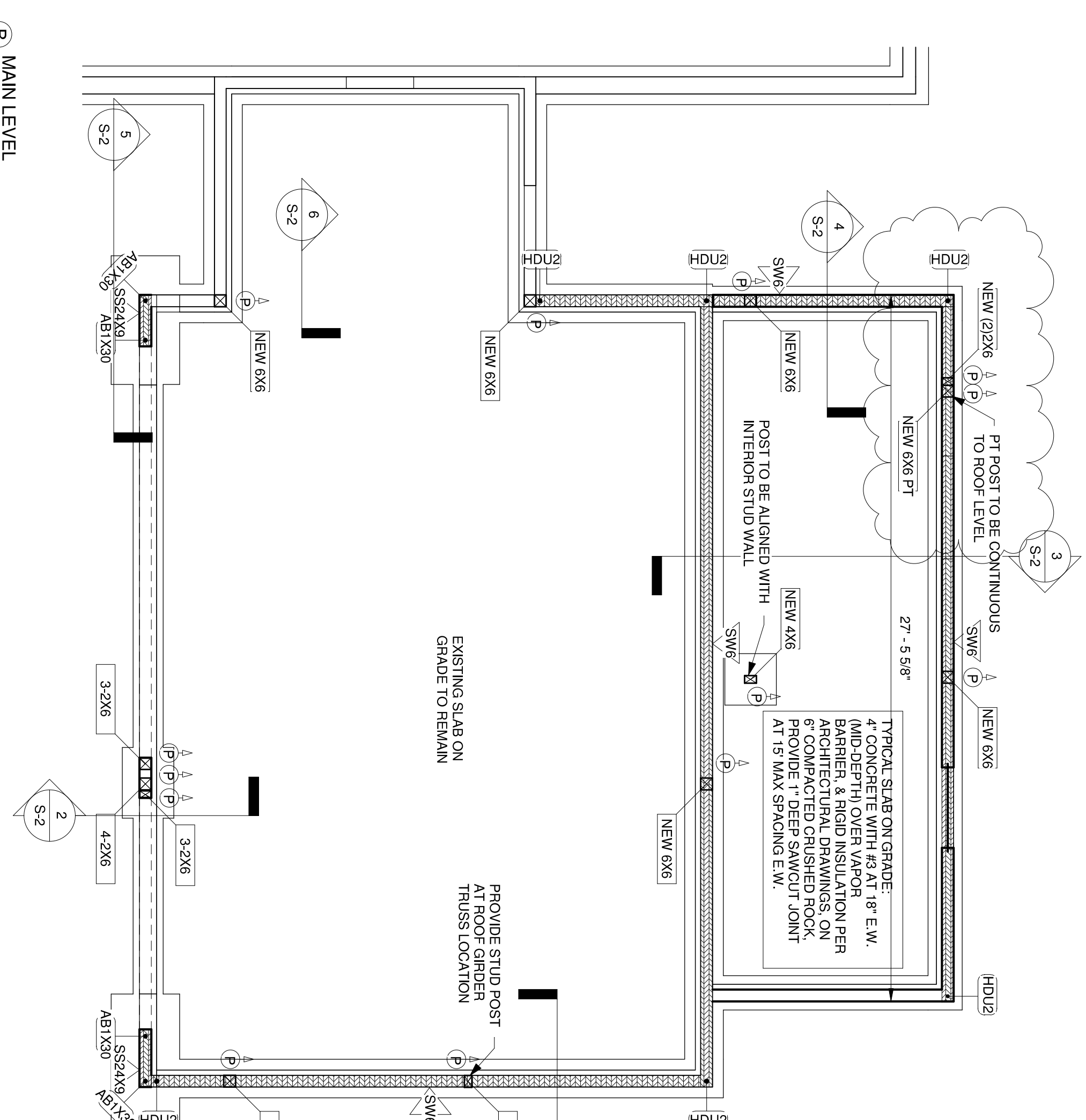
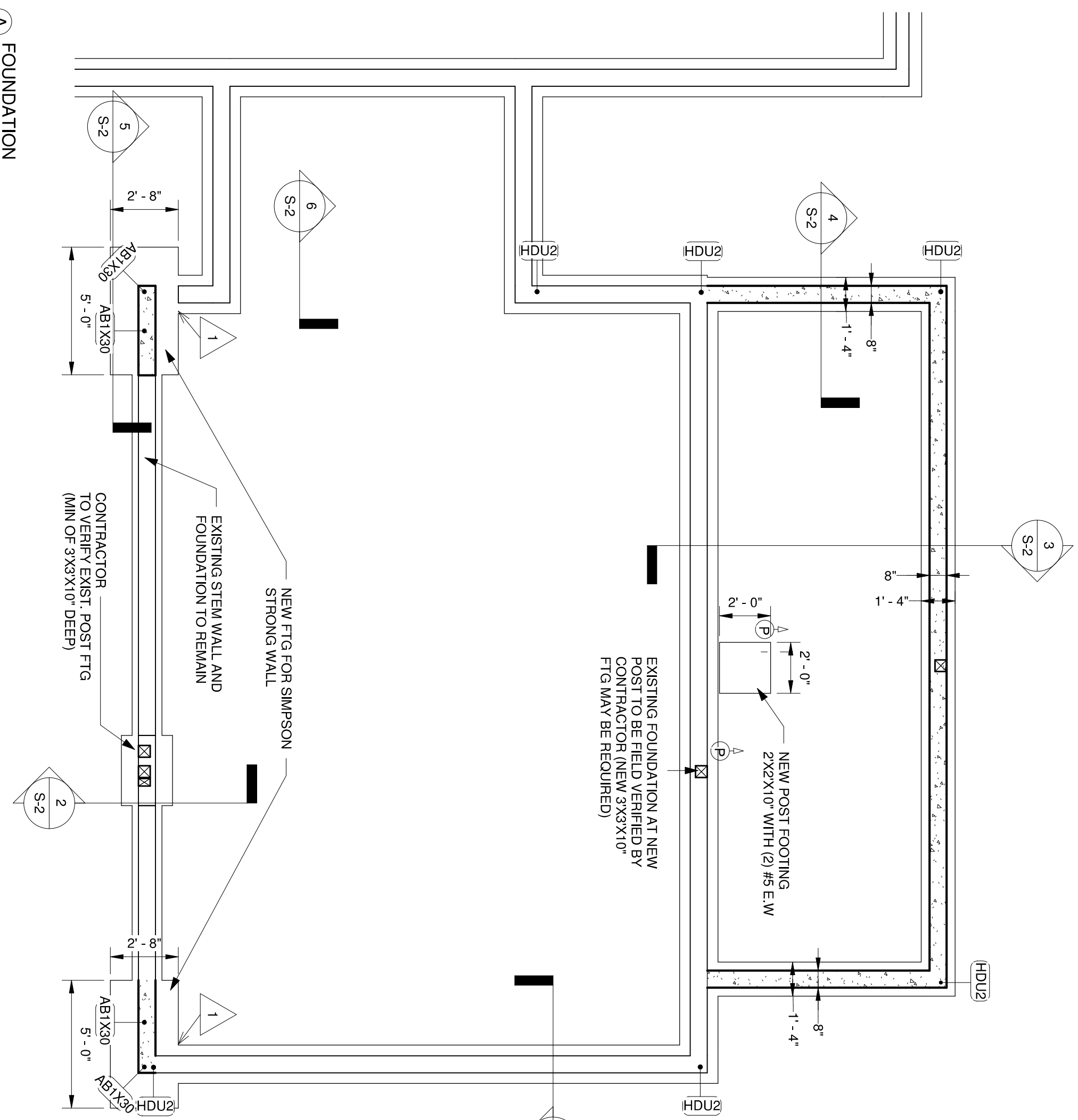
DRAWING INFO

ISSUE DATE	04-01-23	
ISSUED FOR PERMIT		
PROJECT NO.	22126	
ENGINEER	BB	
REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
1	03-20-23	Revision 1

FRAMING PLANS

FOOTING SCHEDULE

Mark Δ	TYPE	WIDTH / DIAMETER	LENGTH / DIAMETER	THICKNESS	COUNT	REINFORCEMENT
1	Footing-Rectangular	2' - 8"	5' - 0"	1' - 0"	2	3 - #4 E.W.



IMPORTANT NOTES ON DRAWING REVIEW, FIELD VERIFICATION, TEMPORARY SHORING AND WATERPROOFING:

- CONTRACTOR MUST REVIEW STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION & NOTIFY ENGINEER OF ANY DISCREPANCIES OR FIELD CONDITIONS IN COMPARISON WITH ARCHITECTURAL DRAWINGS.
- IN REMOVE/LIBRE/ROOF PROJECTS, CONTRACTOR MUST FIELD VERIFY & NOTIFY DESIGN TEAM/OWNER OF EXISTING MECHANICAL, PLUMBING, AND ELECTRICAL LINES THAT MAY INTERFERE WITH STRUCTURAL WORK PRIOR TO CONSTRUCTION.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING PROPER TEMPORARY SHORING PRIOR TO REMOVING ANY STRUCTURAL ELEMENTS.
- ENGINEER IS NOT RESPONSIBLE FOR WATERPROOFING SYSTEM OR DETAILS.
- CONTRACTOR/OWNER SHALL CONSULT WITH QUALIFIED PROFESSIONALS AS REQUIRED.

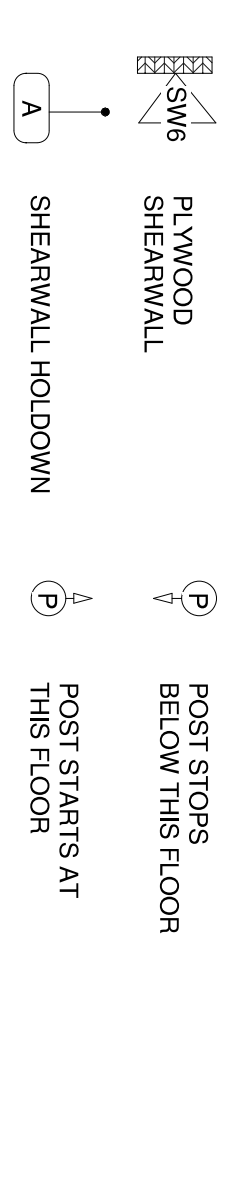
IMPORTANT NOTES ON FOUNDATION AND FRAMING:

- ALL FOOTINGS SHALL BEAR ON SUITABLE SOIL SURFACES MIN. OF MEDIUM DENSE NATIVE SOIL OR COMPACTED ROCK. NO SOFT OR ORGANIC MATERIALS.
- GEOTECHNICAL ENGINEER MAY BE REQUIRED TO ASSESS EXISTING SOIL CONDITIONS.
- FOR FRAMING LUMBER TYPES AND GRADES, AND CONCRETE MIX REQUIREMENTS PLEASE SEE S-0.
- FOR PLYWOOD/OSB SHEATHING SCHEDULE, PLEASE SEE S-X.
- PROVIDE (2) 2X6 OR (3) 2X4 STUD POSTS AT EACH END OF BEAMS, UNLESS NOTED OTHERWISE ON PLAN.
- SLAB ON GRADE SHALL BE MIN. 4" THICK WITH #3 AT 18" EACH WAY (AT MID-DEPTH) ON 6" COMPACTED CRUSHED ROCK SAWCUT JOINT (1" DEEP) AT 15' MAX. SPACING ON WEATHER. SHALL BE DONE WITHIN 4 TO 12 HOURS AFTER FINISHING, DEPENDING ON WEATHER.
- FLOOR SHEATHING SHALL BE 3/4" PLYWOOD OR OSB WITH 10d AT 6" NAILING AT EDGES & BLOCKING AND AT 12" AT FIELD.
- ROOF SHEATHING SHALL BE 1/2" PLYWOOD OR OSB WITH 8d AT 6" NAILING AT EDGES & BLOCKING AND AT 12" AT FIELD.

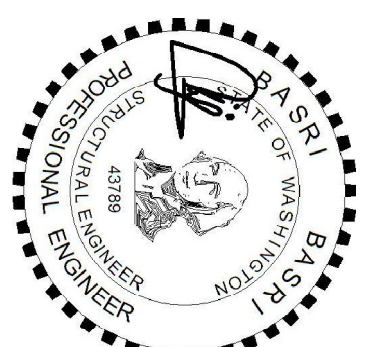
IMPORTANT NOTES ON TRUSS AND LUMBER PACKAGE/LUMBER PACKAGE REVIEW:

- TRUSS FRAMING LAYOUT SHOWN IS GENERAL CONCEPT ONLY. CONTRACTOR SHALL VERIFY PERMANENT BRACING AND CONNECTIONS FOR ENGINEER'S REVIEW AND ARCHITECTURAL DRAWINGS. LAYOUT SHOULD CONFORM TO BOTH STRUCTURAL AND ARCHITECT PRIOR TO TRUSS DESIGN WORK.
- DO NOT REMOVE OR ALTER ANY TRUSS MEMBER.
- DO NOT EXCEED TRUSS DESIGN LOADS.
- FLOOR/ROOF FRAMING LAYOUT AND CONNECTORS (SUCH AS LUMBER PACKAGE BY SUPPLIERS) MUST BE SUBMITTED FOR ENGINEER'S REVIEW PRIOR TO CONSTRUCTION.

FRAMING SYMBOLS:



LEGEND AND NOTES
1/4" = 1'-0"



TSO ADDITION

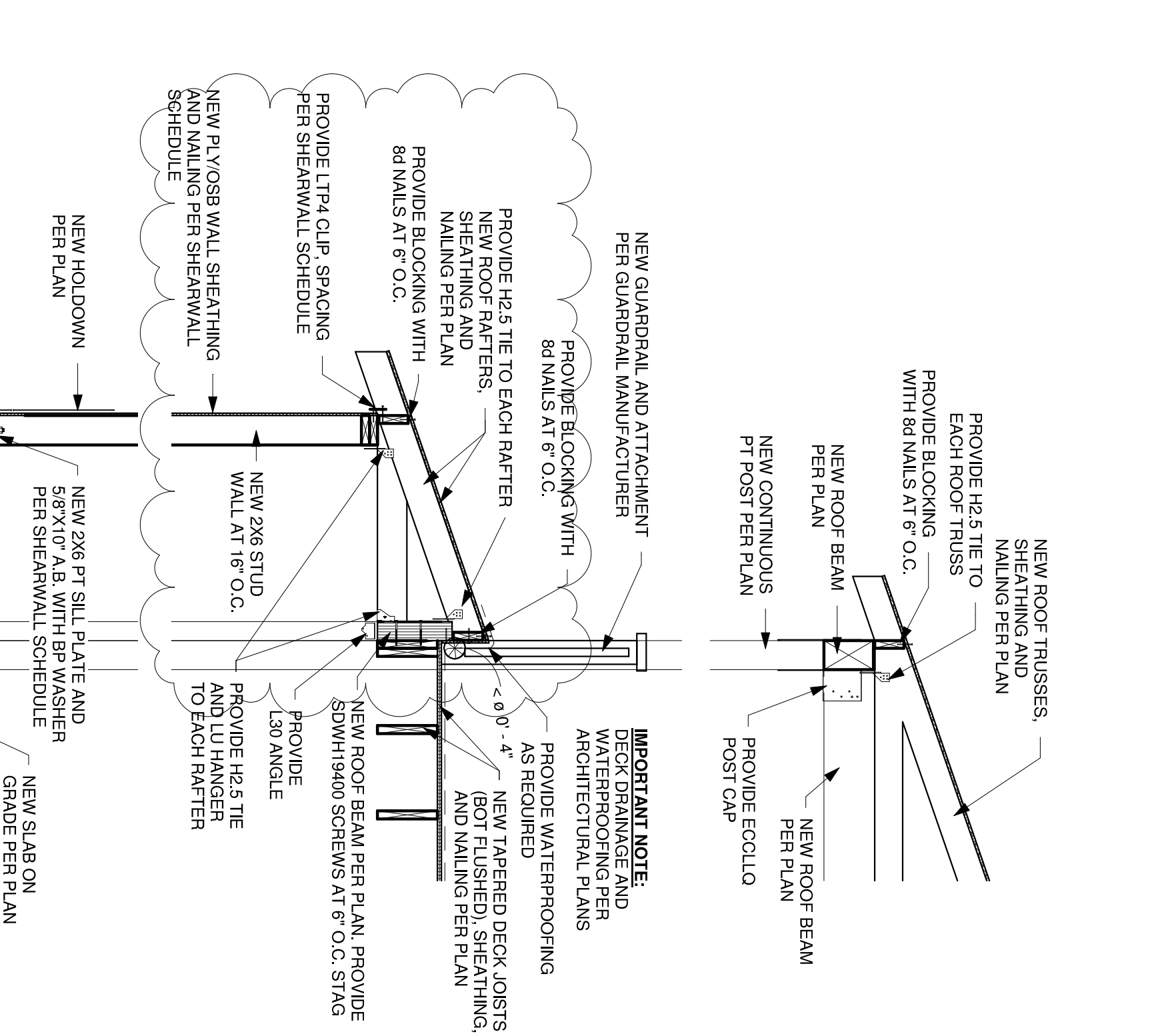
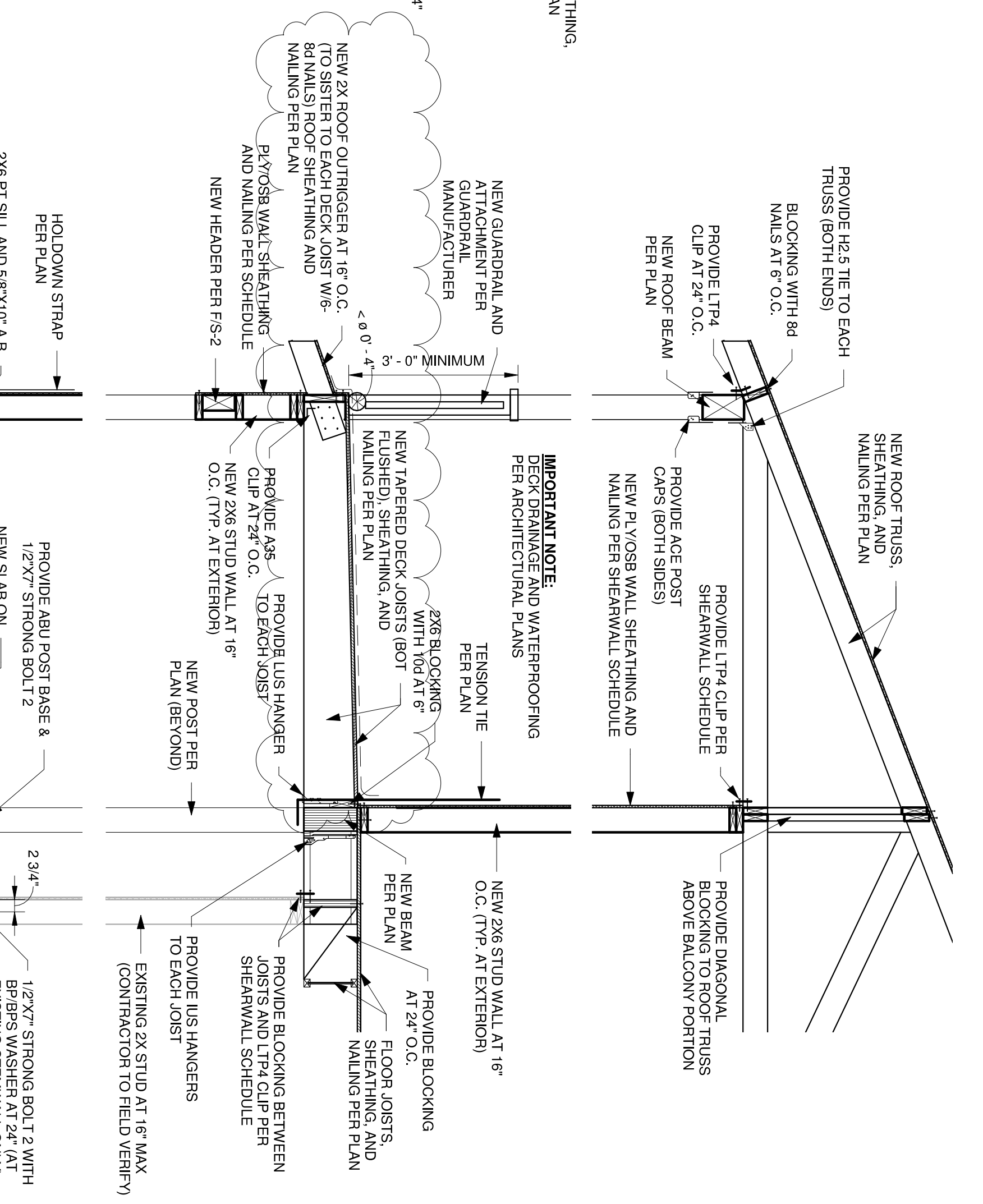
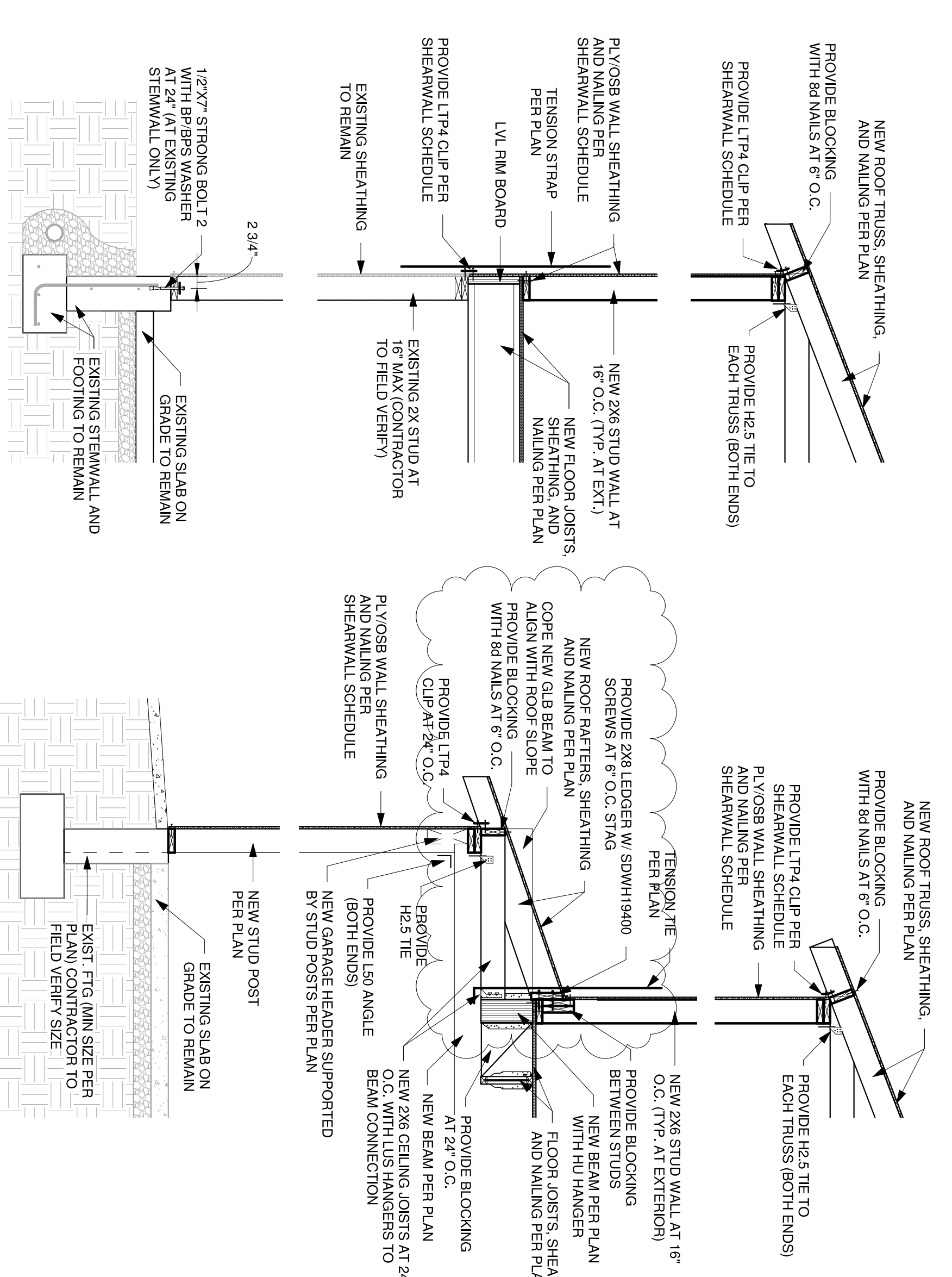
8802 SE 37TH ST
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98040

DRAWING INFO

ISSUE DATE	04-01-23	
ISSUED FOR PERMIT		
PROJECT NO.	22126	
ENGINEER	BB	
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NO.	DATE	DESCRIPTION
1	03-20-23	Revision 1

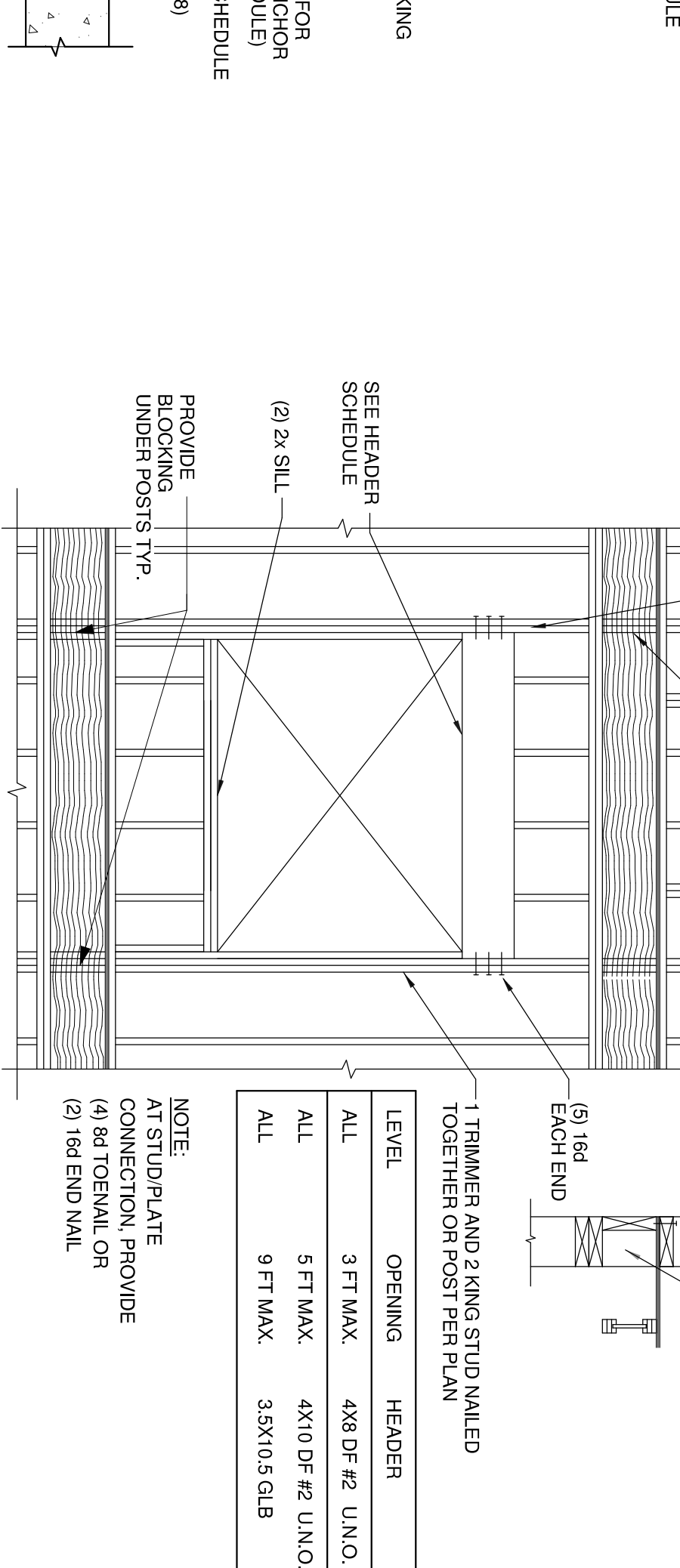
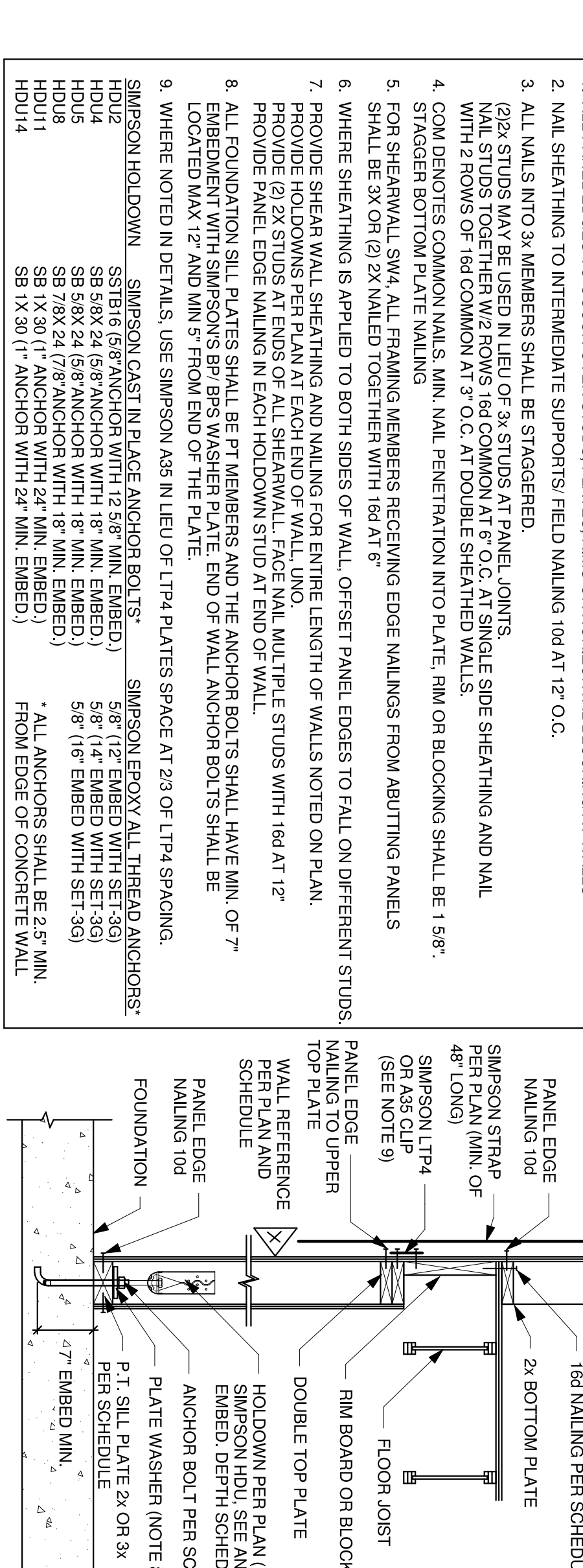
FRAMING DETAILS

S-2

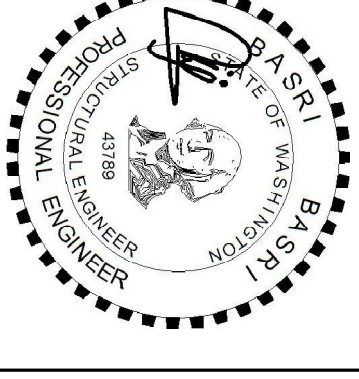


TYPE	PLYWOOD OR OSB SHEATHING (NOTE 7)	PANEL EDGE NAILING (NOTE 4)	PANEL EDGE STUDS AND BLAG	ANCHOR BOLTS AT SILL PLATE (NOTE 9)	TOP/SILL PLATE TO BLOCKING/ RIM (NOTE 9)	BOTTOM PLATE TO BLOCKING/ RIM (NOTE 4)	CAPACITY (LIFT)
SW6	15x2\"/>						

SHEARWALL SCHEDULE NOTES:
 1. ALL PANEL EDGES TO OCCUR OVER STUDS, PLATES, RIMS OR HORIZONTAL BLOCKING AT WALLS
 2. NAIL SHEATHING TO INTERMEDIATE SUPPORTS/ FIELD NAILING 10d AT 12\"/>



LEVEL	OPENING	HEADER
ALL	3 FT MAX	4x8 DF #2 U.N.O.
ALL	5 FT MAX	4x10 DF #2 U.N.O.
ALL	9 FT MAX	3x10x5 GLB



TSO ADDITION

8802 SE 37TH ST
MERCER ISLAND, WA
98040

DRAWING INFO

ISSUE DATE	04-01-23	
ISSUED FOR	PERMIT	
PROJECT NO.	22126	
ENGINEER	BB	
REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

WSW DETAILS

WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH ASD ALLOWABLE UPLIFT	WSW-48 ¹ ANCHOR BOLT			WSW-48 ¹ ANCHOR BOLT		
			(kips)	(lbs)	(kips)	(lbs)	(kips)	(lbs)
SEISMIC	CRACKED	STANDARD	27	9	16,100	33	12	11
		HIGH STRENGTH	43	15	33,000	51	17	12
	UNCRAKED	STANDARD	24	8	15,100	28	10	10
		HIGH STRENGTH	29	9	17,100	34	12	10
		STANDARD	40	13	22,500	47	16	12
		HIGH STRENGTH	47	14	25,500	54	18	13
WIND	CRACKED	STANDARD	20	7	14,400	28	8	8
		HIGH STRENGTH	27	9	17,400	37	11	9
	UNCRAKED	STANDARD	25	8	17,900	29	10	10
		HIGH STRENGTH	30	10	21,900	36	12	12
		STANDARD	34	12	24,900	36	12	12
		HIGH STRENGTH	37	13	27,100	43	15	15

NOTES:

- ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY.
- REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
- ANCHOR STRENGTH INDICES REQUIRED GRADE OF WSW-48 ANCHOR BOLT STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
- SEISMIC INDICES SEISMIC DESIGN CATEGORY C-F, DETACHED 1 AND 2 FAMILY DWELLINGS IN SOC C MAY USE WIND ANCHORAGE 2 SOLUTIONS, SEISMIC ANCHORAGE DESIGN CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14.
- WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SOC C.
- FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS.
- THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR D.

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS 6

MODEL	L OR L ₁ (in.)	SEISMIC ³		WIND ⁴		ASD ALLOWABLE SHEAR LOAD V (lbs.) ⁵
		SHEAR REINFORCEMENT	MIN. CURB/ STEMWALL WIDTH (in.)	SHEAR REINFORCEMENT	MIN. CURB/ STEMWALL WIDTH (in.)	
WSW12	10 1/2"	(1) #3 TIE	8"	SEE NOTE 6	6	1,035
WSW18	15	(1) #3 HARPIN	8"	(1) #3 HARPIN	6	UNCRACKED
WSW24	19	(2) #3 HARPIN	8"	(1) #3 HARPIN	6	CRACKED

NOTES:

- SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
- SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
- SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F, DETACHED 1 AND 2 FAMILY DWELLINGS IN SOC C.
- WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SOC C.
- WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD IS USED.
- USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
- #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

STRONG-WALL® WSW ANCHOR BOLTS

WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l _a
WSW12	WSW-48 ¹ & 224	3/8"	24"	20"
AND WSW18	WSW-48 ¹ & 245	3/8"	24"	20"
	WSW-48 ¹ & 310	3/8"	30"	26"
WSW18	WSW-48 ¹ & 285	3/8"	30"	26"
	WSW-48 ¹ & 324	3/8"	36"	32"
WSW24	WSW-48 ¹ & 345	1"	24"	20"
	WSW-48 ¹ & 445	1"	30"	26"
WSW24	WSW-48 ¹ & 330	1"	30"	26"
	WSW-48 ¹ & 385	1"	36"	32"

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE

HARPIN INSTALLATION
(GARAGE CURB SHOWN, OTHER FOOTING TYPES SIMILAR)

SECTION A

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

2500 PSI CONCRETE ANCHORAGE SOLUTIONS

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG-WALL® WSW ANCHOR BOLT

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

SINGLE STORY WSW ON CONCRETE

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STANDARD INSTALLATION

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STANDARD TOP CONNECTION

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

TRIM ZONE AND ALLOWABLE HOLES

ALLOWABLE SMALL HOLES
FACE AND EDGE DRILL ZONES

ALLOWABLE LARGE HOLES
IN ADDITION TO ALLOWABLE SMALL HOLES