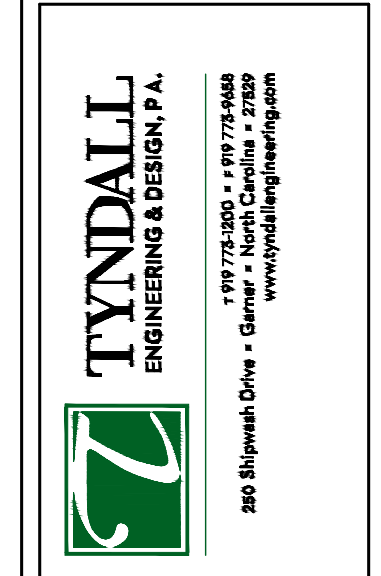


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SOUTHEASTERN INTERIORS  
BYRD RESIDENCE

**FOUNDATION PLAN**

Project #: 2101-010252  
Date: 09/22/2021  
Engineered by: AM  
DWG. Checked by: PAT  
Scale: SEE PLAN

No.	Date	Remarks

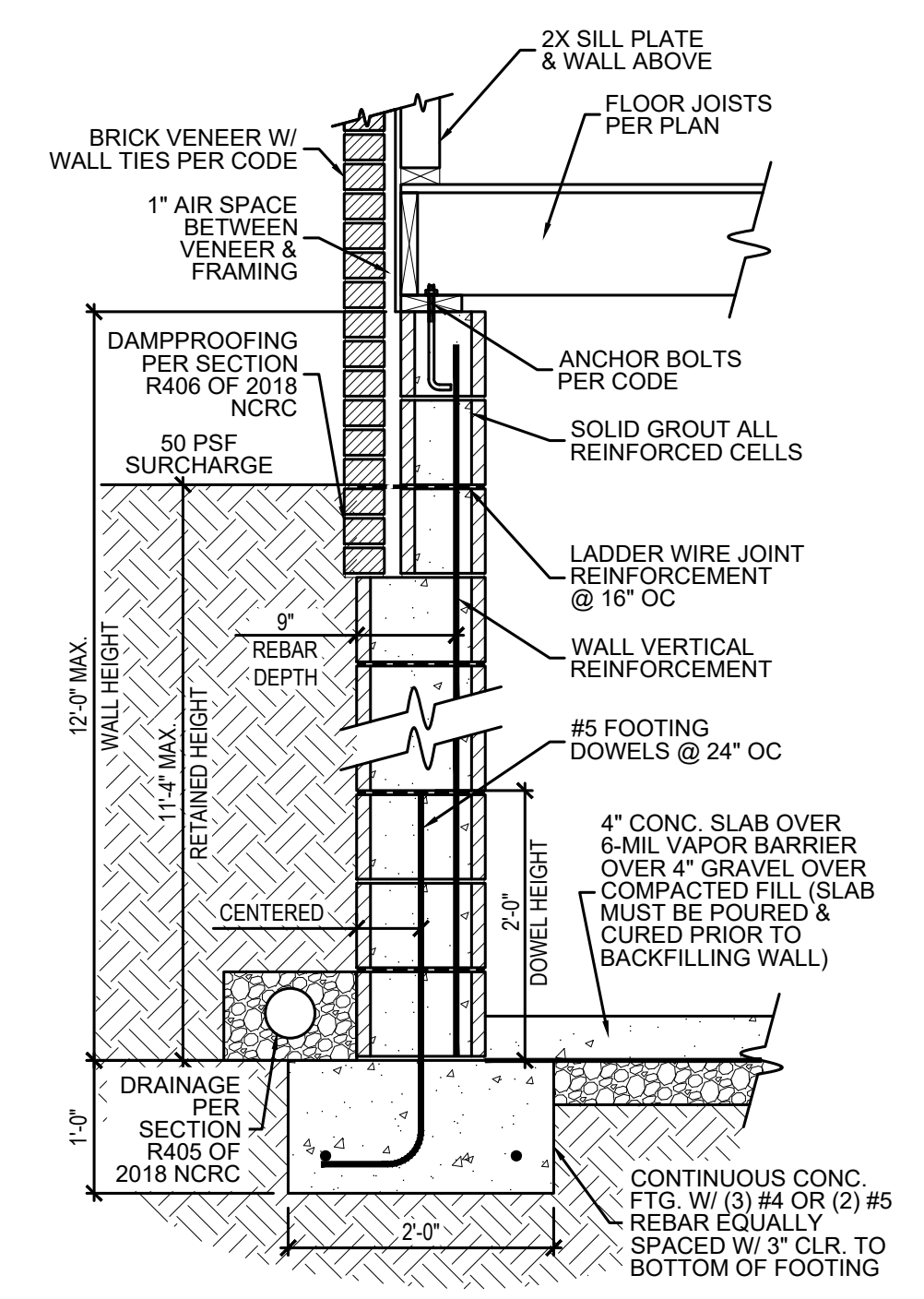
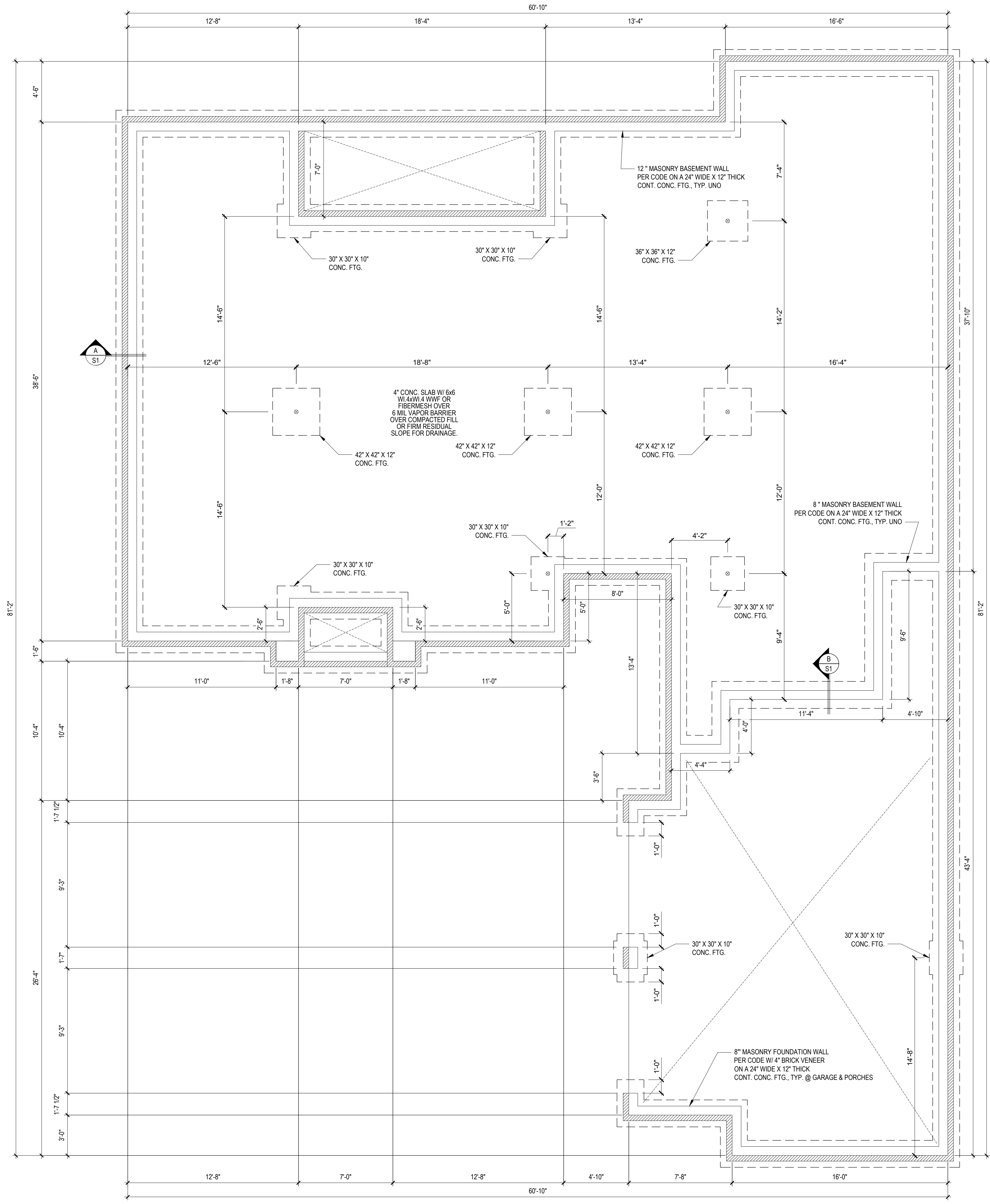
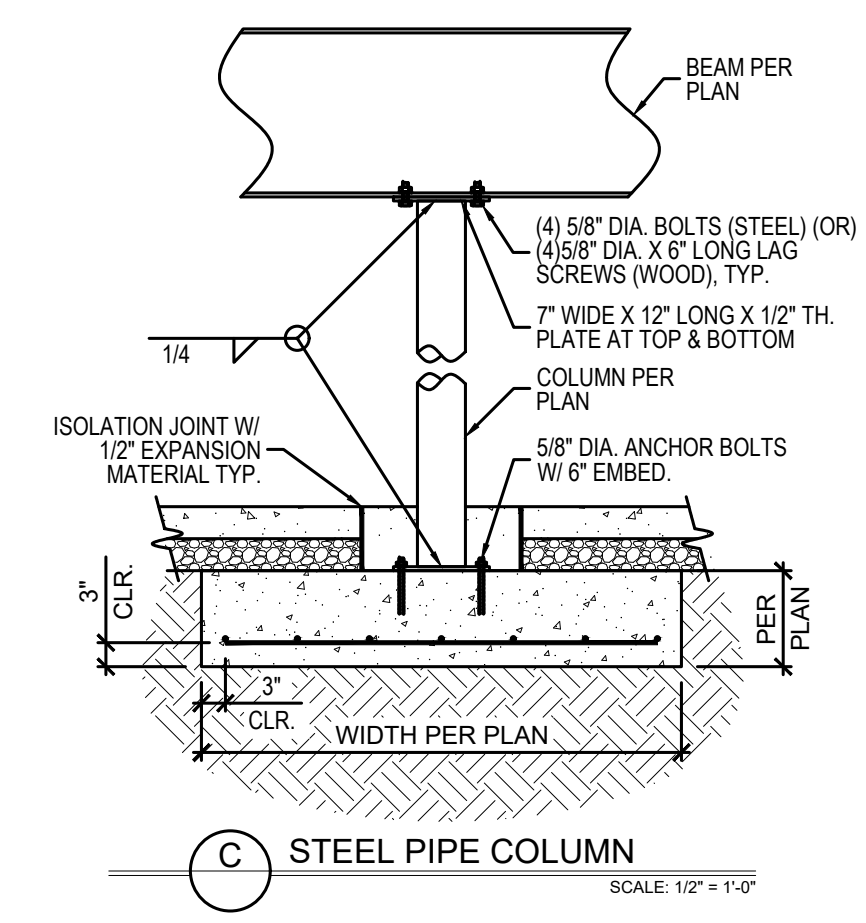
Sheet Number  
**S1**  
1 of 8

**DESIGN LOADS**

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A, B & C			

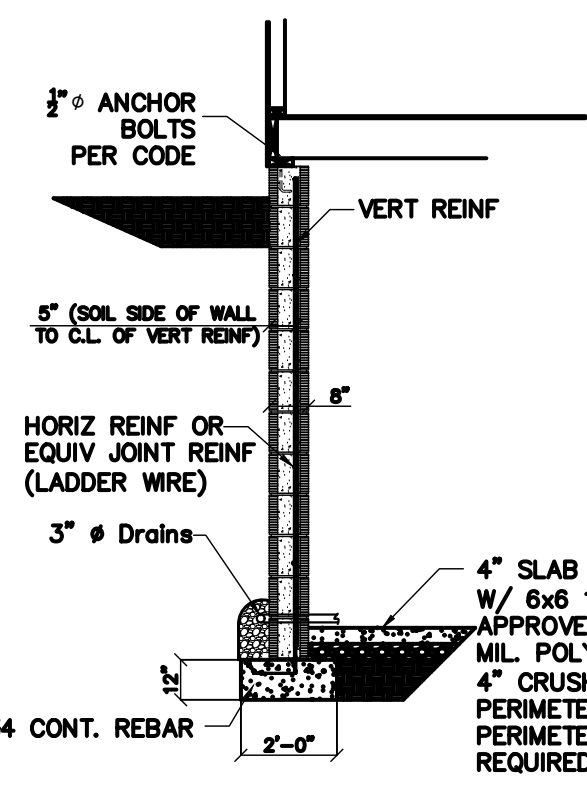
**STRUCTURAL NOTES:**

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- ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND F<sub>b</sub> = 2600 PSI, E = 1.9M PSI (I.E. LEVEL MICROLAM)
- ALL LVL LUMBER IS TO BE 1.55E (F<sub>b</sub> = 2325 PSI)
- ALL LOAD BEARING EXTERIOR WINDOW HEADERS ARE TO BE (2) 2x10 w/ (1) 2x4 JACK STUD (U.N.O.) AND KING STUDS PER TABLE R602.7.5. AND TOGETHER w/ (2) 10d NAILS @ 8" O.C., PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-8", MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6". OTHERWISE REFER TO TABLES R602.7(1) AND R602.7(2).
- ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLES R602.7(1) AND R602.7(2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO)
- REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'-0" IN HEIGHT.
- ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50 F<sub>y</sub> = 50 KSI MIN. (UNO)
- ALL EXTERIOR LUMBER TO BE #2 SYP PT
- ALL CONCRETE, f<sub>c</sub> = 3000 PSI MIN.
- PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 1/2" ANCHOR BOLTS SPACED AT MAXIMUM OF 6'-0" O.C. AND NOT MORE THAN 12" FROM THE CORNER. THERE SHALL BE A MINIMUM OF (2) BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
- PSI COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
- PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.4 OF THE 2018 IRC.
- MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
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- METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.



8' TO 10' WALL HEIGHT		10' TO 12' WALL HEIGHT	
RETAINED HEIGHT	WALL VERTICAL REINFORCEMENT	RETAINED HEIGHT	WALL VERTICAL REINFORCEMENT
0' TO 5'	#5 @ 32" OC	0' TO 6'	#5 @ 24" OC
5' TO 7'-6"	#5 @ 16" OC	6' TO 9'	#5 @ 8" OC
7'-6" TO 9'-4"	#5 @ 8" OC	9' TO 11'-4"	#6 @ 8" OC

**A** 12" CMU BASEMENT WALL W/ BRICK VENEER  
SCALE: 3/4" = 1'-0"



WALL HEIGHT	BASEMENT/GARAGE COMMON WALL	
	VERT REINF	HORIZ REINF
6'-8"	#5 @ 8" o.c. or #6 @ 16" o.c.	8" JOINT REINF (LADDER WIRE) @ 16" O.C., MAX
8'-10"	#6 @ 8" o.c.	8" JOINT REINF (LADDER WIRE) @ 16" O.C., MAX
10'-12"	N/A	N/A

**B** 8" MASONRY BASEMENT WALL DETAIL  
NO SCALE

**FOUNDATION PLAN**  
1/4" = 1'-0"

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CLIENT: SOUTHEASTERN INTERIORS  
 PROJECT: BYRD RESIDENCE

**BASEMENT HEADER  
 1ST FLOOR FRAMING**

Project #: 2101-010252  
 Date: 09/22/2021  
 Engineer: AM  
 DWG. Checked By: PAT  
 Scale: SEE PLAN

**REVISIONS**

No.	Date	Remarks

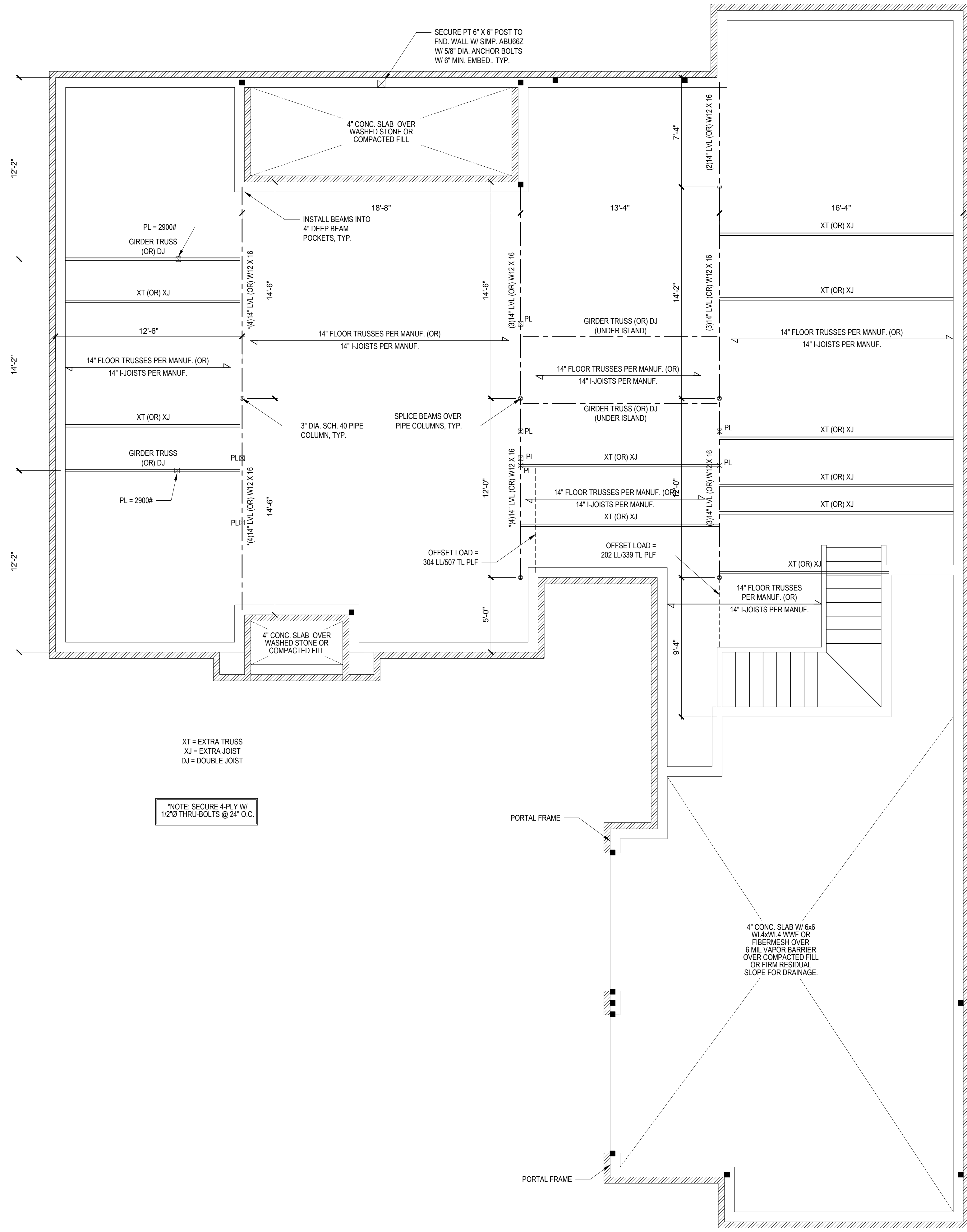
Sheet Number  
**S2**  
 2 of 8

**DESIGN LOADS**

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ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A, B & C			

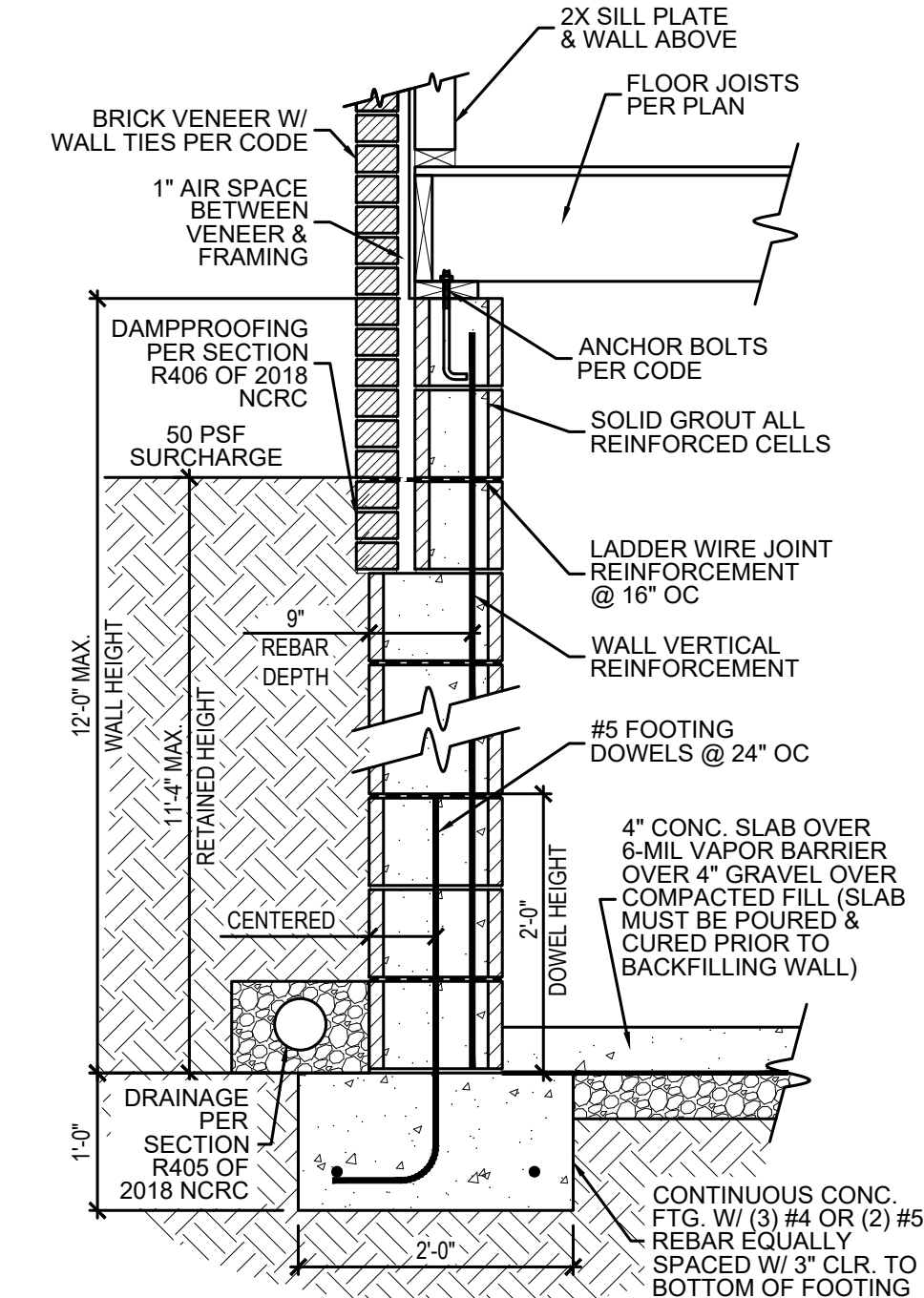
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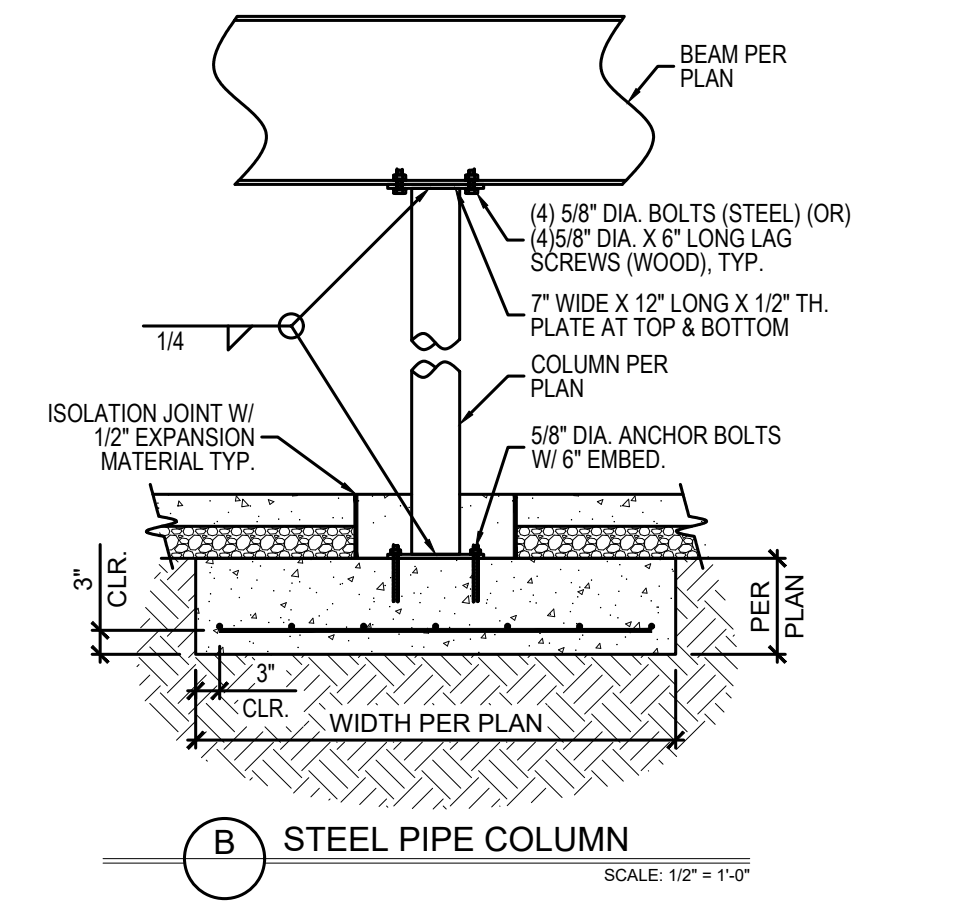
XT = EXTRA TRUSS  
 XJ = EXTRA JOIST  
 DJ = DOUBLE JOIST

NOTE: SECURE 4-PLY W/ 1/2" THRU-BOLTS @ 24" O.C.



8' TO 10' WALL HEIGHT		10' TO 12' WALL HEIGHT	
RETAINED HEIGHT	WALL VERTICAL REINFORCEMENT	RETAINED HEIGHT	WALL VERTICAL REINFORCEMENT
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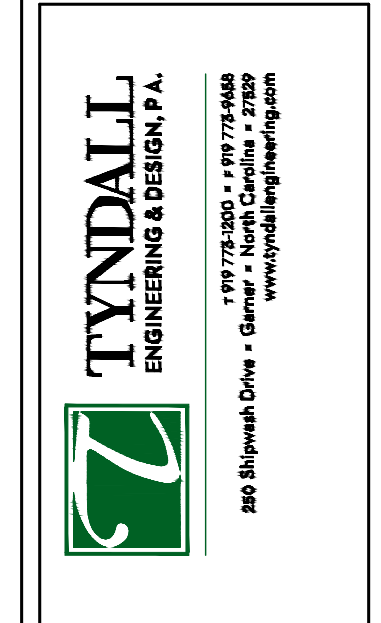
**A 12" CMU BASEMENT WALL W/ BRICK VENEER**  
 SCALE: 3/4" = 1'-0"



**BASEMENT PLAN**  
 1/4" = 1'-0"

FILENAME: Z:\RESIDENTIAL\2021\STRUCTURAL\PROJECTS\2101-010252 - MICHAEL WEAGER - PLAN (8/22/2021)\DWG\2101-010252\_LEANS SWAGD BR PRELIM TYNDALL LAST PLOT DATE: 9/22/2021 3:53 PM

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CLIENT: SOUTHEASTERN INTERIORS  
 PROJECT: BYRD RESIDENCE

**1ST FLOOR HEADER  
 2ND FLOOR FRAMING**

Project #: 2101-010252  
 Date: 09/22/2021  
 Engineered by: AM  
 DWG. Checked by: PAT  
 Scale: SEE PLAN

REVISIONS		
No.	Date	Remarks

Sheet Number  
**S3**  
 3 of 8

**DESIGN LOADS**

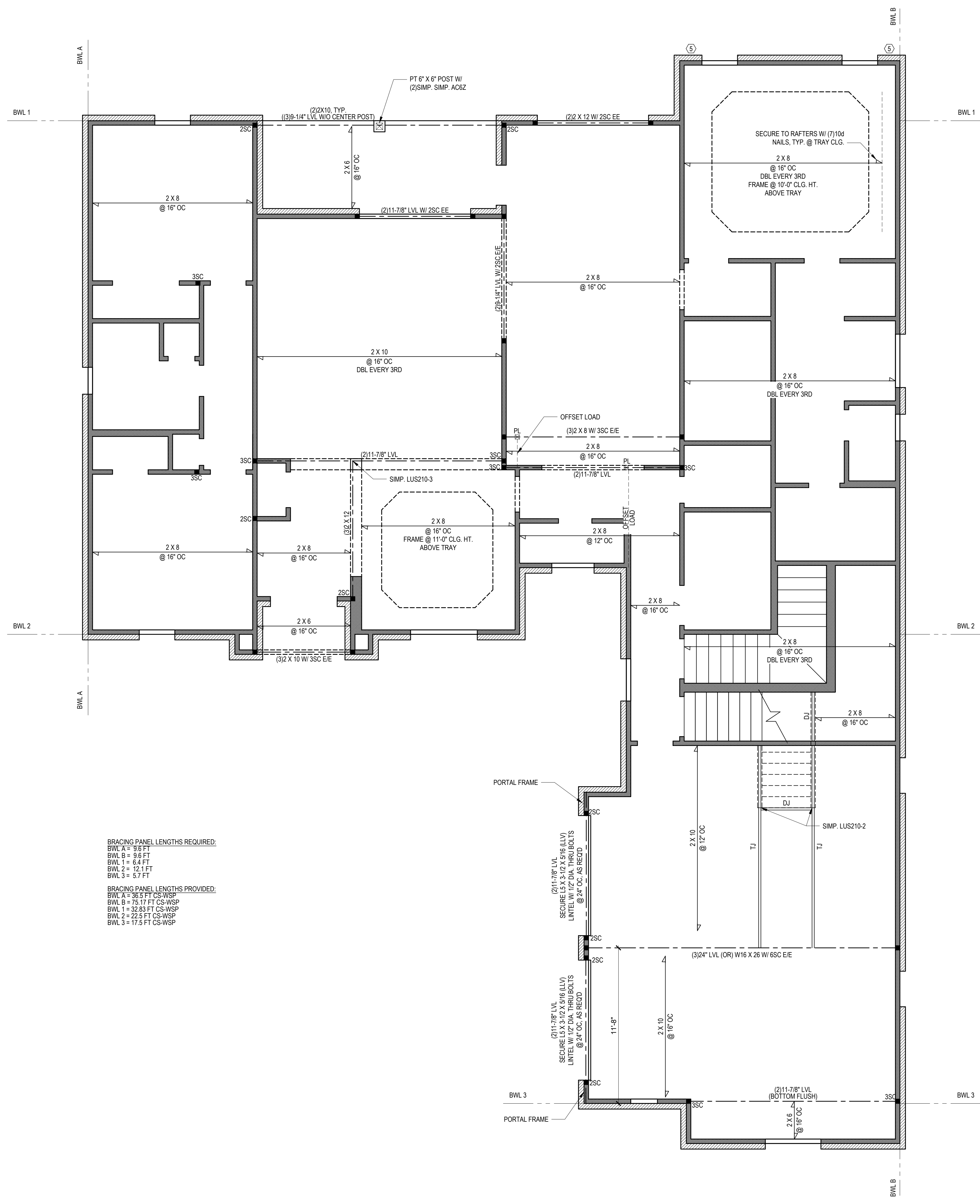
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ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A, B & C			

**STRUCTURAL NOTES:**

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- ALL LUMBER SHALL BE SYP #2 (UNO)  
 ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND F<sub>b</sub> = 2600 PSI, E = 1.9M PSI  
 (I.E. LEVEL MICROLAM)  
 ALL LSL LUMBER IS TO BE 1.55E (F<sub>b</sub> = 2325 PSI)  
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- METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

**STRUCTURAL SHEATHING NOTES**

- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NCRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO)
  - 1/2" GYPSUM BOARD (GB) MINIMUM LENGTH OF 8'-0" (ISOLATED PANELS) OR 4'-0" (CONTINUOUS SHEATHING); SECURE w/ 5d COOLER NAILS (OR EQUAL PER TABLE R702.3.5) SPACED @ 7" O.C. AT PANEL EDGES, INCLUDING TOP AND BOTTOM PLATES & 7" O.C. AT INTERMEDIATE SUPPORTS
  - 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE w/ 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS
- EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION R602.10.3 (UNO)
- ALL SHEATHABLE SURFACES OF EXTERIOR WALLS (INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS) SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANEL (WSP) SHEATHING WITH A MINIMUM THICKNESS OF 3/8". SHEATHING SHALL BE SECURED WITH MINIMUM 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND SPACED AT 12" O.C. AT INTERMEDIATE SUPPORTS. MINIMUM BRACED WALL PANEL LENGTHS WITH CS-WSP METHOD SHALL BE AS FOLLOWS:
  - 24" ADJACENT TO OPENINGS NOT MORE THAN 67% OF WALL HEIGHT
  - 30" ADJACENT TO OPENINGS GREATER THAN 67% AND LESS THAN 85% OF WALL HEIGHT.
  - 48" FOR OPENINGS GREATER THAN 85% OF WALL HEIGHT
- SHEATH INTERIOR & EXTERIOR
- FOR CS-WSP METHOD, A MINIMUM 24" BRACED WALL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF A BRACED WALL LINE IN ACCORDANCE WITH FIGURE R602.10.3(4). IN LIEU OF A CORNER RETURN, EITHER A MIN. 48" BRACED WALL PANEL SHALL BE PROVIDED AT THE CORNER OR A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW.
- MINIMUM 800# HOLD-DOWN DEVICE



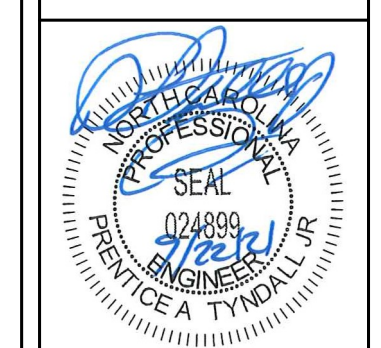
**BRACING PANEL LENGTHS REQUIRED:**  
 BWL A = 9.6 FT  
 BWL B = 9.6 FT  
 BWL 1 = 6.4 FT  
 BWL 2 = 12.1 FT  
 BWL 3 = 5.7 FT

**BRACING PANEL LENGTHS PROVIDED:**  
 BWL A = 36.5 FT CS-WSP  
 BWL B = 15.1 FT CS-WSP  
 BWL 1 = 32.83 FT CS-WSP  
 BWL 2 = 22.5 FT CS-WSP  
 BWL 3 = 17.5 FT CS-WSP

**FIRST FLOOR PLAN**  
 1/4" = 1'-0"

FILENAME: Z:\RESIDENTIAL\ENR\2021\STRUCTURAL\PROJECTS\2101-010252 - NEWELL HEADR - PLAN (88-220V) (4/10/21) - 010252\_LEWIS SWAGD BR - PRENICE TYNDALL LAST PLOT DATE: 09/22/2021 3:53 PM

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 919.775.3300 • 919.775.4444  
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Client: **SOUTHEASTERN INTERIORS**  
 Project: **BYRD RESIDENCE**

**2ND FLOOR HEADER  
 2ND FLR. CLG. FRAMING**

Project #: 2101-010252  
 Date: 09/22/2021  
 Engineered By: AM  
 DWG. Checked By: PAT  
 Scale: SEE PLAN

REVISIONS		
No.	Date	Remarks

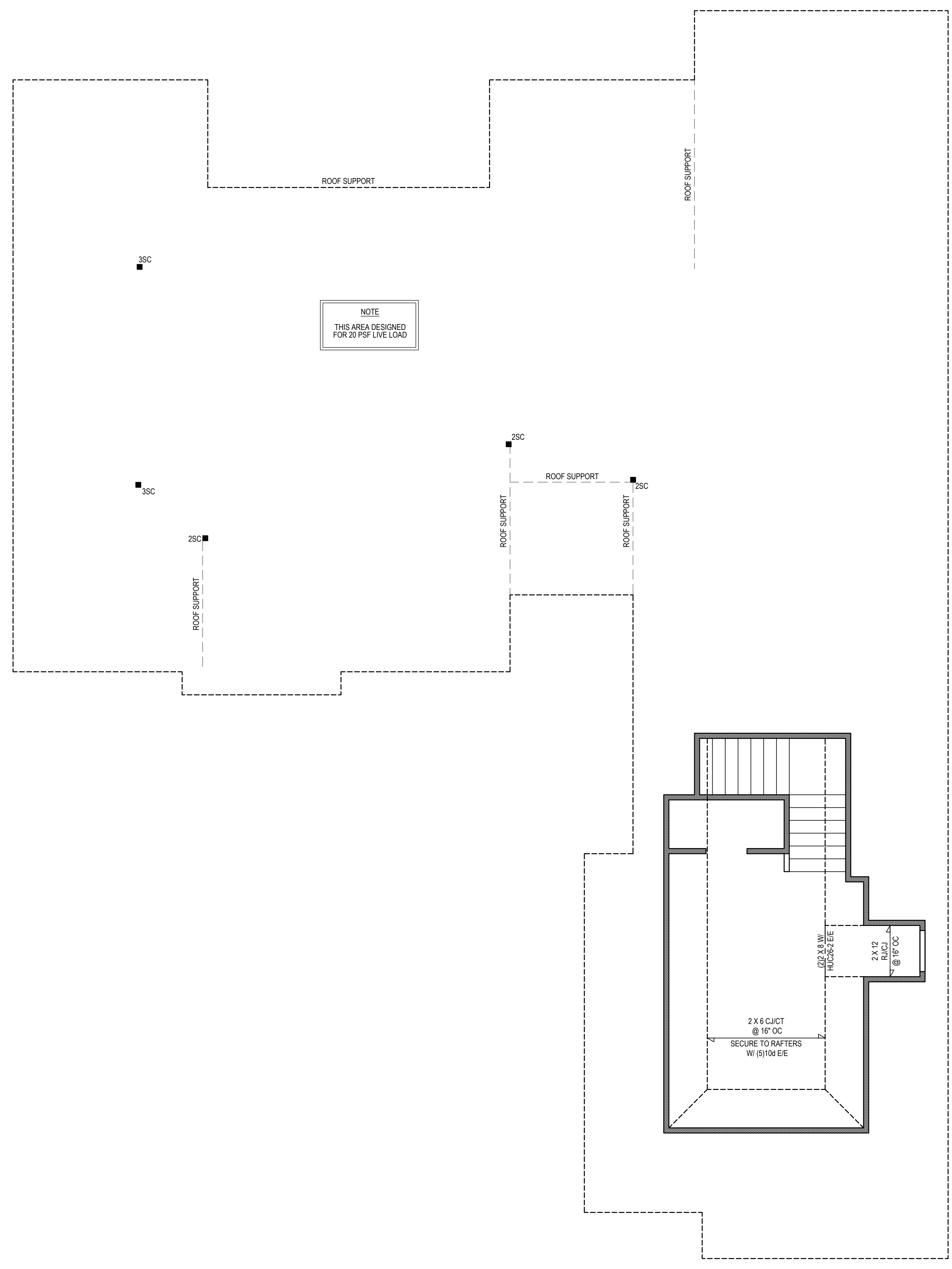
Sheet Number  
**S4**  
 4 of 8

**DESIGN LOADS**

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
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**STRUCTURAL NOTES:**

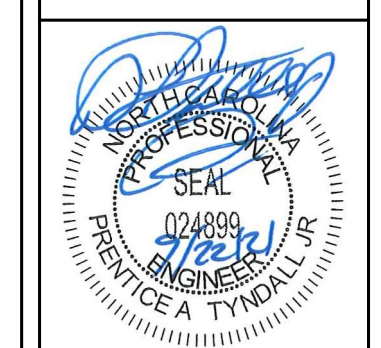
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- ALL CONCRETE, f<sub>c</sub> = 3000 PSI MIN.
- PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 1/2" Ø ANCHOR BOLTS SPACED AT MAXIMUM OF 6'-0" O.C. AND NOT MORE THAN 12" FROM THE CORNER. THERE SHALL BE A MINIMUM OF (2) BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
- PSI COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (U.N.O.)
- PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.4 OF THE 2018 IRC.
- MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.



**SECOND FLOOR PLAN**  
 1/4" = 1'-0"

FILENAME: Z:\RESIDENTIAL\ENR\2021 STRUCTURAL PROJECTS\2101-010252 - MICHEL WEAVER - PLAN (8)-2020\DWG\101-010252\_LEANS SWAG 06 - PRELIM TYNDALL LAST PLOT DATE: 09/22/2021 3:53 PM

\*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.  
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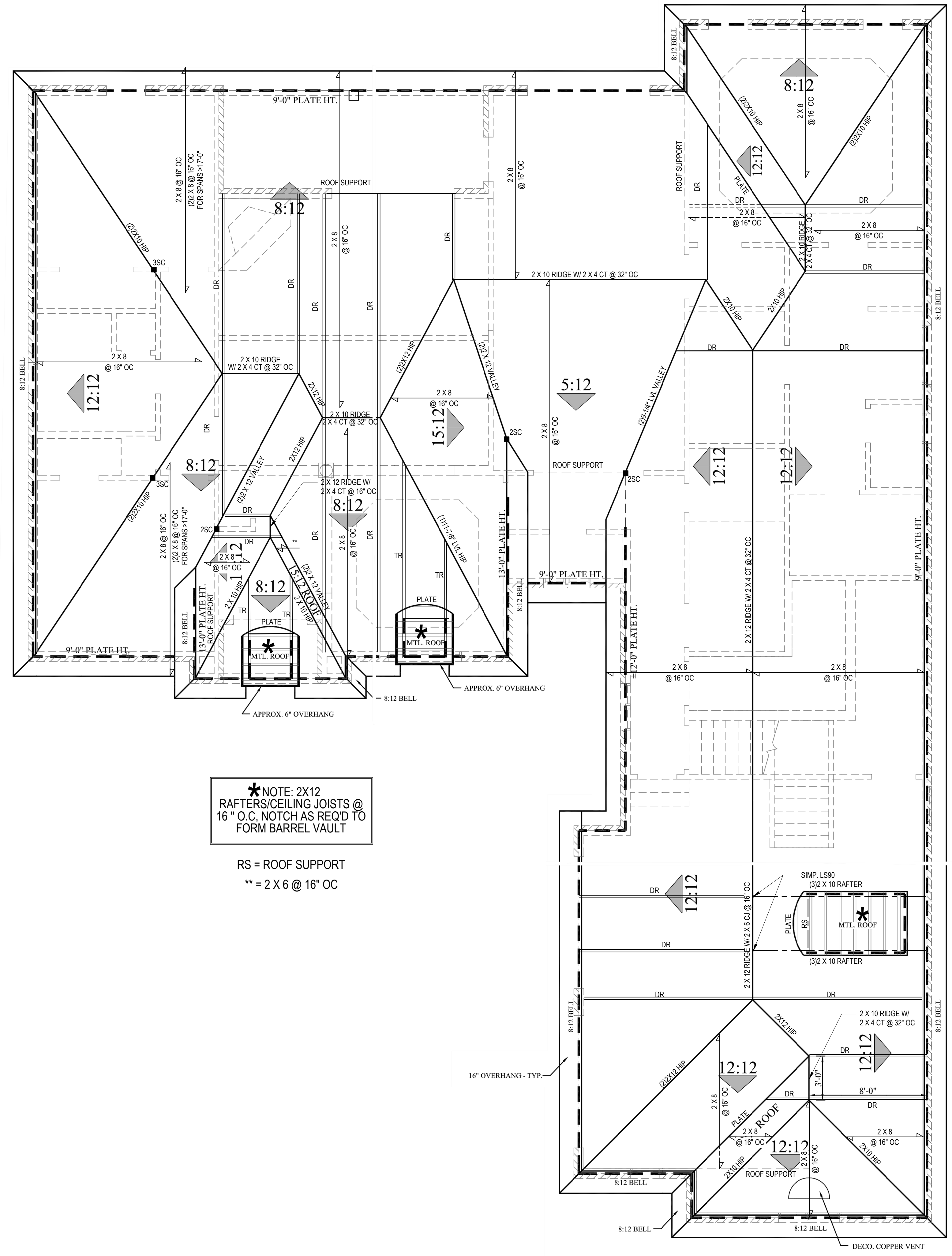
Client: **SOUTHEASTERN INTERIORS**  
 Project: **BYRD RESIDENCE**

# ROOF PLAN

Project #: 2101-010252  
 Date: 09/22/2021  
 Engineered by: AM  
 DWG. Checked by: PAT  
 Scale: SEE PLAN

REVISIONS		
No.	Date	Remarks

Sheet Number  
**S5**  
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**\*NOTE: 2X12  
 RAFTERS/CEILING JOISTS @  
 16" O.C. NOTCH AS REQ'D TO  
 FORM BARREL VAULT**

RS = ROOF SUPPORT  
 \*\* = 2 X 6 @ 16" O.C.

**ROOF PLAN**  
 1/4" = 1'-0"

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**STRUCTURAL NOTES**

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
- DESIGN LOADS:
 

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
ALL FLOORS	40	10	L/360	L/240
ATTIC (w/ walk up stairs)	30	10	L/360	L/240
ATTIC (pull down access)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
SEISMIC	SEISMIC ZONES A, B & C			
- MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE (U.N.C.)
- MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R602.3 OF 2018 NC BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT.
- ALL FRAMING LUMBER SHALL BE SYP #2 (Fb = 800 PSI, BASED ON D x D) (U.N.)  
ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL.  
ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2000 PSI, E = 1.9M PSI (U.N.O.)  
ALL L.S. LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2325 PSI, E = 1.8M PSI (U.N.O.)  
ALL P.S.L. LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2400 PSI, E = 1.8M PSI (U.N.O.)
- ALL LOAD BEARING EXTERIOR HEADERS SHALL BE (2) 2x10 (U.N.O.) REFER TO TABLE R602.7(1) & (2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS UNLESS SPECIFICALLY NOTED ON PLANS.
- ALL STRUCTURAL STEEL W-SHAPES (I-BEAMS) SHALL BE ASTM A992 GRADE 50.  
ALL STEEL ANGLES, PLATES, AND C-CHANNELS SHALL BE ASTM A36.  
ALL STEEL PIPE SHALL BE ASTM A53 GRADE B.
- STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH. PROVIDE SOLE PLATE BEARING FROM BEAM SUPPORT TO FOUNDATION BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO (2) LAG SCREWS (1/2" x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.
- PROVIDE ANCHOR BOLT PLACEMENT PER SECTION 403.1.6: 1/2" ANCHOR BOLTS SPACED AT 6'-0" O.C. AND PLACED 12" FROM THE END OF EACH PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE. THERE SHALL BE A MINIMUM TWO ANCHOR BOLTS PER PLATE SECTION.
- FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF NC BUILDING CODE.
- WALL AND ROOF CLADDING VALUES:  
WALL CLADDING SHALL BE DESIGNED FOR 28.0 POUNDS PER SQUARE FOOT (LBS/SQFT) OR GREATER POSITIVE AND NEGATIVE PRESSURE.  
ROOF WALLS BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:  
39.0 LBS/SQFT FOR ROOF PITCHES 0/12 TO 1/12  
36.0 LBS/SQFT FOR ROOF PITCHES 1/12 TO 6/12  
18.0 LBS/SQFT FOR ROOF PITCHES 6/12 TO 12/12  
MEAN ROOF HEIGHT 3/2" OR LESS
- FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER.
- REFER TO SECTION R602.3 FOR FRAMING OF ALL WALLS OVER 10'-0" IN HEIGHT.
- PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 NRC.
- UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- REFER TO TABLE N1102.1 FOR PRESCRIPTIVE BUILDING ENVELOPE THERMAL COMPONENT CRITERIA
- PSL COLUMNS DESIGNED WITH MAXIMUM HEIGHT OF 9'-0" (U.N.O.)
- PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- MAXIMUM MASONRY PER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSION OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.

**DEFINITIONS FOR COMMON ABBREVIATIONS**

ALT = ALTERNATE	MAX = MAXIMUM
CANT = CANTILEVER	MIN = MINIMUM
CJ = CEILING JOIST	NOM = NOMINAL
CMU = CONCRETE MASONRY UNIT	O.C. = ON CENTER
COL = COLUMN	FL = POINT LOAD
CONC = CONCRETE	PT = PRESSURE TREATED
CONT = CONTINUOUS	REINF = REINFORCED
CT = COLLAR TIE	REQD = REQUIRED
DBL = DOUBLE	RJ = ROOF JOIST
DIA = DIAMETER	RS = ROOF SUPPORT
DJ = DOUBLE JOIST	SC = STUD COLUMN
DR = DOUBLE RAFTER	SCH = SCHEDULE
EA = EACH	SPEC = SPECIFIED
EE = EACH END	THK = THICK
FJ = FLOOR JOIST	TJ = TRIPLE JOIST
FND = FOUNDATION	TRTD = TREATED
FTG = FOOTING	TYP = TYPICAL
GALV = GALVANIZED	UNO = UNLESS NOTED OTHERWISE
HORIZ = HORIZONTAL	W = WIDE FLANGE BEAM
HT = HEIGHT	WWF = WELDED WIRE FABRIC
MANUF = MANUFACTURER	XJ = EXTRA JOIST

**1) MAXIMUM HEIGHT OF DECK SUPPORT POSTS AS FOLLOWS:**

POST SIZE	MAX. POST HEIGHT**
4 x 4	8'-0"
6 x 6	20'-0"
***	OVER 20'-0"

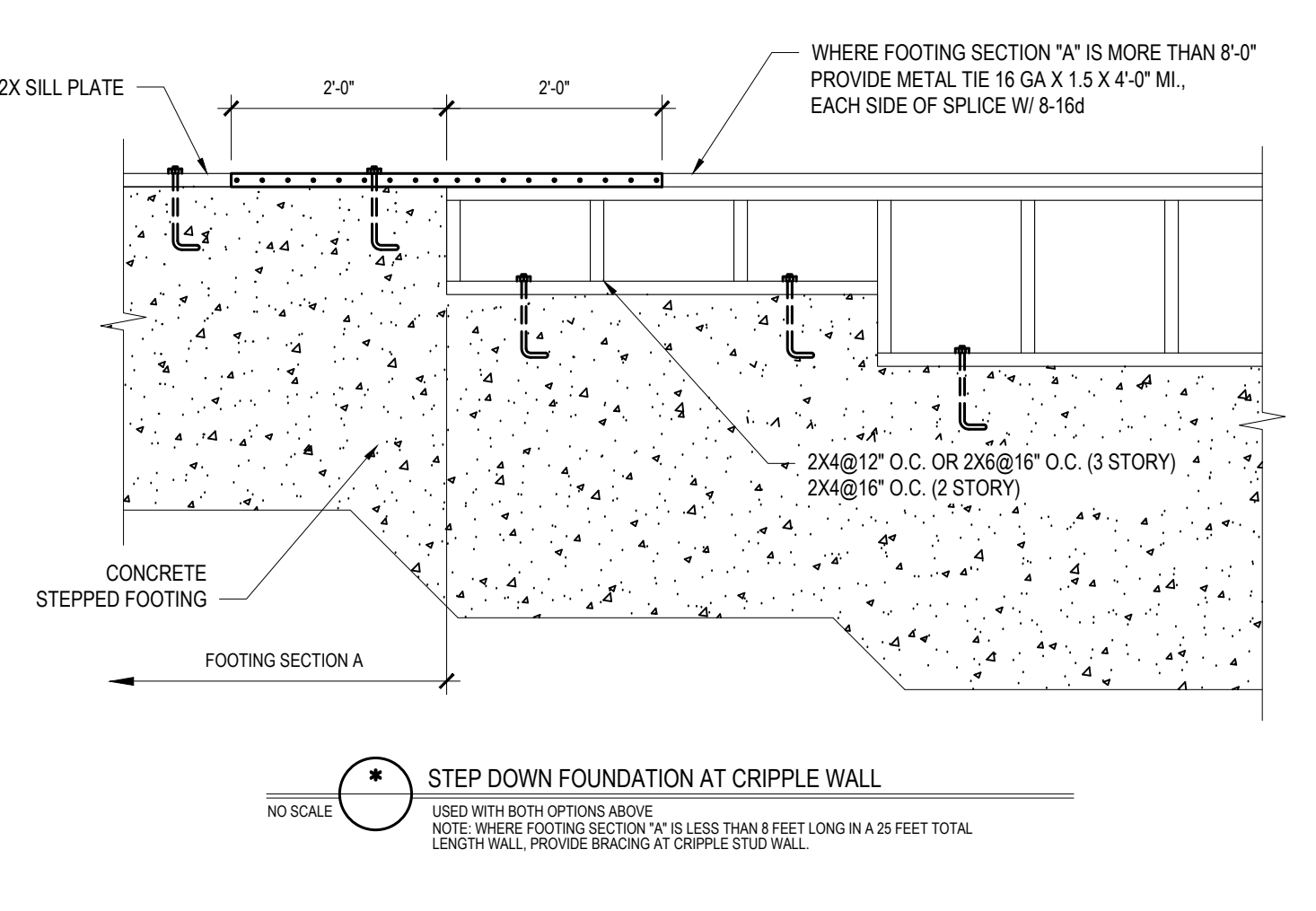
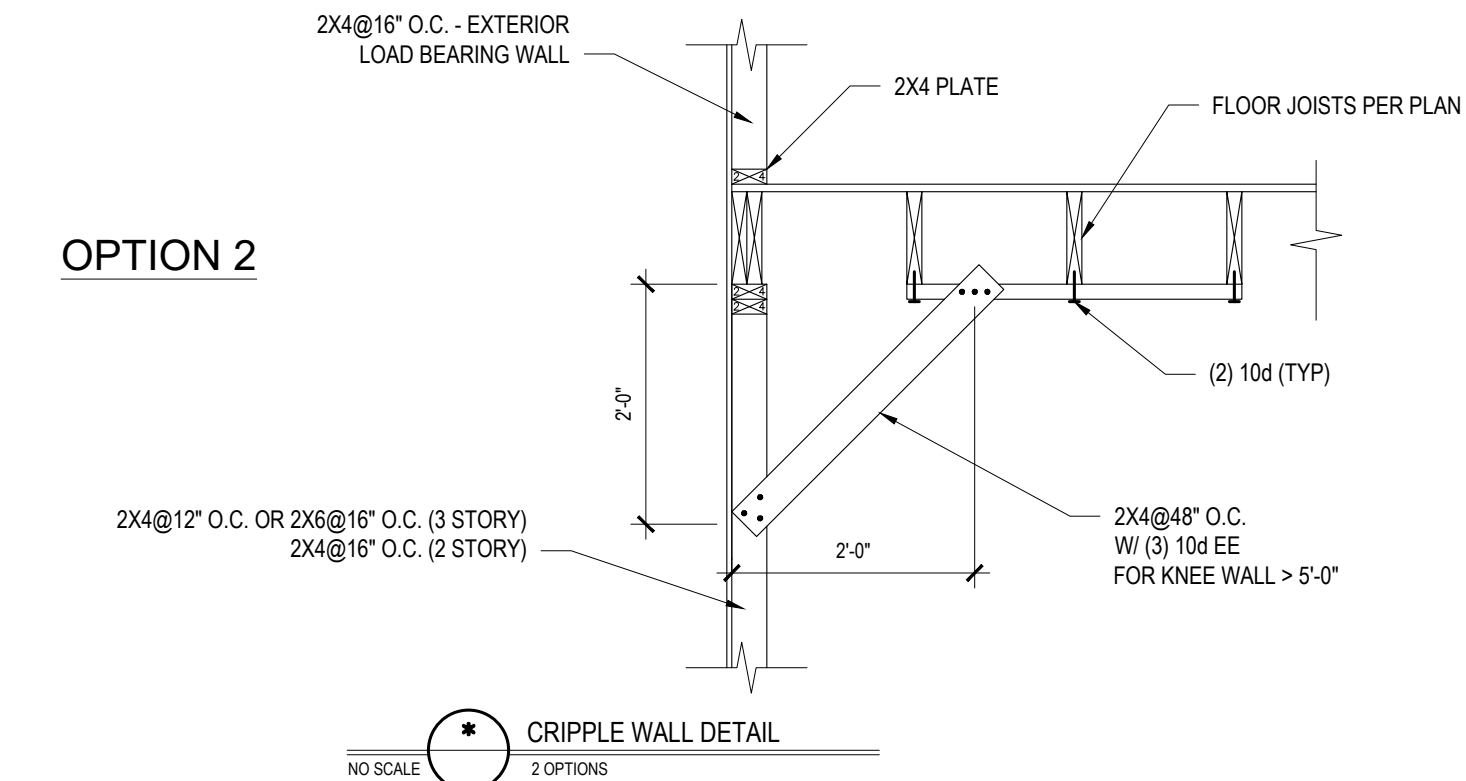
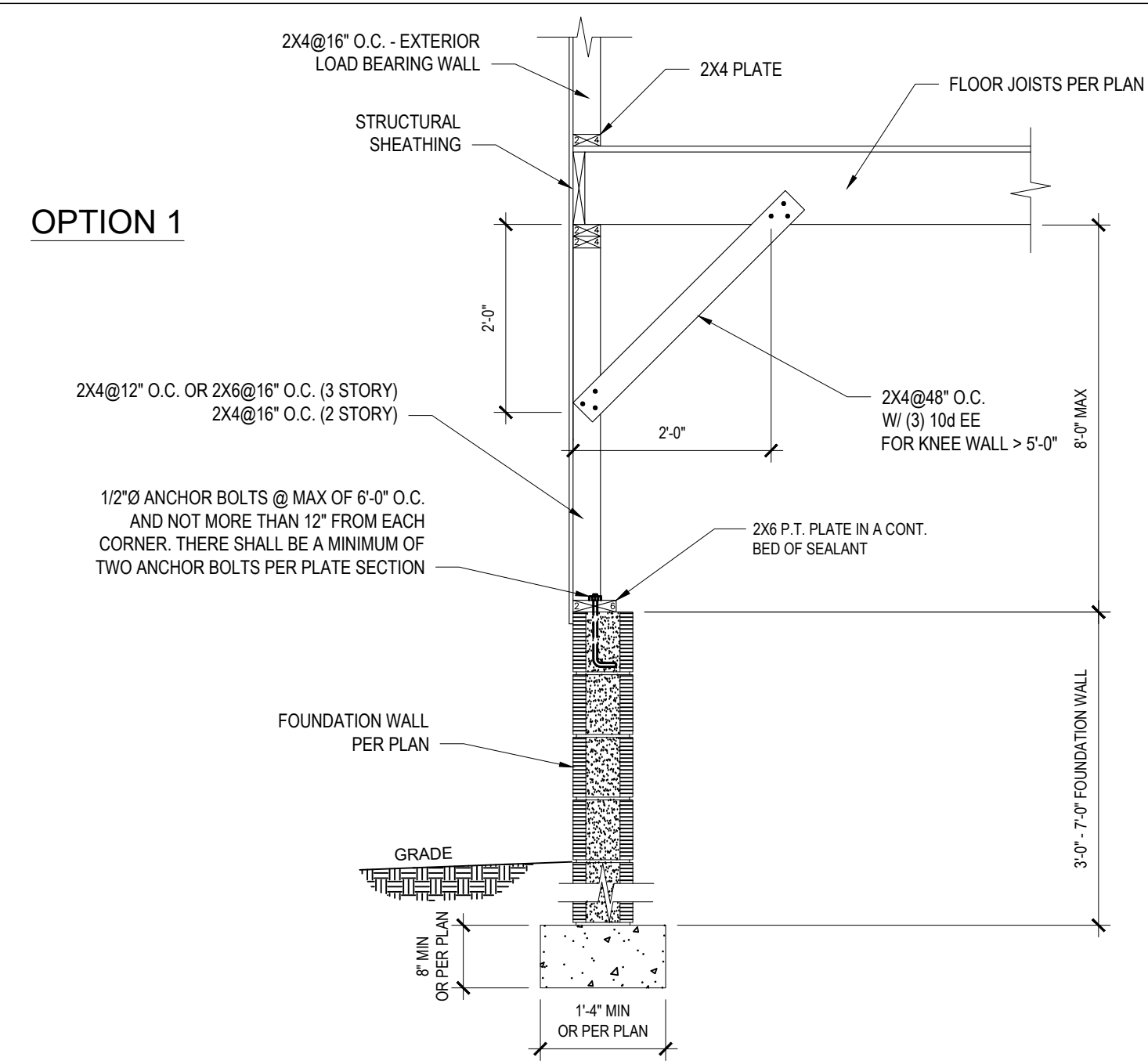
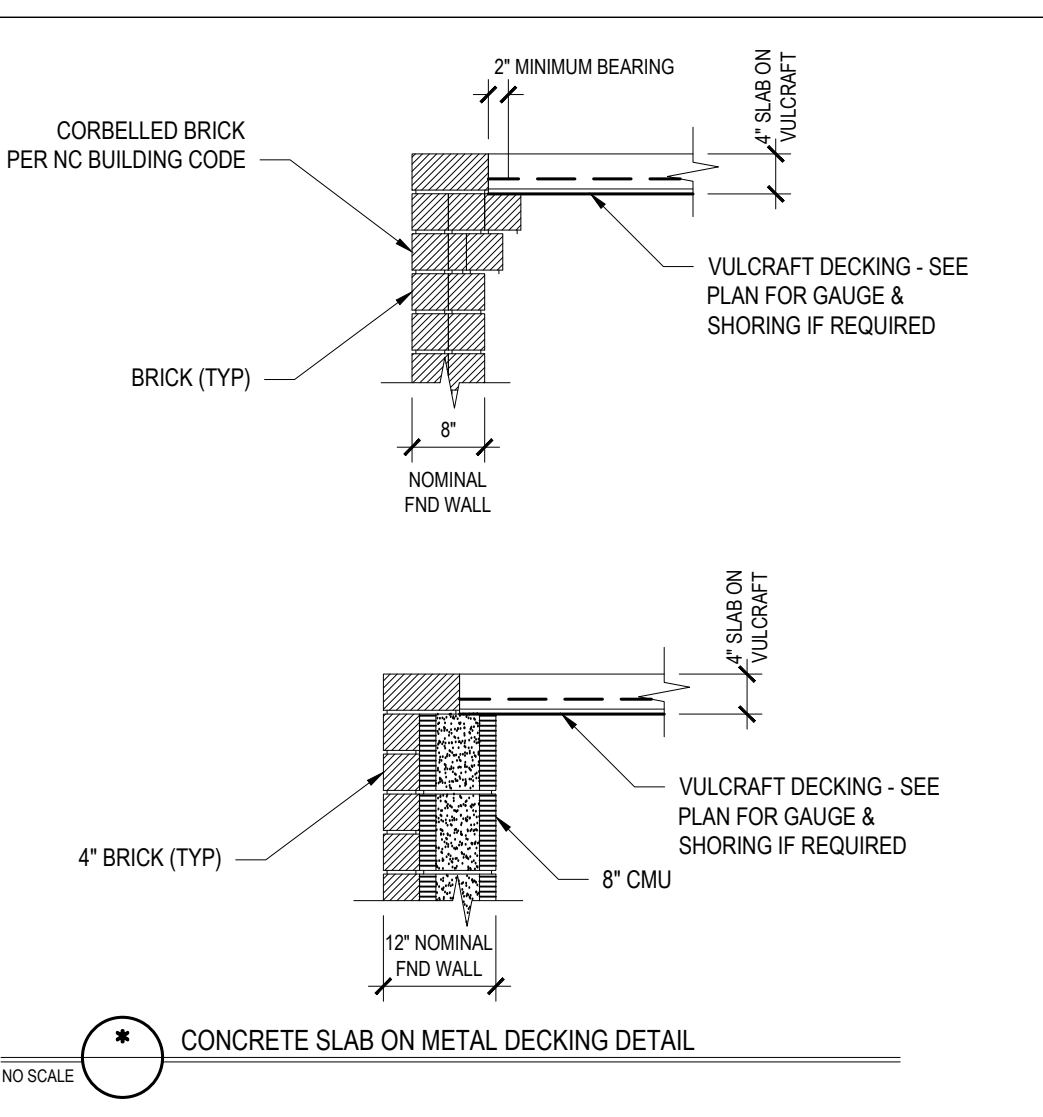
\* THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS. MAXIMUM TRIBUTARY AREA IS BASED ON 128 TOTAL SQUARE FEET WHICH MAY BE LOCATED AT DIFFERENT LEVELS.  
\*\* FROM TOP OF FOOTING TO BOTTOM OF GIRDER.  
\*\*\* DECKS WITH POST HEIGHTS OVER 20'-0" SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT.

2) DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF THESE METHODS:

- THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION (4) ABOVE. LATERAL BRACING IS NOT REQUIRED.
- 4 x 4 WOOD KNEE BRACES MAY BE PROVIDED ON EACH COLUMN IN BOTH DIRECTIONS. THE KNEE BRACES SHALL ATTACH TO EACH POST AT A POINT NOT LESS THAN 1/3 OF THE POST LENGTH FROM THE TOP OF THE POST, AND THE BRACES SHALL BE ANGLED BETWEEN 45° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE BOLTED TO THE POST AND GIRDER WITH ONE 5/8" HOT DIPPED GALVANIZED BOLT AT EACH END OF THE BRACE.
- FOR FREESTANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POSTS IN ACCORDANCE WITH THE FOLLOWING:

POST SIZE	MAX. TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER
4 x 4	48 SQ. FT.	4'-0"	2'-6"	1'-0"
6 x 6	120 SQ. FT.	6'-0"	3'-6"	1'-8"

- 2 x 6 DIAGONAL VERTICAL CROSS BRACING MAY BE PROVIDED IN TWO (2) PERPENDICULAR DIRECTIONS FOR FREESTANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS. THE 2 x 6s SHALL BE ATTACHED TO THE POSTS WITH ONE 5/8" HOT DIPPED GALVANIZED BOLT AT EACH END OF EACH BRACING MEMBER.
- FOR EMBEDMENT OF PILES IN COASTAL REGIONS, SEE CHAPTER 46.



CLIMATE ZONES	FENESTRATION U-FACTOR <sup>a</sup>	SKYLIGHT U-FACTOR <sup>b</sup>	GLAZED FENESTRATION SHGC <sup>c,d</sup>	CEILING R-VALUE <sup>e</sup>	WOOD FRAMED WALL R-VALUE <sup>f</sup>	MASS WALL R-VALUE <sup>g</sup>	FLOOR R-VALUE <sup>h</sup>	BASEMENT WALL R-VALUE <sup>i,j</sup>	SLAB R-VALUE AND DEPTH <sup>k</sup>	CRAWL SPACE WALL R-VALUE <sup>l</sup>
3	0.35	0.55	0.30	38 or 30 cont <sup>1</sup>	15 or 13 + 2.5 <sup>h</sup>	5/13 or 5/10 cont <sup>1</sup>	19	5/13	0	5/13
4	0.35	0.55	0.30	38 or 30 cont <sup>1</sup>	15 or 13 + 2.5 <sup>h</sup>	5/13 or 5/10 cont <sup>1</sup>	19	10/15	10	10/15
5	0.35	0.55	NR	38 or 30 cont <sup>1</sup>	19, or 13 + 5 <sup>h</sup> or 15 + 3 <sup>h</sup>	13/17 or 13/12.5 cont <sup>1</sup>	30 <sup>9</sup>	10/15	10	10/19

**TABLE N1102.1 CLIMATE ZONES 3-5**

NO SCALE

\* R-VALUES ARE MINIMUM U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.

<sup>1</sup> THE FENESTRATION U-FACTOR COLUMN ENCLOSED SKYLIGHTS, THE SQUARE-HEAT GAIN COEFFICIENT (SHGC) COLUMN APPLIES TO ALL GLAZED FENESTRATION.

<sup>2</sup> 10"17 MEANS R-17 CONTINUOUS INSULATED SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME.

<sup>3</sup> OR R-15 cavity insulation AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.

<sup>4</sup> FOR MONOLITHIC SLAB INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP COMMAND TO THE BOTTOM OF THE FOOTING OR MINIMUM OF 2" BELOW SPACE W/CHERES IS USED FOR CRAWL SPACE INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 2" ABOVE W/CHERES IS USED. R-4 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.

<sup>5</sup> SEE LIST 2.

<sup>6</sup> BASEMENT WALL INSULATION IS NOT REQUIRED IN WINTERING LOCATIONS AS DEFINED BY FIGURE N1102.2 AND TABLE N1102.7.

<sup>7</sup> OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY. 10"19 MEANS R-19 CAVITY INSULATION. 10"13+2.5 MEANS R-13 CAVITY INSULATION PLUS R-4 INSULATED SHEATHING. 10"15 MEANS R-15 CAVITY INSULATION. PLUS R-3 INSULATED SHEATHING. 2" STRUCTURAL SHEATHING COVERS 25% OR LESS OF THE EXTERIOR. INSULATED SHEATHING IS NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS USED. 2" STRUCTURAL SHEATHING COVERS MORE THAN 25% PERCENT OF THE EXTERIOR. SHALL BE SUBSTITUTED WITH INSULATION SHEATHING OF AT LEAST EQ. 1" + 2" MEANS R-15 CAVITY INSULATION PLUS R-2.5 SHEATHING.

<sup>8</sup> FOR MASS WALLS THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS WALL.

<sup>9</sup> IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.3, A MINIMUM OF THIS GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A U-FACTOR NO GREATER THAN 0.55 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.

<sup>10</sup> IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.3, A MINIMUM OF THIS GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN 0.35 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.

<sup>11</sup> R-4 SHALL BE ADDED TO THE REQUIRED INSULATION REQUIREMENT WHERE THE FULL HEIGHT OF ANCHORING INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE LEVEL. OTHERWISE, R-4 INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION SAFETY OR WITHIN 1/8" OF THE EXTERIOR BRICK.

<sup>12</sup> TABLE VALUE REQUIRED EXCEPT FOR ROOF EDGE WHERE THE SPACE IS LIMITED BY THE PITCH OF THE ROOF. THERE THE INSULATION MUST FILL THE SPACE UP TO THE AIR BATTLE.

<sup>13</sup> IF 10" PERFORMS AS BOTH COMPRESSED AND NOTED IN A MINIMUM 1.5" FRAMING CAVITY. IT DENIED TO COMPLY. PERFORMS AS BOTH COMPRESSED AND NOTED IN A 2x4 WALL IS NOT PERMITTED TO COMPLY.

<sup>14</sup> BASEMENT WALL MEETING THE MINIMUM MASS WALL SPECIFIC HEAT CONTENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

— SQ. FT. OF ATTIC / 300 = — SQ. FT. INLETS/OUTLETS REQUIRED

1) CALCULATION BASED ON VENTILATORS USED AT LEAST 2' ABOVE THE COME VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY SAME VENTS.

2) COUNTERSINKS SHALL HAVE A 1" MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

**ATTIC VENTILATION CALCULATION**

NO SCALE

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**SOUTHEASTERN INTERIORS**

**BYRD RESIDENCE**

**STANDARD DETAILS**

Project #: 2101-010252  
Date: 09/22/2021  
Engineered By: AM  
DWG. Checked By: PAT  
Scale: SEE PLAN

**REVISIONS**

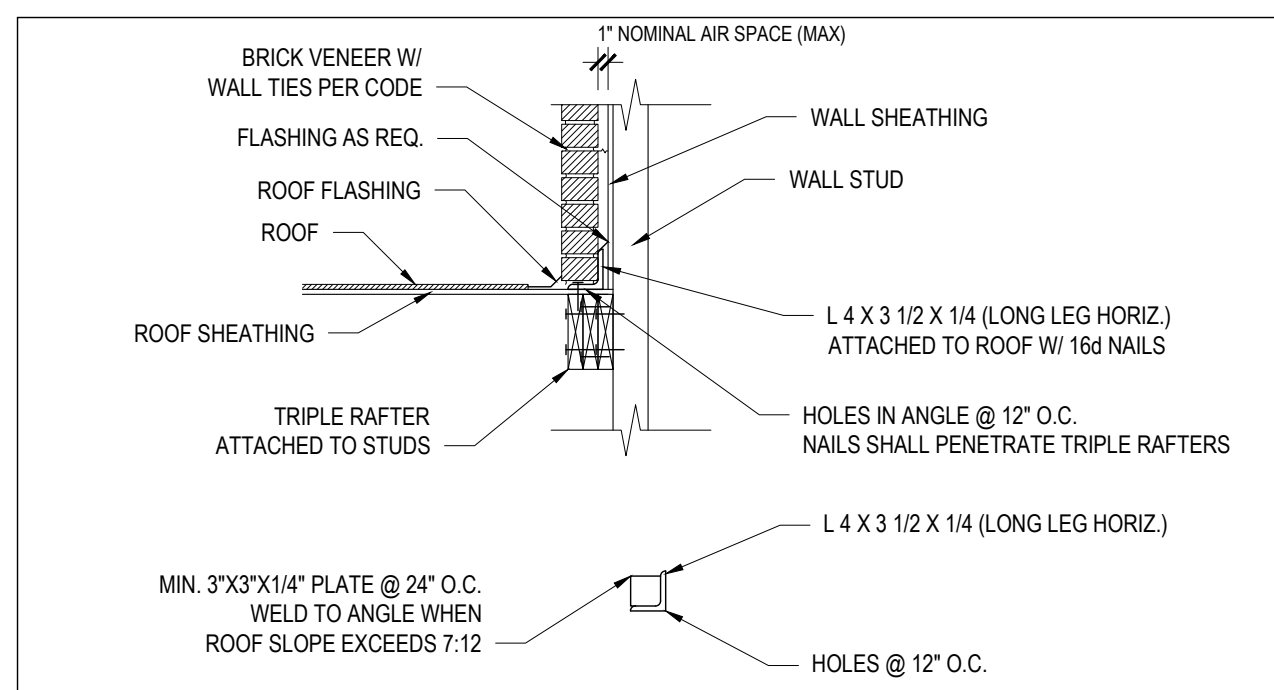
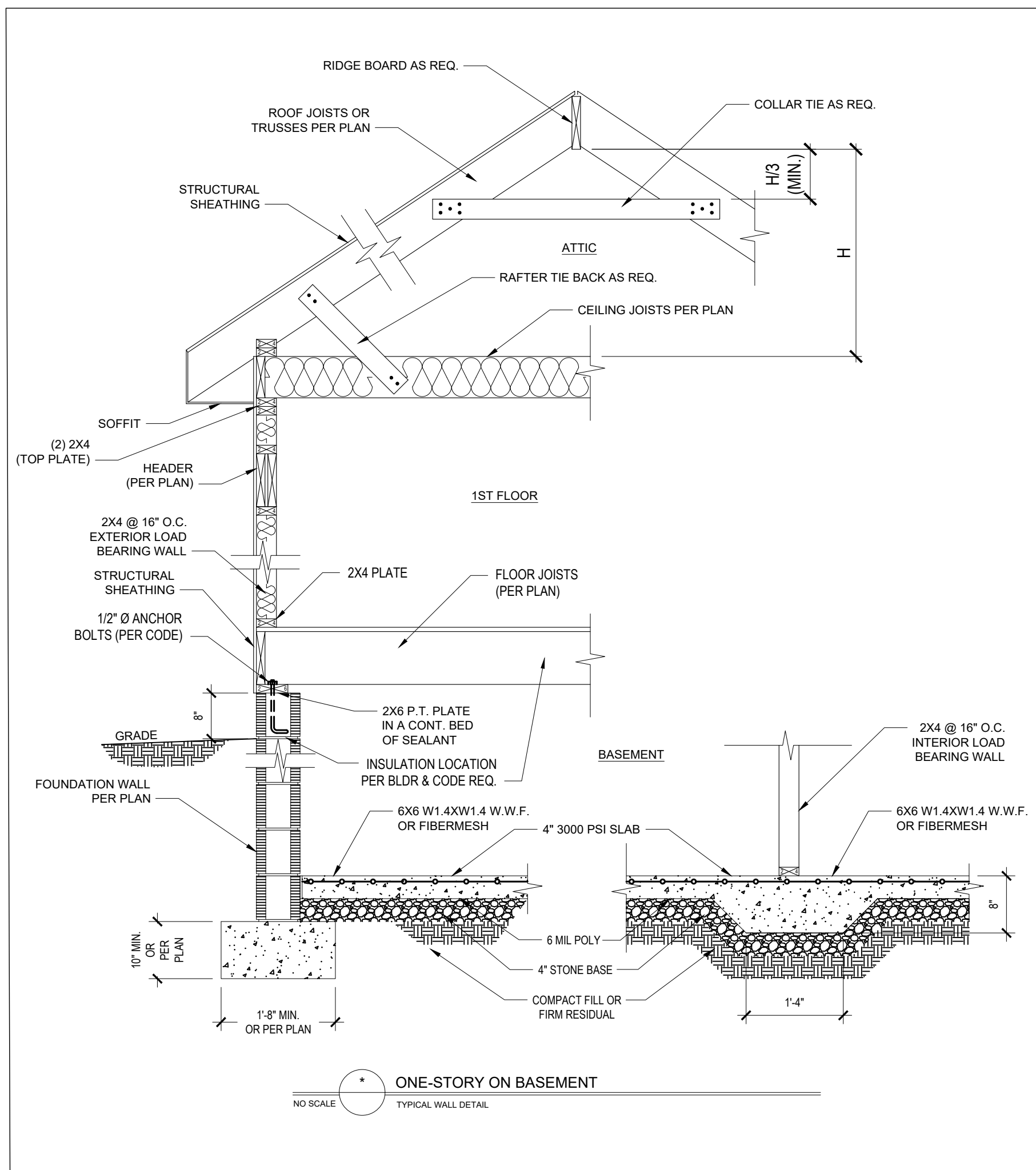
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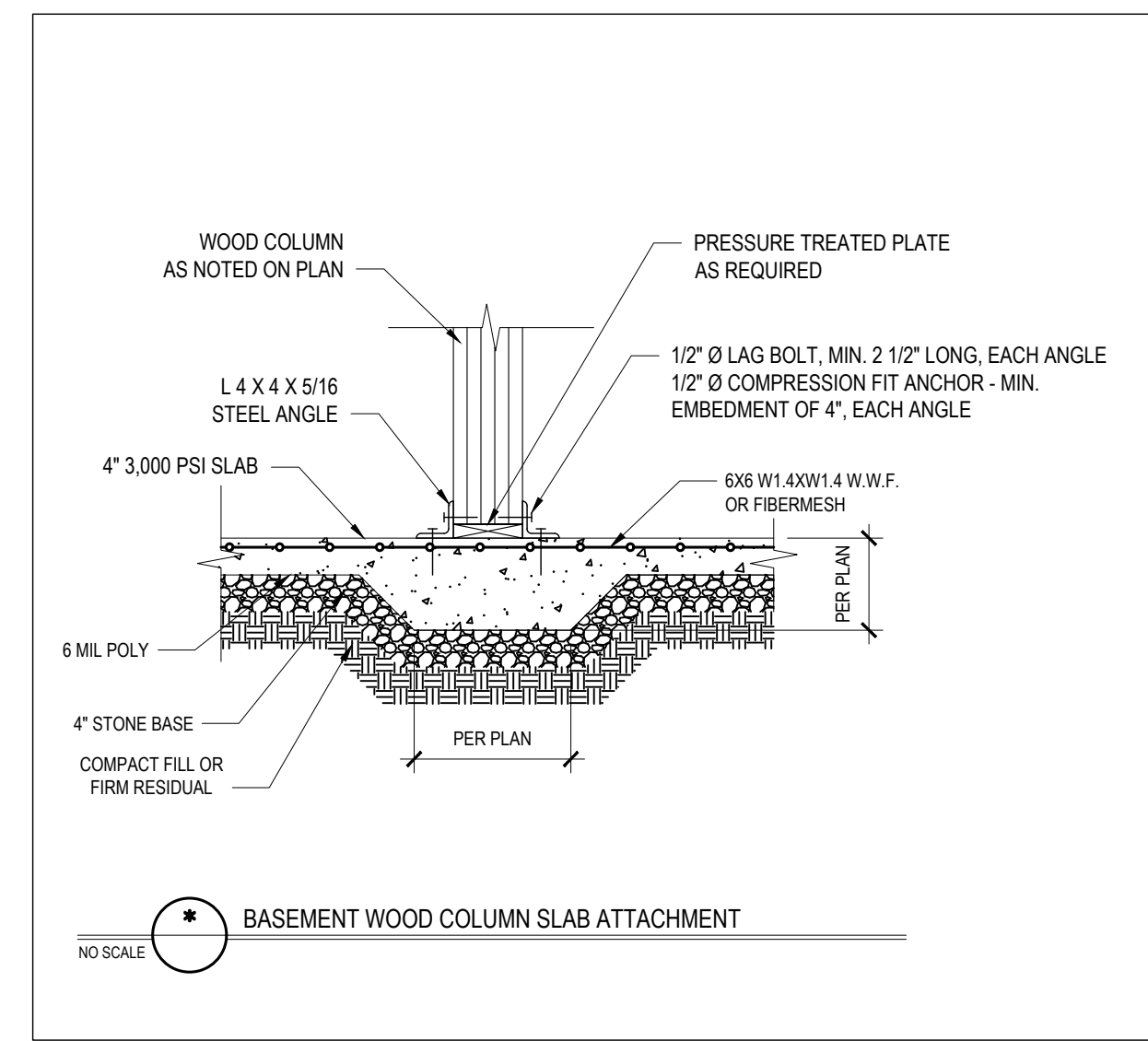
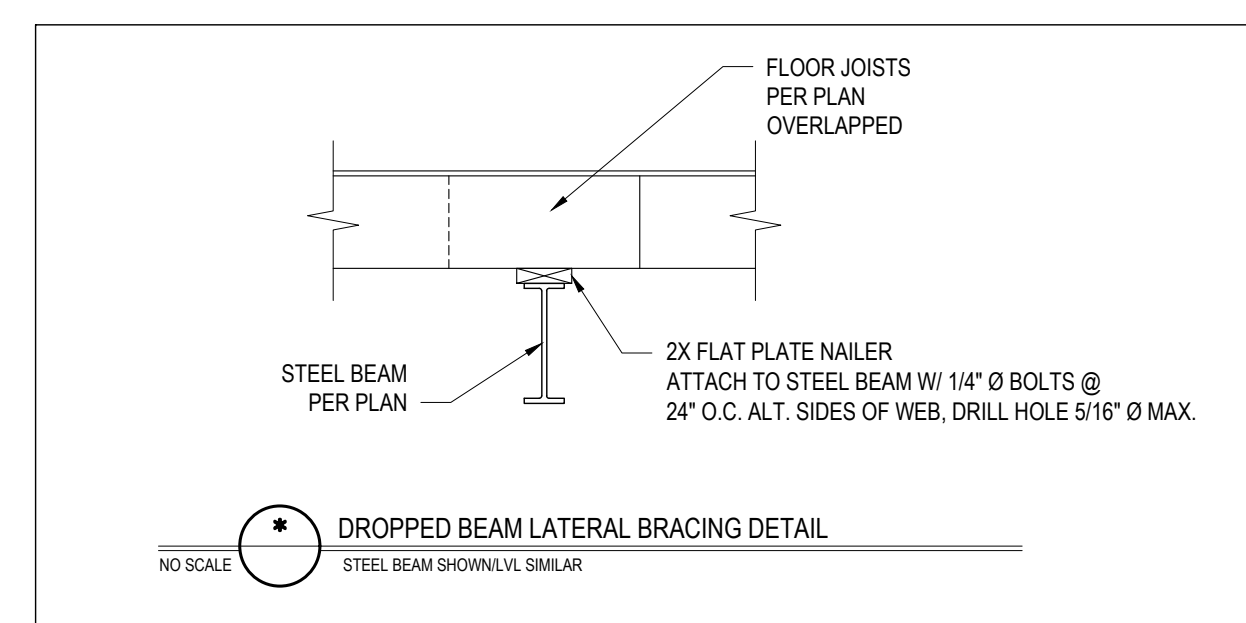
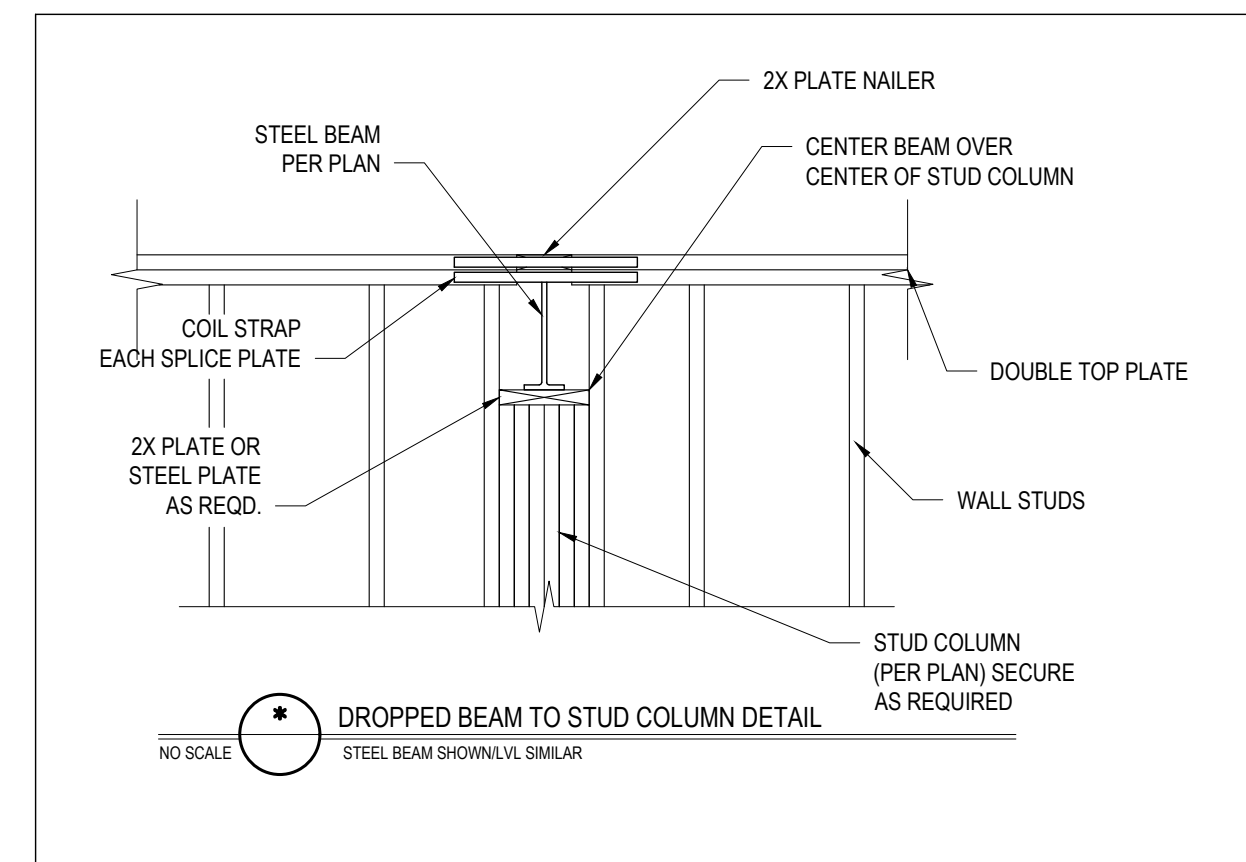
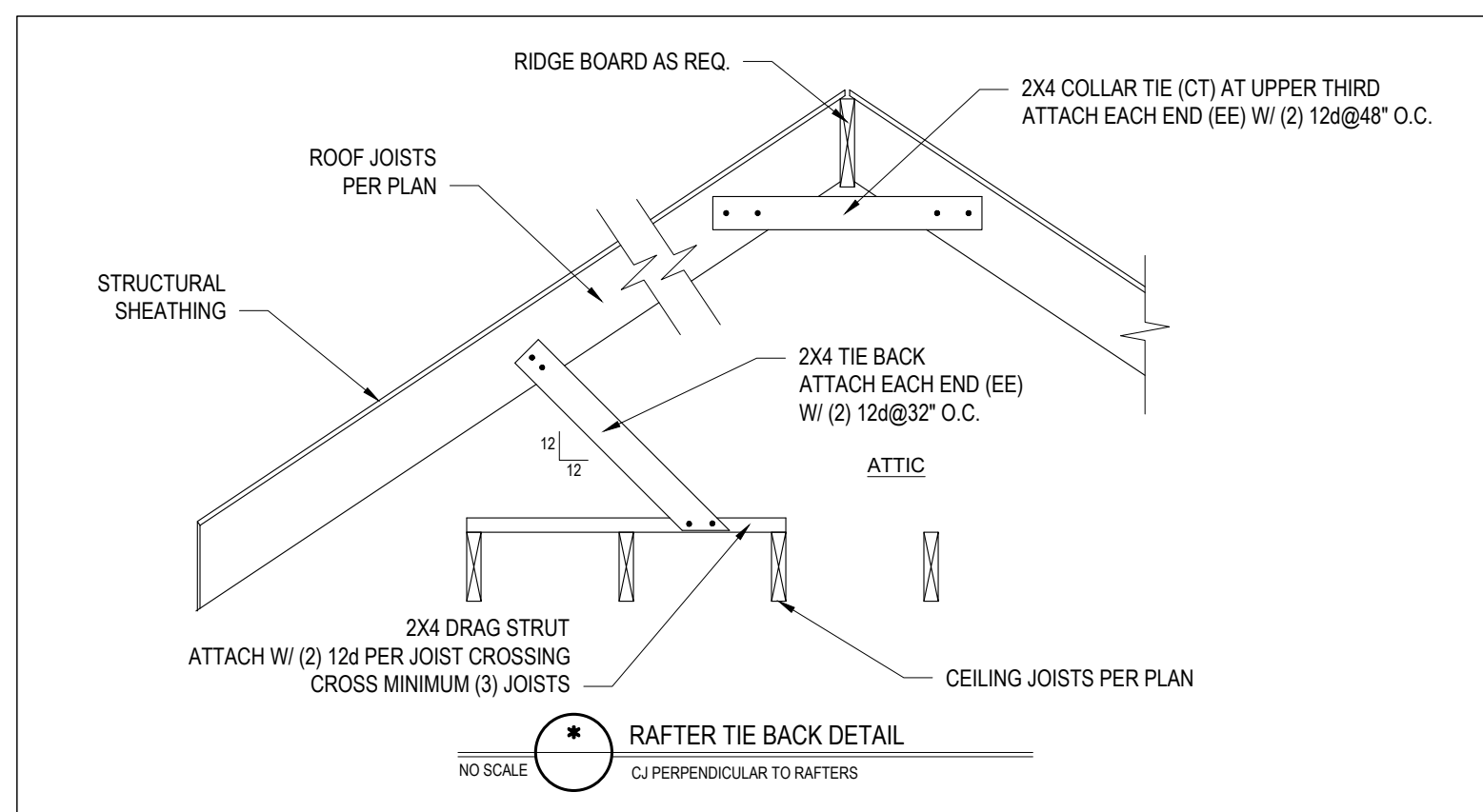
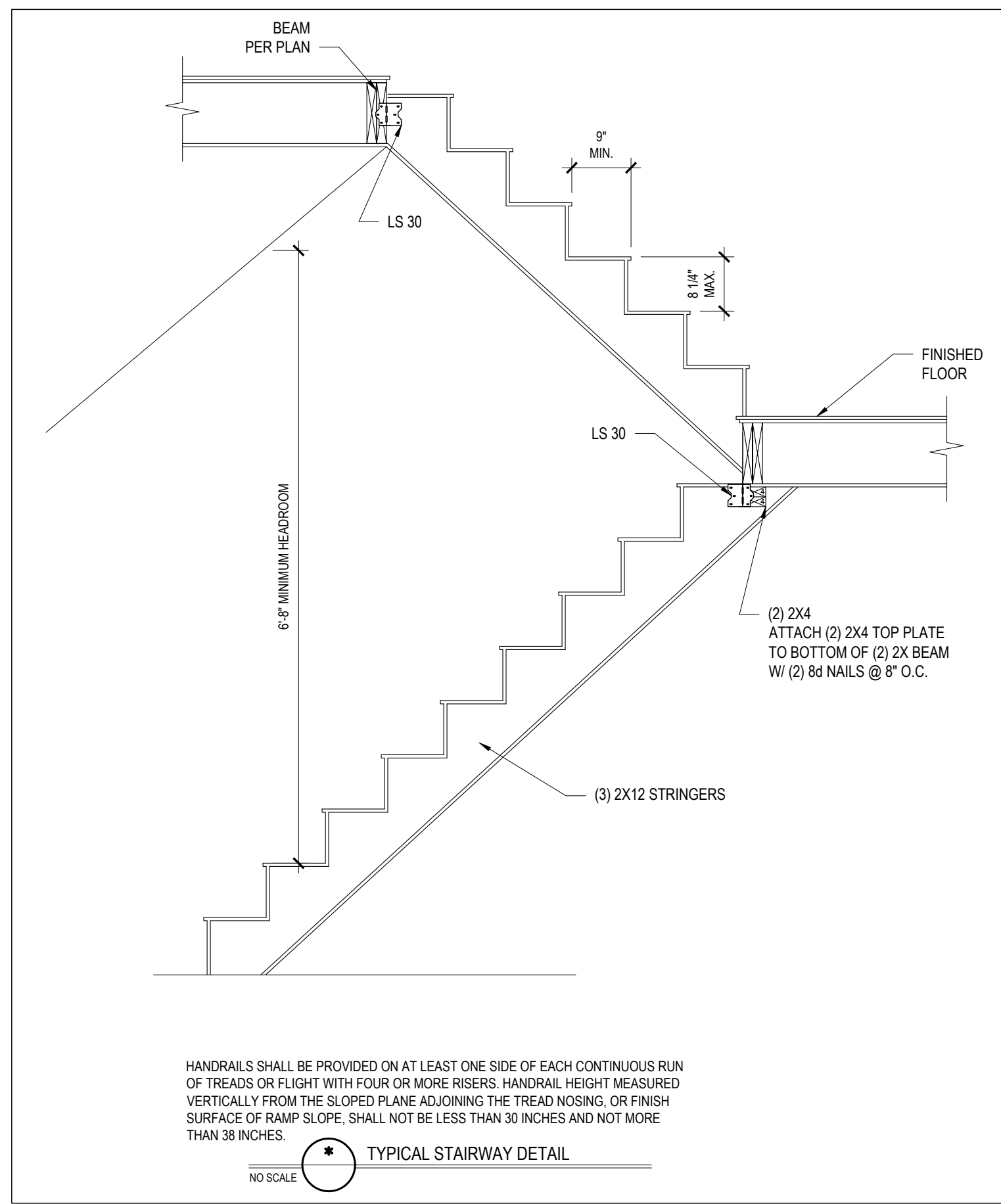
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ALLOWABLE SPANS FOR LINTELS SUPPORTING MASONRY VENEER

SIZE OF ANGLE (1,3)	NO STORY ABOVE (5)	1 STORY ABOVE (5)	2 STORIES ABOVE (5)	# OF 1/2" (OR EQUIV.) REINFORCING BARS IN REINFORCED LINTEL (2,4,5)
L 3 x 3 x 1/4	6'-0"	4'-6"	3'-0"	1
L 4 x 3 x 1/4	8'-0"	6'-0"	4'-6"	1
L 5 x 3 1/2 x 5/16	10'-0"	8'-0"	6'-0"	2
L 6 x 3 1/2 x 5/16	14'-0"	9'-6"	7'-0"	2
2L 5 x 3 1/2 x 5/16	20'-0"	12'-0"	9'-6"	4

- LONG LEG OF THE ANGLE SHALL BE PLACED IN A VERTICAL POSITION.
- DEPTH OF REINFORCED LINTELS SHALL NOT BE LESS THAN 8" AND ALL CELLS OF HOLLOW MASONRY LINTELS SHALL BE GROUTED. REINFORCING BARS SHALL EXTEND NOT LESS THAN 8" INTO THE SUPPORT.
- STEEL MEMBERS INDICATED ARE ADEQUATE TYPICAL EXAMPLES. OTHER STEEL MEMBERS MEETING STRUCTURAL DESIGN REQUIREMENTS SHALL BE PERMITTED TO BE USED.
- EITHER STEEL ANGLE OR REINFORCED LINTEL SHALL SPAN OPENING.
- SPANS OVER 4'-0" SHALL BE SHORED UP UNTIL CURED.



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CLIENT: **SOUTHEASTERN INTERIORS**  
PROJECT: **BYRD RESIDENCE**

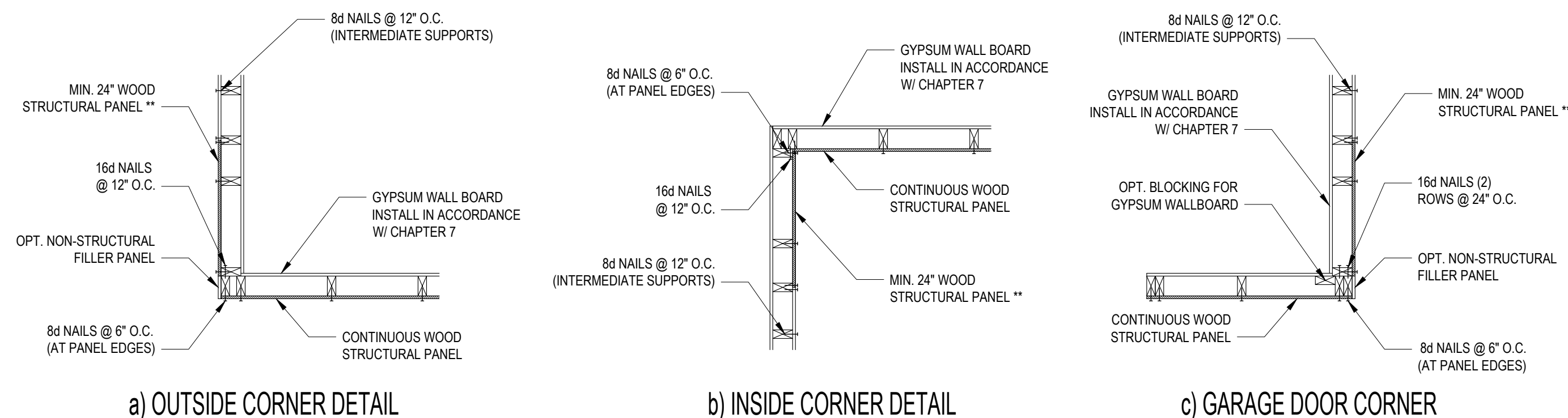
**STANDARD DETAILS**

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Scale: SEE PLAN

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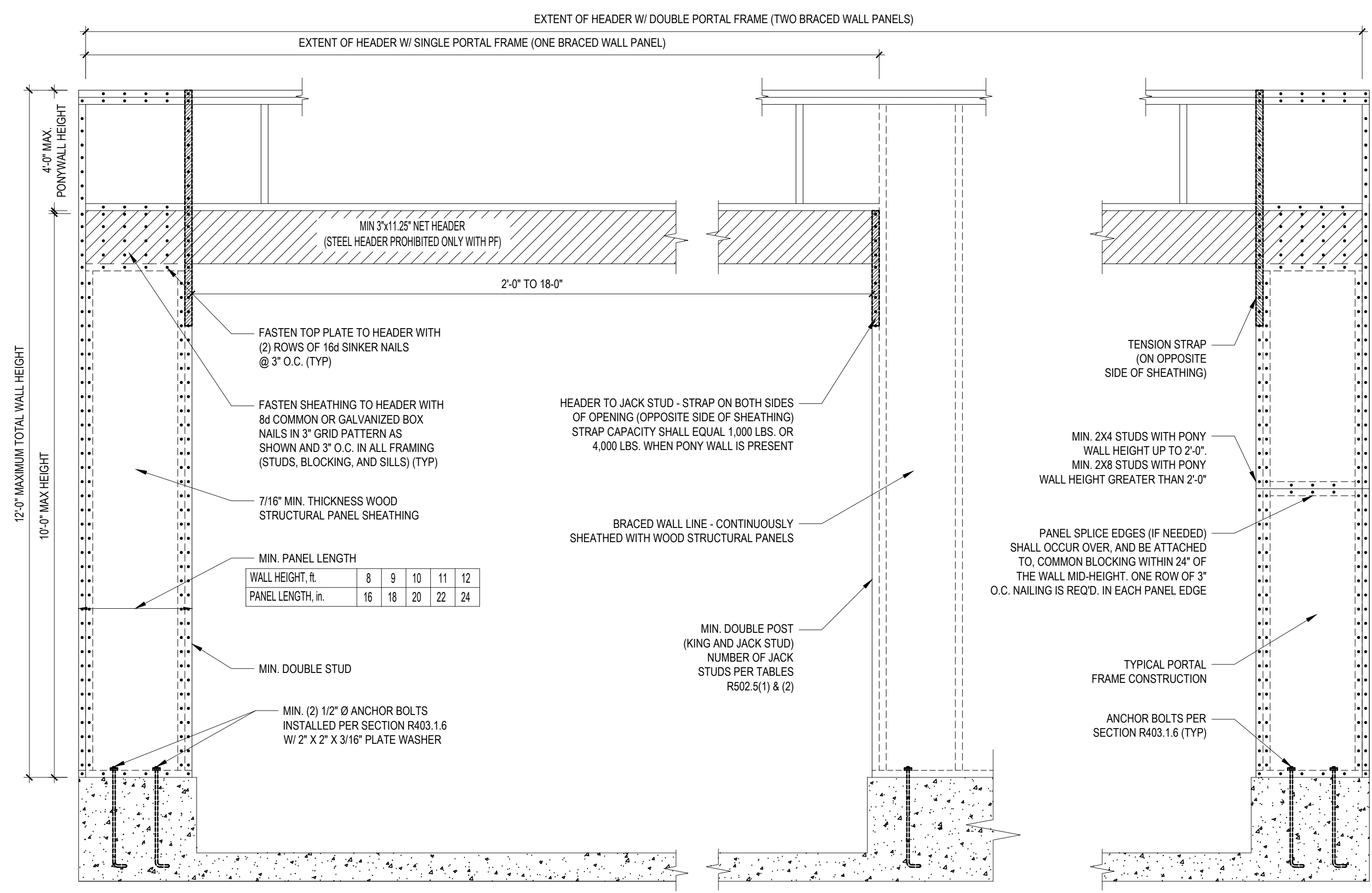
**B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING**  
NO SCALE

**STRUCTURAL SHEATHING NOTES**

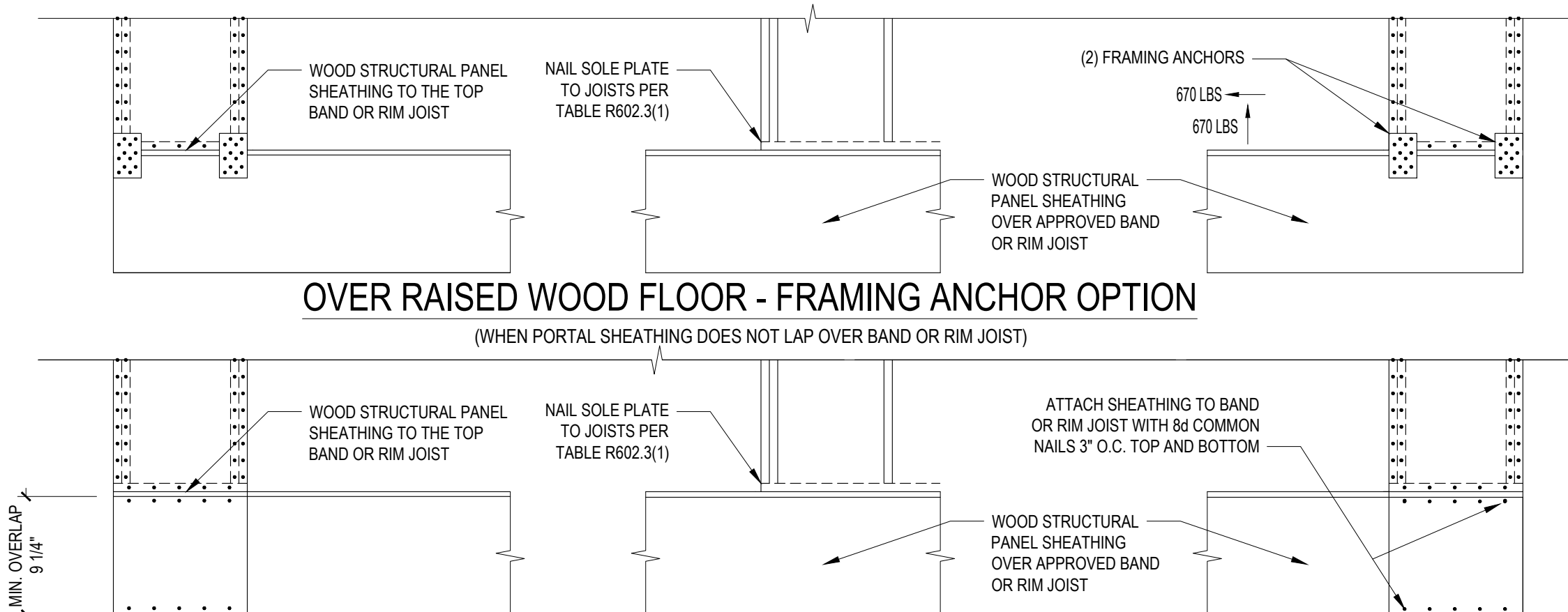
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10.3 OF THE 2018 NRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- REFERENCE FIGURE R602.10.4.3 OF THE 2018 NRC.
- INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO).
- 12\"/>

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			@ PANEL EDGES	@ INTERMEDIATE SUPPORTS
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6\"/>	

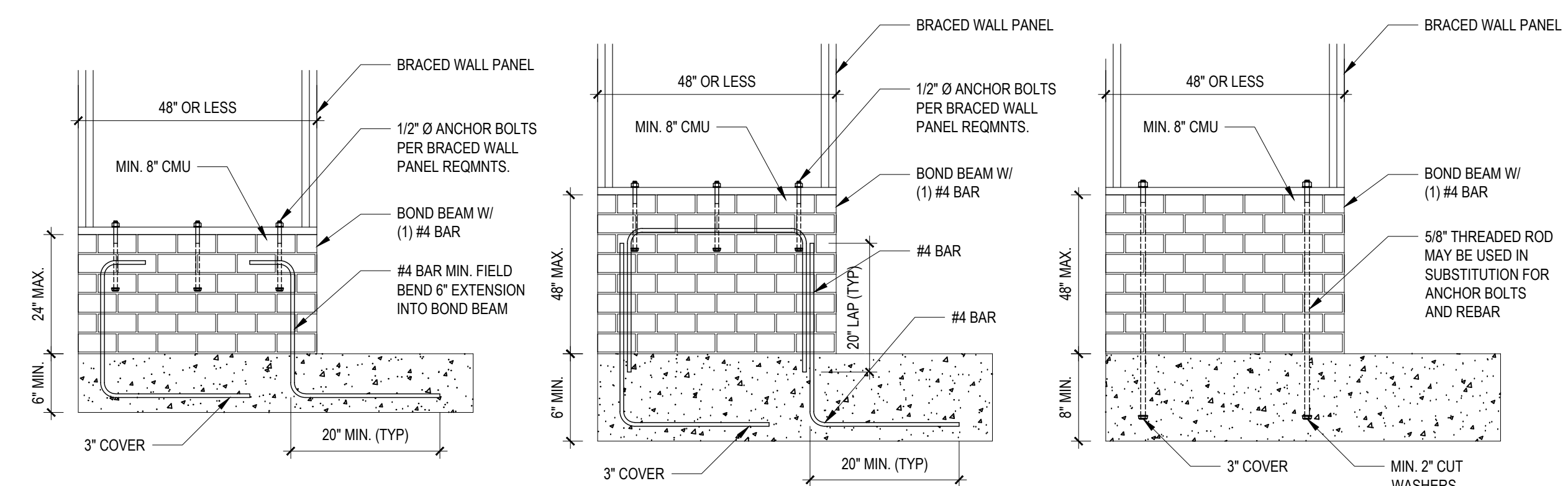
\*OR EQUIVALENT PER TABLE R702.3.5  
**B3: BRACE WALL PANEL CONNECTIONS**  
NO SCALE



**B2: METHOD CS-PF: CONTINUOUSLY SHEATHED PORTAL FRAME**  
FIGURE R602.10.1

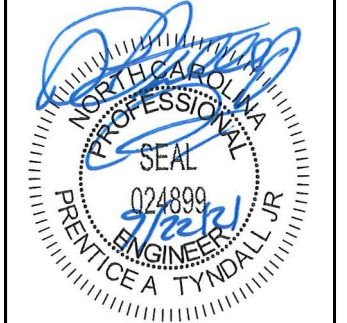


**B3: BRACE WALL PANEL CONNECTIONS**  
NO SCALE



**B4: MASONRY STEM WALL SUPPORTING BRACED WALL PANELS**  
FIGURE R602.10.4.3 OF THE 2018 NRC  
NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS

Engineers and architects are not responsible for construction methods, techniques, sequences, procedures or safety precautions. Any deviation or discrepancies on plans are to be brought to the immediate attention of Tyn dall Engineering & Design, P.A. Failure to do so will void Tyn dall Engineering & Design, P.A. liability. Please review these documents carefully. Tyn dall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.



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CLIENT: SOUTHEASTERN INTERIORS  
PROJECT: BYRD RESIDENCE

**SHEATHING DETAILS**

Project #: 2101-010252  
Date: 09/22/2021  
Engineered by: AM  
DWG. Checked by: PAT  
Scale: SEE PLAN

REVISIONS		
No.	Date	Remarks

Sheet Number  
**D3**  
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