

GENERAL NOTES:

- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ALL DIMENSIONS, ROOF PITCHES, AND SQUARE FOOTAGE ARE CORRECT PRIOR TO CONSTRUCTION. K&A HOME DESIGNS, INC. IS NOT RESPONSIBLE FOR ANY DIMENSIONING, ROOF PITCH, OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- ALL WALLS SHOWN ON THE FLOOR PLANS ARE DRAWN AT 4" UNLESS NOTED OTHERWISE.
- ALL ANGLED WALL SHOWN ON THE PLANS ARE 45 DEGREES UNLESS NOTED OTHERWISE.
- STUD WALL DESIGN SHALL CONFORM TO ALL NORTH CAROLINA STATE BUILDING CODE REQUIREMENTS.
- DO NOT SCALE PLANS. DRAWING SCALE MAY BE DISTORTED DUE TO COPIER IMPERFECTIONS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NORTH CAROLINA RESIDENTIAL STATE BUILDING CODE, 2018 EDITION.



SQUARE FOOTAGE

HEATED SQUARE FOOTAGE		UNHEATED SQUARE FOOTAGE	
FIRST FLOOR=	1663	GARAGE=	N/A
SECOND FLOOR=	N/A	FRONT PORCH=	218
THIRD FLOOR=	N/A	SCREEN PORCH=	296
BASEMENT=	N/A	SIDE PORCH=	60
		STORAGE=	N/A
TOTAL HEATED=	1663	TOTAL UNHEATED=	574

CRAWL SPACE VENTILATION CALCULATIONS

-VENT LOCATIONS MAY VARY FROM THOSE SHOWN ON THE PLAN BUT SHOULD BE PLACED TO PROVIDE ADEQUATE VENTILATION AT ALL POINTS TO PREVENT DEAD AIR POCKETS.

-100% VAPOR BARRIER MUST BE PROVIDED WITH 12" MIN. LAP JOINTS.

-THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/1500 AS LONG AS REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS-VENTILATION OF THE SPACE THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED. (COMPLY WITH NC CODE MIN. WITH REGARD TO VENT PLACEMENT FROM CORNERS)

N/A SQ. FT. OF CRAWLSPACE/1500

N/A SQ. FT. OF REQUIRED VENTILATION

PROVIDED BY: N/A VENTS AT 0.45 SQ. FT. NET FREE

VENTILATION EACH= N/A SQ. FT. OF VENTILATION

****FOUNDATION DRAINAGE- WATERPROOFING PER SECTIONS 405 & 406.**

ATTIC VENTILATION CALCULATIONS

- CALCULATIONS SHOWN BELOW ARE BASED ON VENTILATORS USED AT LEAST 3 FT. ABOVE THE CORNICE VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY EAVE VENTS.

- CATHEDRAL CEILINGS SHALL HAVE A MIN. 1" CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

2250 SQ. FT. OF ATTIC/300= 7.5

EACH OF INLET AND OUTLET REQUIRED.

***WALL AND ROOF CLADDING DESIGN VALUES**

- WALL CLADDING IS DESIGNED FOR A 24.1 SQ. FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE.

- ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:

45.5 LBS. PER SQ. FT. FOR ROOF PITCHES OF 0/12 TO 2.25/12

34.8 LBS. PER SQ. FT. FOR ROOF PITCHES OF 2.25/12 TO 7/12

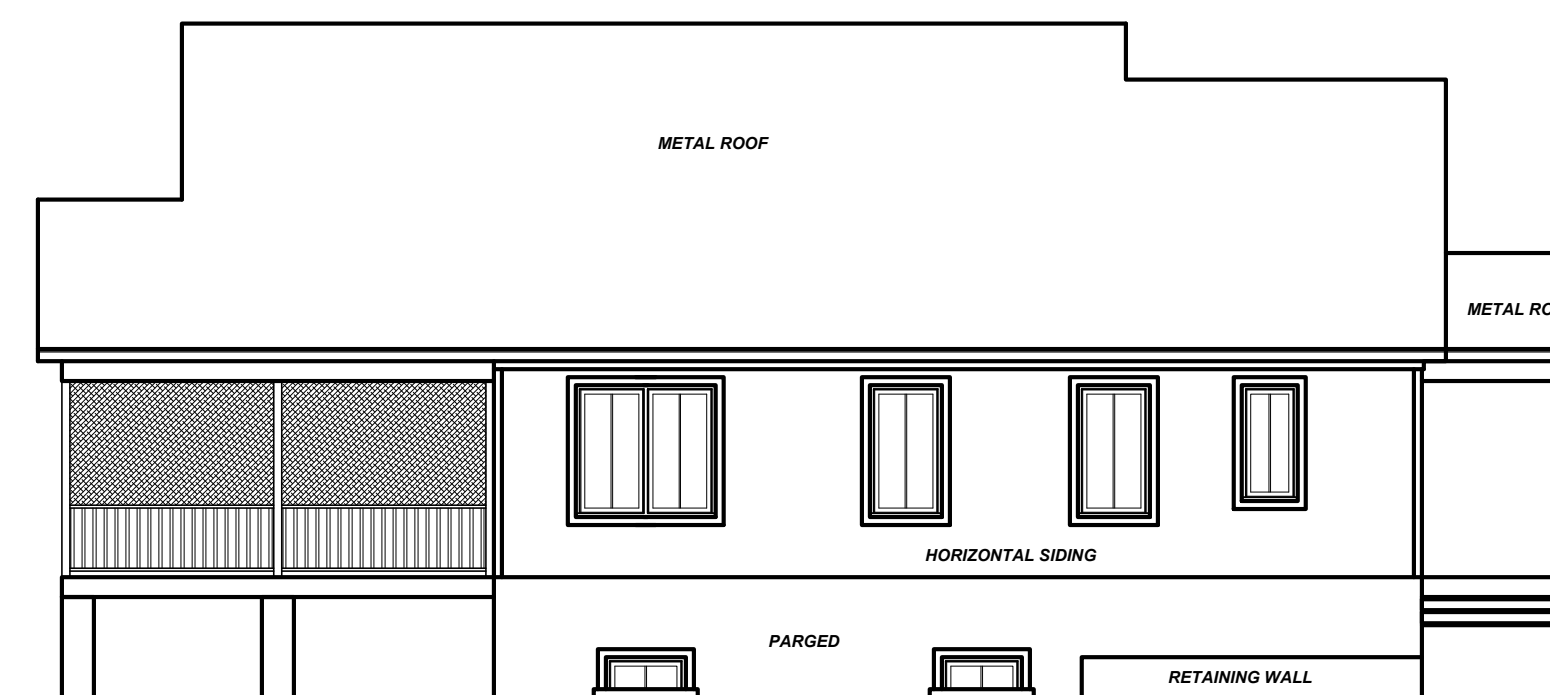
21 LBS. PER SQ. FT. FOR ROOF PITCHES OF 7/12 TO 12/12

**** MEAN ROOF HEIGHT 30' OR LESS**



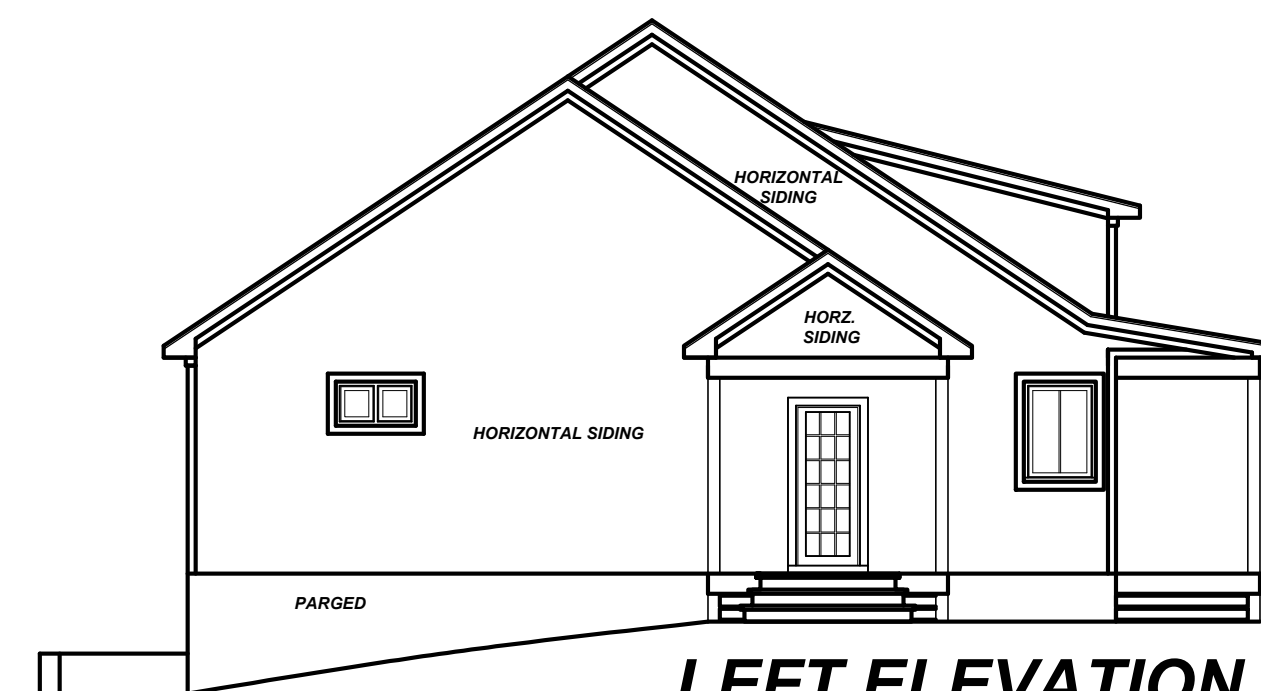
FRONT ELEVATION

1/4" = 1'-0"



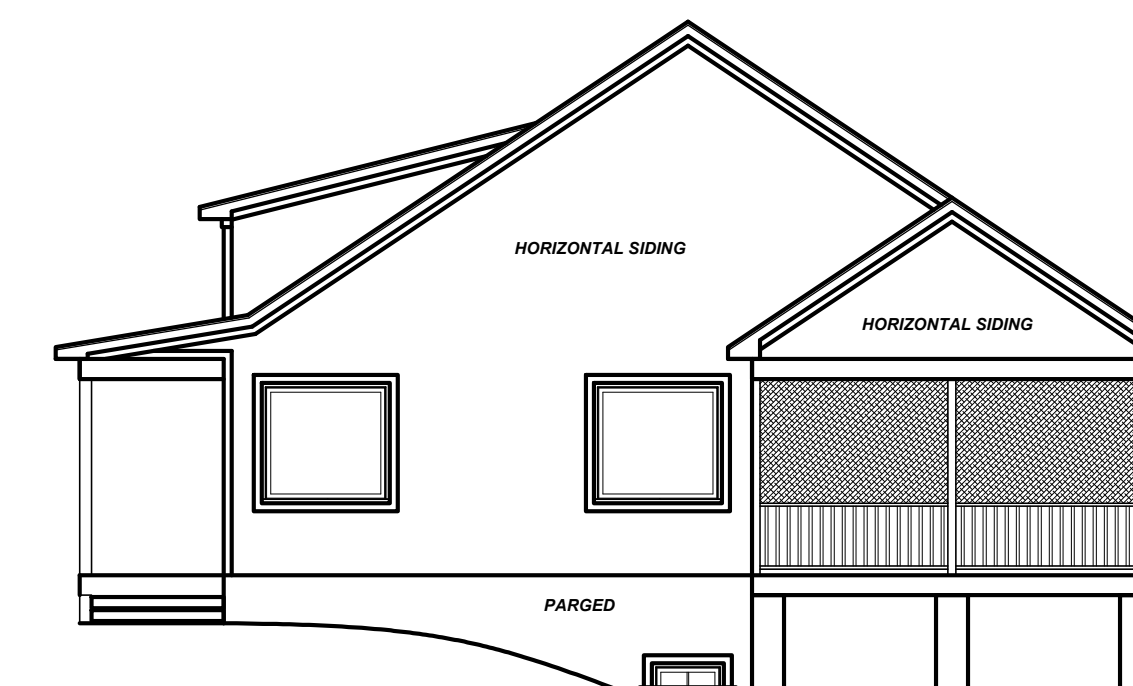
REAR ELEVATION

1/8" = 1'-0"



LEFT ELEVATION

1/8" = 1'-0"



RIGHT ELEVATION

1/8" = 1'-0"

Project No.	20-359
Date	2-26-21
Drawn/Design By.	KBB
Scale	REFER TO ELEV.

REVISIONS		
No.	Date	Remarks
1		
2		
3		
4		

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ELEVATIONS

Sheet Number	1
	of 3

STRUCTURAL NOTES

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

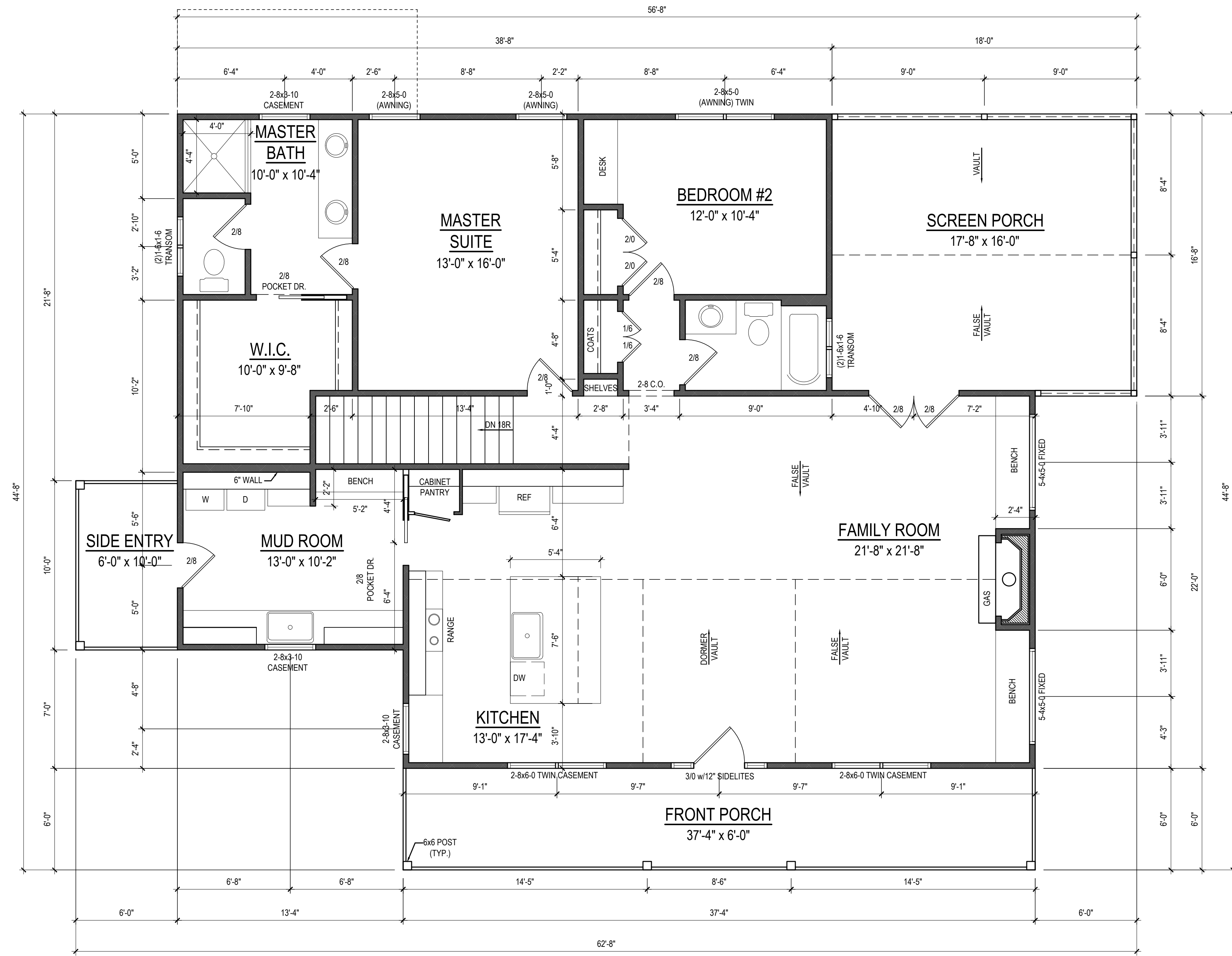
2) DESIGN LOADS:

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (DL & LL)
ALL FLOORS	40	10	L/360
ATTIC (pull down access)	20	10	L/240
ATTIC (no access)	10	5	L/240
EXTERNAL BALCONY	60	10	L/360
ROOF	20	10	L/180
ROOF TRUSS	20	20	L/240
WIND LOAD	[BASED ON 115 MPH (3-second gusts)]		

- 3) MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
- 4) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE (UNO).
- 5) MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R404 OF 2018 NC RESIDENTIAL BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT
- 6) ALL FRAMING LUMBER SHALL BE SYP #2 (F) - 800 PSI UNO.
ALL LOAD BEARING HEADERS EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL.
- 7) ALL LOAD BEARING HEADERS SHALL BE (2)x10 (UNO). ALL WINDOW AND DOOR HEADERS SHALL BE SUPPORTED BY (1) JACK STUD AND (1) KING STUD AT EACH END UNLESS NOTED. ALL OTHER BEAMS SHALL BE SUPPORTED BY 2 STUDS OR THE AMOUNT OF STUDS REQUIRED FOR FULL BEARING AT EACH END UNLESS NOTED. POINT LOADS (STIFF KNEES, ETC.) SHALL CONSIST OF 2 STUDS UNLESS NOTED. ALL SUPPORTS OF 2 STUDS OR MORE SHALL BE TRANSFERRED THROUGH EACH FLOOR TO THE FOUNDATION.
- 8) ALL EXTERIOR WALLS TO BE SHEATHED WITH MIN. 7/16" WOOD STRUCTURAL PANELS FASTENED WITH 8D NAILS 6" O.C. AT EDGES AND 12" O.C. AT INT. SUPPORTS. BLOCKING SHALL BE INSTALLED IF LESS THAN 50 PERCENT OF THE WALL LENGTH IS SHEATHED. WHERE BLOCKING IS REQ'D, ALL PANELS SHALL BE FASTENED AT 3" O.C. AT EDGES AND 6" O.C. AT INT. SUPPORTS.
- 9) ALL STRUCTURAL STEEL SHALL ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER AND 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.
- 10) ANCHOR BOLT PLACEMENT PER SECTION R403.1.6. 1/2" DIAMETER ANCHOR BOLTS SPACED AT 6'-0" O/C AND PLACED 12" FROM THE END OF EACH PLATE SECTION
- 11) FOUNDATION DRAINAGE-DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF 2018 NC RESIDENTIAL BUILDING CODE
- 12) WALL AND ROOF CLADDING VALUES:
WALL CLADDING SHALL BE DESIGNED FOR A 24.1 SQ.FT. OR GREATER POSITIVE AND NEGATIVE PRESSURE
ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:
45.5 LBS/SQFT FOR ROOF PITCHES OF 0/12 TO 2.25/12
34.8 LBS/SQFT FOR ROOF PITCHES OF 2.25/12 TO 7/12
21.0 LBS/SQFT FOR ROOF PITCHES OF 7/12 TO 12/12
** MEAN ROOF HEIGHT 30' OR LESS
- 13) FOR ROOF SLOPES FROM 2:12 THROUGH 4:12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER
- 14) IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQ. FTG. ARE CORRECT PRIOR TO CONSTRUCTION. DESIGNER IS NOT RESPONSIBLE FOR DIMENSIONING OR SQ. FTG. ERRORS ONCE CONSTRUCTION BEGINS

TABLE N1102.1 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT

CLIMATE ZONE	MAXIMUM GLAZING U-FACTOR	MINIMUM INSULATION R-VALUE					
		CEILINGS	WALLS	FLOORS	BASEMENT WALLS	SLAB PERIMETER	CRAWL SPACE WALLS
3	.35	R-38 or R-30	R-15	R-19	R-5/13	R-0	R-5/13
4	.35	R-38 or R-30	R-15	R-19	R-10/15	R-10	R-10/15



FIRST FLOOR PLAN
1/4" = 1'-0" CEILING HT. = 9'-0"

Project #	20-359
Date	2-26-21
Drawn/Design By	KBB
Scale	1/4" = 1'-0"

REVISIONS		
No.	Date	Remarks
1		
2		
3		
4		

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Misklewicz Residence

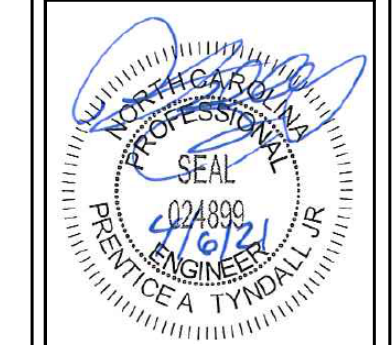
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FIRST FLOOR

Sheet Number
3
of 3

Email: Kent@KandAHomeDesigns.com Website: www.KandAHomeDesigns.com

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 * Failure to do so will void Tyndall Engineering & Design, P.A. liability.
 * Please review these documents carefully.
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Client: **KIMBERLY & DAVID MISKLEWICZ**

Design: **MISKLEWICZ RESIDENCE**

BASEMENT PLAN
1ST FLR. FRMG.

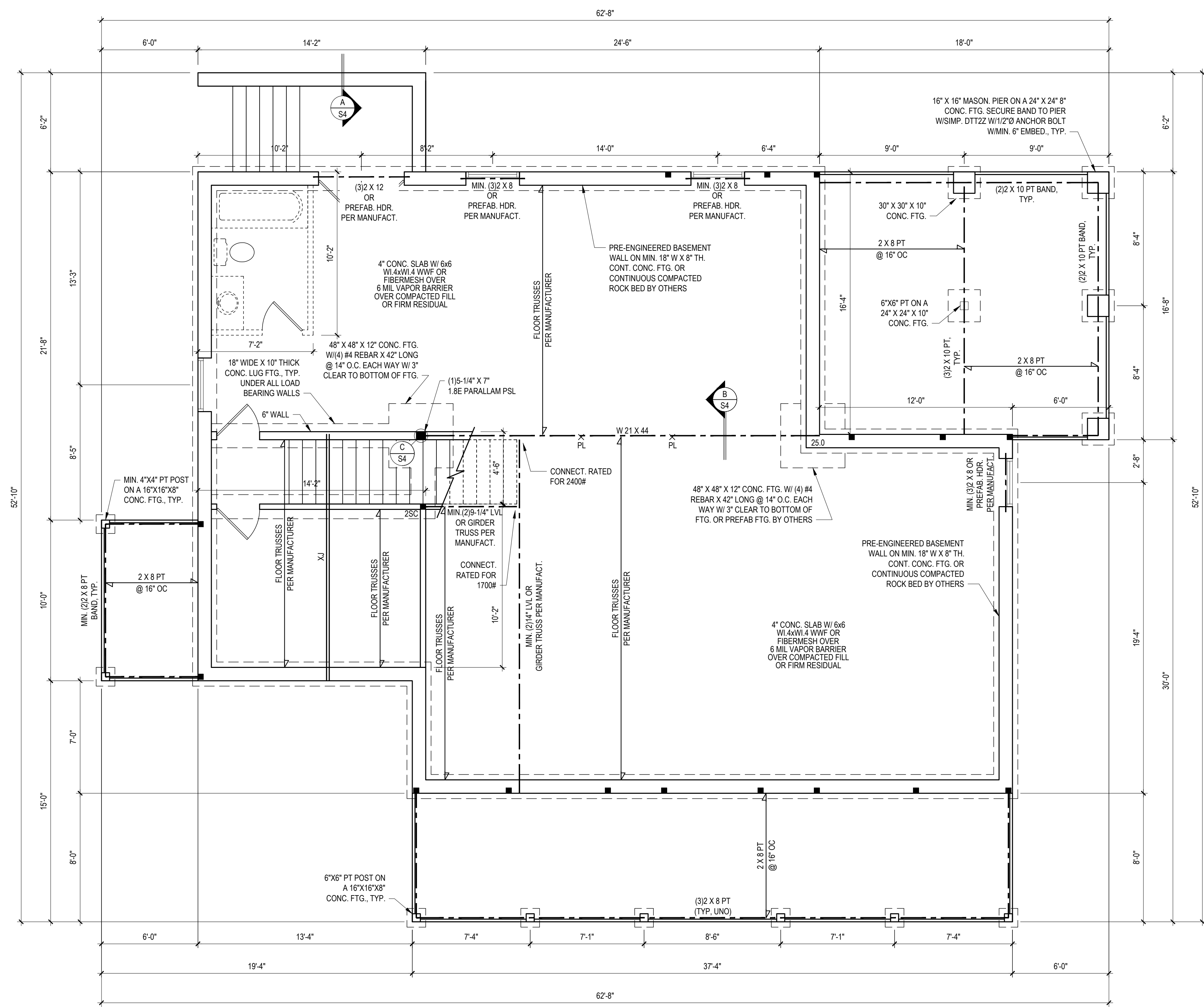
Project #:	2101-010078
Date:	04/06/2021
Drawn/Design By:	KFR/JTT
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS		
No.	Date	Remarks

Sheet Number

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BASEMENT PLAN
1/4" = 1'-0" CEILING HT. = 10'-0"

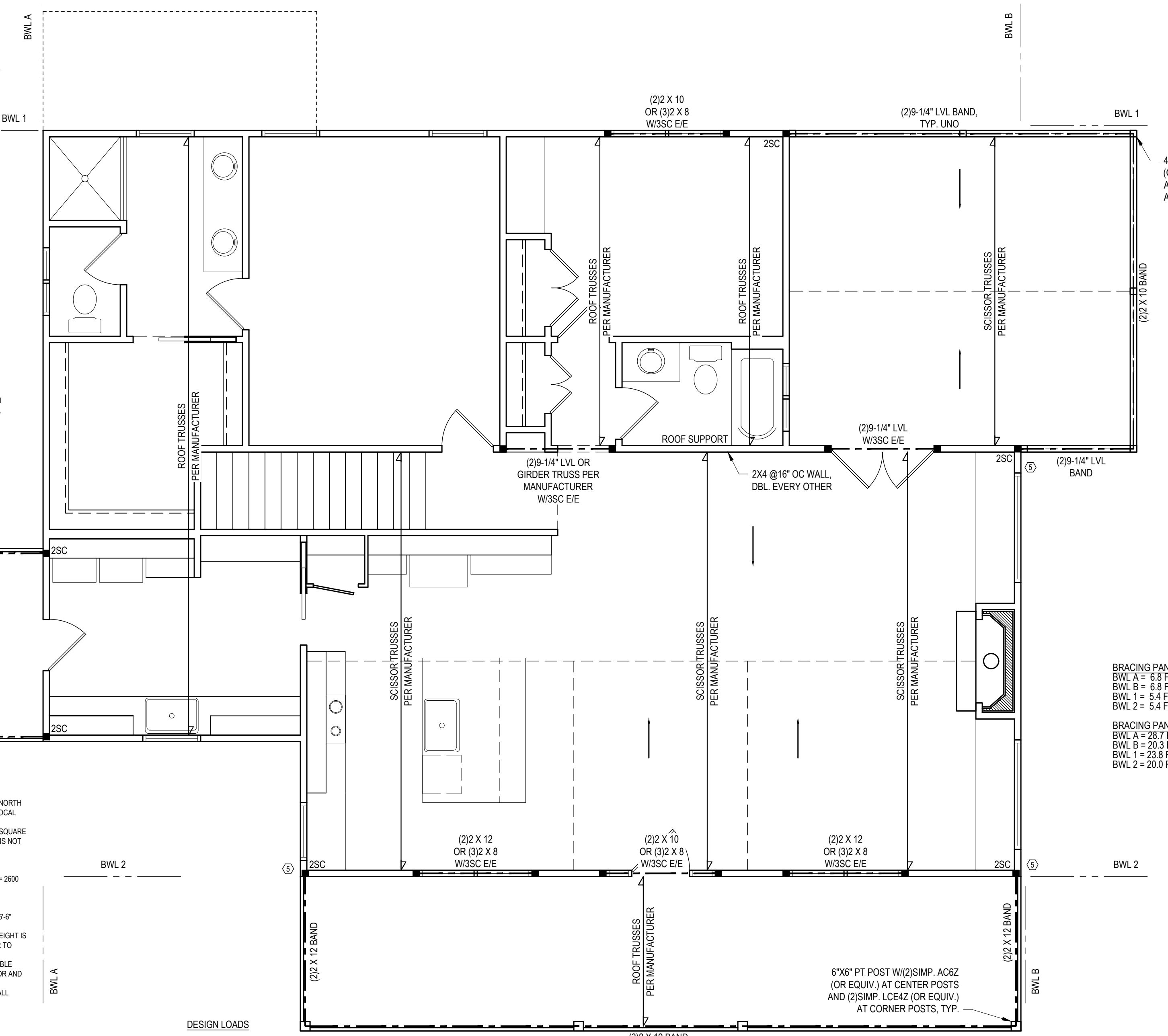
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STRUCTURAL SHEATHING NOTES

- 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 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)
- 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

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 Fb = 2600 PSL E = 1.9M PSI (I.E. ILEVEL MICROLAM)
ALL LVL LUMBER IS TO BE 1.55E (Fb = 2325 PSI)
- ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 6'-6" SHOULD BE A (2) 2x10 w/ (1) 2x4 KING STUD AND (1) 2x4 JACK STUD NAILED TOGETHER w/ (2) 10d @ 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 TABLE R502.5(1).
- ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE R502.5(1) 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
Fy = 50 KSI MIN. (UNO)
- ALL EXTERIOR LUMBER TO BE #2 SYP PT
- ALL CONCRETE, fc = 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.
- PSL 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.
- UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.



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			

FIRST FLOOR PLAN
1/4" = 1'-0" CEILING HT. = 9'-0"

BRACING PANEL LENGTHS REQUIRED:
BWL A = 6.8 FT
BWL B = 6.8 FT
BWL 1 = 5.4 FT
BWL 2 = 5.4 FT

BRACING PANEL LENGTHS PROVIDED:
BWL A = 28.7 FT CS-WSP
BWL B = 20.3 FT CS-WSP
BWL 1 = 23.8 FT CS-WSP
BWL 2 = 20.0 FT CS-WSP

Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.
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KIMBERLY & DAVID MISKLEWICZ
MISKLEWICZ RESIDENCE

**1ST FLR. HEADER
2ND FLR. FRMG.**

Project #: 2101-010078
Date: 04/06/2021
Drawn/Design By: KFR/JTT
DWG. Checked By: PAT
Scale: SEE PLAN

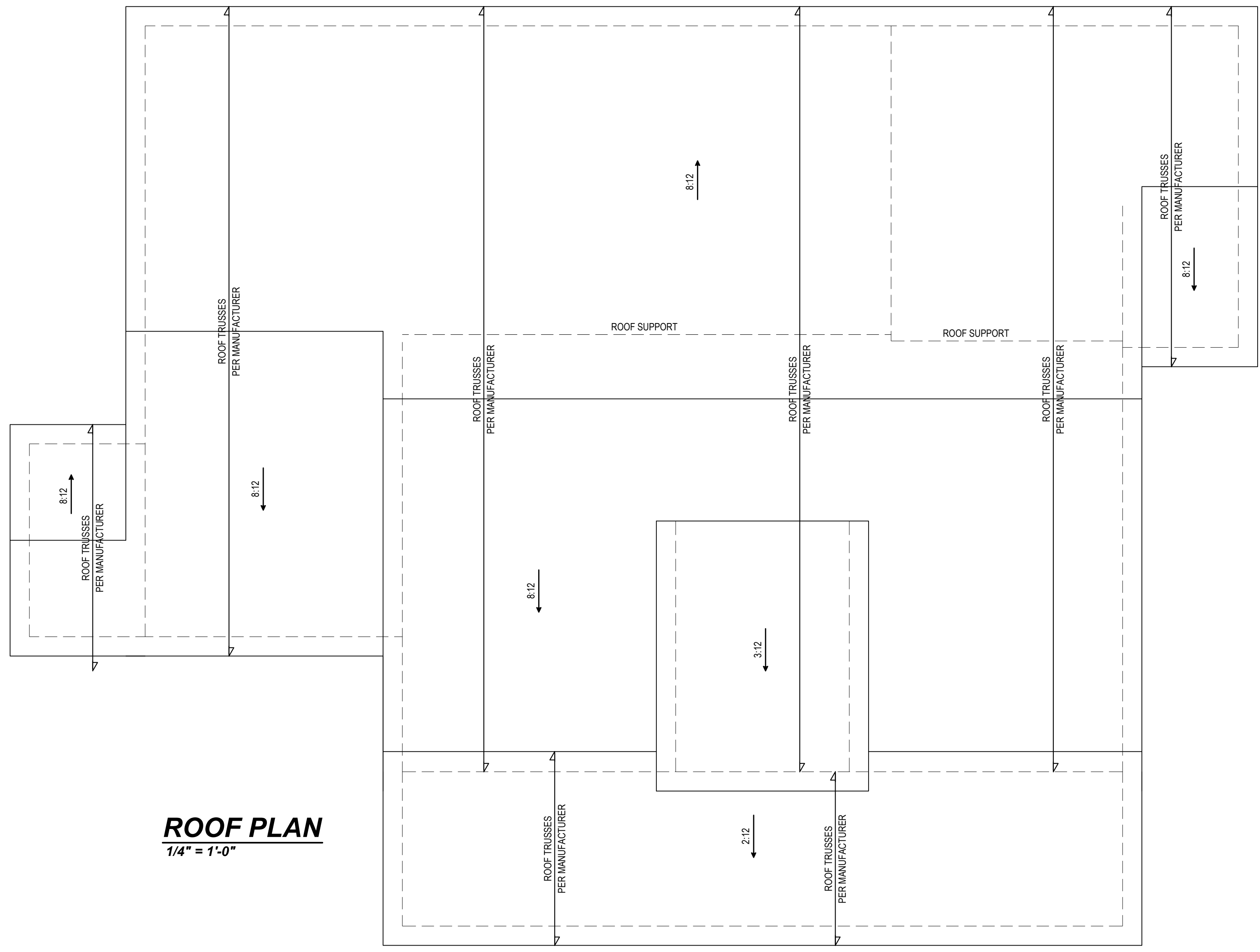
REVISIONS

No.	Date	Remarks

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

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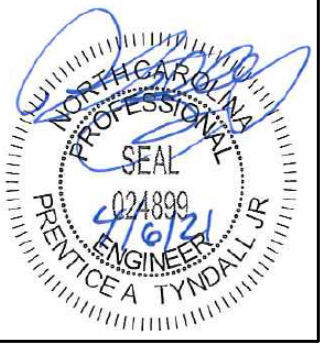
Client:	KIMBERLY & DAVID MISKLEWICZ
Date:	MISKLEWICZ RESIDENCE

ROOF PLAN

Project #:	2101-010078
Date:	04/06/2021
Drawn/Design By:	KFR/JTT
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS		
No.	Date:	Remarks

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KIMBERLY & DAVID MISKLEWICZ

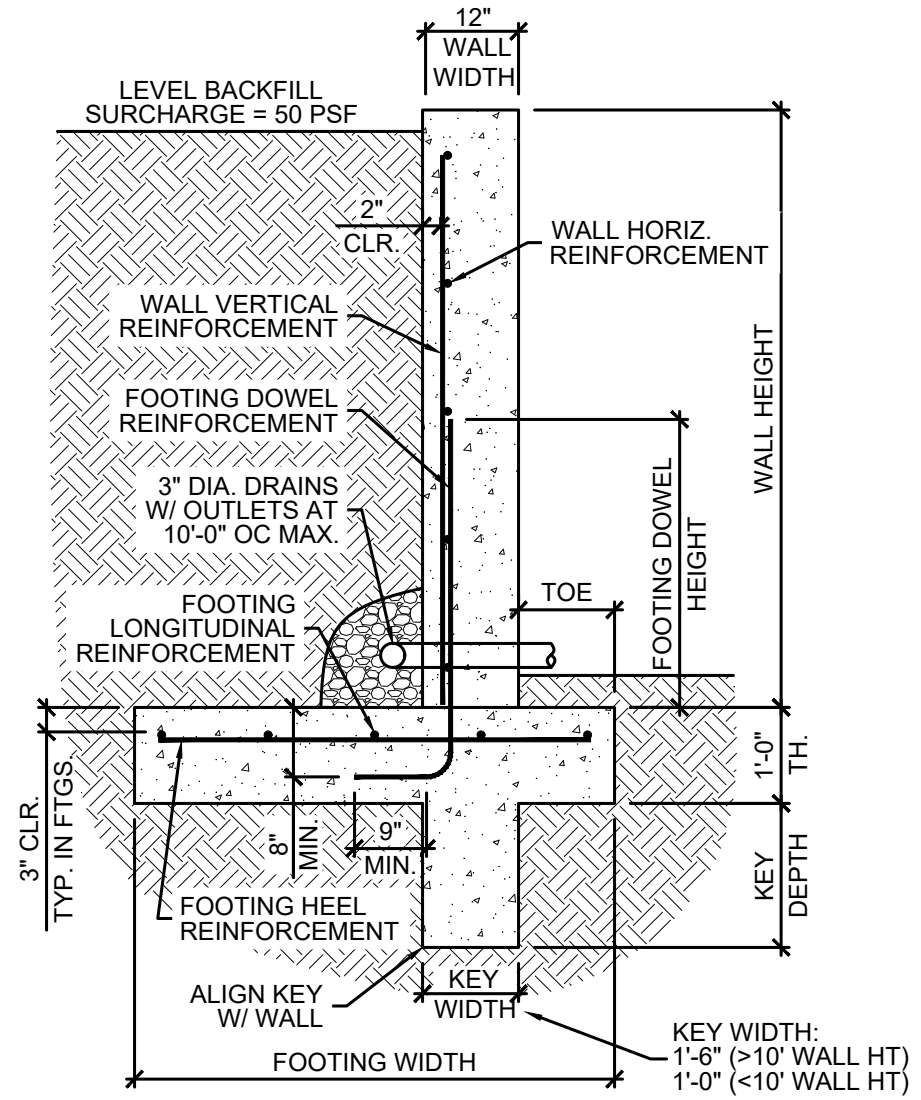
MISKLEWICZ RESIDENCE

DETAILS

Project #: 2101-010078
 Date: 04/06/2021
 Drawn/Design By: KFR/JTT
 DWG. Checked By: PAT
 Scale: NOT TO SCALE

REVISIONS		
No.	Date	Remarks

Sheet Number
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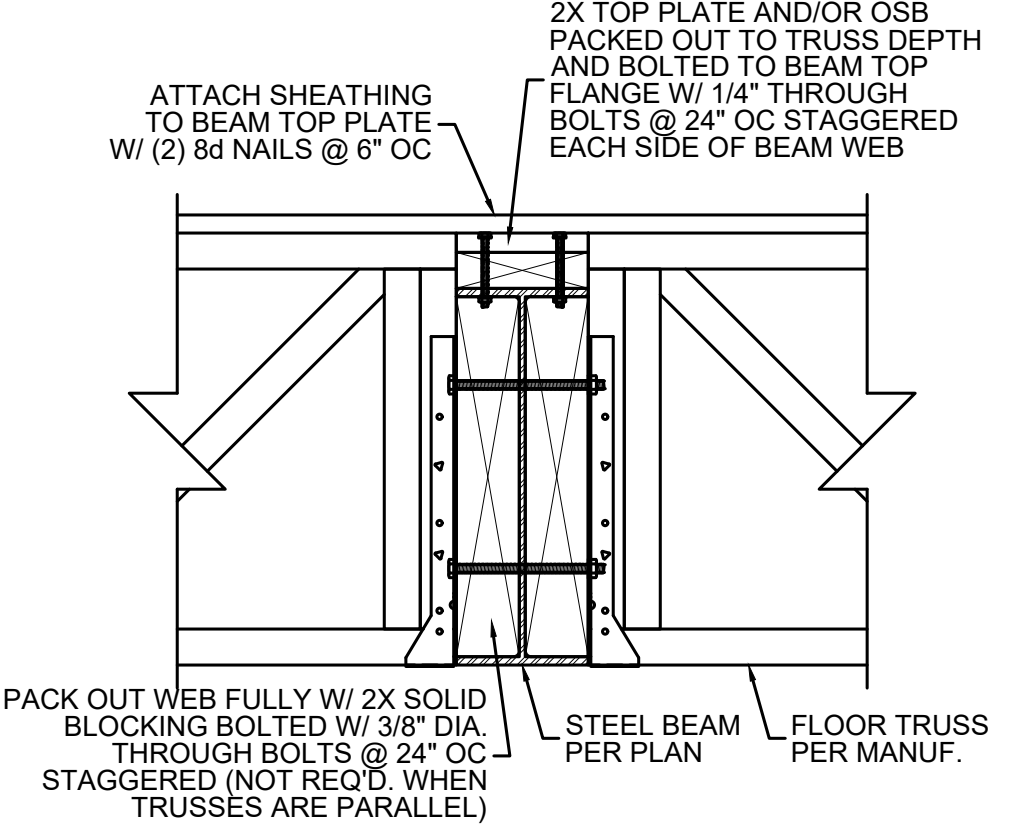


A CANTILEVERED CONCRETE RETAINING WALL SCALE: 1/2" = 1'-0"

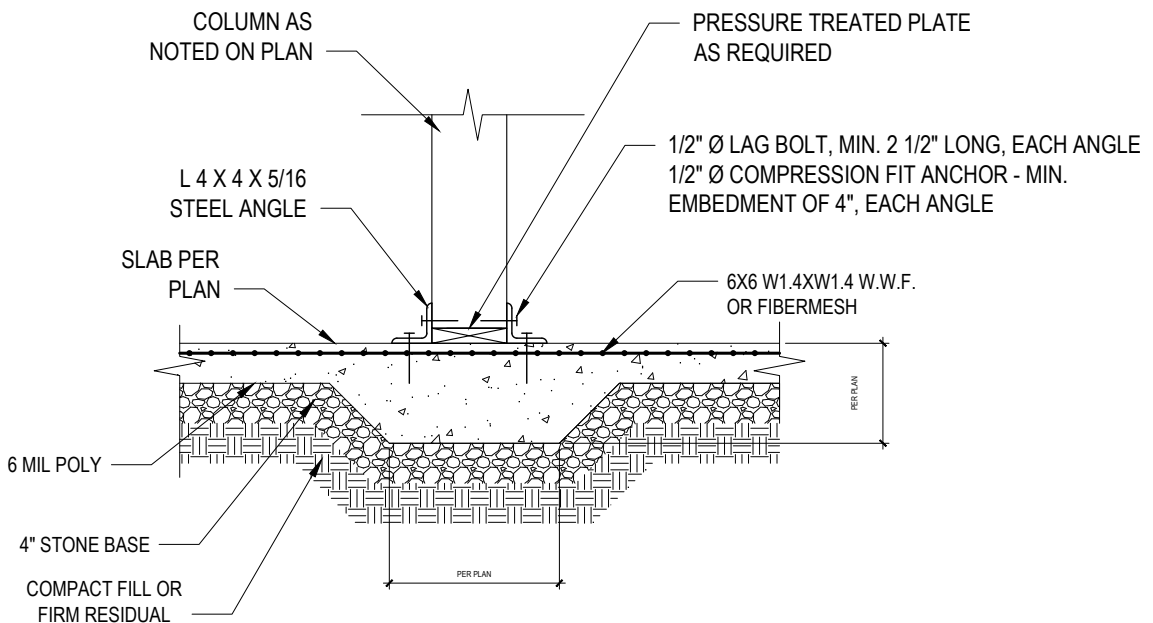
WALL DESIGN CRITERIA
 SOIL BEARING PRESSURE = 2000 PSF
 f_c = 3000 PSI
 ϕ = 110 PCF
 δ = 26 DEGREES
 COHESION = 0 PSF
 FRICTION COEFF. = 0.25

RETAINING WALL DESIGN TABLE

WALL HEIGHT	TOE	FOOTING WIDTH	KEY DEPTH	FTG. DOWEL HEIGHT	FOOTING DOWEL REINFORCEMENT	WALL VERTICAL REINFORCEMENT	WALL HORIZ. REINFORCEMENT	FOOTING HEEL REINFORCEMENT	FOOTING LONGITUDINAL REINFORCEMENT
12'-0" TO 10'-0"	1'-6"	8'-0"	2'-0"	4'-0"	#5 @ 8" OC	#5 @ 12" OC	#5 @ 12" OC	#5 @ 8" OC	#5 @ 14" OC
10'-0" TO 8'-0"	1'-3"	7'-6"	1'-8"	3'-0"	#4 @ 7" OC	#5 @ 14" OC	#4 @ 12" OC	#5 @ 8" OC	#5 @ 14" OC
8'-0" TO 6'-0"	1'-0"	5'-0"	1'-6"	3'-0"	#5 @ 14" OC	#4 @ 14" OC	#4 @ 12" OC	#4 @ 8" OC	#5 @ 14" OC
6'-0" TO 4'-0"	9"	3'-9"	1'-0"	3'-0"	#4 @ 18" OC	#4 @ 18" OC	#4 @ 16" OC	#4 @ 8" OC	(5) #4 @ 9" OC
4'-0" TO 2'-0"	6"	2'-6"	8"	2'-0"	#4 @ 18" OC	#4 @ 18" OC	#4 @ 16" OC	#4 @ 8" OC	(4) #4
2'-0" OR LESS	4"	2'-4"	N/A	FULL HEIGHT	#4 @ 18" OC	#4 @ 18" OC	#4 @ 16" OC	#4 @ 12" OC	(3) #4 OR (2) #5



B STEEL BEAM FRAMING SCALE: 1-1/2" = 1'-0"



C BASEMENT WOOD COLUMN SLAB ATTACHMENT NO SCALE

FILENAME: \\A:\RESIDENTIAL ENR\2021 STRUCTURAL PROJECTS\2101-010078 - MISKLEWICZ RESIDENCE - MAIN\FROM ARCHY\2101-010078_L.E.DWG. SAVED BY: MARK LAST PLOT DATE: 4/6/2021 11:24 AM

STRUCTURAL NOTES

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE¹, IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.

2) 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 (w/ 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			

- 3) MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
- 4) CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE. (U.N.D.)
- 5) MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R404 OF 2018 NC BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT.
- 6) ALL FRAMING LUMBER SHALL BE SYP #2 (F = 900 PSI, BASED ON 2x10) UNO. ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL. ALL LV LUMBER TO BE 1 7/8" WIDE NOMINAL EACH SINGLE MEMBER AND F = 2600 PSI, E = 1.9M PSI (U.N.D.). ALL LS LUMBER TO BE 3" WIDE NOMINAL EACH SINGLE MEMBER AND F = 2200 PSI, E = 1.9M PSI (U.N.D.). ALL PS LUMBER TO BE 3" WIDE NOMINAL EACH SINGLE MEMBER AND F = 2400 PSI, E = 1.9M PSI (U.N.D.).
- 7) ALL LOAD BEARING EXTERIOR HEADERS SHALL BE AT (2) 2x10 (U.N.D.) REFER TO TABLE R602.1(1) & (2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS UNLESS SPECIFICALLY NOTED ON PLANS.
- 8) 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.
- 9) STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3'-12" AND FULL FLANGE WIDTH. PROVIDE SOLID 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 NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.
- 10) PROVIDE ANCHOR BOLT PLACEMENT PER SECTION 403.1.6: 1/2" Ø 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.
- 11) FOUNDATION DRAINAGE DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF NC BUILDING CODE.
- 12) WALL AND ROOF CLADDING VALUES:
WALL CLADDING SHALL BE DESIGNED FOR 28.0 POUNDS PER SQUARE FOOT (LBSSQ/FT) OR GREATER POSITIVE AND NEGATIVE PRESSURE. ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:
36.0 LBSSQ/FT FOR ROOF PITCHES 6/12 TO 12/12
36.0 LBSSQ/FT FOR ROOF PITCHES 1.5/12 TO 6/12
18.0 LBSSQ/FT FOR ROOF PITCHES 6/12 TO 12/12
*MEAN ROOF HEIGHT 30" OR LESS
- 13) FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 1/8" FIBER PAPER.
- 14) REFER TO SECTION R602.3 FOR FRAMING OF ALL WALLS OVER 10'-0" IN HEIGHT.
- 15) PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 NRC.
- 16) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- 17) REFER TO TABLE N1102.1 FOR PRESCRIPTIVE BUILDING ENVELOPE THERMAL COMPONENT CRITERIA.
- 18) PSL COLUMNS DESIGNED WITH MAXIMUM HEIGHT OF 9'-0" (U.N.D.)
- 19) PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.D.)
- 20) MAXIMUM MASONRY PER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- 21) IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, P.A. IS NOT RESPONSIBLE FOR DIMENSION OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.

CLIMATE ZONES

CLIMATE ZONES	FENESTRATION U-FACTOR ^a	SKYLIGHT U-FACTOR ^b	GLAZED FENESTRATION SHGC ^{c,d}	CEILING R-VALUE ^e	WOOD FRAMED WALL R-VALUE ^f	MASS WALL R-VALUE ^g	FLOOR R-VALUE ^h	BASEMENT WALL R-VALUE ⁱ	SLAB R-VALUE AND DEPTH ^j	CRACK SPACE R-VALUE ^k
3	0.35	0.55	0.30	35 or 30 (cont.)	15 or 13 + 2.5	5/13 or 5/13 (cont.)	19	5/13 ^l	0	5/13
4	0.35	0.55	0.30	35 or 30 (cont.)	15 or 13 + 2.5	5/13 or 5/13 (cont.)	19	10/15	10	10/15
5	0.35	0.55	NR	NR	19, or 13 + 5 ^m or 15 + 3 ⁿ	13/17 or 13/12.5 (cont.)	30 ^o	10/15	10	10/15

TABLE N1102.1 CLIMATE ZONES 3-5

NO SCALE

a. R-VALUES ARE MINIMUM FACTORS AND SHGC ARE MINIMUMS. 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 VALUE SPECIFIED IN THE TABLE.

b. THE FENESTRATION U-FACTOR FOR GLAZED FENESTRATION SHALL BE THE U-FACTOR FOR THE WINDOW TYPE SPECIFIED IN THE TABLE. (SHGC APPLIES TO ALL GLAZED FENESTRATION.)

c. SHGC VALUES IN CAVITY WALLS SHALL BE BASED ON THE WINDOW TYPE SPECIFIED IN THE TABLE.

d. FOR WINDOW TYPE GLAZED FENESTRATION SHALL BE APPLIED FROM THE INSULATION SIDE OF THE WINDOW.

e. THE CEILING R-VALUE FOR CEILING INSULATION SHALL BE APPLIED FROM THE INSULATION SIDE OF THE CEILING.

f. FOR MASS WALLS, THE R-VALUE SHALL BE APPLIED FROM THE INSULATION SIDE OF THE WALL.

g. FOR MASS WALLS, THE R-VALUE SHALL BE APPLIED FROM THE INSULATION SIDE OF THE WALL.

h. THE FIRST FLOOR IS CAVITY INSULATION. THE SECOND FLOOR IS CONTINUOUS INSULATION. 30" THICK MASS IS CAVITY INSULATION PLUS R-4 INSULATED BRACING. 12" THICK MASS IS CAVITY INSULATION PLUS R-4 INSULATED BRACING. IF STRUCTURAL BRACING COVERS LESS THAN 25% OF THE EXTERIOR SURFACE, THE R-VALUE SHALL BE APPLIED FROM THE INSULATION SIDE OF THE BRACING.

i. FOR EXTERIOR WALLS, THE R-VALUE SHALL BE APPLIED FROM THE INSULATION SIDE OF THE WALL.

j. INSULATION SHALL MEET THE MINIMUM R-VALUE SPECIFIED. HEAT CONDUCTIVITY REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

k. INSULATION SHALL MEET THE MINIMUM R-VALUE SPECIFIED. HEAT CONDUCTIVITY REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

l. FOR BASEMENTS, THE R-VALUE SHALL BE APPLIED FROM THE INSULATION SIDE OF THE WALL.

m. INSULATION SHALL MEET THE MINIMUM R-VALUE SPECIFIED. HEAT CONDUCTIVITY REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

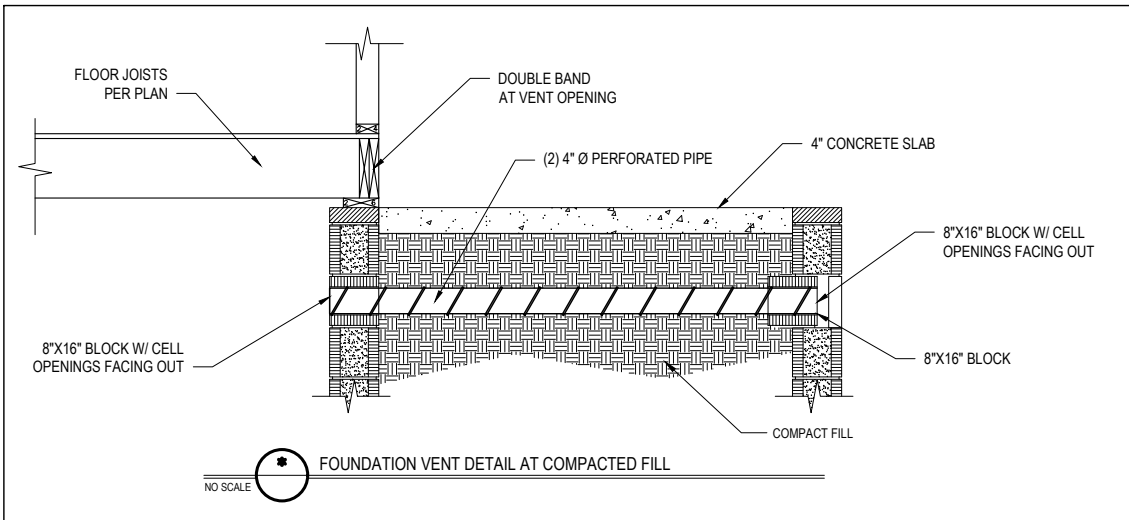
n. INSULATION SHALL MEET THE MINIMUM R-VALUE SPECIFIED. HEAT CONDUCTIVITY REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

o. INSULATION SHALL MEET THE MINIMUM R-VALUE SPECIFIED. HEAT CONDUCTIVITY REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

2469 SQ. FT. OF ATTIC / 300 = 8.23 SQ. FT. INLETS/OUTLETS REQUIRED

- 1) CALCULATION BASED ON VENTILATORS USED AT LEAST 8" ABOVE THE CEILING WITH THE BALANCE OF VENTILATION PROVIDED BY BALANCE.
- 2) CATHEDRAL CEILING SHALL HAVE A 1" MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

ATTIC VENTILATION CALCULATION



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	PL = POINT LOAD
CONC = CONCRETE	PT = PRESSURE TREATED
CONT = CONTINUOUS	RENF = 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
FTD = 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.

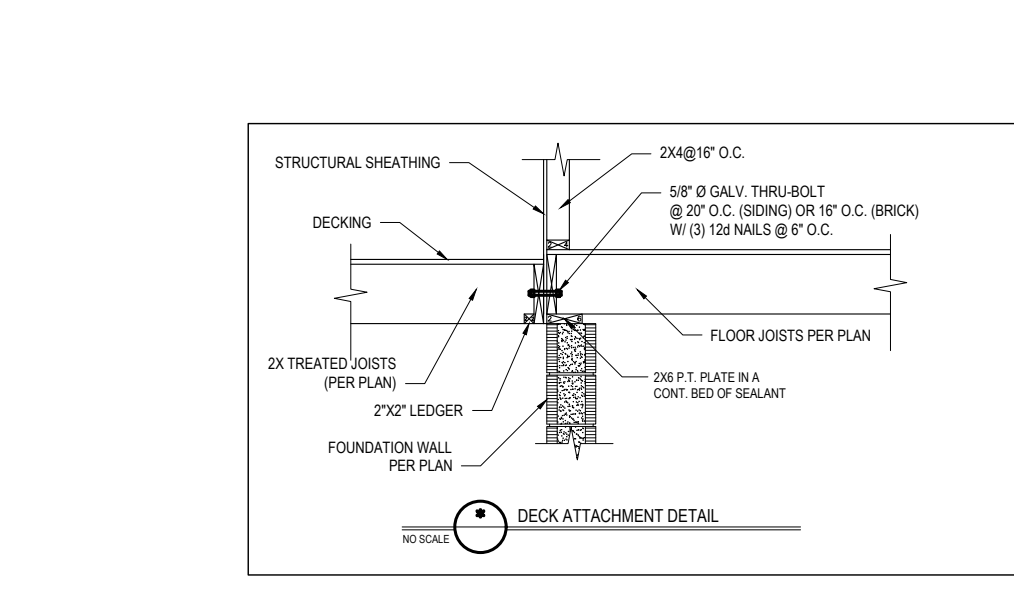
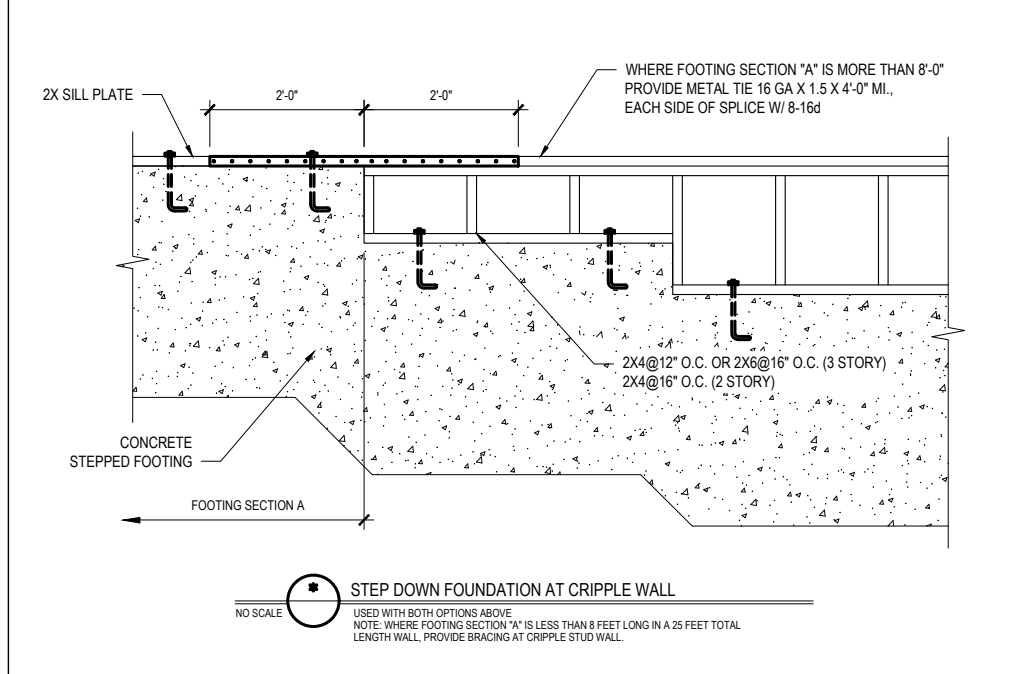
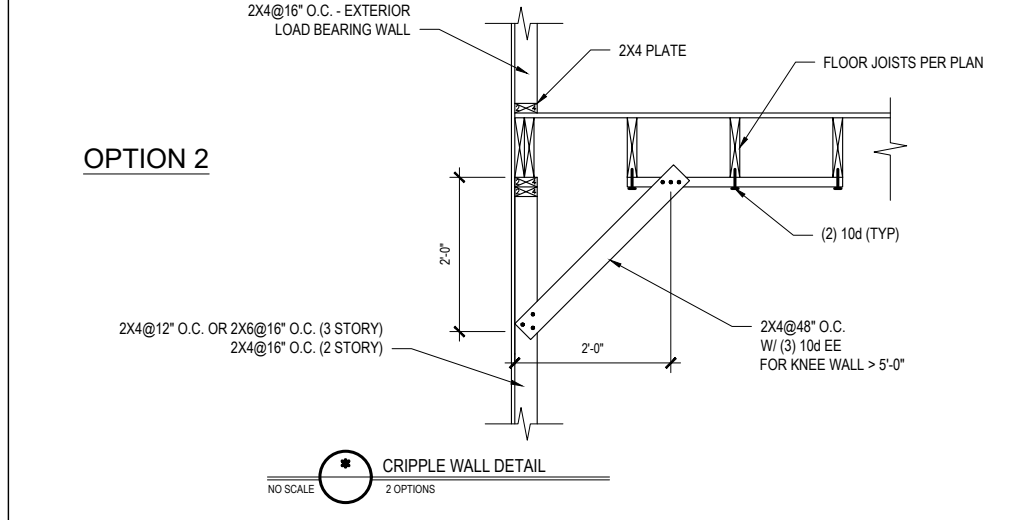
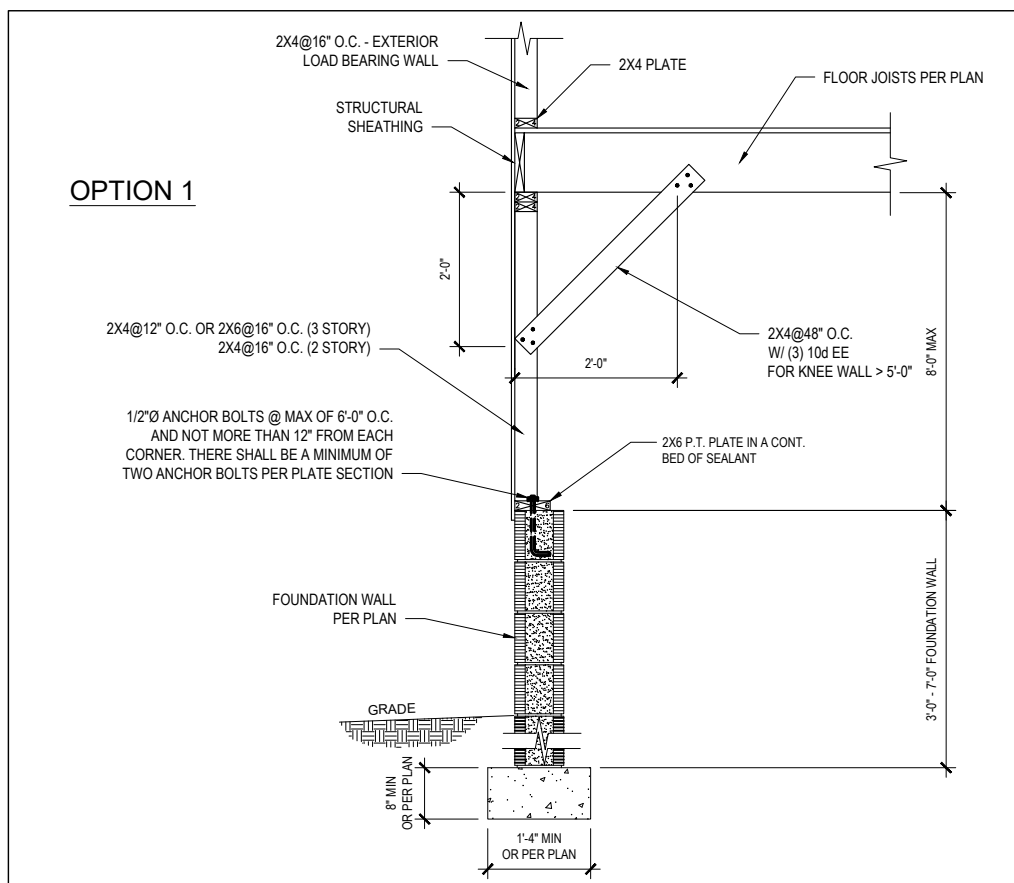
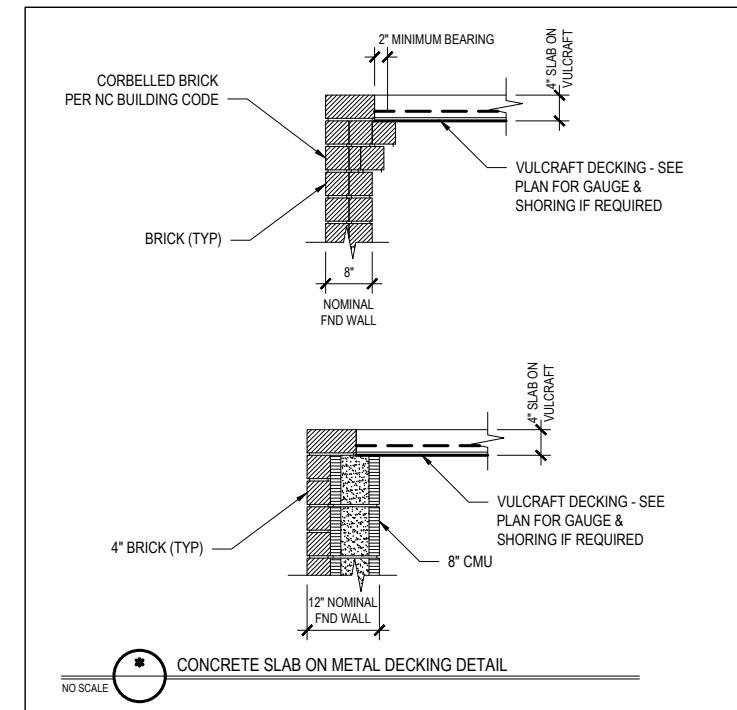
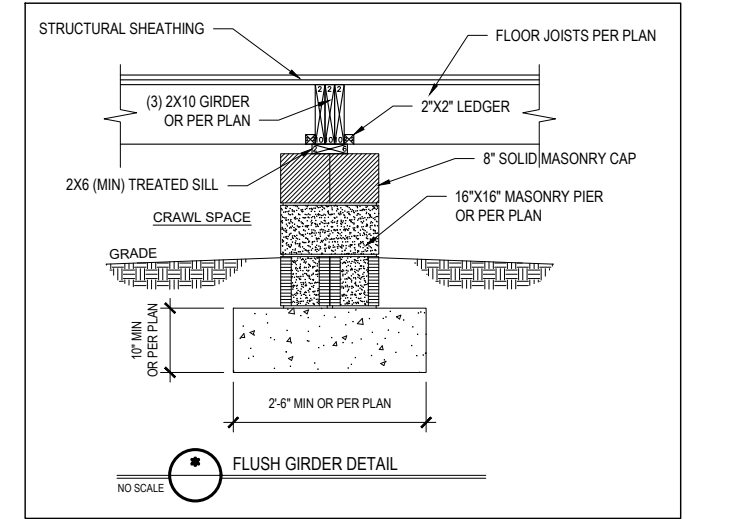
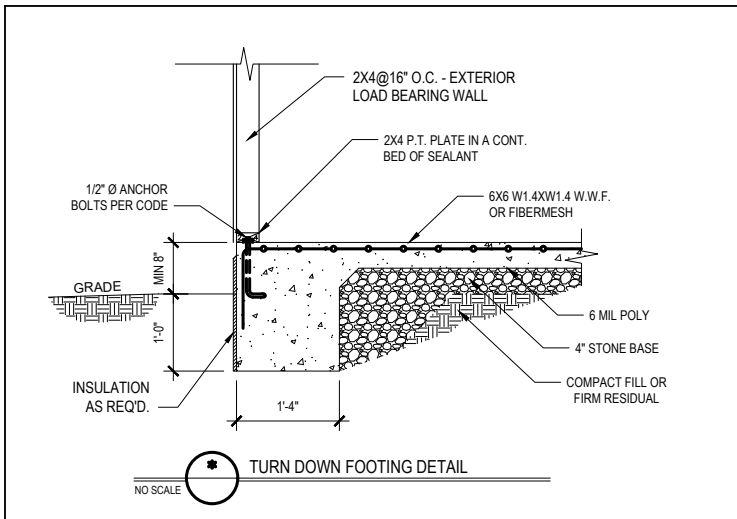
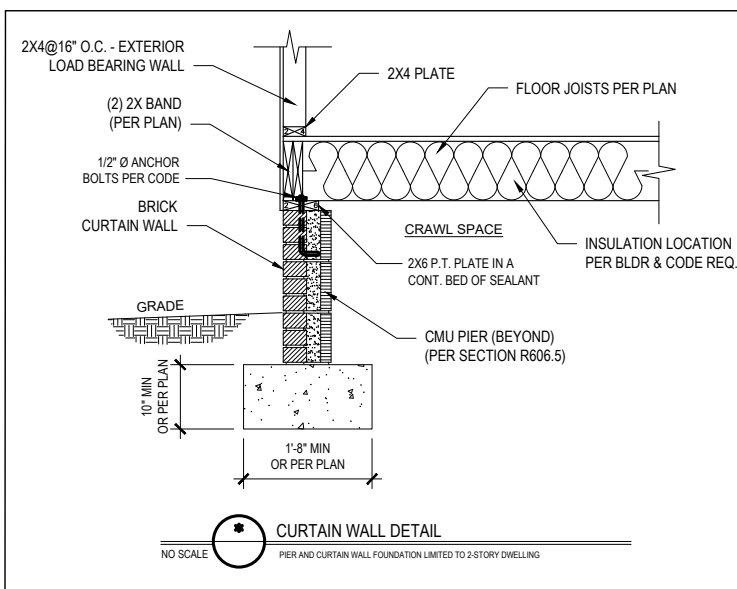
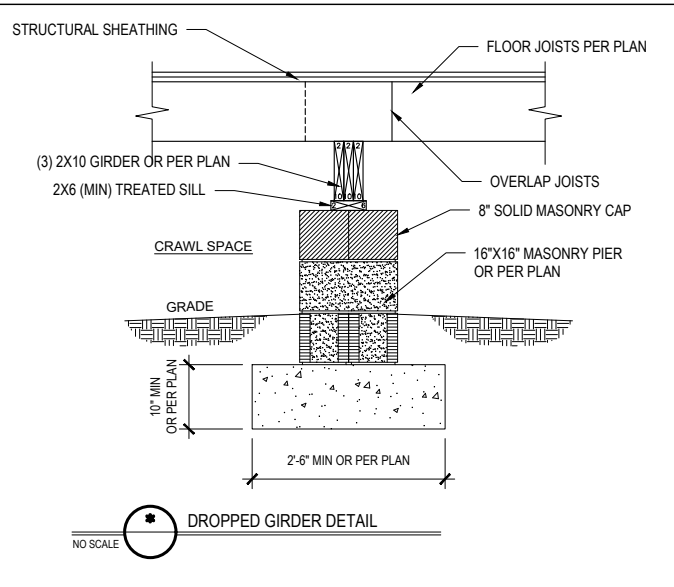
** FROM TOP OF FOOTING TO BOTTOM OF GIRDER.

*** DECKS WITH POST HEIGHTS OVER 20'-0" SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT.

- 2) DECKS SHALL BE DESIGNED TO PROVIDE LATERAL STABILITY BY ONE OF THESE METHODS:
- A. THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION (H) ABOVE. LATERAL BRACING IS NOT REQUIRED.
- B. 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.
- C. 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.	8'-0"	3'-6"	1'-8"

- D. 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 6 SHALL BE ATTACHED TO THE POSTS WITH ONE 5/8" HOT DIPPED GALVANIZED BOLT AT EACH END OF EACH BRACING MEMBER.
- E. FOR EMBEDMENT OF PILES IN COASTAL REGIONS, SEE CHAPTER 46.



Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.

Any deviations or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability.

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KIMBERLY & DAVID MISKLEWICZ

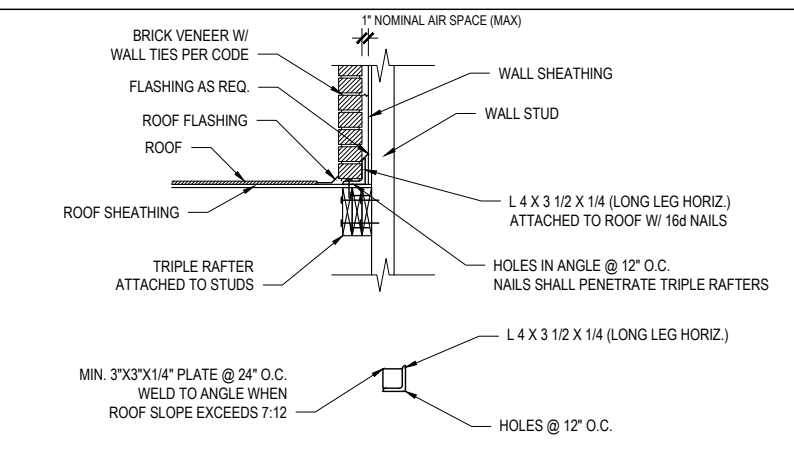
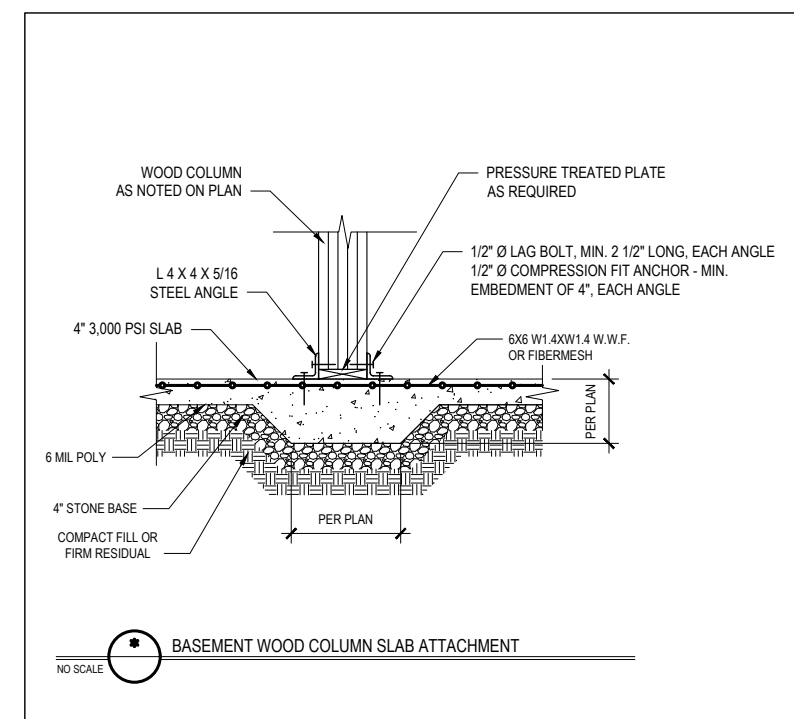
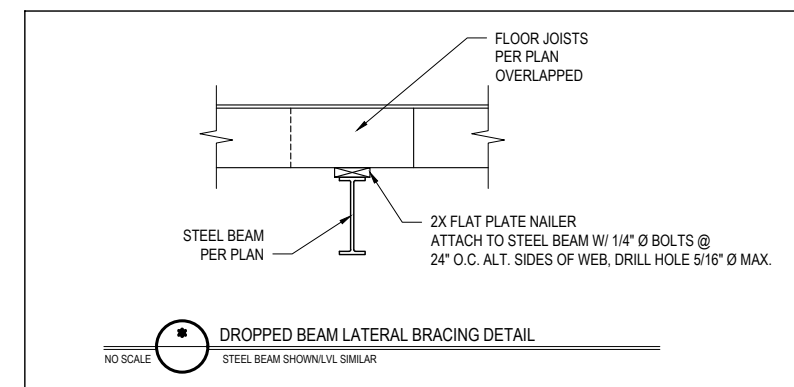
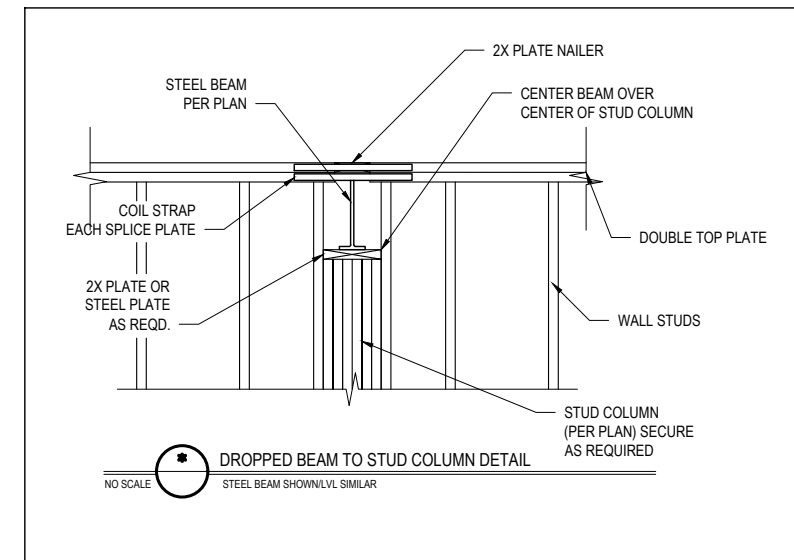
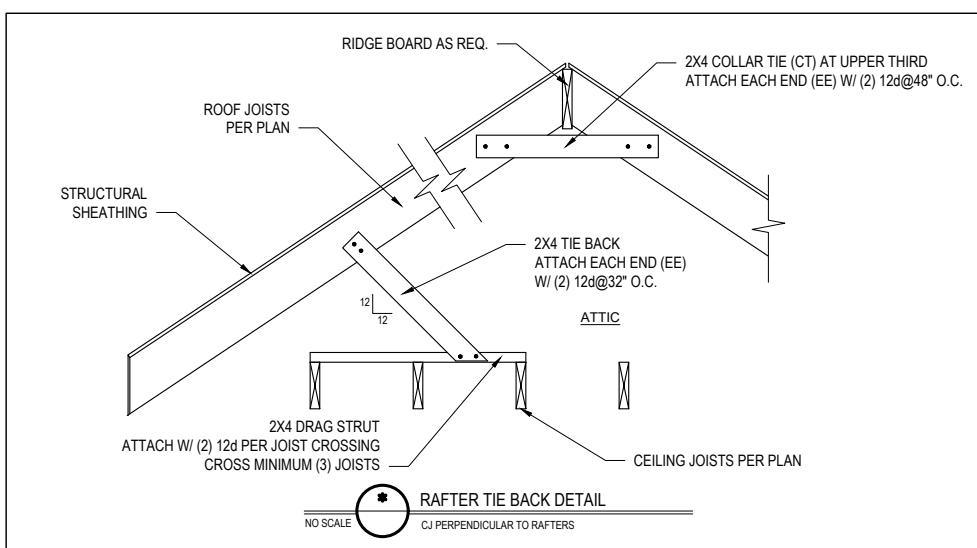
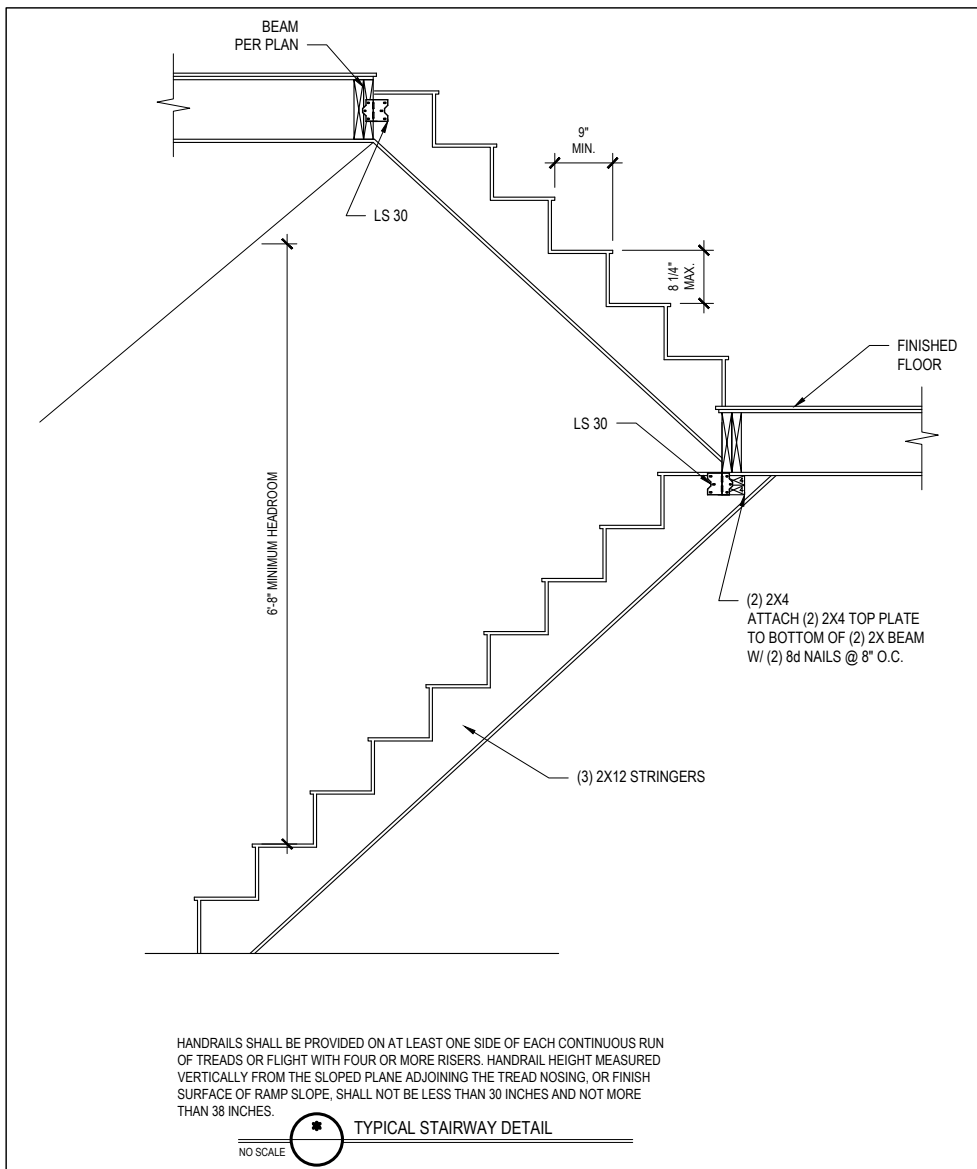
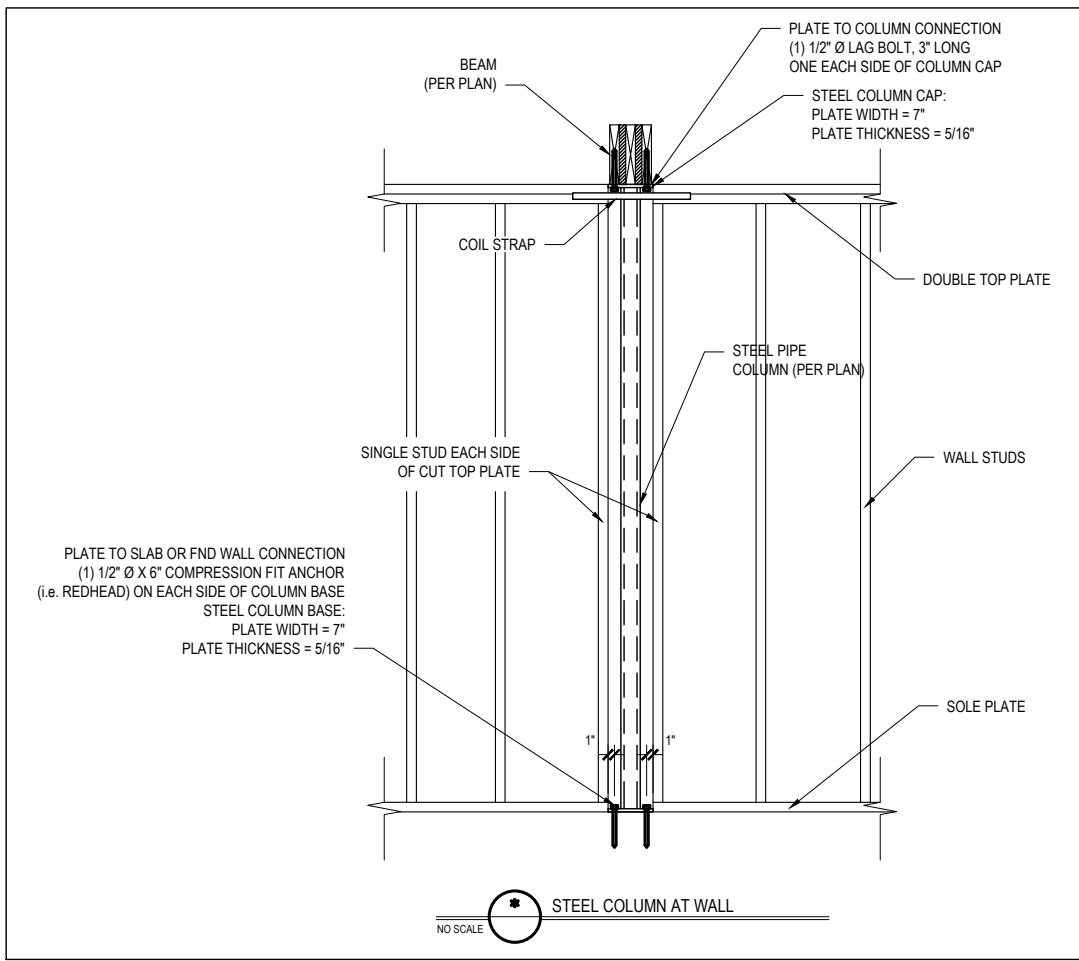
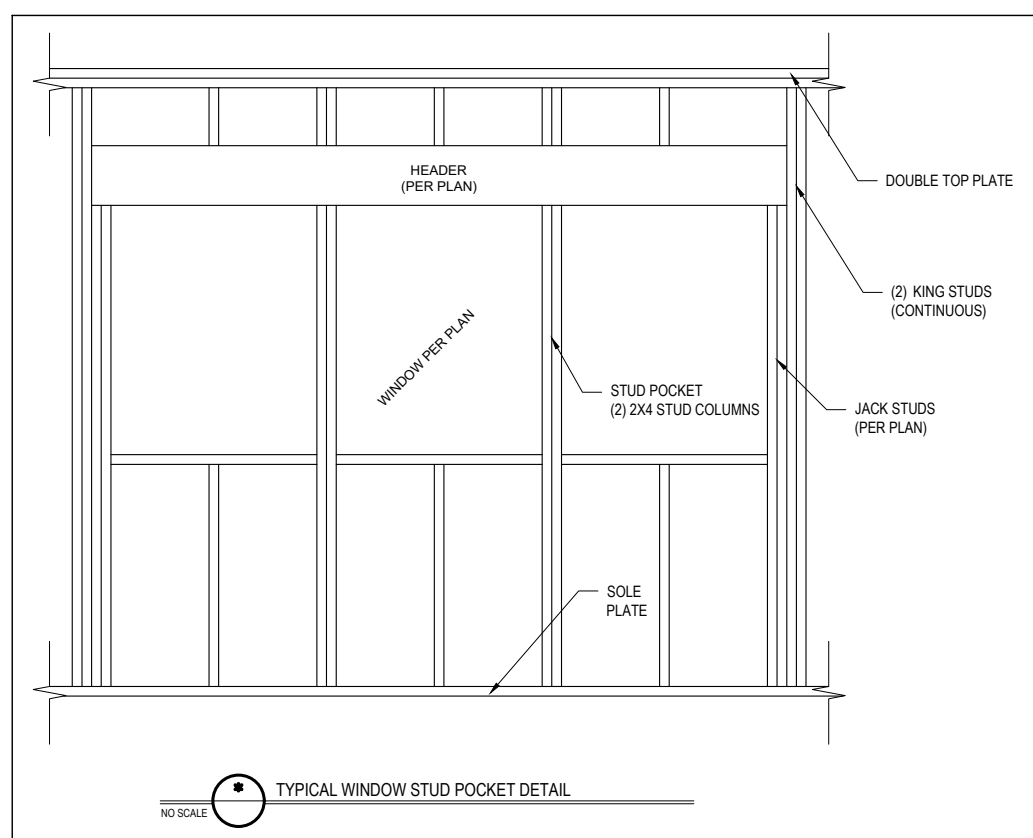
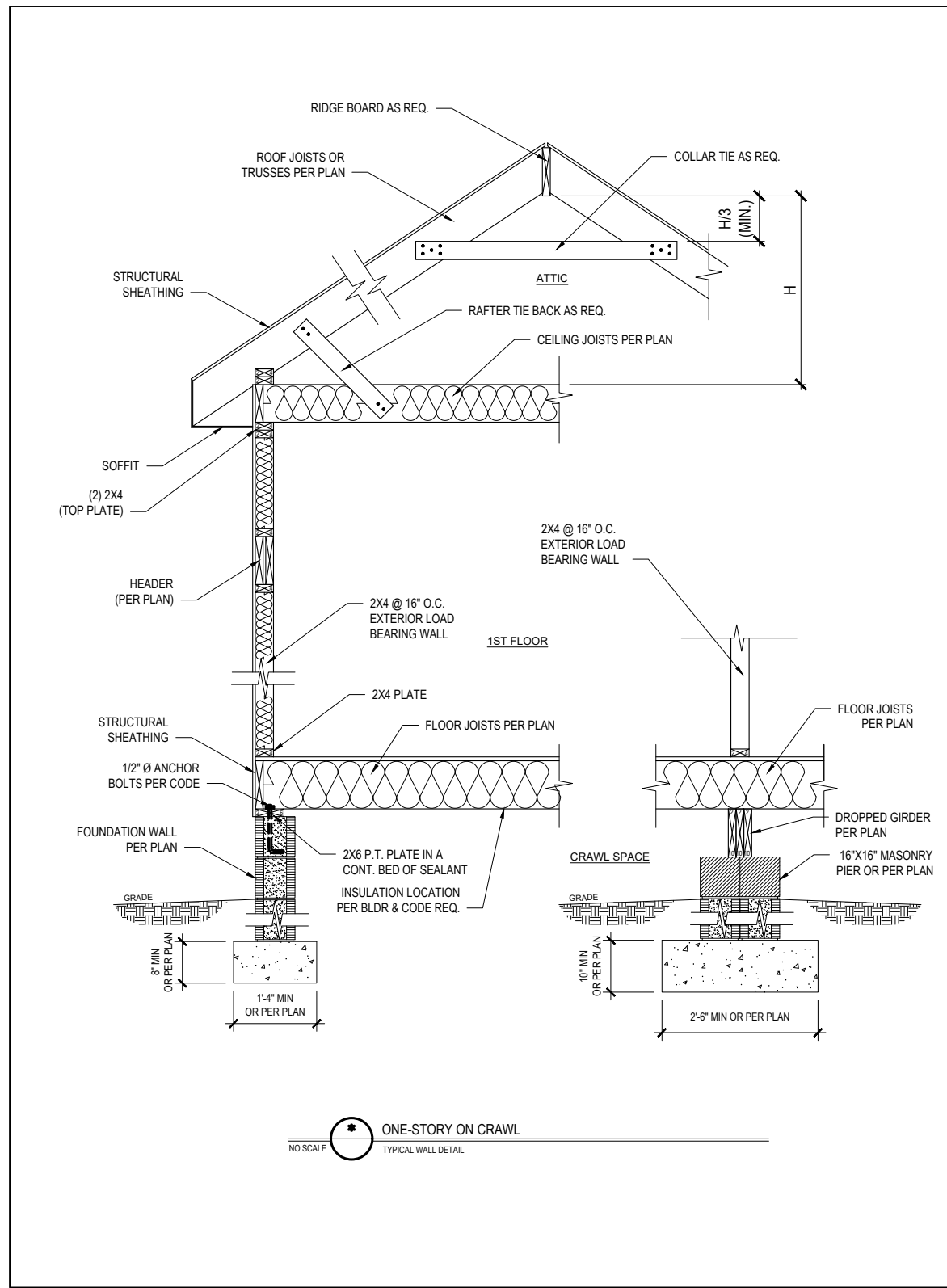
MISKLEWICZ RESIDENCE

STANDARD DETAILS

Project #: 2101-010078
Date: 04/06/2021
Drawn/Design By: KFR/JTT
DWG. Checked By: PAT
Scale: NOT TO SCALE

No.	Date	Remarks

Sheet Number
D1
5 of 7



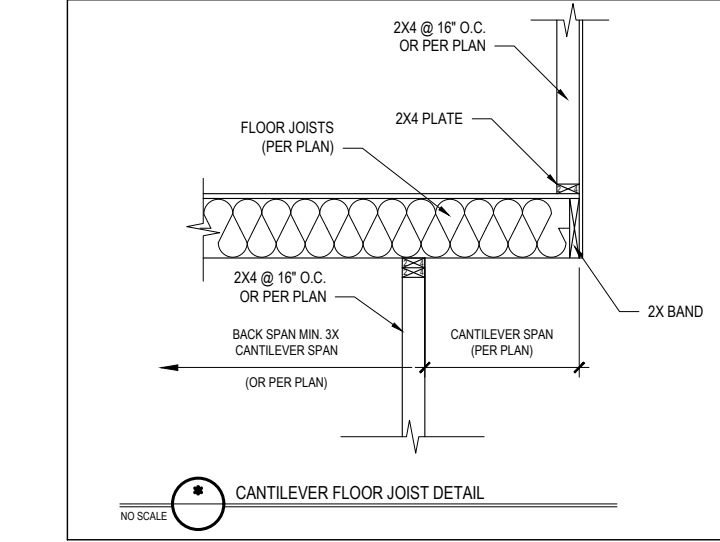
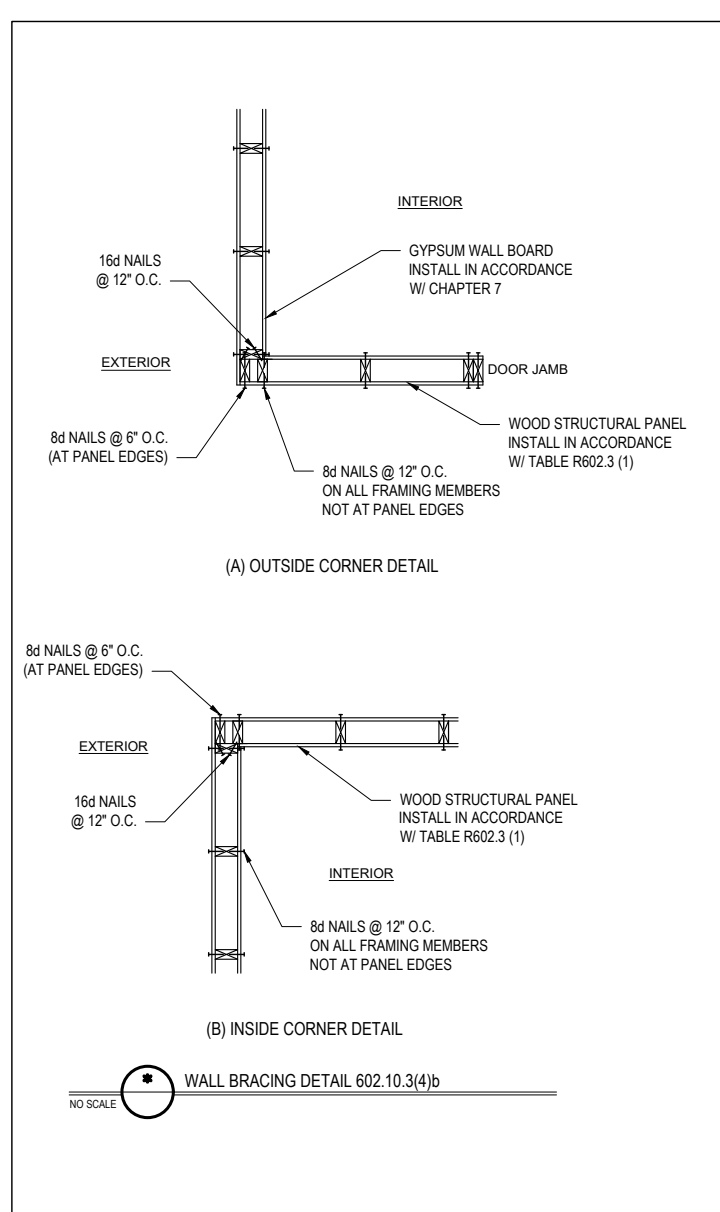
ALLOWABLE SPANS FOR LITELS SUPPORTING MASONRY VENEER

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 LITEL (2,4,5)
L 3 x 3 1/2	6'-0"	4'-6"	3'-0"	1
L 4 x 3 1/2	8'-0"	6'-0"	4'-6"	1
L 5 x 3 1/2 x 3/16	10'-0"	8'-0"	6'-0"	2
L 6 x 3 1/2 x 3/16	14'-0"	9'-6"	7'-0"	2
2L 5 x 3 1/2 x 3/16	20'-0"	12'-0"	9'-6"	4

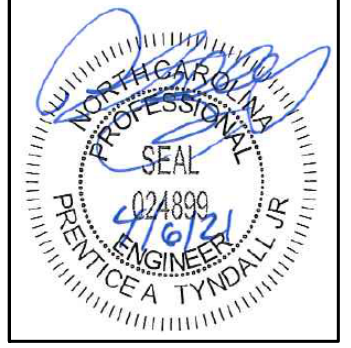
- LONG LEG OF THE ANGLE SHALL BE PLACED IN A VERTICAL POSITION.
- DEPTH OF REINFORCED LITELS SHALL NOT BE LESS THAN 8" AND ALL CELLS OF HOLLOW MASONRY LITELS SHALL BE GROUTED. REINFORCING BARS SHALL EXTEND NOT LESS THAN 8" INTO THE SUPPORT.
- STEEL MEMBERS INDICATED ARE ASSOCIATE TYPICAL EXAMPLES. OTHER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

HARDWARE CROSS-REFERENCE CHART

SIMPSON STRONG-TIE PRODUCT NUMBER	USP STRUCTURAL CONNECTORS PRODUCT NUMBER
A35	MPA1
ABE	PAE
CBSQ	CBSQ
CCO	KCCO
CMSTC16	CMSTC16
CS	RS
H1	RT15
H2.5A	RT1A
H10	RT16
HD08-SDS3	UPH08
HD12-SDS2.5	PHD2
HD12-SDS2.5	PHD5
HETA	HTA
HGAM10KTA	HGAM
HDQ14-SDS2.5	UPH14
HTS	HTW
HTT	HTT
HUS	HUS
LTA1	LPTA
LTHA26	HUC26
LTP4	MP4F
LUS	JUS
MAS	FA3
MSTAM	MSTAM
PC	PCM
PHD-SDS3	PHD
SSP	RSPTB
STC	TR1
STHD	STAD



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Client: **KIMBERLY & DAVID MISKLEWICZ**
Date: **MISKLEWICZ RESIDENCE**

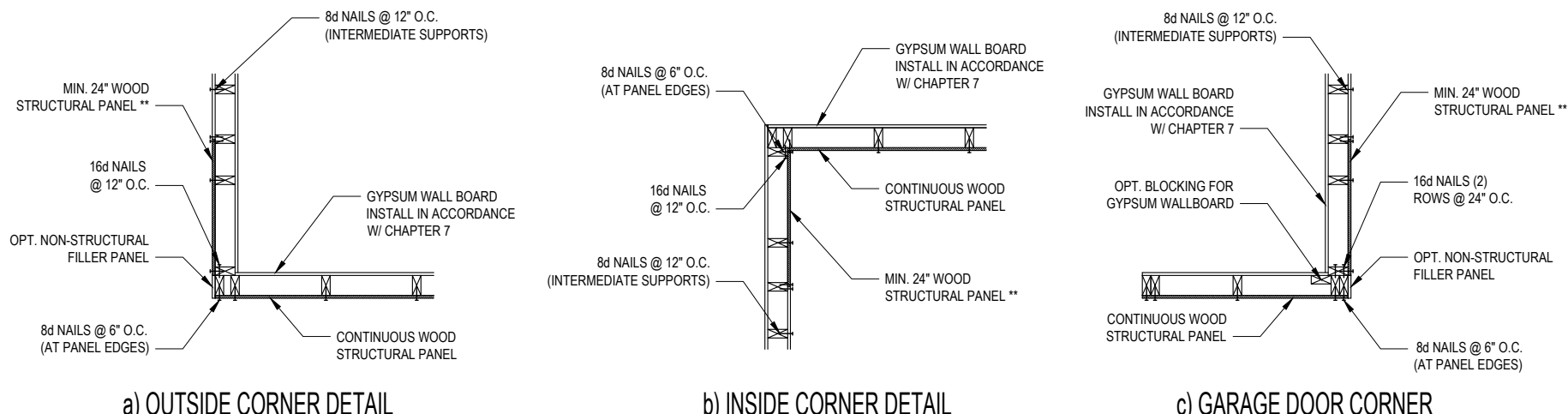
STANDARD DETAILS

Project #: **2101-010078**
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Drawn/Designer By: **KFR/JTT**
DWG. Checked By: **PAT**
Scale: **NOT TO SCALE**

REVISIONS

No.	Date	Remarks

Sheet Number
D2
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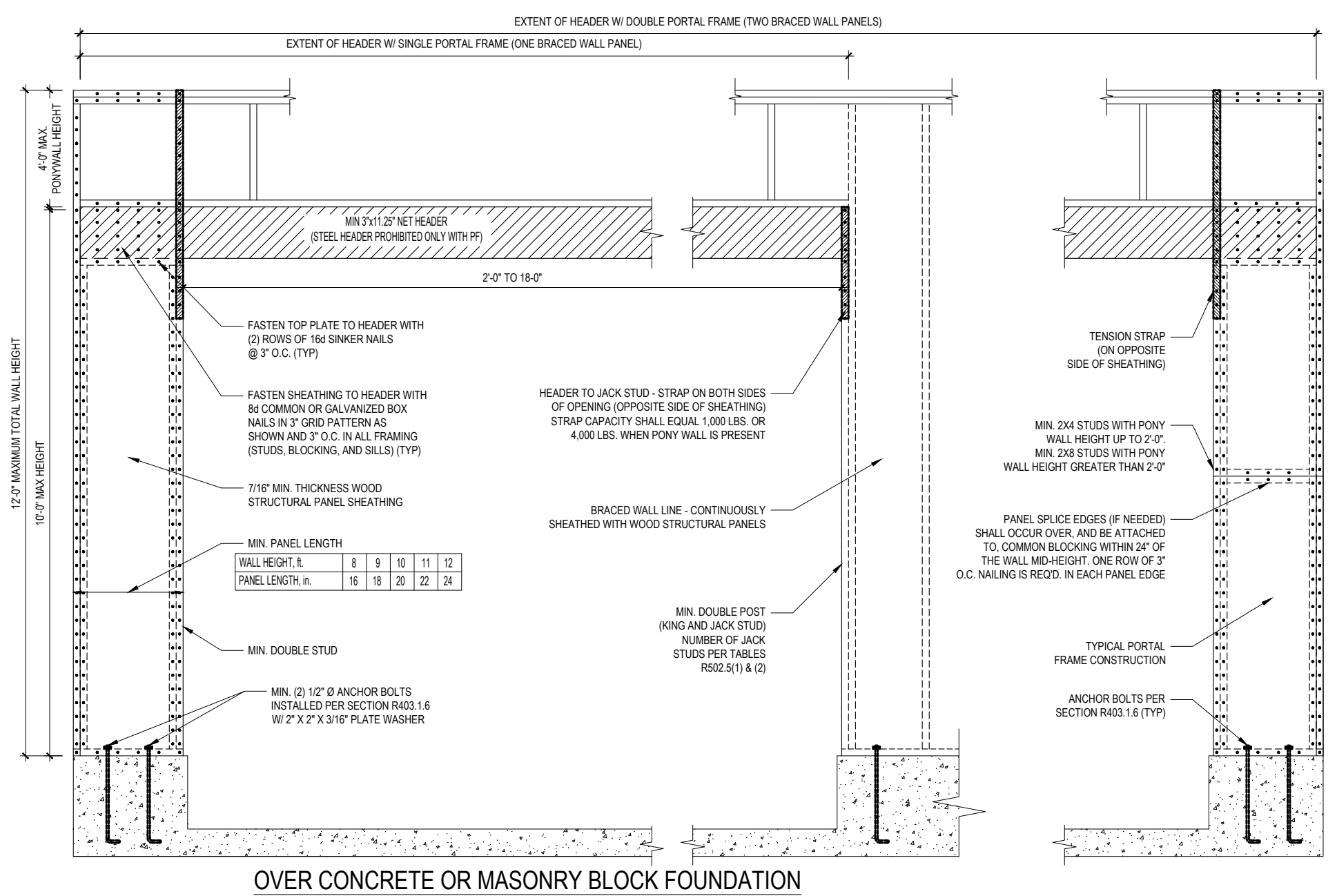
B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING
NO SCALE

STRUCTURAL SHEATHING NOTES

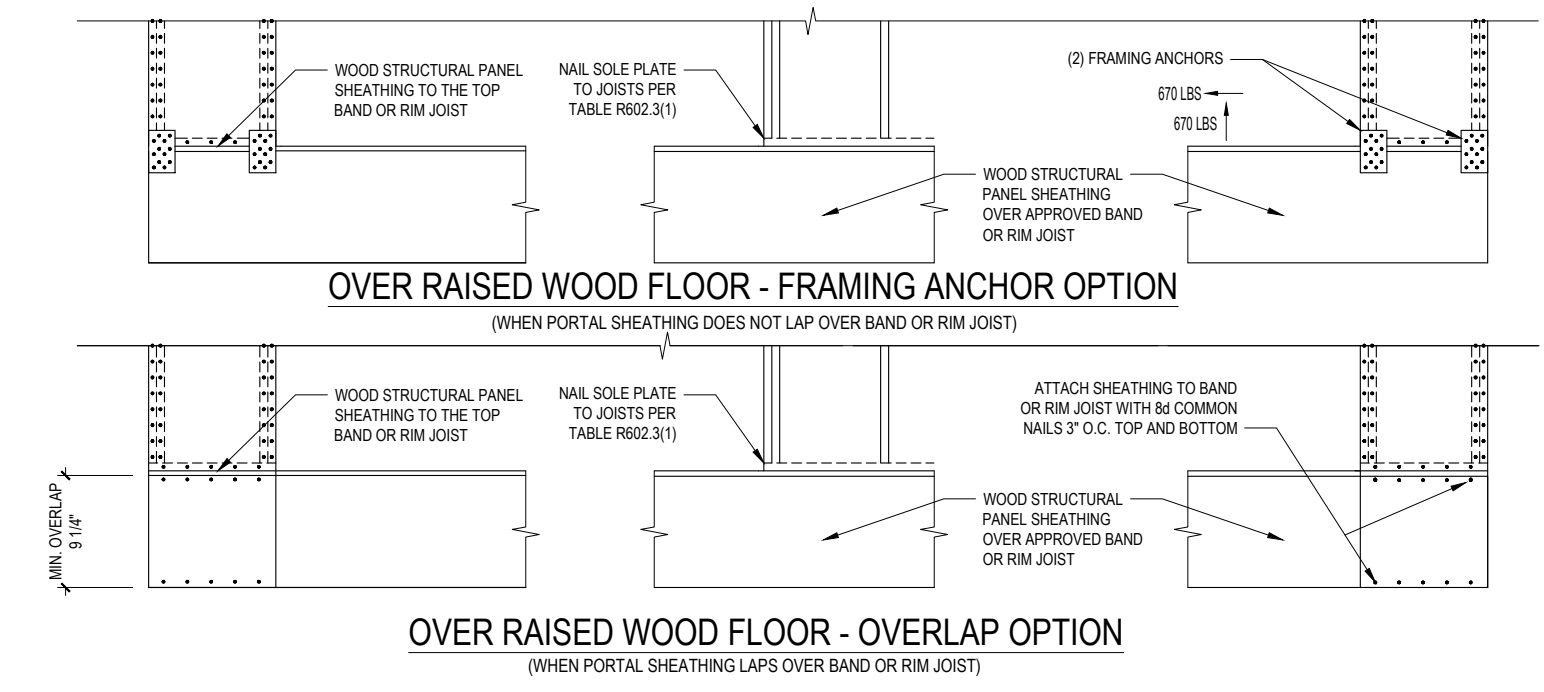
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10.3 OF THE 2018 NRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3 REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
- 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 (LNU)
- 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\"/>	

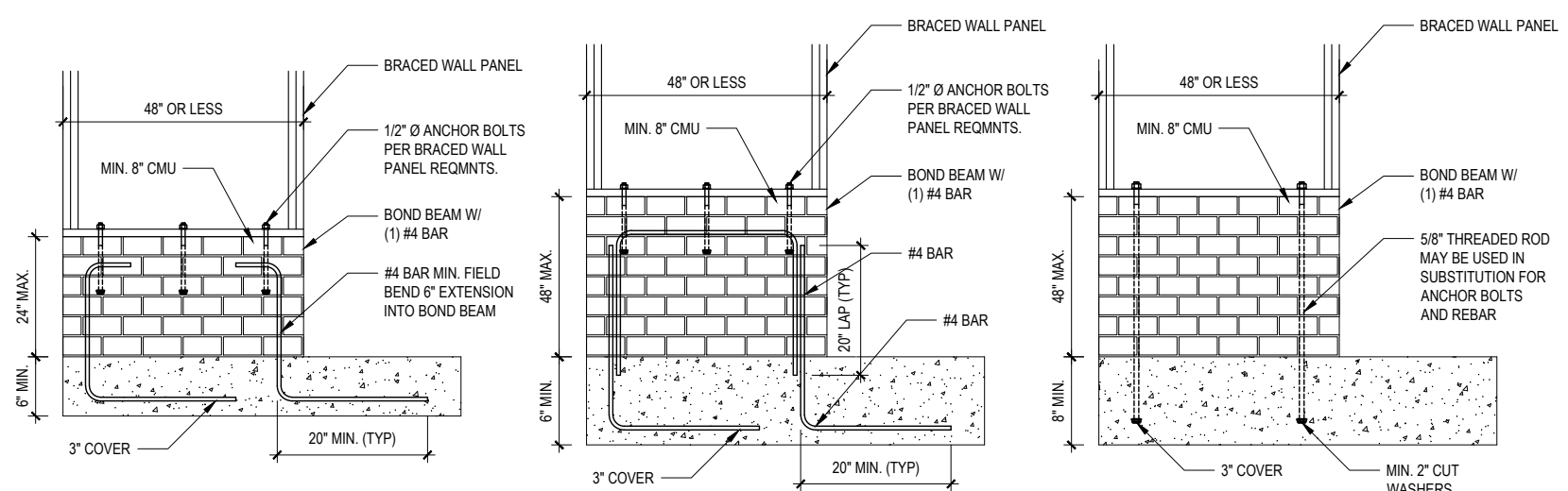
B3: BRACE WALL PANEL CONNECTIONS
NO SCALE



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



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



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

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MISKLEWICZ RESIDENCE

SHEATHING DETAILS

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Scale:	NOT TO SCALE

REVISIONS		
No.	Date	Remarks

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