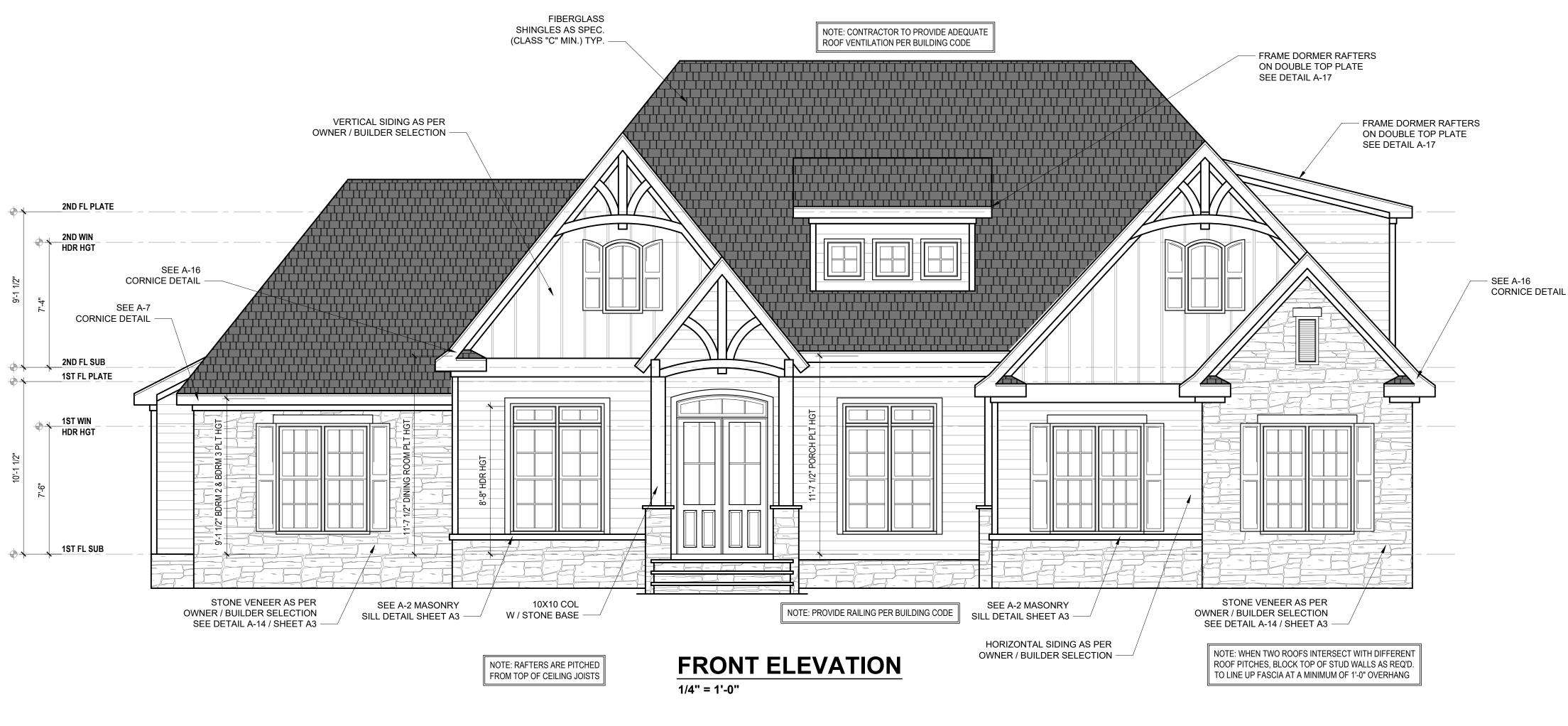
# TAYLOR RESIDENCE



NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

APPROVED

Limited building only review Permit holder responsible for full compliance with the code

O3/11/2021

Harnett County North Carolina

SHINGLES
ROOFING FELT

AS REQUIRED SHEATHING RAFTERS - SIZE AS REQUIRED INSULATION AS REQUIRED -CLG JOISTS - SIZE AS REQUIRED SHEATHING 1X8 FASCIA MIN. 1/2" REVEAL 1/2" SOFFIT -CONT. VENT -2X4 LOOKOUT 1X4 FRIEZE BOARD HORIZONTAL SIDING

A-17 CORNICE DETAIL

NTS

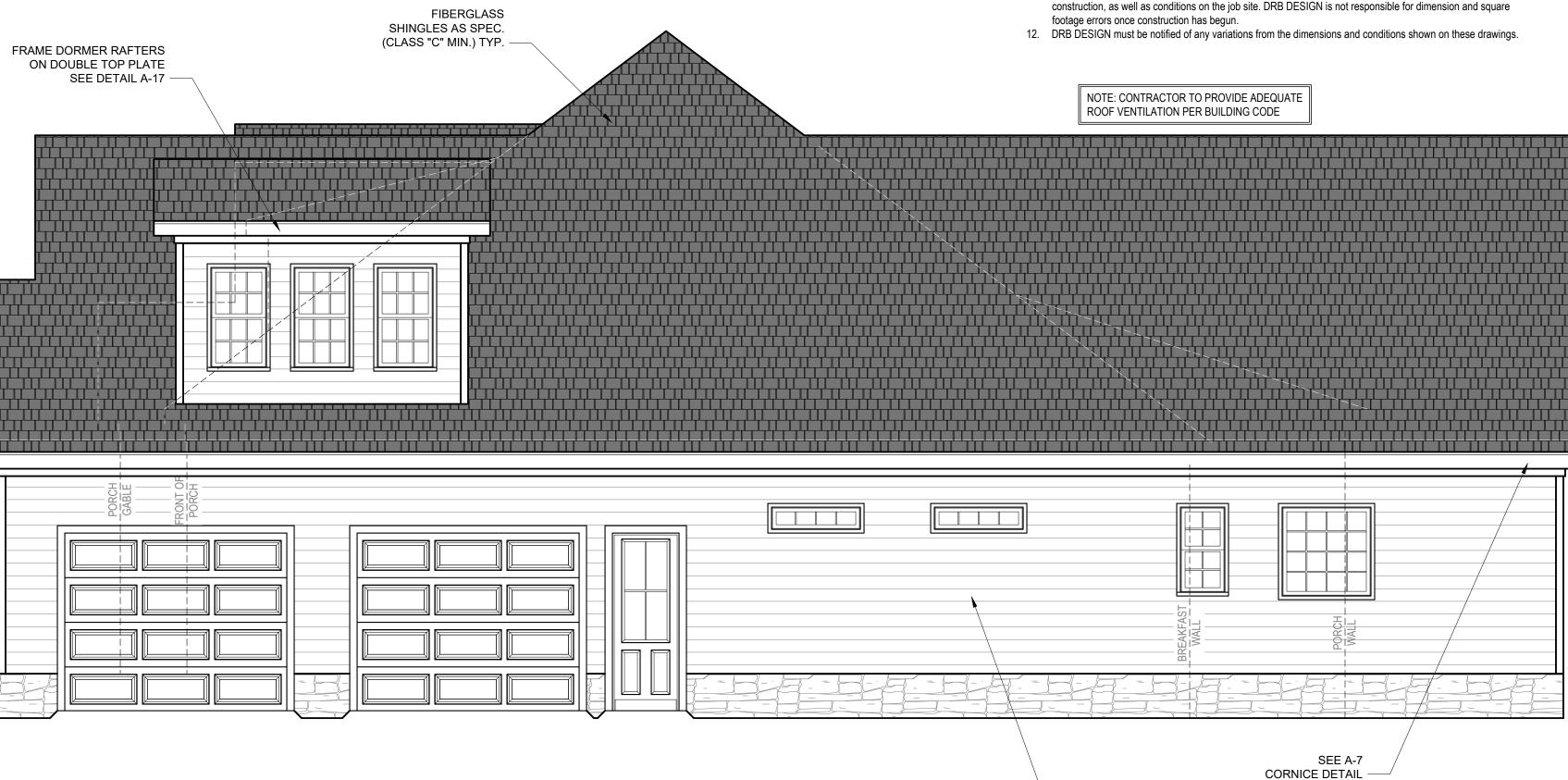
DRB DESIGN assumes no liability for any home constructed from this plan.

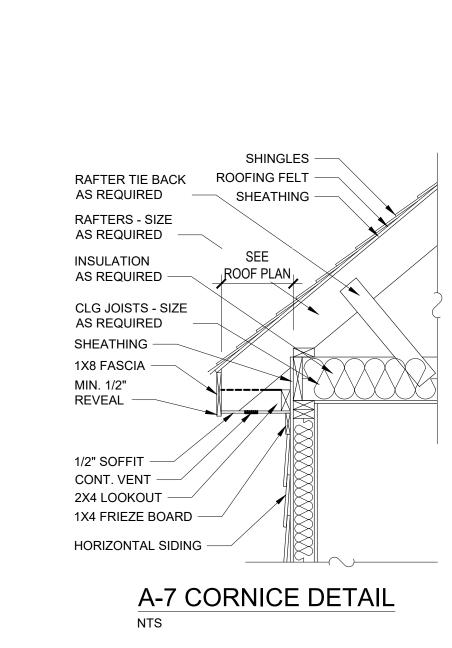
HORIZONTAL SIDING AS PER

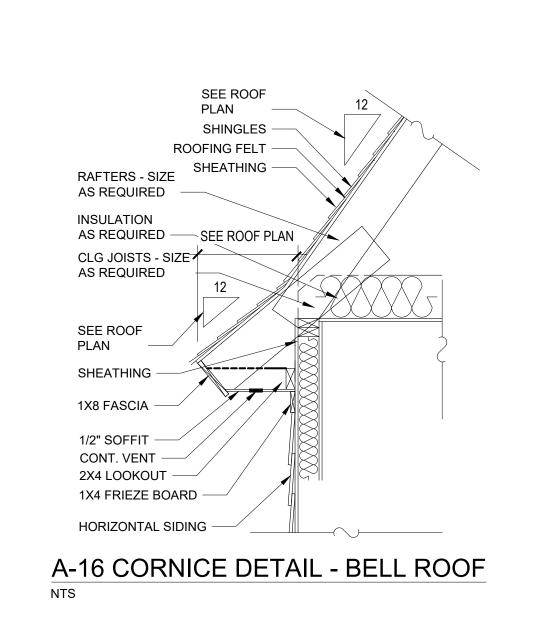
OWNER / BUILDER SELECTION

- All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
- 3. Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
- services of a structural engineer after notifying DRB DESIGN that such services are required.
   Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
   Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
- Communication is imperfect and every contingency cannot be anticipated.
   Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
- A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.

  Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB.
- Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arriving out of such changes.
   Written dimensions on those plans always have precedence over cooled dimensions.
- 10. Written dimensions on these plans always have precedence over scaled dimensions.
  11. It is the contractors responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square







**ELEVATIONS** 

DRB2001-0049

DRAWN/DESIGNED BY

01/04/2021

DRB

<u>CHECKED BY</u>

DRB

<u>SCALE</u>

1/4"=1'-0"

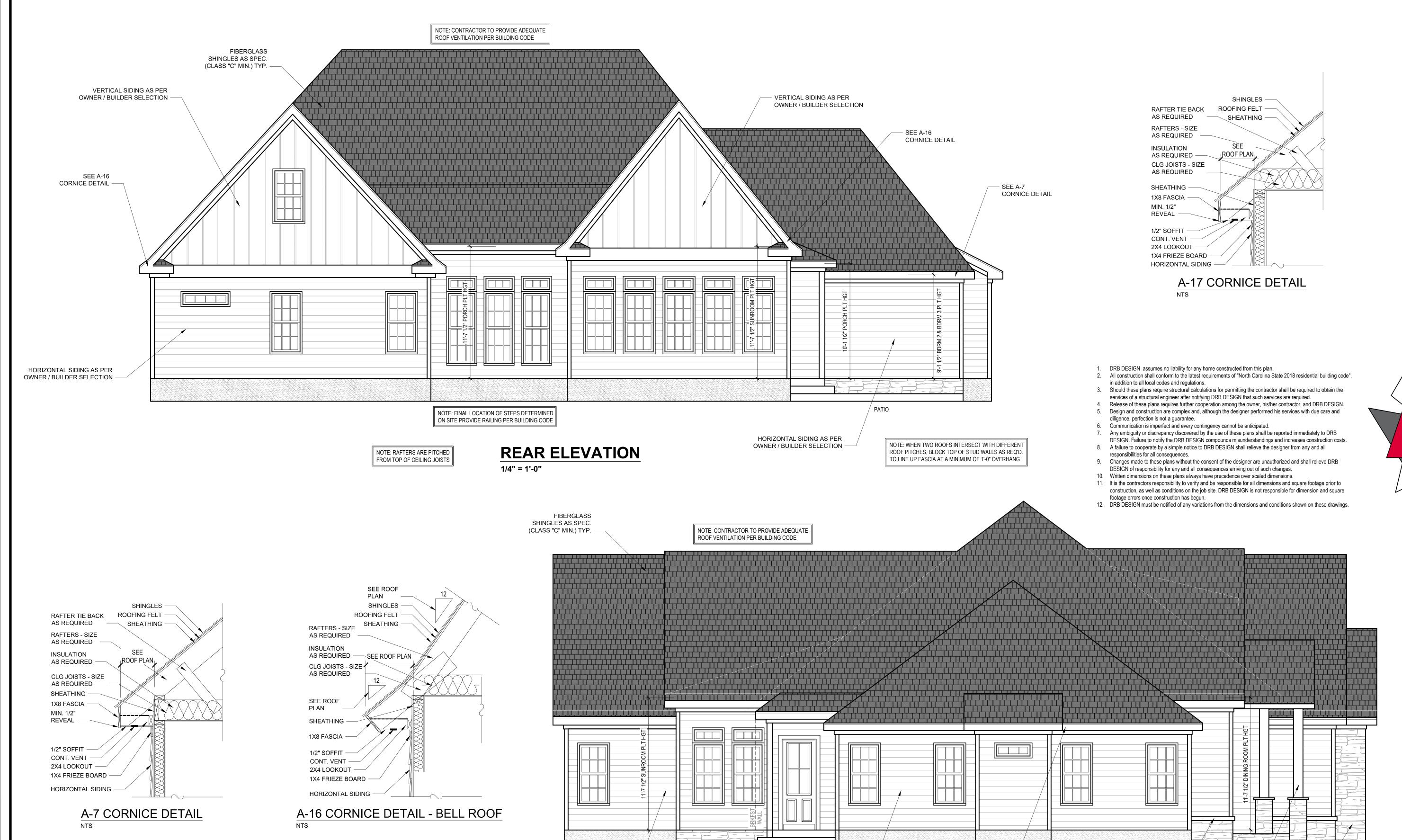
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 $A1_{of}$ 

RIGHT ELEVATION

1/4" = 1'-0"

# TAYLOR RESIDENCE



PATIO

HORIZONTAL SIDING AS PER

OWNER / BUILDER SELECTION -

HORIZONTAL SIDING AS PER

OWNER / BUILDER SELECTION —

SEE A-7

CORNICE DETAIL -

**LEFT ELEVATION** 

1/4" = 1'-0"

DRB2001-0049 01/04/2021 DRAWN/DESIGNED BY CHECKED BY DRB SCALE 1/4"=1'-0"

**ELEVATIONS** 

10X10 COL

STONE VENEER AS PER

OWNER / BUILDER SELECTION -

W / STONE BASE

SEE A-1 MASONRY

SILL DETAIL SHEET A3 ——

1/4" = 1'-0"

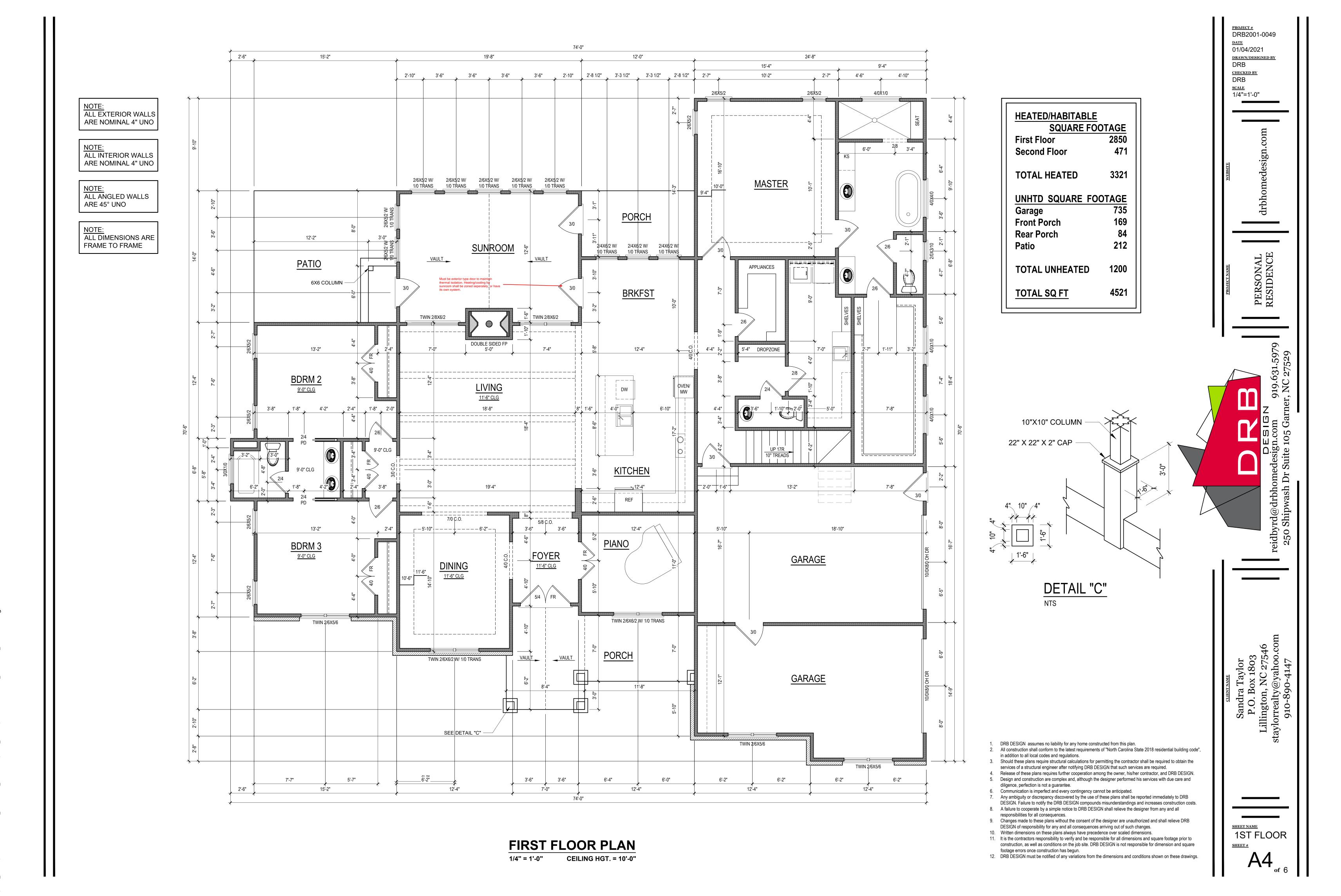
DRB2001-0049 INSULATION AS REQUIED SHEATHING -01/04/2021 - SOLE PLATE MASONRY CHECKED BY TIES DRB MASONRY SCALE VENEER 1/4"=1'-0" INSULATION AS REQUIED FLOOR JOIST SIZE AS REQD WEEP HOLES PER CODE - ANCHOR BOLTS AS REUIRED - 8" CMUS - GROUTED REBAR AS REQUIRED A-14 FOUNDATION WALL DETAIL - GYPSUM WALLBOARD INSULATION SIDING -AS REQUIED SHEATHING WALL STUD - SOLE PLATE AS REQD SHEATHING MASONRY SILL - HEADER INSULATION AS REQUIED FLOOR JOISTSIZE AS REQD TERMITE SHIELD ANCHOR BOLTS WEEP HOLES AS REUIRED PER CODE - 8" CMUS - GROUTED REBAR AS REQUIRED - CONT. REBAR AS REQUIRED WIDTH AS REQUIRED A-1 MASONRY SILL DETAIL MASONRY SILL - INSULATION AS REQUIED SHEATHING -- WALL STUD - SOLE PLATE SHEATHING MASONRY TIES - HEADER MASONRY INSULATION AS REQUIED GROUT -FLOOR JOIST SIZE AS REQD WEEP HOLES TERMITE SHIELD PER CODE - ANCHOR BOLTS AS REUIRED 8" CMUS - GROUTED REBAR AS REQUIRED - CONT. REBAR AS REQUIRED REQUIRED A-2 MASONRY SILL DETAIL DRB DESIGN assumes no liability for any home constructed from this plan. All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
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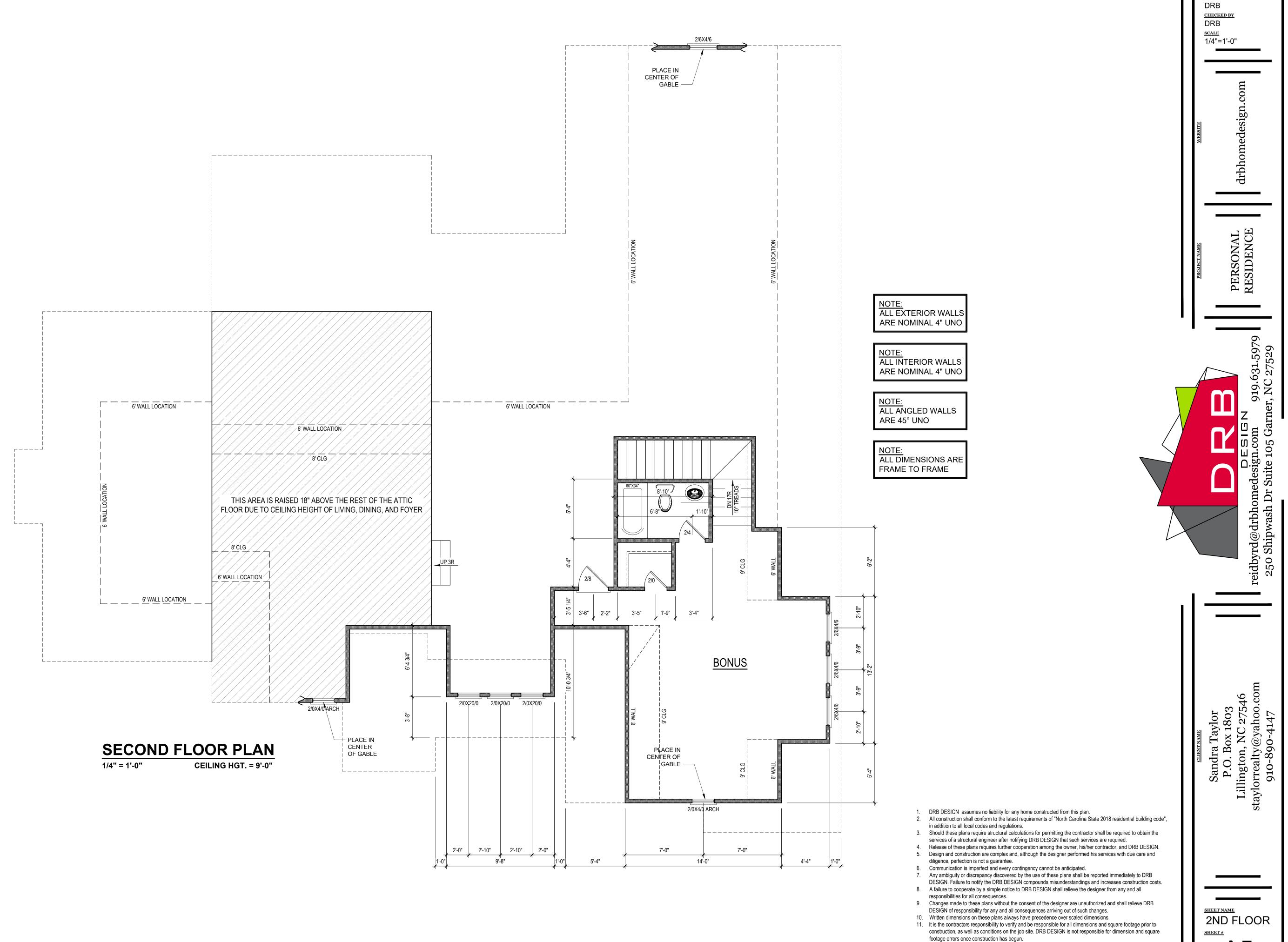
footage errors once construction has begun.

11. It is the contractors responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square

12. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

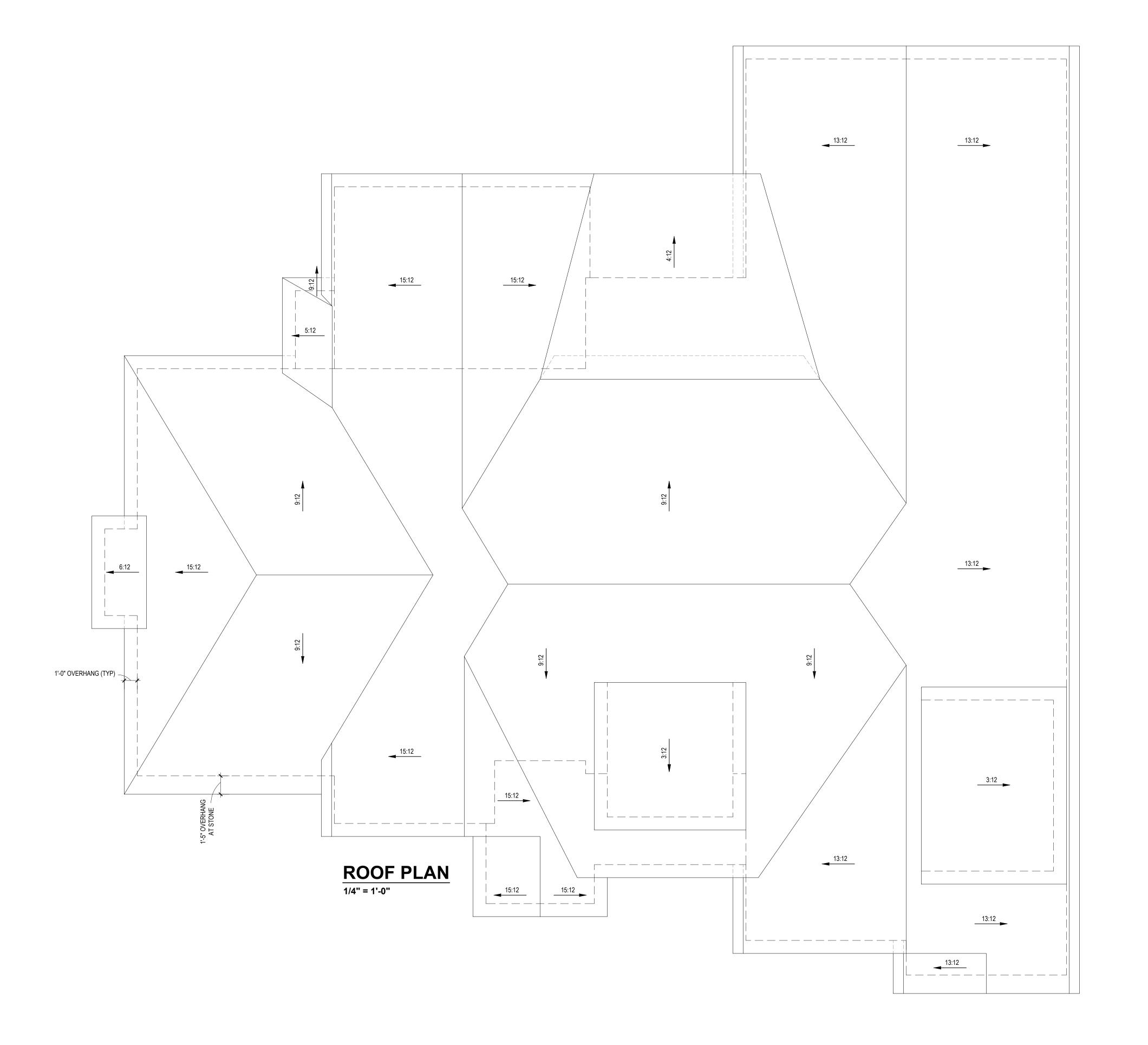


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01/04/2021 DRAWN/DESIGNED BY

12. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.



01/04/2021

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12. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLE	CTION	
	( - /	( - /	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	BAS	SED ON 120 MPH (E	O ON 120 MPH (EXPOSURE B)		
SEISMIC	BAS	ED ON SEISMIC ZO	NES A, B & C		

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.
- 2) IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- 3) ALL LUMBER SHALL BE SYP #2 (UNO)
  ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2600
  PSI, E = 1.9M PSI
- (I.E. iLEVEL MICROLAM)

  ALL LSL LUMBER IS TO BE 1.55E (Fb = 2325 PSI)

  4)

  ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 5'-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).

  5) 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)

  6) REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL
- WALLS OVER 10'-0" IN HEIGHT.
  7) ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
- Fy = 50 KSI MIN. (UNO)
- 8) ALL EXTERIOR LUMBÉR TO BE #2 SYP PT
  9) ALL CONCRETE, fc = 3000 PSI MIN.
  10) PRESUMPTIVE BEARING CAPACITY = 2000 PSF

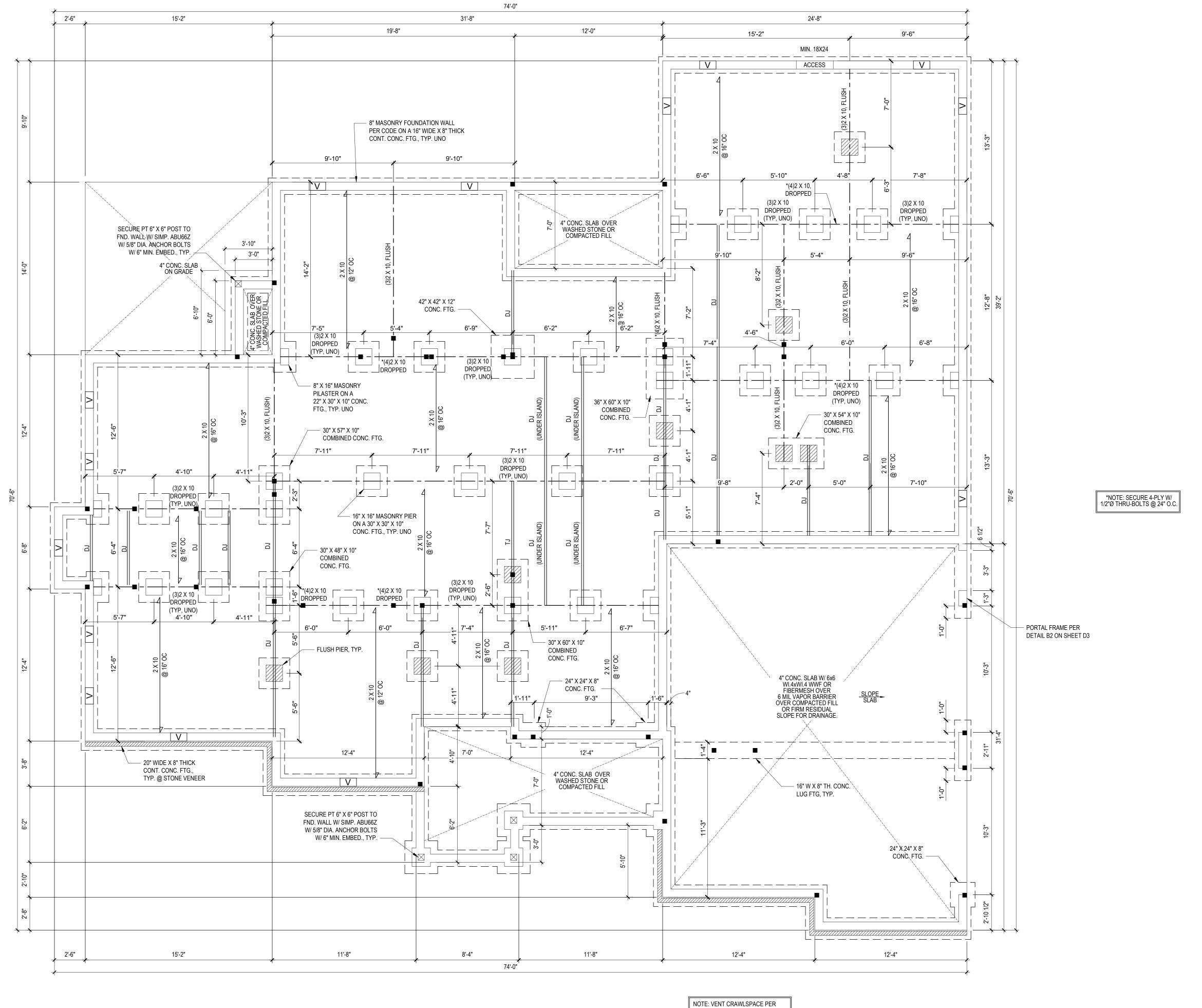
OF PORCH COLUMNS. (U.N.O.)

- 11)
  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 THALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT
- SHALL EXTEND 7" INTO CONCRETE OR MASONRY.

  12) PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 9-0" (UNO)

  13) PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM
- 14) PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.4 OF THE 2018 IRC.
  15) MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST
- HORIZONTAL DIMENSION.

  16) UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE
- 17) METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.



LOCAL CODES AND REQUIREMENTS

**FOUNDATION PLAN** 

1/4" = 1'-0"

\*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.
\*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.
\*Please review these documents carefully.
Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.



ENGINEERING & DESIGN, P A,

1 919 778-1200 - r 919 778-9688
hipwesh Drive - Germer - North Caroline - 27829
www.kyndellengineering.com

T OTO 77
250 Shipwash Drive - Gerner - N

TAYLOR RESIDENCE

FOUNDATION PLAN 1ST FLOOR FRAMIN

Project #:

DRB2001-0049

Date:

01/05/21

Drawn/Design By:

IJE

DWG. Checked By:

PAT

Scale:

SEE PLAN

**Sheet Number** 

S1

5) ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE

6) REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL

WALLS OVER 10'-0" IN HEIGHT.

ALL CONCRETE, fc = 3000 PSI MIN.

OF PORCH COLUMNS. (U.N.O.)

HORIZONTAL DIMENSION.

Fy = 50 KSI MIN. (UNO) 8) ALL EXTERIOR LUMBER TO BE #2 SYP PT

7) ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50

PRESUMPTIVE BEARING CAPACITY = 2000 PSF

12) PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)

17) METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

14) PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.4 OF THE 2018 IRC.

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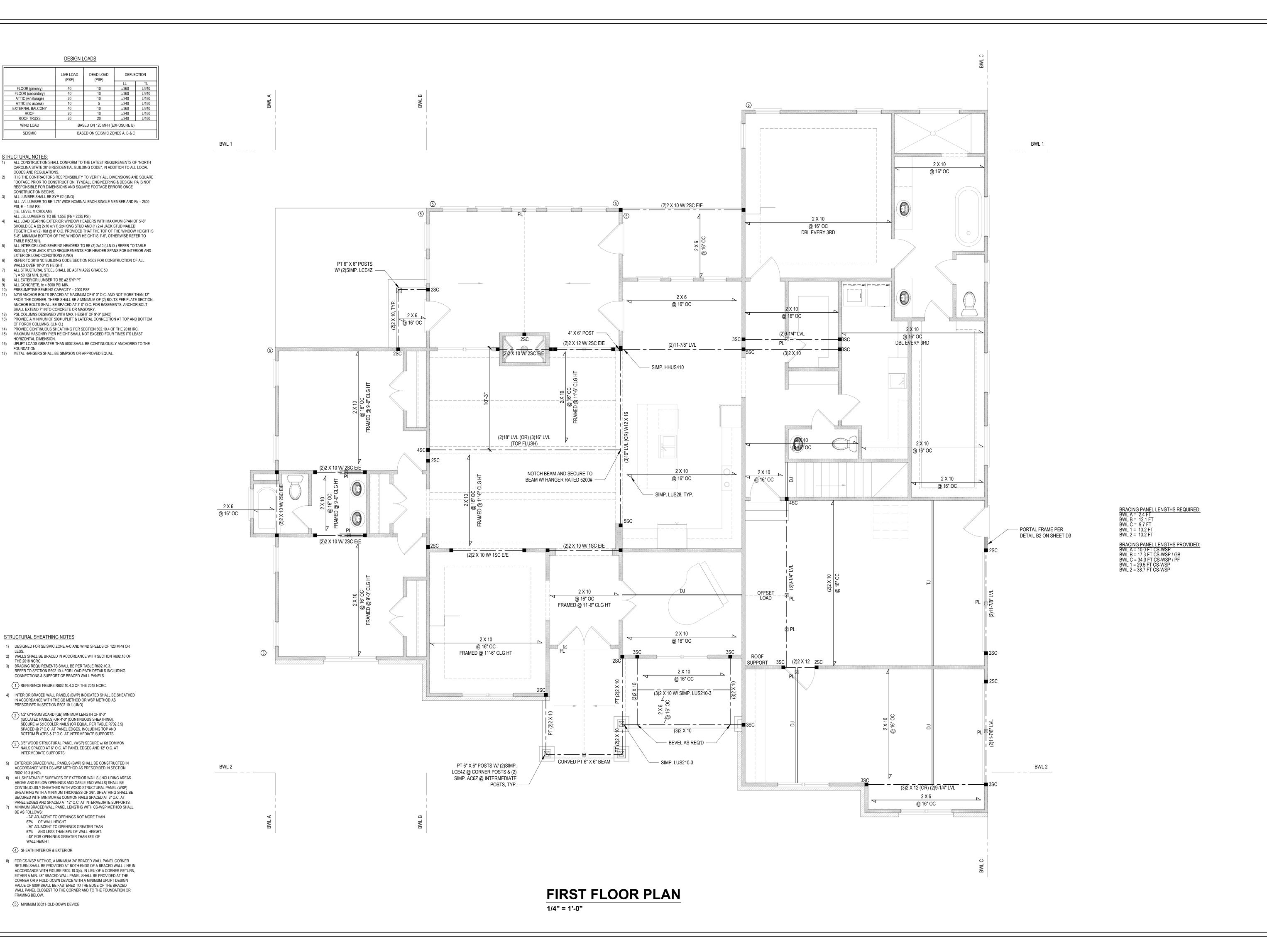
## STRUCTURAL SHEATHING NOTES

- 1) DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR
- 2) WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NCRC.
- 3) 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.
- 1 REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- 4) 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)
- 2 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  $\begin{tabular}{ll} \hline $3$/8" WOOD STRUCTURAL PANEL (WSP) SECURE w/ 6d COMMON \\ NAILS SPACED AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT \\ \hline \end{tabular}$ INTERMEDIATE SUPPORTS
- 5) EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION
- R602.10.3 (UNO) 6) 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

## 4 SHEATH INTERIOR & EXTERIOR

8) 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. 5 MINIMUM 800# HOLD-DOWN DEVICE



\*Engineers seat does not include construction means, methods, techniques, sequences, procedures or safety precaution. \*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 P.A. liability.
Please review these documents carefully. Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were



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DRB2001-0049

**Sheet Number** 

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLE	CTION	
	( - /	( - /	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	BAS	BASED ON SEISMIC ZONES A, B & C			

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
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- 3) ALL LUMBER SHALL BE SYP #2 (UNO) ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2600 PSI, E = 1.9M PSI
- (I.E. iLEVEL MICROLAM) ALL LSL LUMBER IS TO BE 1.55E (Fb = 2325 PSI)
- 4) ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 5'-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
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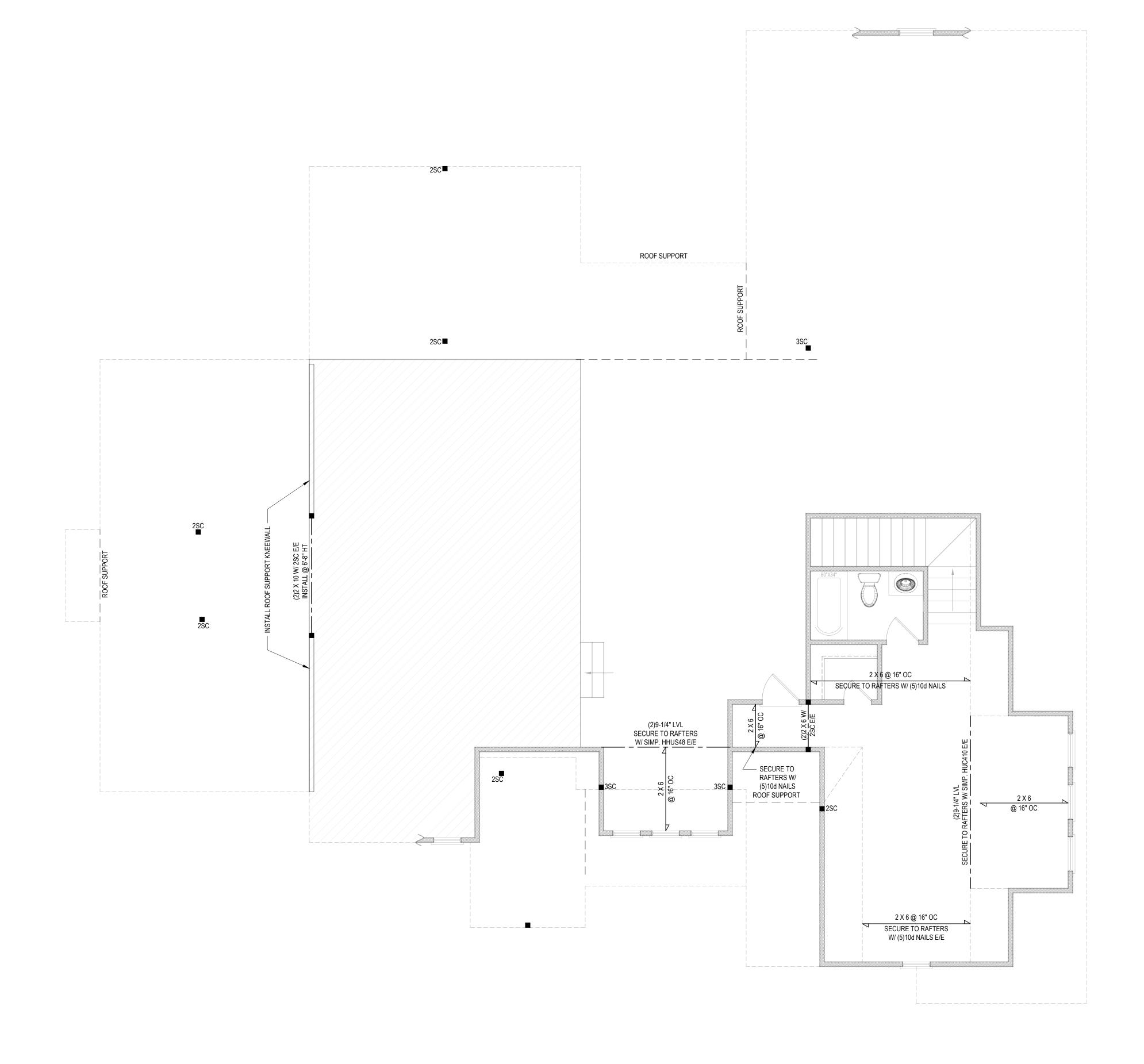
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- 3) 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE w/ 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS
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  - 30" ADJACENT TO OPENINGS GREATER THAN 67% AND LESS THAN 85% OF WALL HEIGHT.

- 48" FOR OPENINGS GREATER THAN 85% OF

- WALL HEIGHT 4 SHEATH INTERIOR & EXTERIOR
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- 5 MINIMUM 800# HOLD-DOWN DEVICE



**SECOND FLOOR PLAN** 

1/4" = 1'-0"

Engineers seal does not include construct \*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution. \*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. \*Please review these documents carefully. Tyndall Engineering & Design, P.A. Failure Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begin

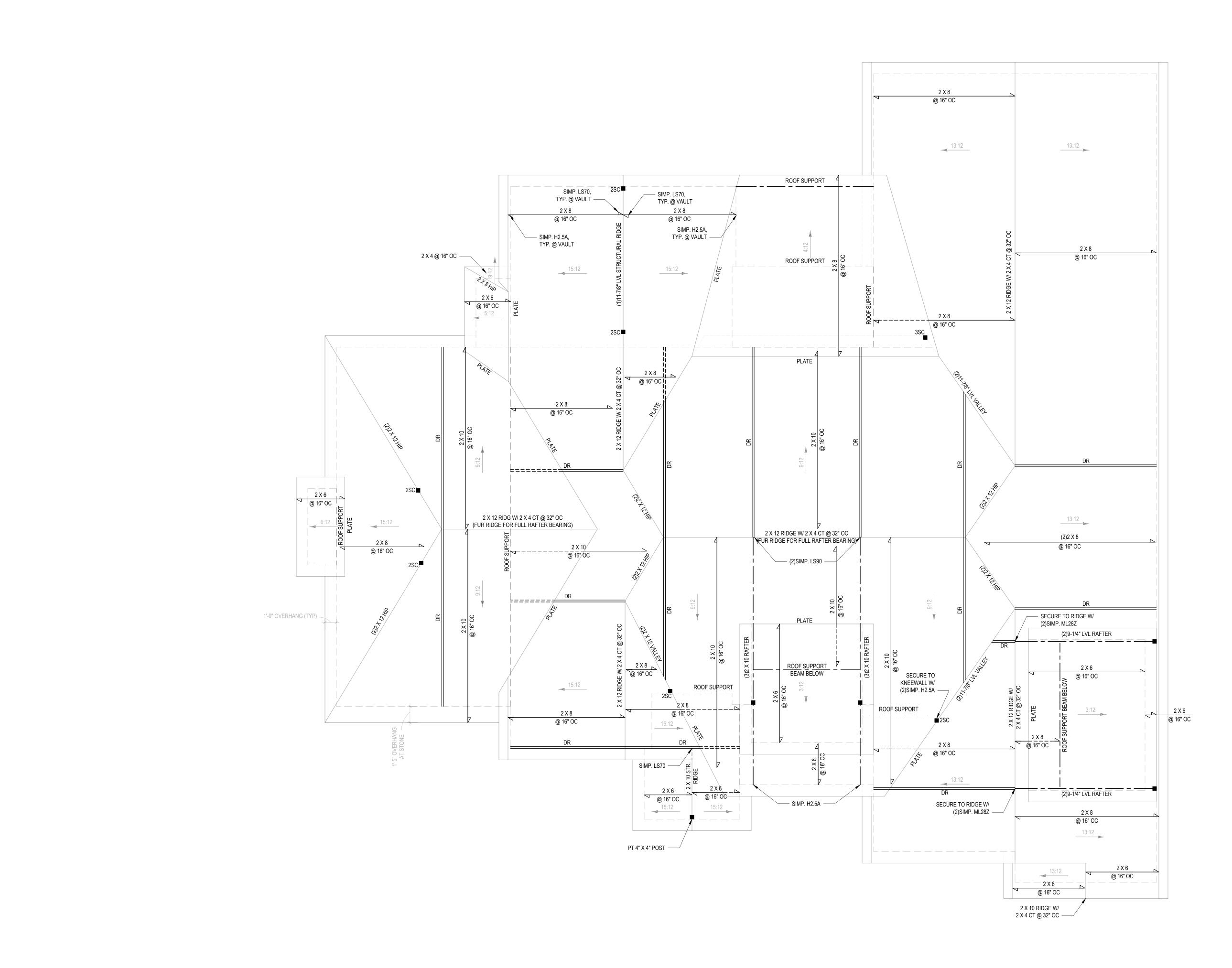


DRB2001-0049 01/05/21 Drawn/Design By: DWG. Checked By:

PAT SEE PLAN

REVISIONS No. Date:

**Sheet Number** 



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SEE PLAN

**REVISIONS** 

**Sheet Number** 

4 of 7

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

### 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		
	(* /	(* )	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			

- 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
- 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 (Fb = 800 PSI, BASED ON 2x10) UNO. 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 = 2600 PSI, E = 1.9M PSI (U.N.O.) ALL LSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2325 PSI, E = 1.6M PSI (U.N.O.) ALL PSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND Fb = 2400 PSI, E = 1.8M PSI (U.N.O.)
- 7) ALL LOAD BEARING EXTERIOR HEADERS SHALL BE AT (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.
- 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 3-1/2" 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"Ø 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.
- 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 (LBS/SQFT) OR GREATER POSITIVE AND NEGATIVE PRESSURE. ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS: 39.0 LBS/SQFT FOR ROOF PITCHES 0/12 TO 1.5/12 36.0 LBS/SQFT FOR ROOF PITCHES 1.5/12 TO 6/12 18.0 LBS/SQFT FOR ROOF PITCHES 6/12 TO 12/12
- 13) FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT 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 NCRC.
- 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.O.)

\*\*MEAN ROOF HEIGHT 30'-0" OR LESS

- 19) PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
- 20) MAXIMUM MASONRY PEIR HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- 21) 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.

	1					ı				
			GLAZED		WOOD	MASS		BASEMENT <sup>c,</sup> o	SLAB <sup>d</sup>	CRAWL SPACE °
CLIMATE	FENESTRATION :	SKYLIGHT <sup>b</sup>	FENESTRATION	CEILING <sup>m</sup>	FRAMED WALL	WALL	FLOOR	WALL	R-VALUE	WALL
ZONES	U-FACTOR D, J	U-FACTOR	SHGC <sup>b,<u>k</u></sup>	R-VALUE	R-VALUE	R-VALUE '	R-VALUE	R-VALUE	AND DEPTH	R-VALUE
3	0.35	0.55	0.30	38 or 30 cont	15 or 13 + 2.5	<u>5/13 or</u> <u>5/10 cont</u>	19	<u>5/13</u> <sup>f</sup>	0	5/13
4	0.35	0.55	0.30	38 or 30 cont j	15 or 13 + <u>2.5</u> h	<u>5/13 or</u> <u>5/10 cont</u>	19	<u>10/15</u>	10	<u>10/15</u>
5	0.35	0.55	NR	38 or 30 cont	<sup>n</sup> 19, or 13 + 5 or 15 + 3	13/17 <u>or</u> 13/12.5 cont	30 <sup>g</sup>	<u>10/15</u>	10	10/19

- \* TABLE N1102.1 CLIMATE ZONES 3-5
- a. R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE. b. THE FENESTRATION U-FACTOR COLUMN EXCLUDED SKYLIGHTS. THE SOLAR HEAT GAIN COEFFICIENT
- (SHGC) COLUMN APPLIES TO ALL GLAZED FENESTRATION. c. "10/15" MEANS R-10 CONTINUOUS INSULATED SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME
- OR R-15 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.

  d. FOR MONOLITHIC SLABS, INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP DOWNWARD TO THE BOTTOM
- OF THE FOOTING OR A MAXIMUM OF 24" BELOW GRADE WHICHEVER IS LESS. FOR FLOATING SLABS, INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 24", WHICHEVER IS LESS. R-5 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.
- e. DELETED
- f. BASEMENT WALL INSULATION IS NOT REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY FIGURE N1101.7 AND TABLE N1101.7. g. OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY. R-19 MINIMUM.
- h. THE FIRST VALUE IS CAVITY INSULATION, THE SECOND VALUE IS CONTINUOUS INSULATION, SO "13+5" MEANS R-13 CAVITY INSULATION PLUS R-5 INSULATED SHEATHING. \*15+3\* MEANS R-15 CAVITY INSULATION. PLUS R-3 INSULATED SHEATHING. IF STRUCTURAL SHEATHING COVERS 25% OR LESS OF THE EXTERIOR.
- $\underline{\textbf{INSULATING SHEATHING IS NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS USED. IF STRUCTURAL SHEATHING COVERS MORE THAN 25 PERCENT AND ADDRESS MORE THAN 25 PERCENT ADDRESS MORE THAN 25 PERCENT$  $\underline{\text{OF THE EXTERIOR, SHALL BE SUPPLEMENTED WITH INSULATED SHEATHING OF AT LEAST R-2.}} \ "13 + 2.5" \text{ MEANS R-13 CAVITY}$
- i. FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS WALL. j. IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.3, A MAXIMUM OF TWO GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A U-FACTOR NO GREATER THAN 0.55 SHALL BE  $\underline{\textbf{PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.}$
- k. IN ADDITION TO THE EXEMPTION IN SECTION N1102.3.3, A MAXIMUM OF TWO GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN 0.70 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
- I. R-30 SHALL BE DEEMED TO SATISFY THE CEILING INSULATION REQUIREMENT WHEREVER THE FULL HEIGHT OF UNCOMPRESSED R-30 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. OTHERWISE R-38 INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION BAFFLE OR WITHIN 1 INCH OF THE ATTIC ROOF DECK.
- m. 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 BAFFLE.

  1. R.-19 FIBERGLASS BATTS COMPRESSED AND INSTALLED IN A NOMINAL 2 × 6 FRAMING CAVITY IS DEEMED TO COMPLY. FIBERGLASS BATTS RATED R-19 OR HIGHER COMPRESSED AND INSTALLED IN A 2X4 WALL IS NOT DEEMED TO COMPLY.
- 9. BASEMENT WALL MEETING THE MINIMUM MASS WALL SPECIFIC HEAT CONTENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

# 2664 SQ. FT. OF CRAWL SPACE / 150 = 17.76 SQ. FT. OF REQ'D VENTILATION WITHOUT CROSS VENTILATION

17.76 SQ. FT. OF VENTILATION REQ'D / 0.45 SQ.FT. PER VENT = 40 VENTS REQ'D1

2644 SQ. FT. OF CRAWL SPACE / 1500 = 1.78 SQ. FT. OF REQ'D VENTILATION WITH CROSS VENTILATION

- 1.78 SQ. FT. OF VENTILATION REQ'D / 0.45 SQ.FT. PER VENT = 4 VENTS REQ'D2 PROVIDE ADEQUATE VENTILATION AT ALL POINTS AND TO PREVENT DEAD AIR POCKETS.
- 2) THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/1500 OF THE CRAWL SPACE GROUND AREA WHERE THE REQUIRED OPENINGS ARE PLACED SO AS TO PROVIDE CROSS VENTILATION OF THE CRAWL SPACE. THE INSTALLATION OF OPERABLE LOUVERS SHALL NOT BE PROHIBITED. ONE FOUNDATION VENT SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING. TO PREVENT RAINWATER ENTRY WHEN THE CRAWL SPACE IS BUILT ON A SLOPED SITE, THE UPHILL FOUNDATION WALLS MAY BE CONSTRUCTED WITHOUT WALL VENT OPENINGS. VENT DAMS SHALL BE PROVIDED VHEN THE BOTTOM OF THE FOUNDATION VENT OPENING IS LESS THAN 4 INCHES ABOVE THE FINISHED
- WALL VENTED CRAWL SPACES REQUIRE FULL COVERAGE GROUND VAPOR RETARDERS.

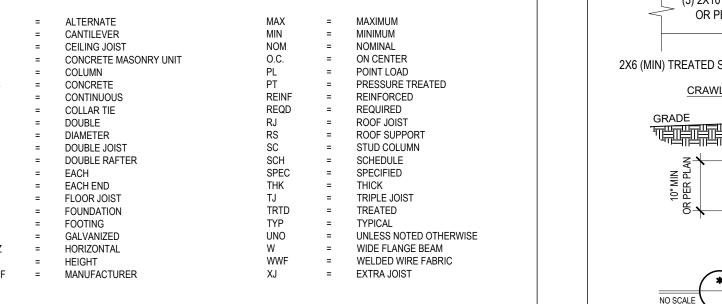
S	Q. FT. OF ATTIC / 300 = SQ. FT. INLETS/OUTLETS REQUIRED
1)	CALCULATION BASED ON VENTILATORS USED AT LEAST 3'-0" ABOVE THE COMICE VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY EAVE VENTS.
2)	CATHEDRAL CEILINGS SHALL HAVE A 1" MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

\* ATTIC VENTILATION CALCULATION

\* CRAWL SPACE VENTILATION CALCULATION



ALTERNATE MAXIMUM CANTILEVER MINIMUM CEILING JOIST = ON CENTER CONCRETE MASONRY UNIT POINT LOAD COL COLUMN CONC CONCRETE PRESSURE TREATED CONTINUOUS REINF REINFORCED COLLAR TIE REQD REQUIRED DOUBLE ROOF SUPPORT DIAMETER = STUD COLUMN DOUBLE JOIST DOUBLE RAFTER SCH = SCHEDULE EACH = SPECIFIED THICK FLOOR JOIST TRIPLE JOIST FOUNDATION TREATED TYPICAL FOOTING UNO GALV GALVANIZED WIDE FLANGE BEAM HORIZ HORIZONTAL



1)	MAXIMUM HEIGHT OF D	ECK SUPPORT POSTS AS FOL	LOWS:
	POST SIZE	MAX. POST HEIGHT**	

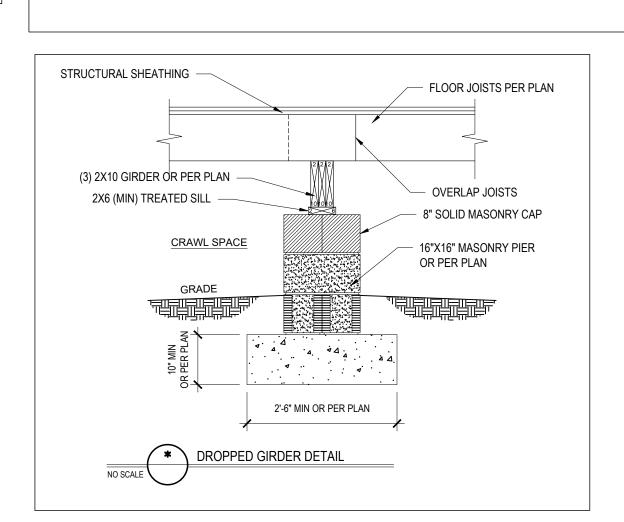
4 x 4	8'-0"	
6 x 6	20'-0"	
***	OVER 20'-0"	

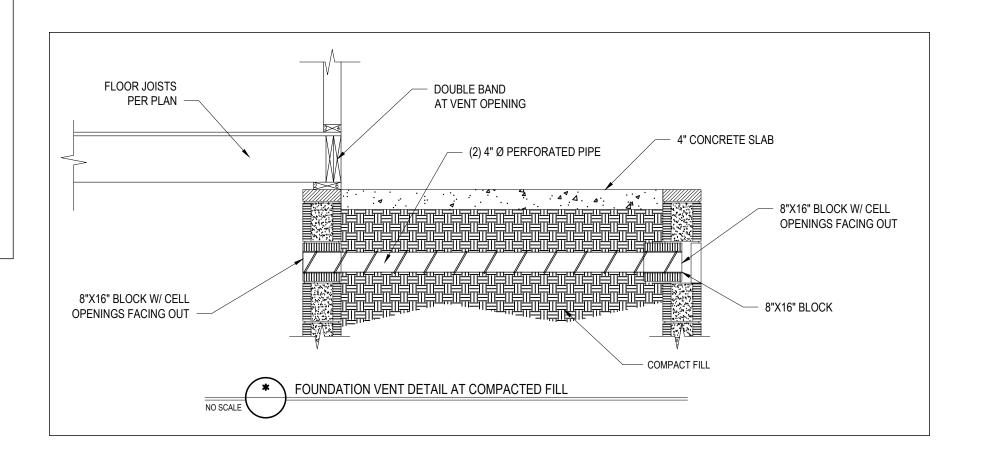
- \* THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS. MAXIMUM TRIBUTARY AREA IS BASED ON 128 TOTAL SQUARE FEET
- WHICH MAY BE LOCATED AT DIFFERENT LEVELS. \*\* FROM TOP OF FOOTING TO BOTTOM OF GIRDER
- \*\*\* DECKS WITH POST HEIGHTS OVER 20'-0" SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT.
- 2) DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF
- A. 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. 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
- TO THE POST AND GIRDER WITH ONE 5/8"Ø 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

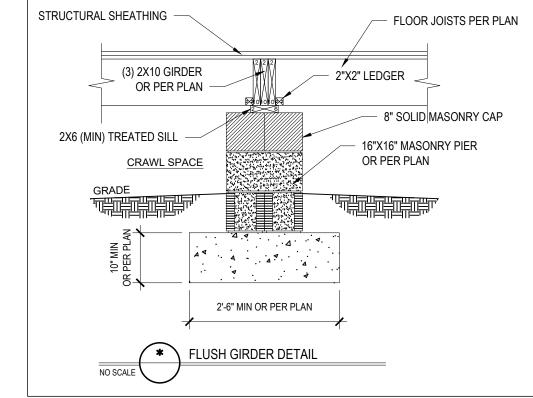
45° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE BOLTED

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"

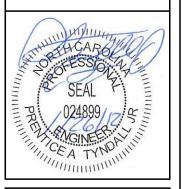
- D. 2 x 6 DIAGONAL VERTICAL CROSS BRACING MAY BE PROVIDED IN TWO (2) PERPENDICULAR DIRECTIONS FOR FREESTANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS. THE 2 x 6s SHALL BE ATTACHED TO THE POSTS WITH ONE 5/8"Ø HOT
- DIPPED GALVANIZED BOLT AT EACH END OF EACH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







rocedures or safety precaution. Any deviations or discrepancies on plans ar to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure do so will void Tyndall Engineering & Desig Please review these documents carefully Tyndall Engineering & Design, P.A. will interpret that all dimensions, etc. presented in these documents were



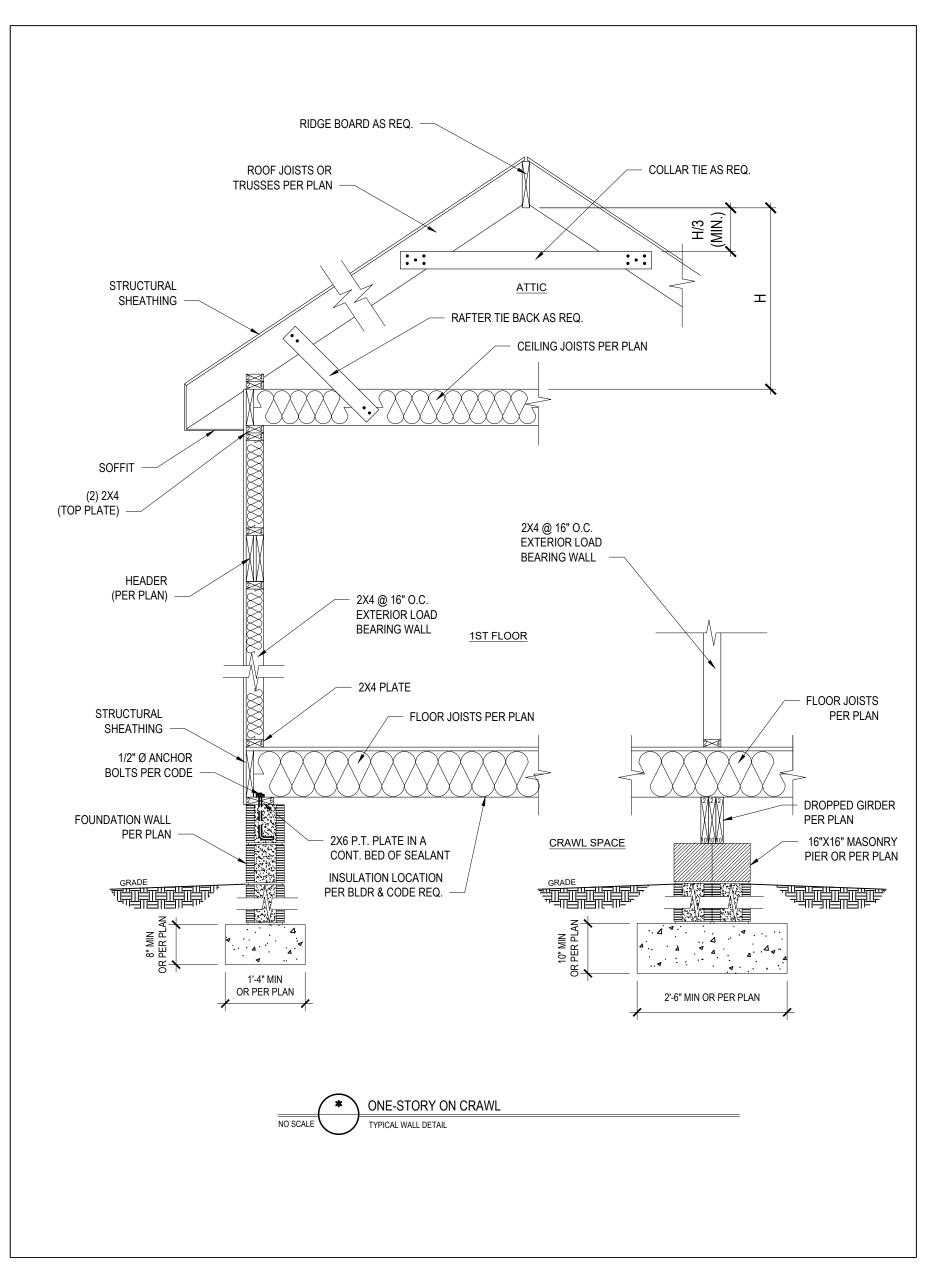


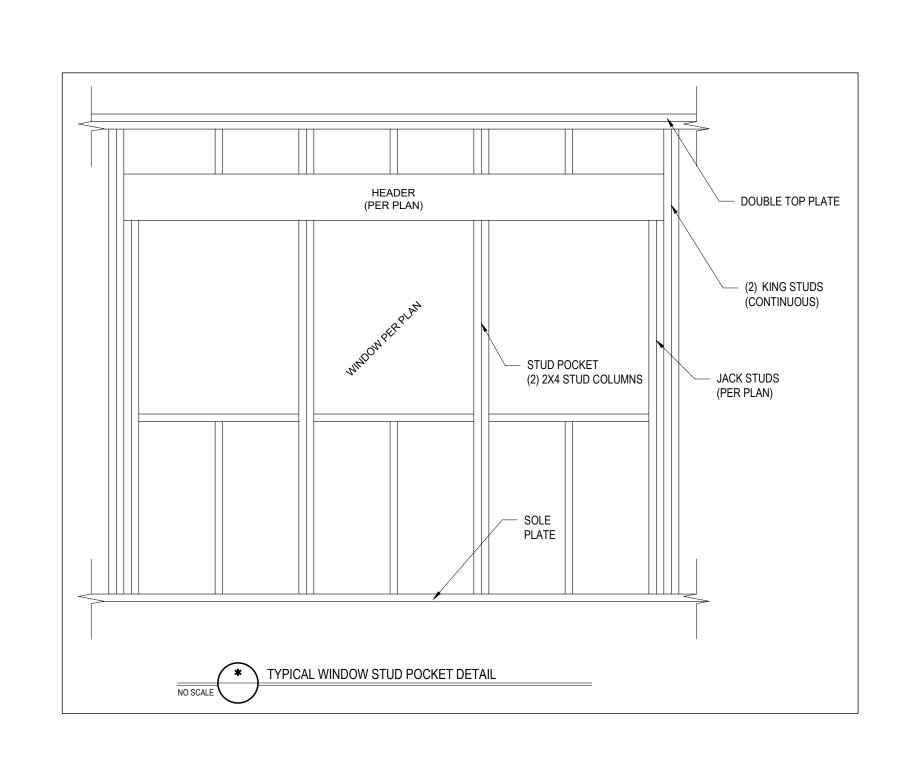
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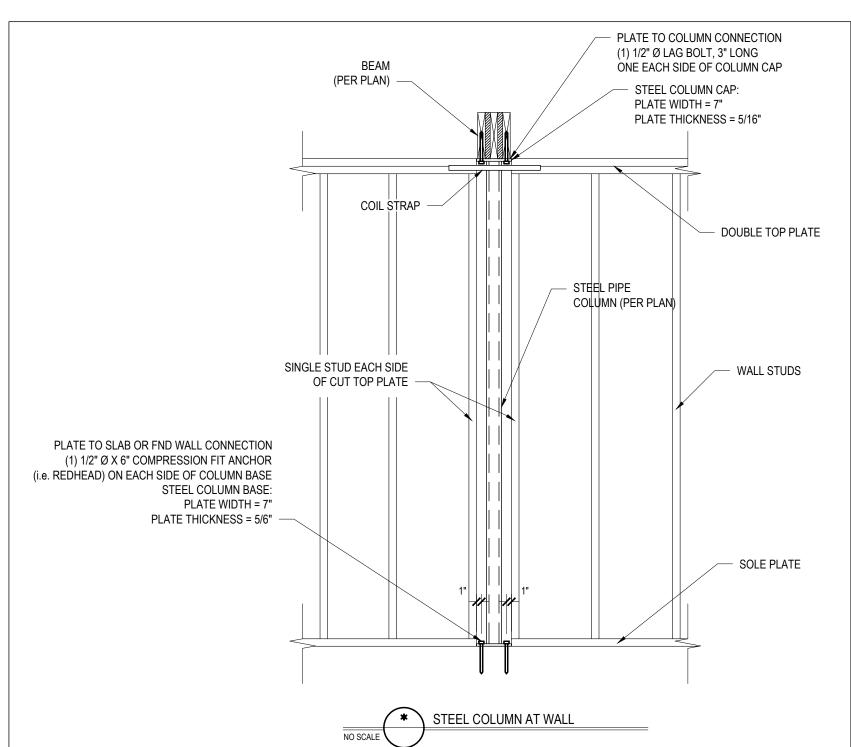
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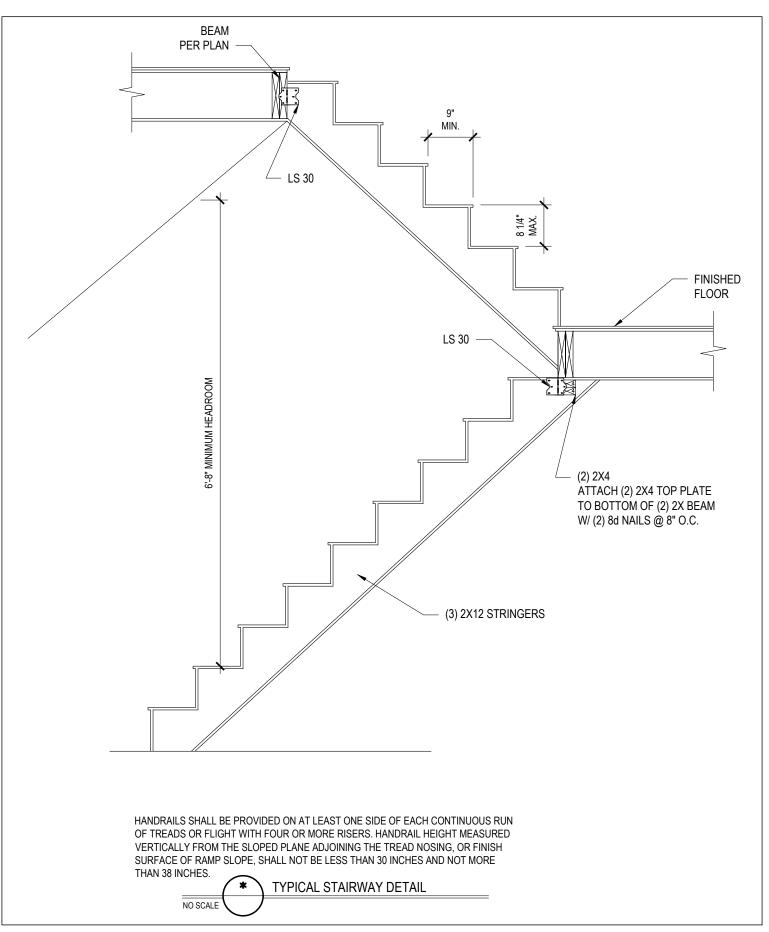
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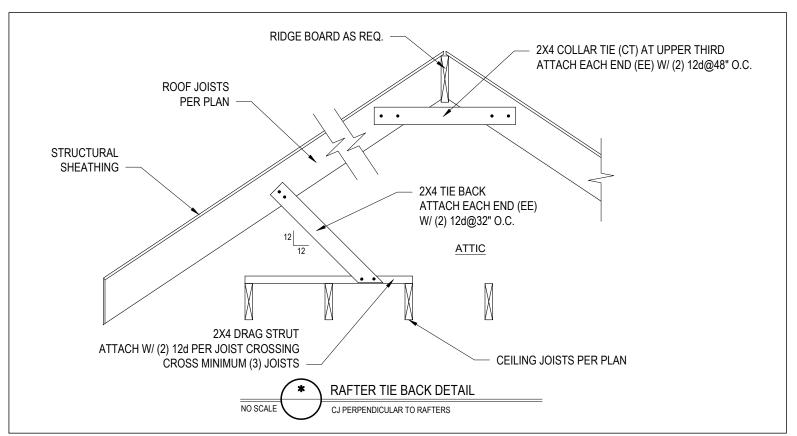
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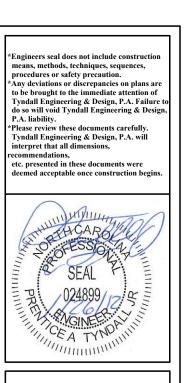










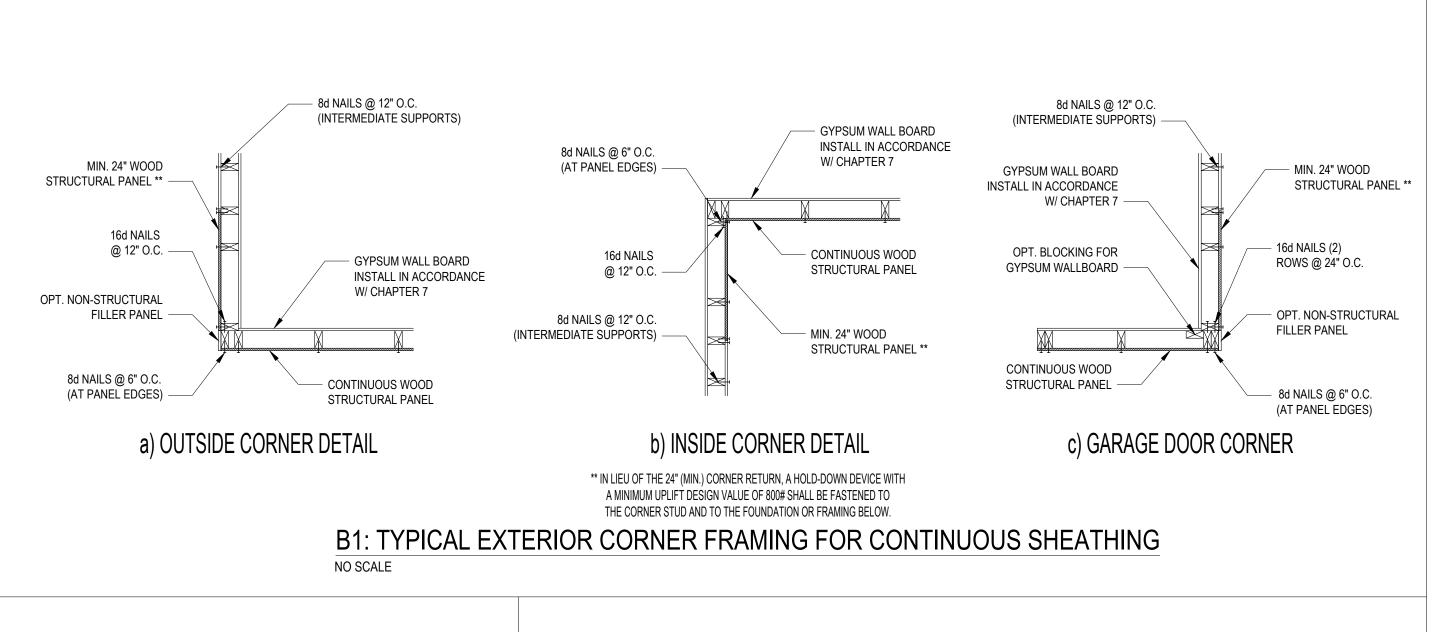


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### STRUCTURAL SHEATHING NOTES

- 1. DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- 2. WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NCRC
- 3. 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
- 1 REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- 4. 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)
- (2) 1/2" GYPSUM BOARD (GB) MINIMUM LENGTH OF 8'-0" (ISOLATED PANELS) OR 4'-0" (CONTINUOUS
- 3 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
- 5. EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD
- AS PRESCRIBED IN SECTION R602.10.3 (UNO) 6 ALL SHEATHARLE 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
- 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

- 48" FOR OPENINGS GREATER THAN 85% OF WALL

O.C. AT PANEL EDGES AND SPACED AT 12" O.C. AT

 $\overline{\langle 4 \rangle}$  SHEATH INTERIOR AND EXTERIOR

LESS THAN 85% OF WALL HEIGHT

- 8. 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 MINIMUM 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
- 5 MINIMUM 800# HOLD-DOWN DEVICE

		REQUIRED BRAC	ED WALL PANEL CONNECTIONS		
			REQUIRED CONNECTION		
METHOD	MATERIAL	MIN. THICKNESS	@ PANEL EDGES	@ INTERMEDIATE SUPPORTS	
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.	
GB	GYPSUM BOARD	1/2"	5d COOLER NAIL** @ 7" O.C.	5d COOLER NAIL** @ 7" O.C.	
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.	

\*\*OR EQUIVALENT PER TABLE R702.3.5

# **B3: BRACE WALL PANEL CONNECTIONS**

NO SCALE

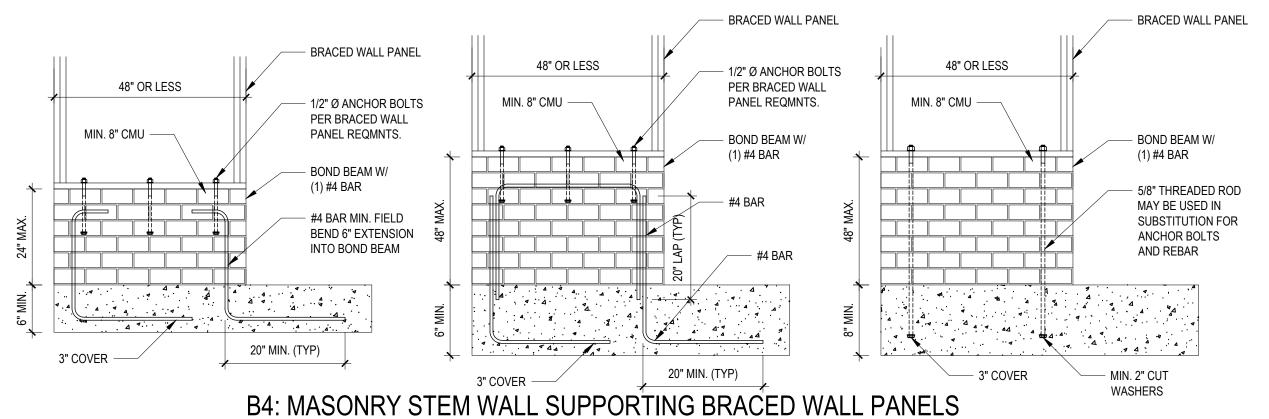
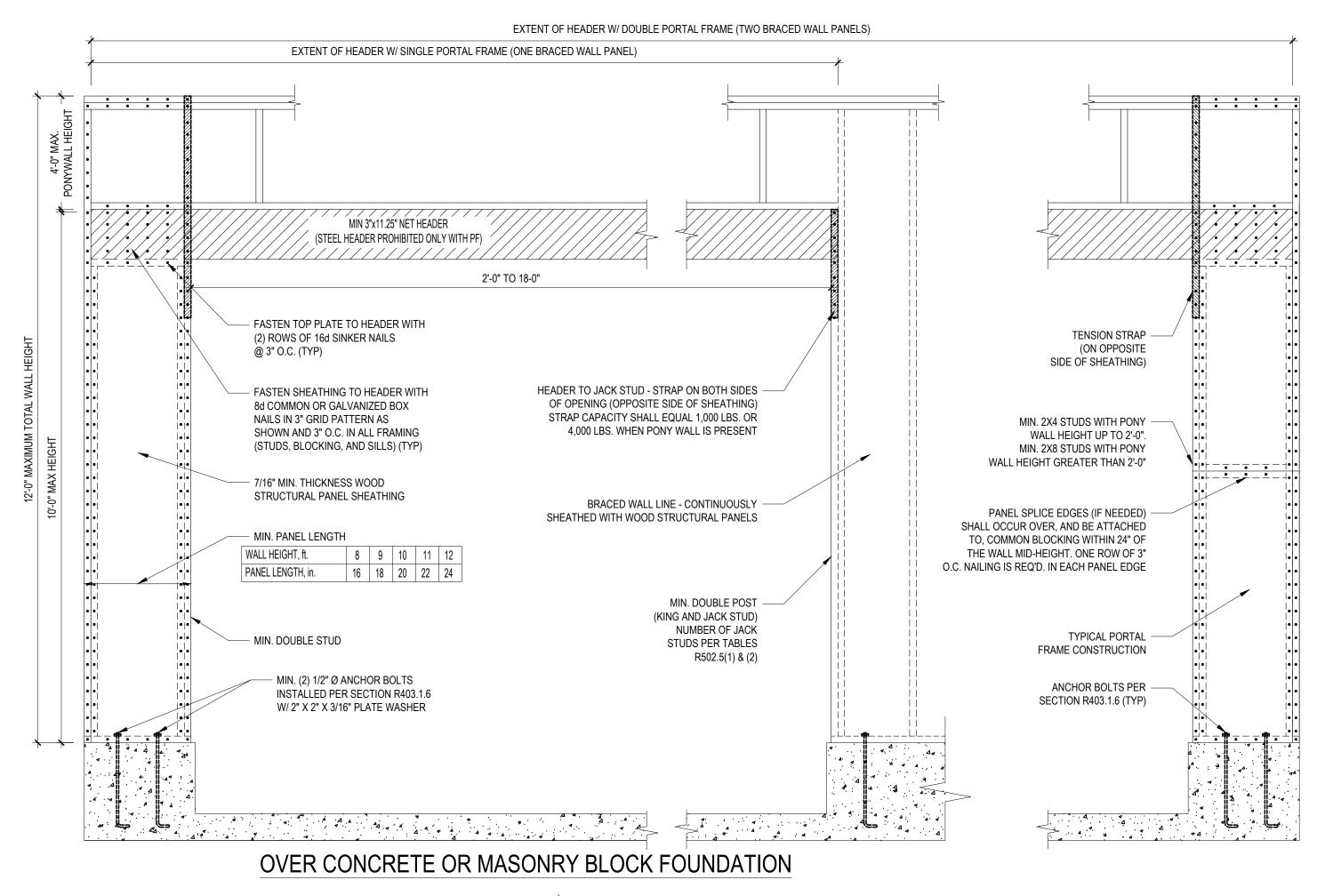
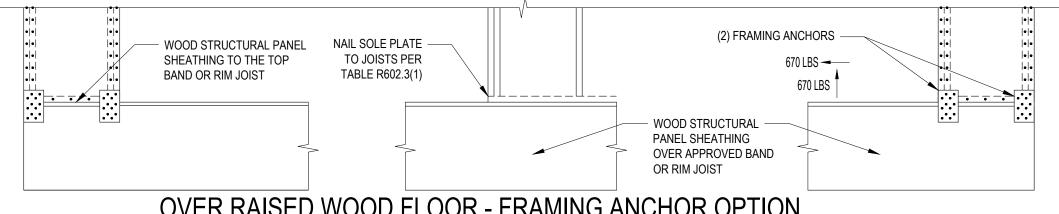


FIGURE R602.10.4.3 OF THE 2018 NCRC NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS





# OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION

(WHEN PORTAL SHEATHING DOES NOT LAP OVER BAND OR RIM JOIST) ATTACH SHEATHING TO BAND NAIL SOLE PLATE WOOD STRUCTURAL PANEL OR RIM JOIST WITH 8d COMMON TO JOISTS PER SHEATHING TO THE TOP NAILS 3" O.C. TOP AND BOTTOM BAND OR RIM JOIST TABLE R602.3(1) WOOD STRUCTURAL PANEL SHEATHING OVER APPROVED BAND OR RIM JOIST

> OVER RAISED WOOD FLOOR - OVERLAP OPTION (WHEN PORTAL SHEATHING LAPS OVER BAND OR RIM JOIST)

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

means, methods, eleminas, sequences, procedures or safety precaution.

\*Any deviations or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure t do so will void Tyndall Engineering & Design D.A. Bability. Please review these documents carefully Tyndall Engineering & Design, P.A. will interpret that all dimensions, etc. presented in these documents were



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