

HISE RESIDENCE

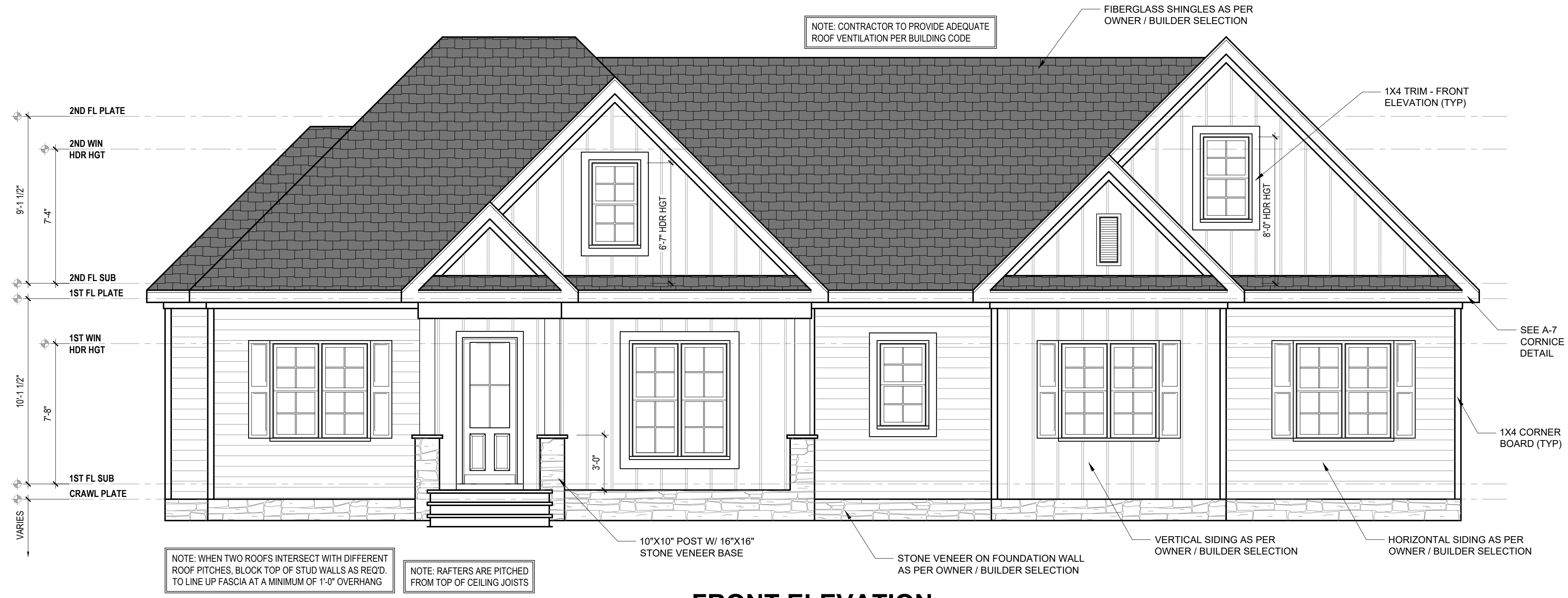
PROJECT#
DRB2101-0064
DATE
05/23/2021
DRAWN/DESIGNED BY
DRB
CHECKED BY
IJE
SCALE
1/4" = 1'-0"

SHEET NAME
ELEVATIONS
SHEET #
A1

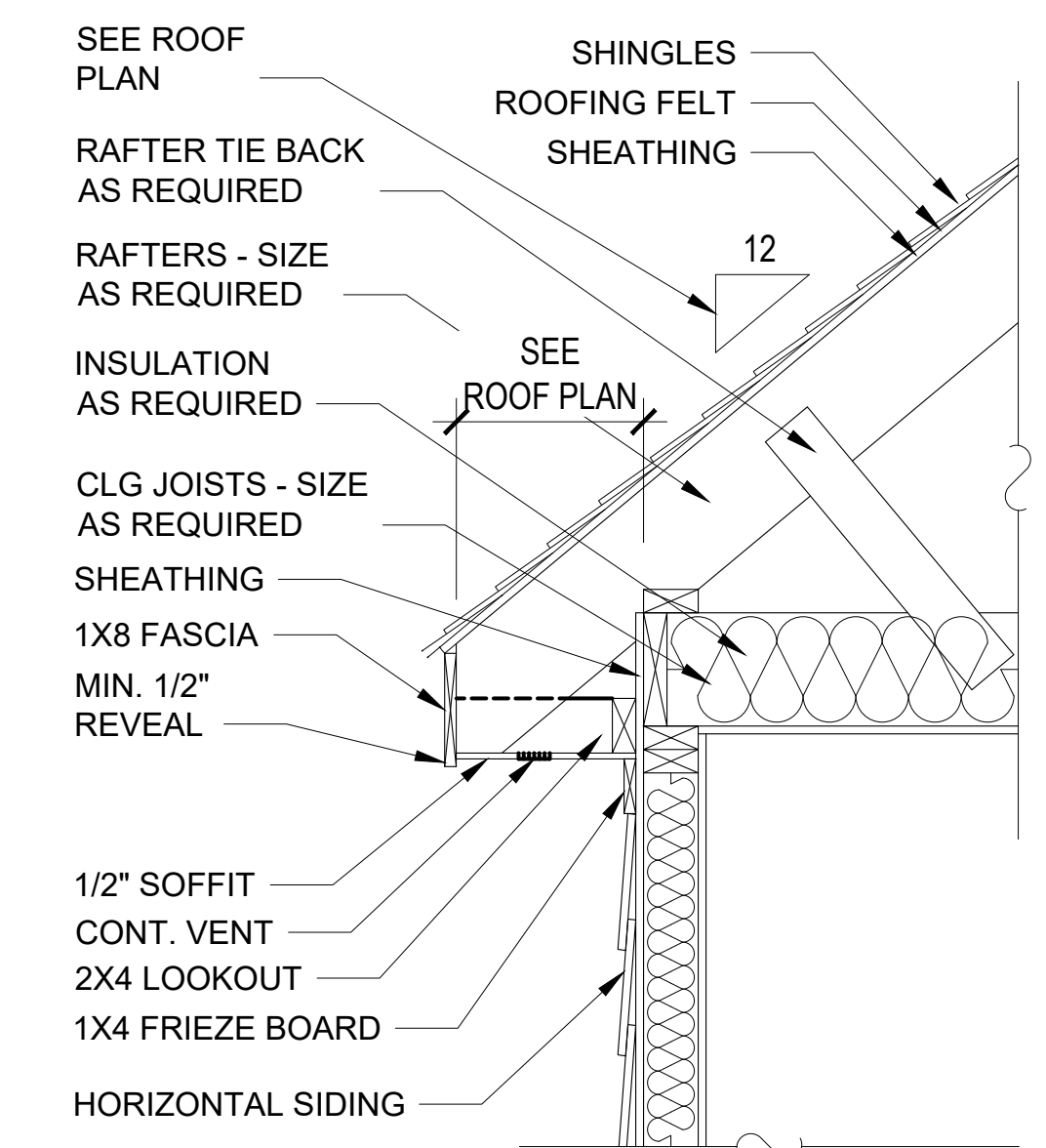
PERSONAL RESIDENCE

DRB DESIGN
drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

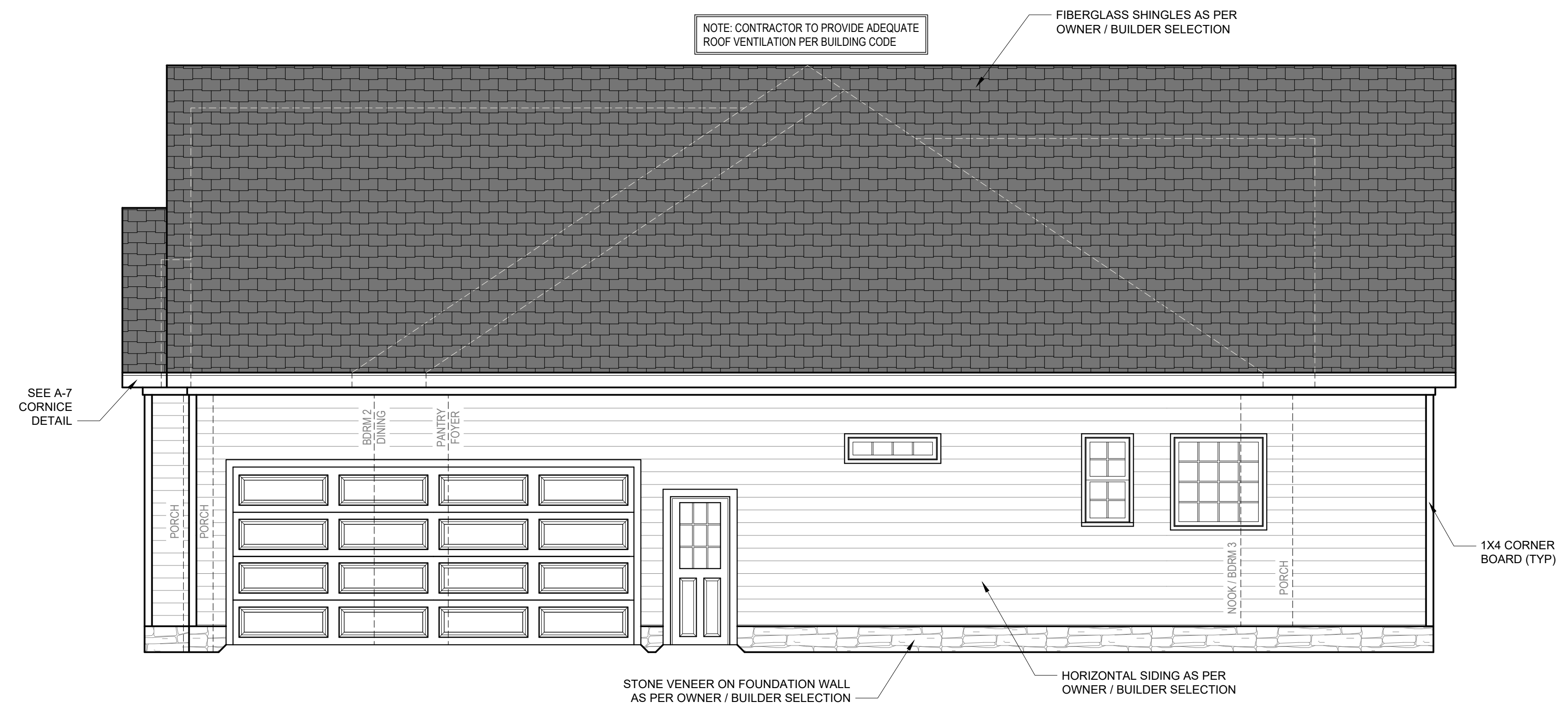
Aaron & Suzanne Hise
506 B. West Duncan St.
Lillington, NC 27546
828-443-2760
aaronhise@yahoo.com



FRONT ELEVATION
1/4" = 1'-0"



A-7 CORNICE DETAIL
NTS



RIGHT ELEVATION
1/4" = 1'-0"

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- 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.
- 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 DESIGN of responsibility for any and all consequences arising out of such changes.
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- It is the contractor's 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 footage errors once construction has begun.
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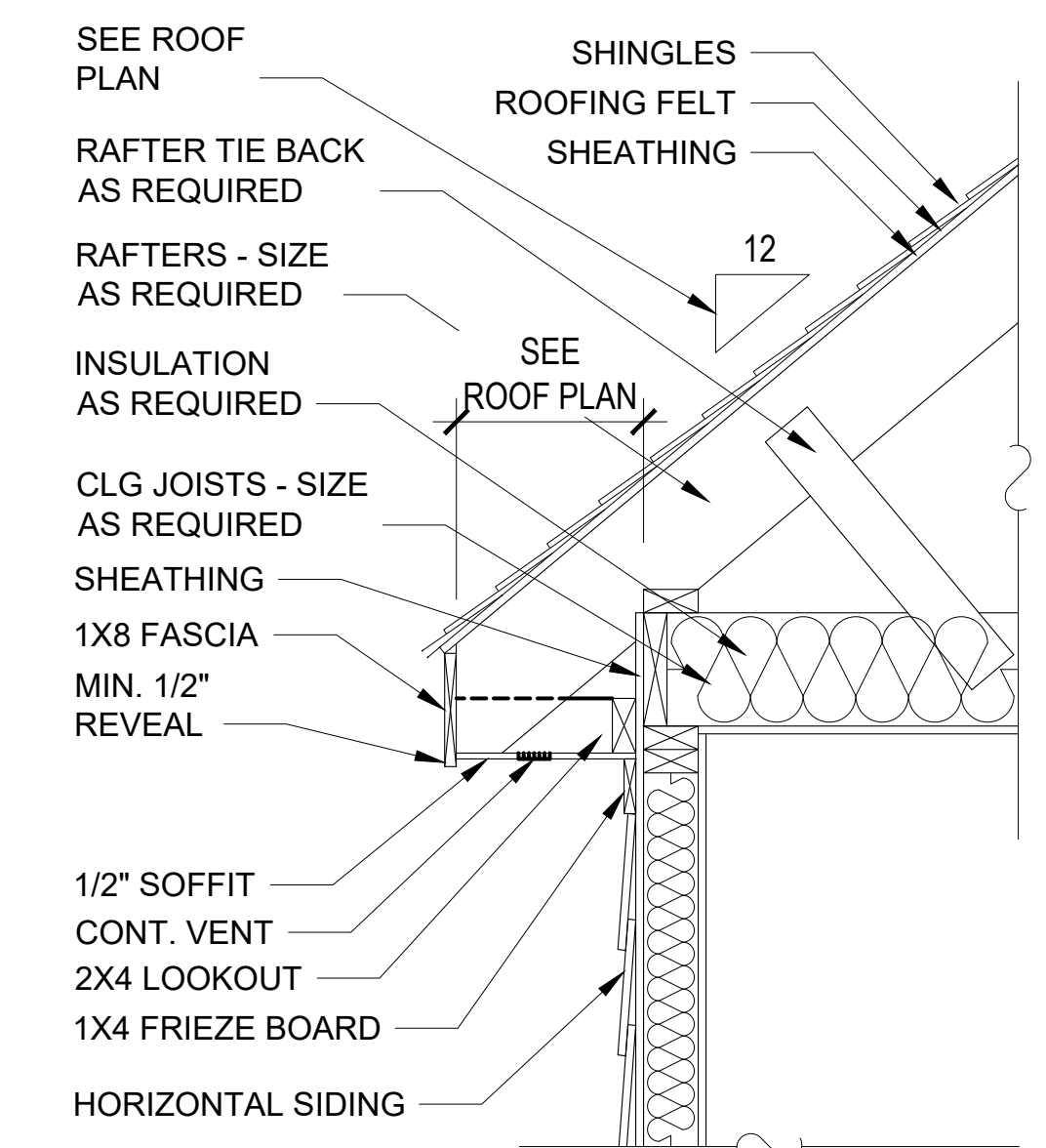
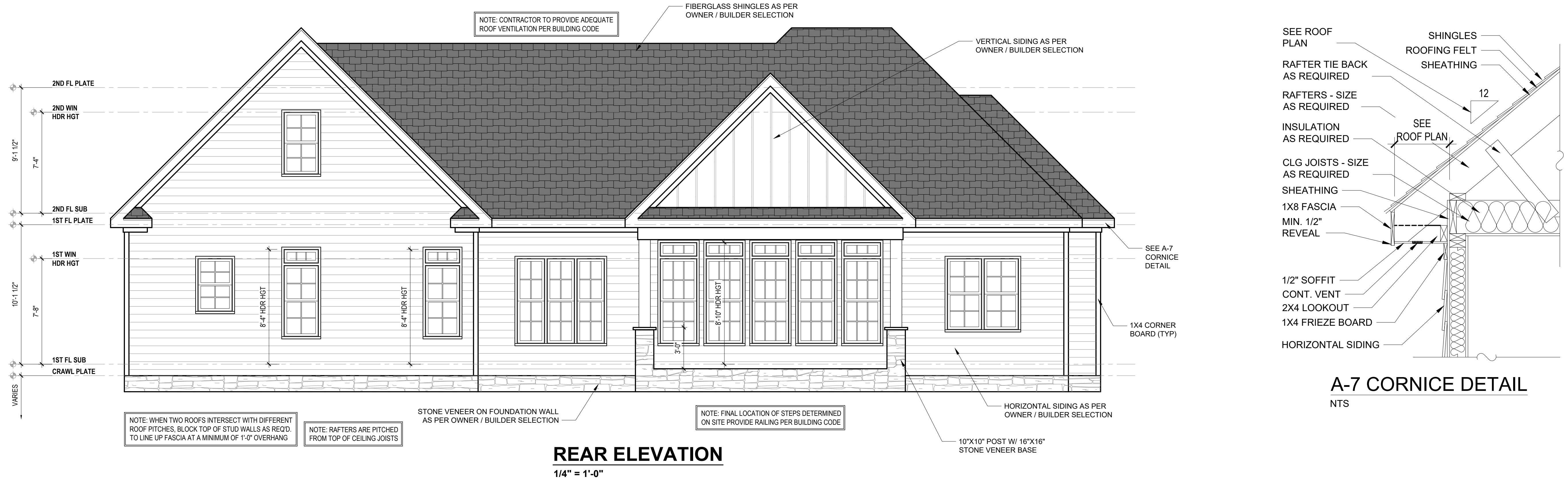
PROJECT NAME
Personal Residence
www.drbbhomedesign.com

Personal Residence

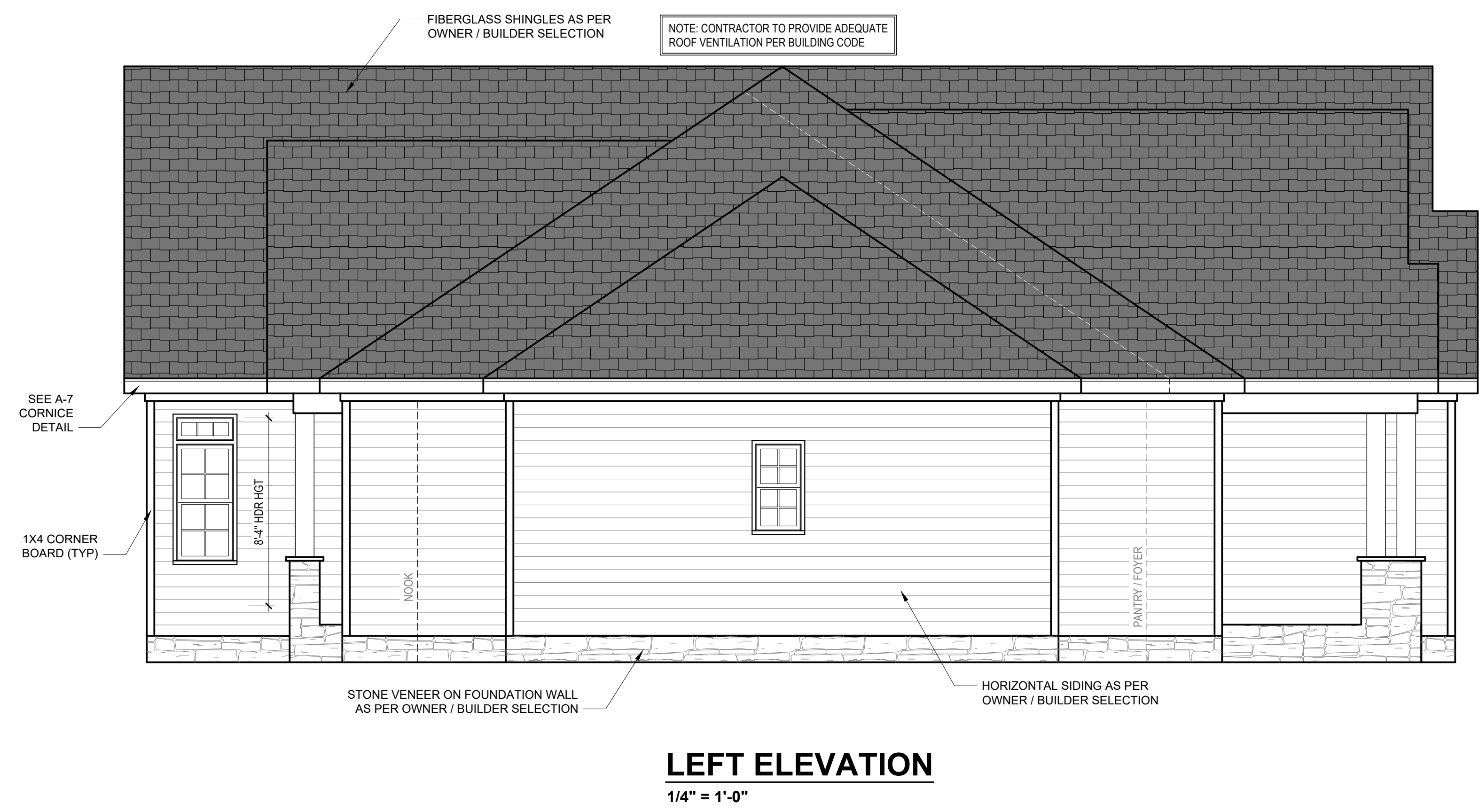
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SHEET NAME
ELEVATIONS
SHEET #
A2
of 6

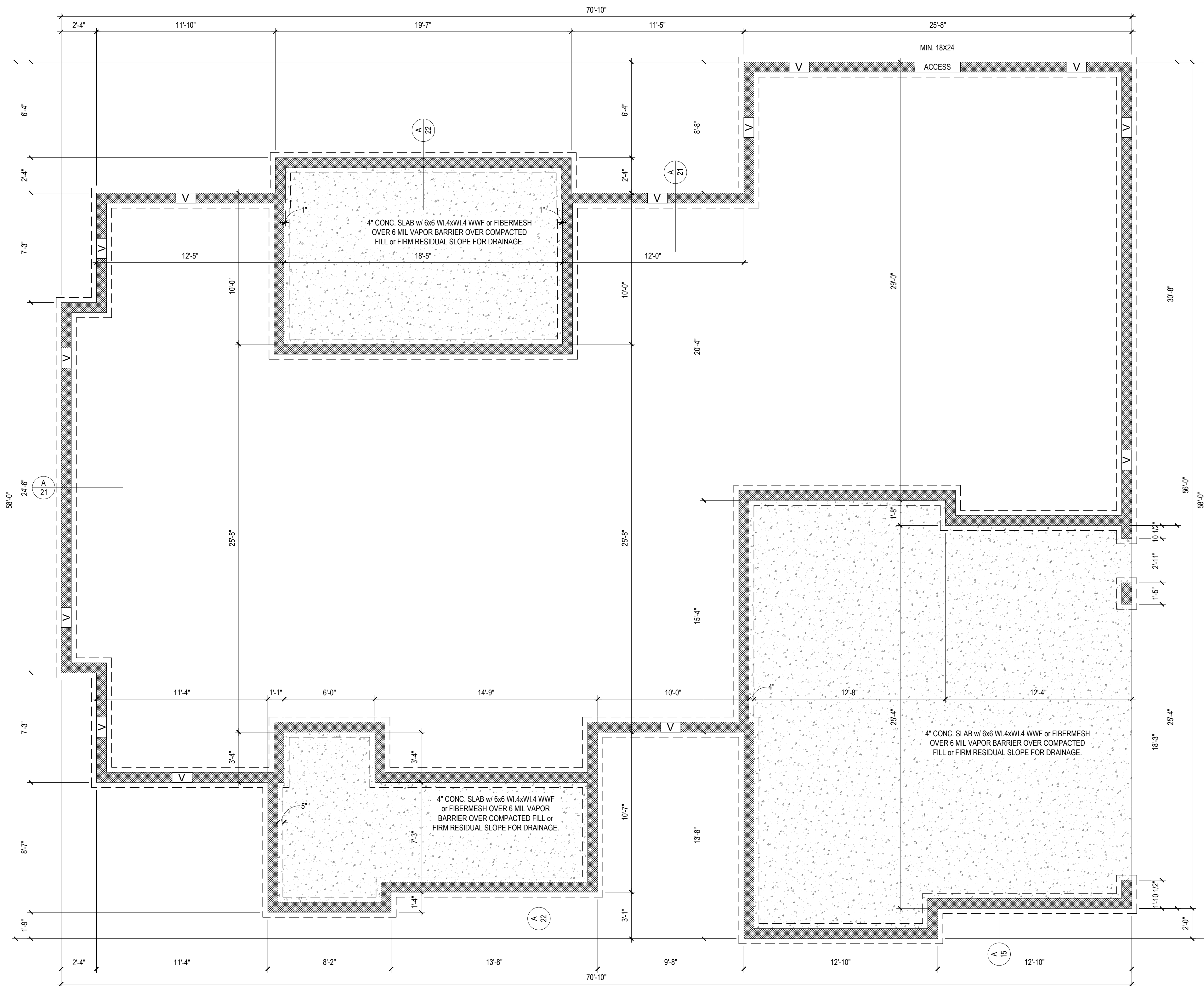


REAR ELEVATION
1/4" = 1'-0"



LEFT ELEVATION
1/4" = 1'-0"

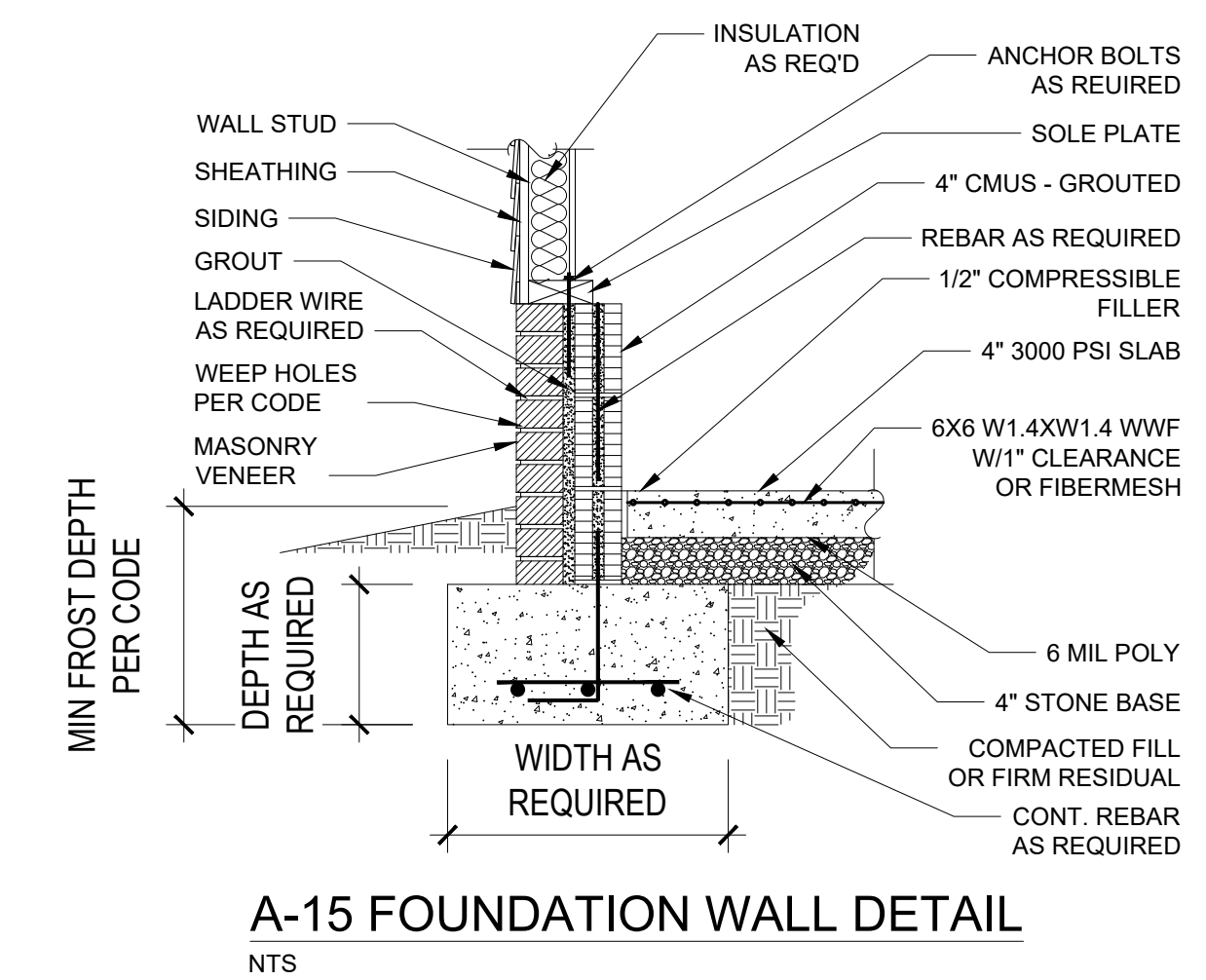
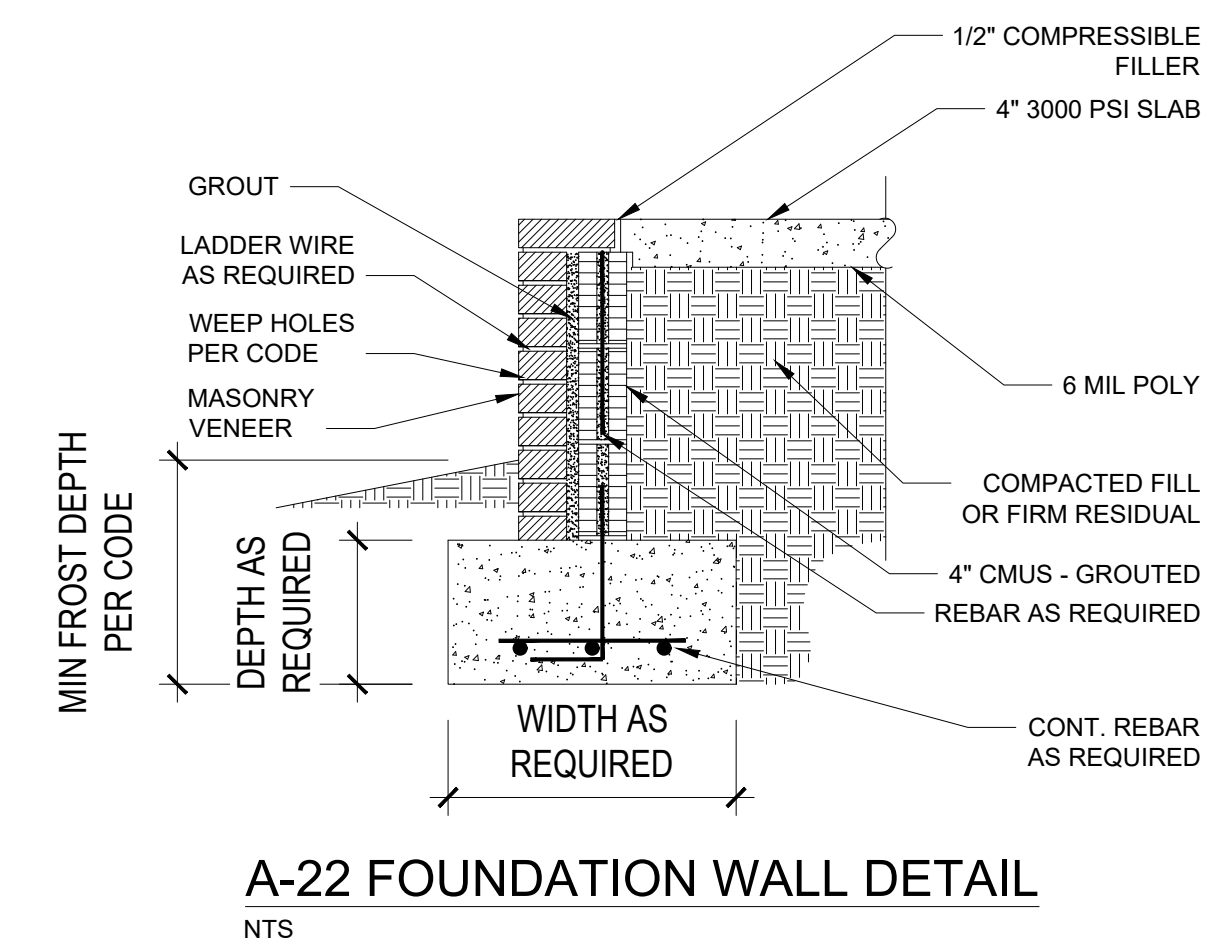
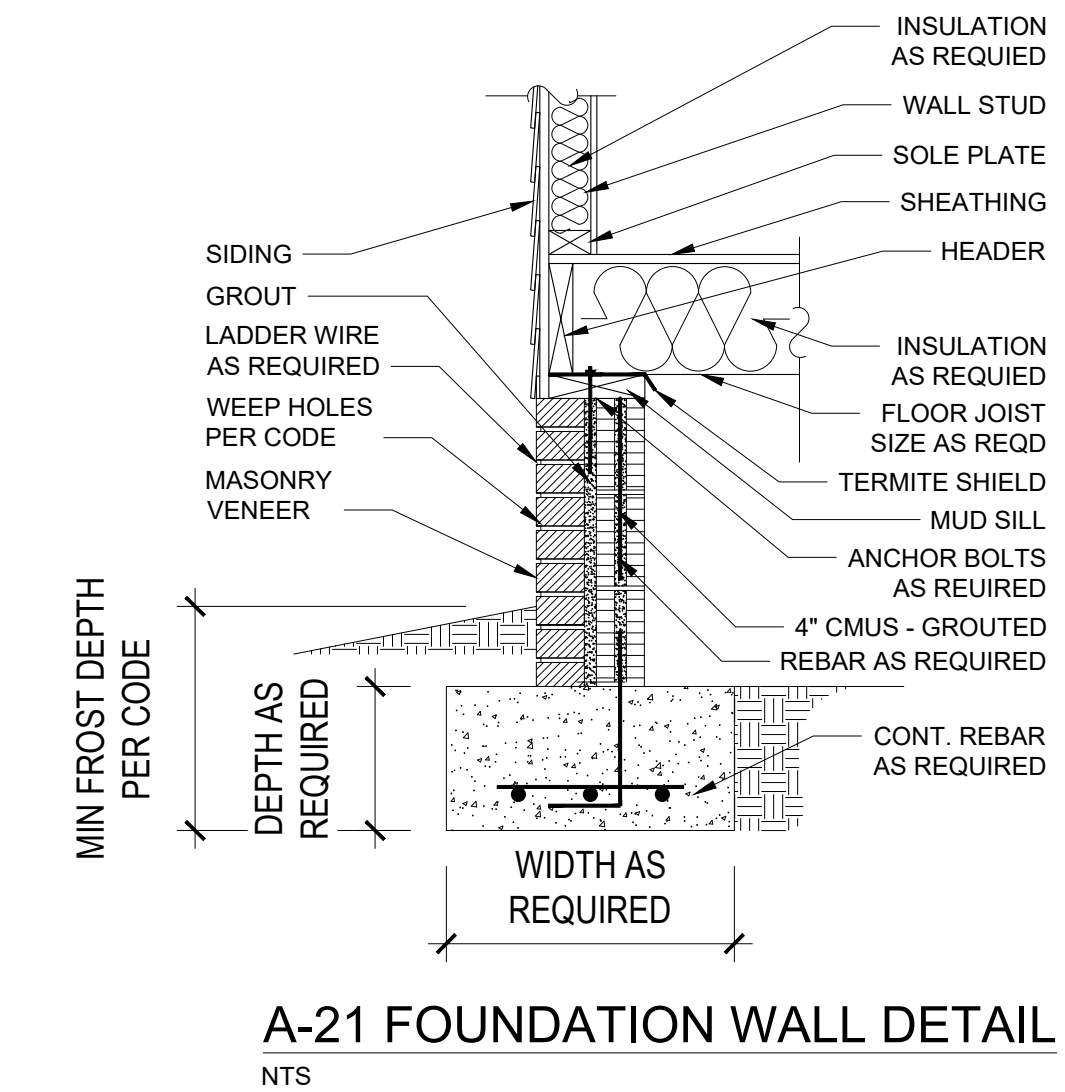
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FOUNDATION PLAN

1/4" = 1'-0"

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IJE
SCALE
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PROJECT NAME
Personal Residence

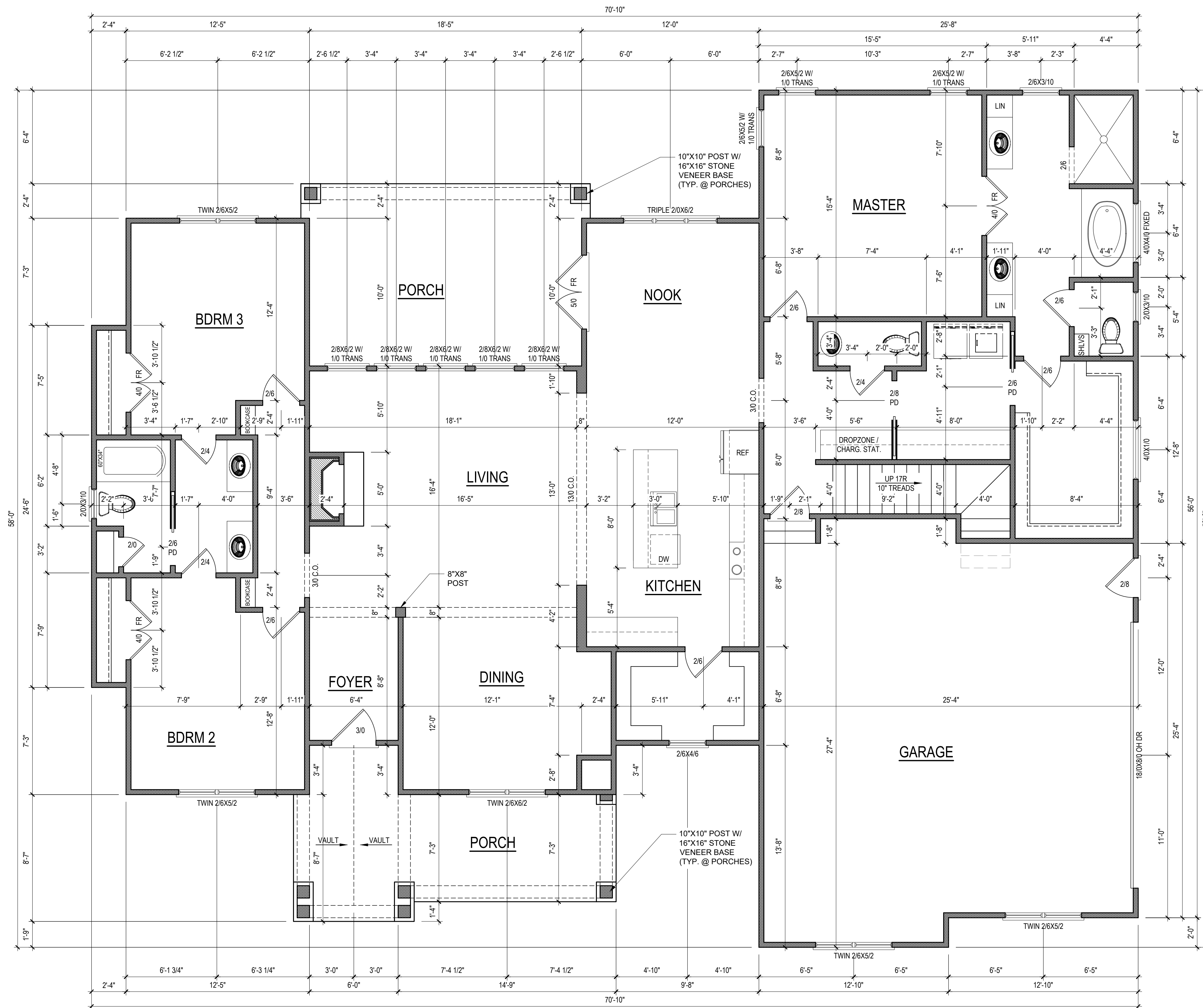
CLIENT NAME
Personal Residence

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aaronhise@yahoo.com

SHEET NAME
FOUNDATION

SHEET #
A3 of 6



FIRST FLOOR PLAN
 1/4" = 1'-0" CEILING HGT. = 10'-0"

HEATED/HABITABLE SQUARE FOOTAGE	
First Floor	2261
Second Floor	431
TOTAL HEATED	2692
UNHTD SQUARE FOOTAGE	
Garage	693
Front Porch	189
Rear Porch	230
TOTAL UNHEATED	1112
TOTAL SQ FT	3804

NOTE:
ALL EXTERIOR WALLS
ARE NOMINAL 4" UNO

NOTE:
ALL INTERIOR WALLS
ARE NOMINAL 4" UNO

NOTE:
ALL ANGLED WALLS
ARE 45° UNO

NOTE:
ALL DIMENSIONS ARE
FRAME TO FRAME

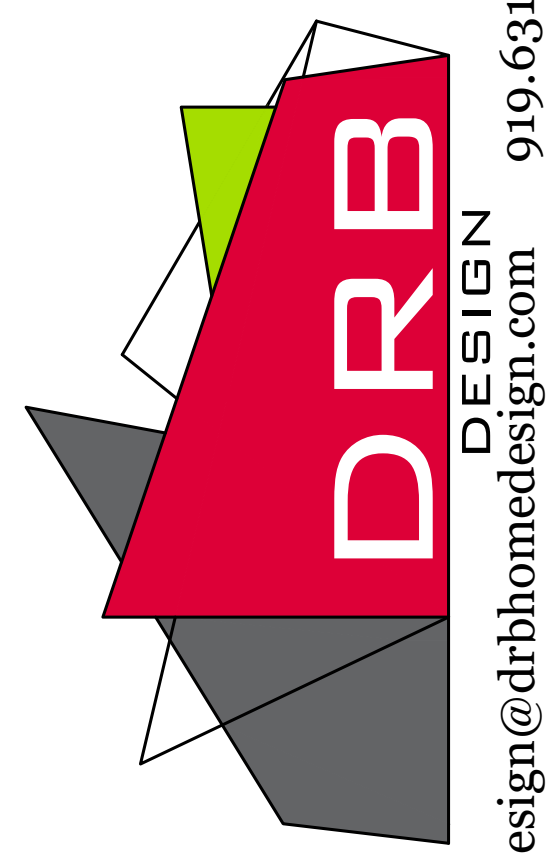
NOTE:
SEE ELEVS. FOR
WINDOW HDR HGT

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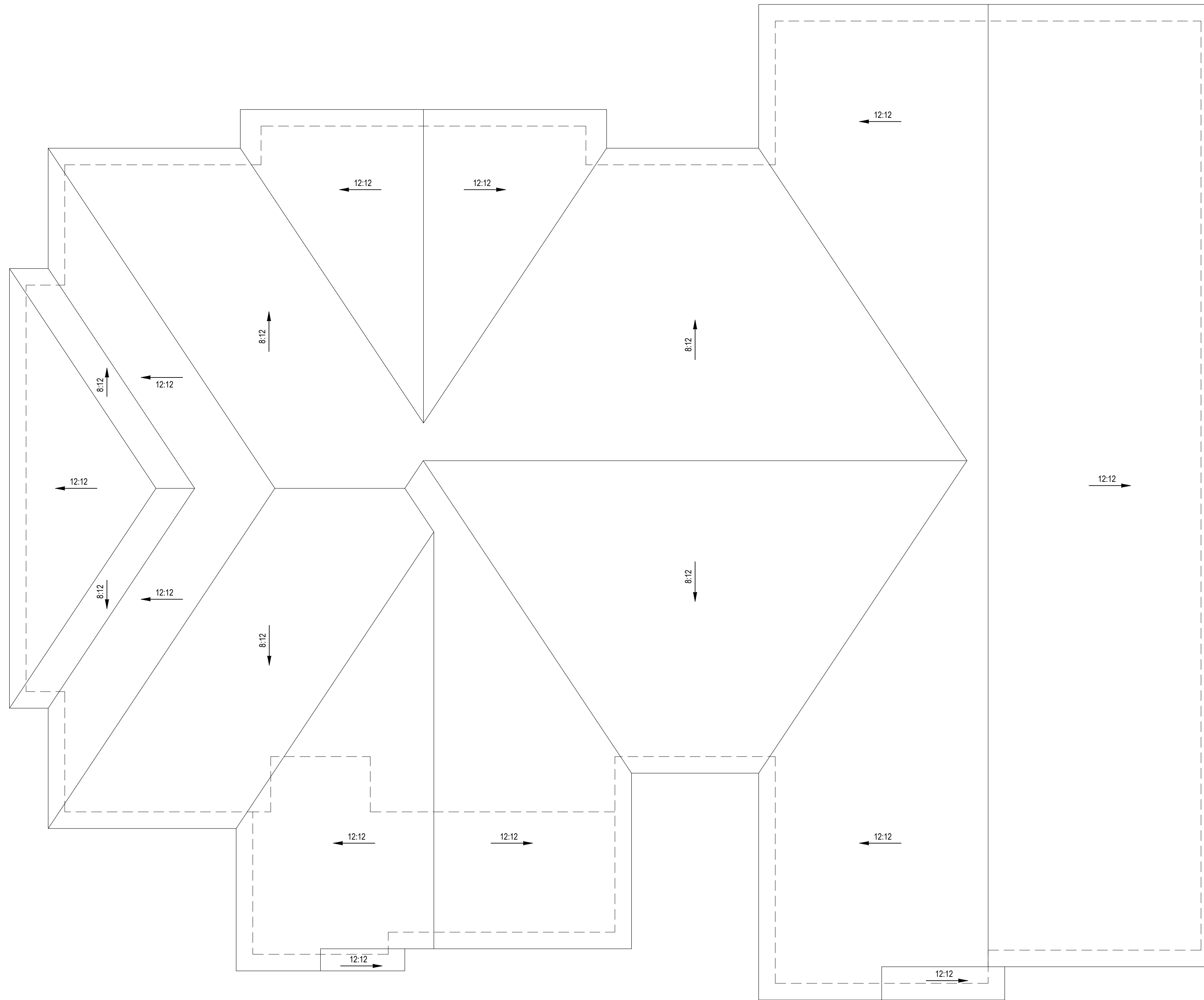
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drbdesign@drbhomedesign.com 919.631.5979
 250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME
Aaron & Suzanne Hise
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 aaronhise@yahoo.com

SHEET NAME
1ST_FLOOR
 SHEET#
A4
 of 6



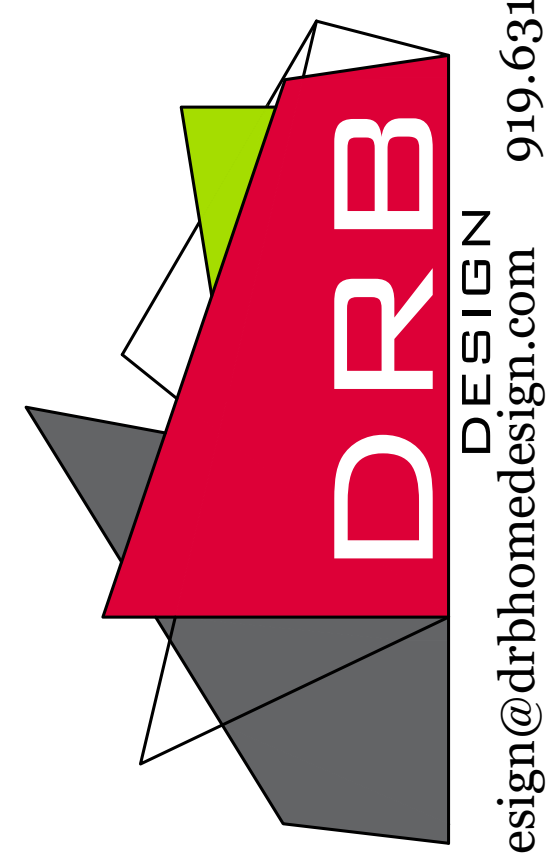
ROOF PLAN
1/4" = 1'-0"

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WEBSITE
drbhomedesign.com

PROJECT NAME
Personal
Residence



drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

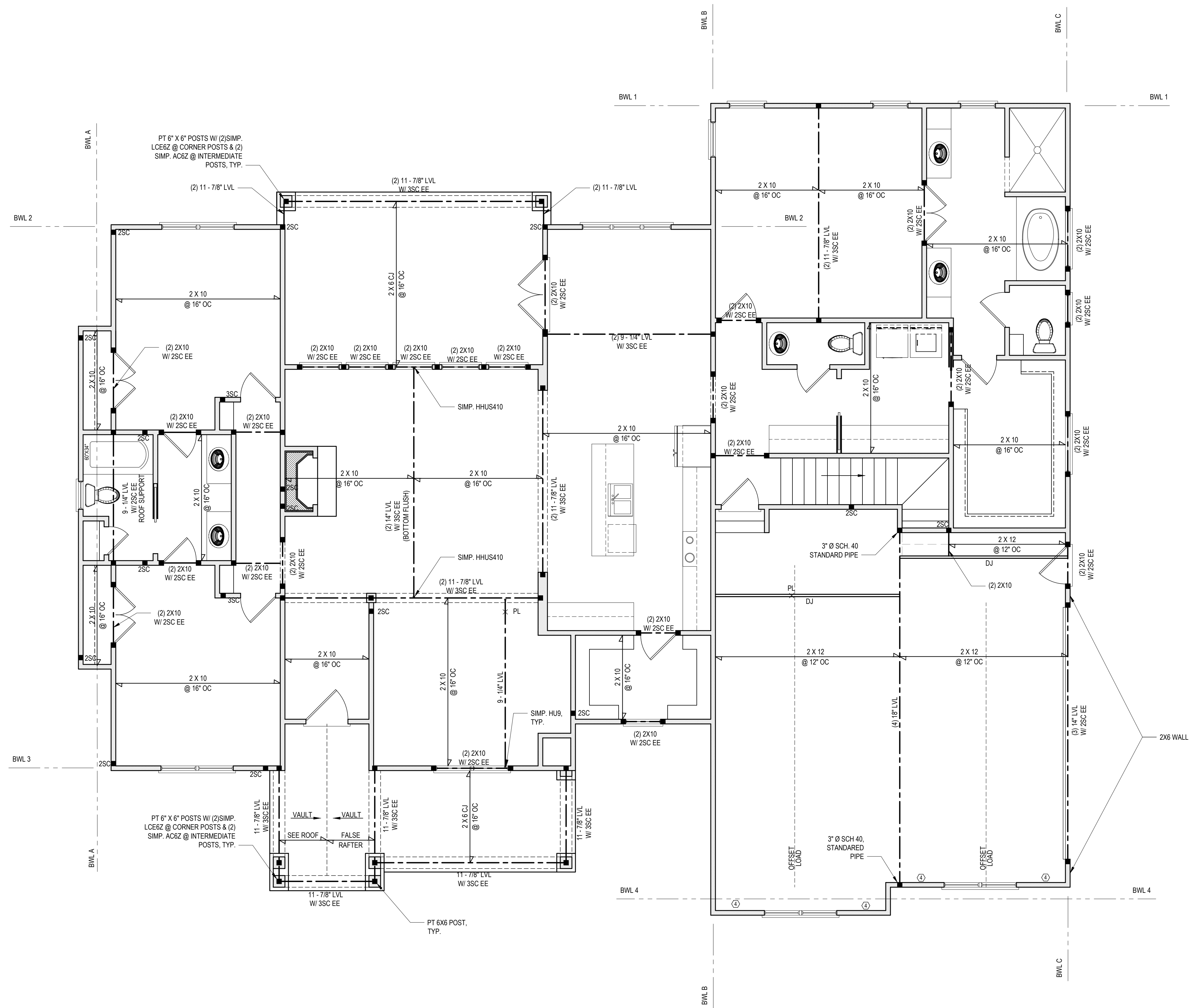
CLIENT NAME
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Lillington, NC 27546
828-443-2760
aaronhise@yahoo.com

SHEET NAME
ROOF
SHEET #
A6
of 6

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 (w/ storage)	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:**
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
 - 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 DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
 - ALL LUMBER SHALL BE SYP #2 (UNO).
ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND F_b = 2600 PSI, E = 1.8M PSI.
(I.E. LEVEL MICROLAM)
ALL L.S. LUMBER IS TO BE 1.5SE (F_b = 2225 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) 10# NAILS @ 8" O.C., PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 5'-8". MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-4". 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 IRC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'-0" IN HEIGHT.
 - ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
F_y = 50 KSI MIN. (UNO)
 - ALL EXTERIOR LUMBER TO BE #2 SYP PT
 - ALL CONCRETE, f_c = 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 7'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
 - PROVIDE A MINIMUM OF 50# UPLIFT AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
 - PROVIDE CONTINUOUS SHEATHING PER SECTION 622.10.4 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.

- 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.
(1) REFERENCE FIGURE R602.10.4.3 OF THE 2018 NRC.
(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.
(3) 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE w/ 6d COMMON NAILS SPACED AT 8" 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 8" 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.
(5) MINIMUM 800# HOLD-DOWN DEVICE

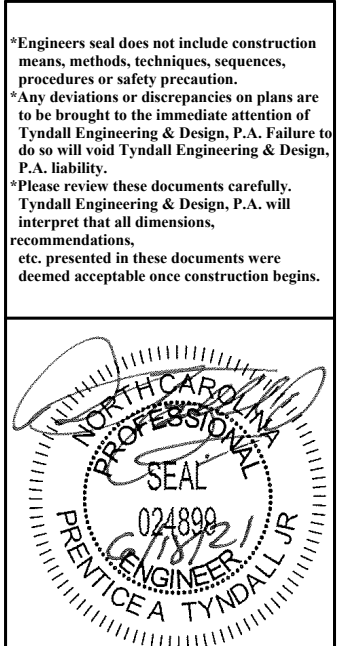


BRACING PANEL LENGTHS REQUIRED:
 BWL A = 12.3 FT
 BWL B = 20.0 FT
 BWL C = 7.7 FT
 BWL 2 = 11.1 FT
 BWL 3 = 11.1 FT
 BWL 4 = 16.1 FT

BRACING PANEL LENGTHS PROVIDED:
 BWL A = 35.6 FT CS-WSP
 BWL B = 51.8 FT CS-WSP
 BWL C = 24.7 FT CS-WSP
 BWL 1 = 17.5 FT CS-WSP
 BWL 2 = 11.9 FT CS-WSP
 BWL 3 = 15.5 FT CS-WSP
 BWL 4 = 28.7 FT CS-WSP

NOTE: SECURE 4-PLY W/ 1/2\"/>

FIRST FLOOR PLAN
 1/4" = 1'-0" CEILING HGT. = 10'-0"



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 280 Blythewood Drive • Cary, NC 27513 • 919.775.4444
 www.tyndallengineering.com

Client: **AARON & SUZANNE HISE**
 Project: **HISE RESIDENCE**

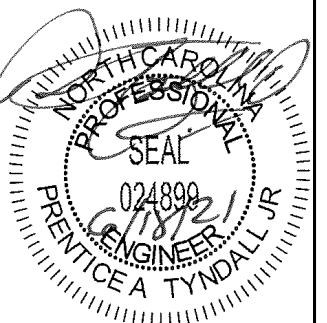
**1ST FLOOR HEADER
 2ND FLOOR FRAMING**

Project #: DRB2101-0064
 Date: 6/18/21
 Drawn/Design By: IJE
 DWG. Checked By: PTH
 Scale: SEE PLAN

REVISIONS		
No.	Date	Remarks

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*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.
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TYNDALL
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 200 Blythebark Drive • Garner • North Carolina • 27529
 919.775.2500 • 919.775.4444
 www.tyndallengineering.com

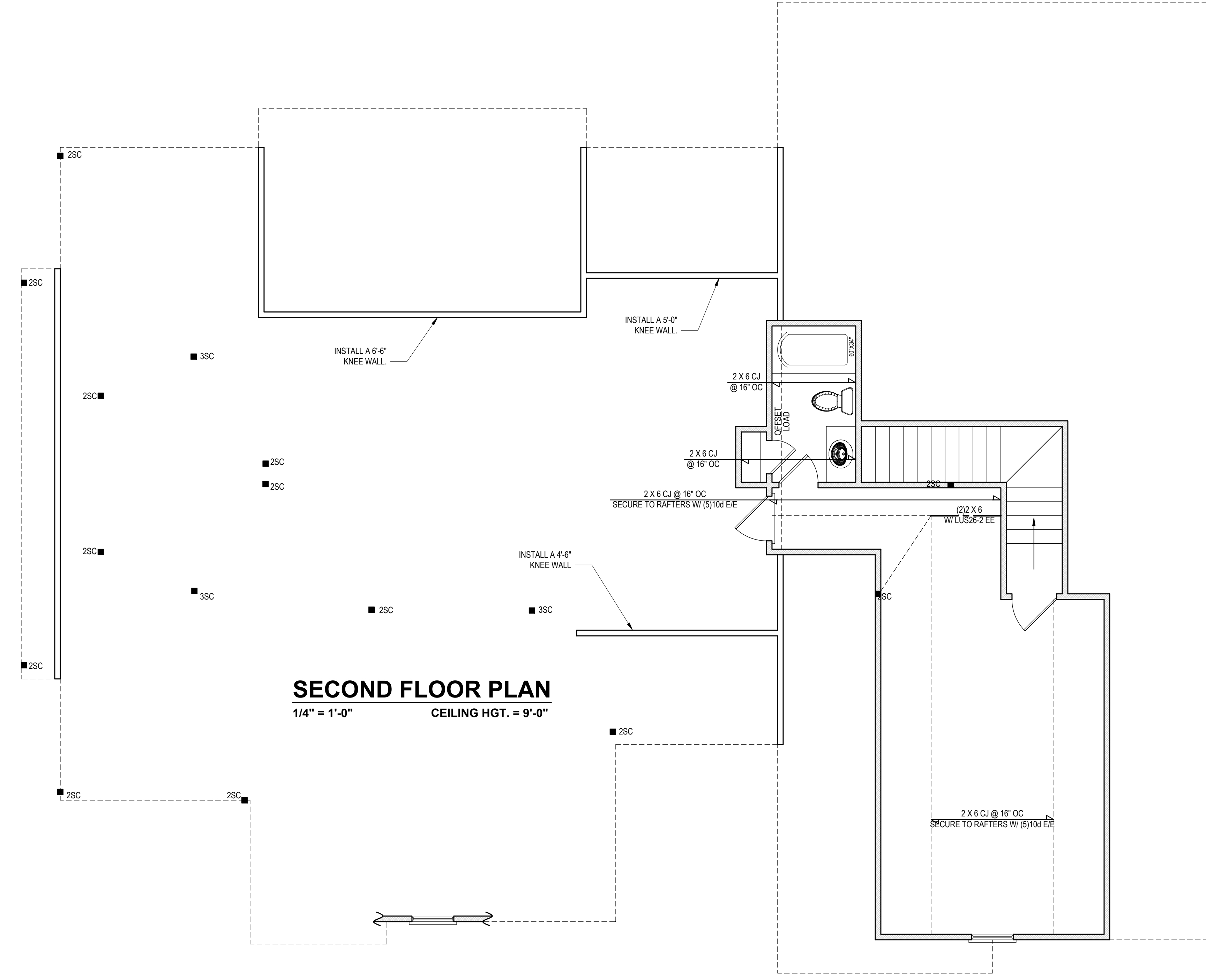
Client: **AARON & SUZANNE HISE**
 Project: **HISE RESIDENCE**

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

Project #: **DRB2101-0064**
 Date: **6/18/21**
 Drawn/Design By: **IJE**
 DWG. Checked By: **PTII**
 Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks
△		
△		
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Sheet Number
S3
 3 of 6



SECOND FLOOR PLAN
 1/4" = 1'-0" CEILING HGT. = 9'-0"

FILENAME: Z:\PROJ_2021\DRB2101\0064\AARON_SUZANNE_HISE\001_PLAN\DRB2101-0064_2ND FLR CLG FRAMING.DWG
 DATE: 6/18/2021 2:51 PM

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 Phone: 919.775.5100 • Fax: 919.775.4449
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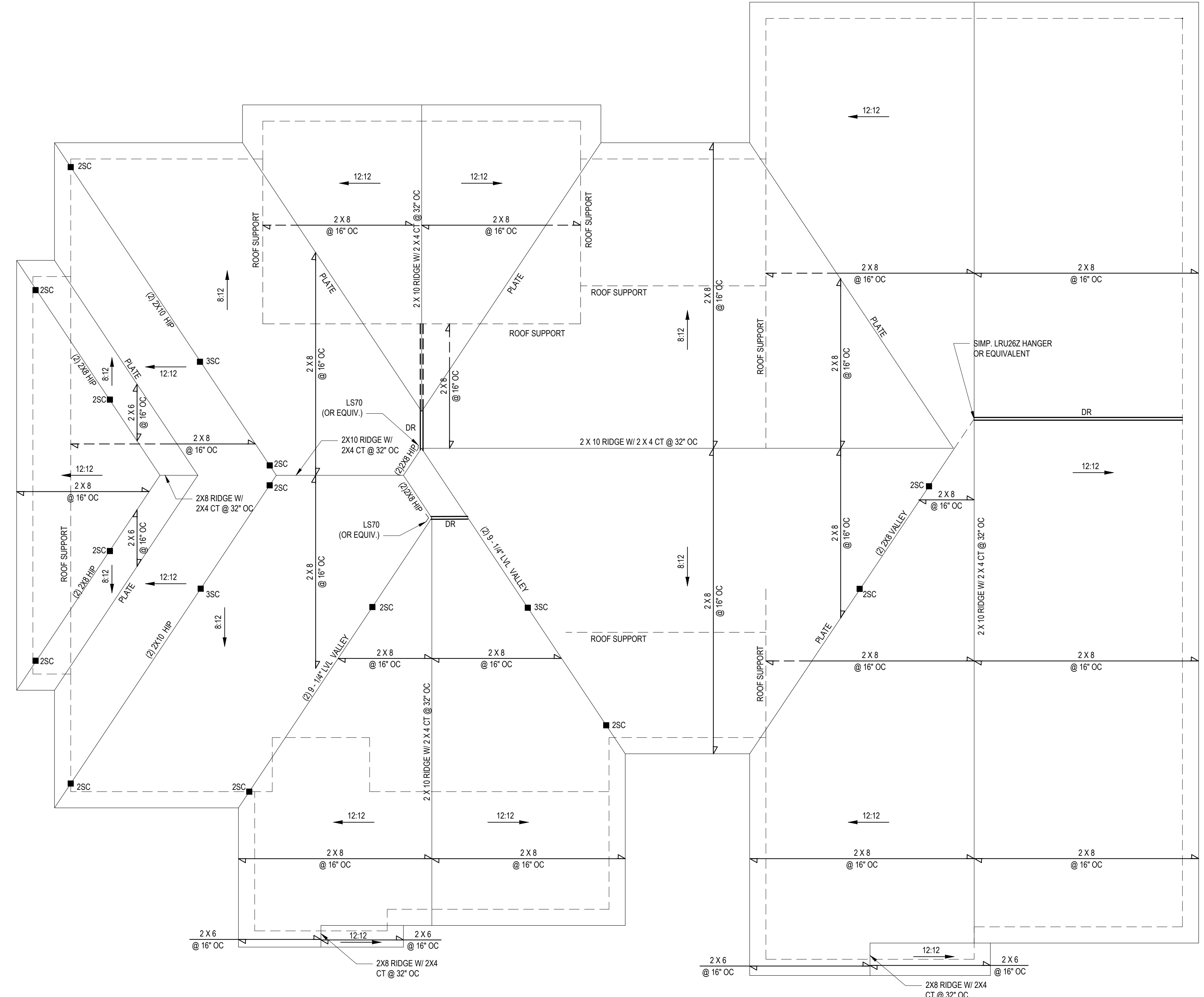
Client: **AARON & SUZANNE HISE**
 Project: **HISE RESIDENCE**

ROOF PLAN

Project #: **DRB2101-0064**
 Date: **6/18/21**
 Drawn/Design By: **IJE**
 DWG. Checked By: **PTH**
 Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks

Sheet Number
S4
 4 of 6



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

FILENAME: Z:\PROJ_2021\DRB2101-0064\AARON_SUZANNE_HISE\DWG_FILES\DRB2101-0064_LE.DWG, SHEET: DRB2101-0064_LE.DWG, DATE: 6/18/2021 2:51 PM

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 (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	20	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.C.)
- 5) MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" UNLESS 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.
- 6) ALL FRAMING LUMBER SHALL BE SYP #2 (F_b = 800 PSI, BASED ON 2x10) (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 F_b = 2000 PSI, E = 1.9M PSI (U.N.O.)
ALL LSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND F_b = 2325 PSI, E = 1.8M PSI (U.N.O.)
ALL PSL LUMBER TO BE 3.5" WIDE NOMINAL EACH SINGLE MEMBER AND F_b = 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 3/16" AND FULL FLANGE WIDTH PROVIDES 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 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" 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 VALLES 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
38.0 LBS/SQFT FOR ROOF PITCHES 6/12 TO 12/12
*MEAN ROOF HEIGHT 38'-0" OR LESS
- 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.)
- 19) PROVIDE A MINIMUM OF 50# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH DIMENSION. (U.N.O.)
- 20) MAXIMUM MASONRY PER 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, P.A. 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	PL = POINT LOAD
CONC = CONCRETE	PT = PRESSURE TREATED
CONT = CONTINUOUS	REIN = 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	TRD = TREATED
FTG = FOOTING	TYP = TYPICAL
GALV = GALVANIZED	UNO = UNLESS NOTED OTHERWISE
HORIZ = HORIZONTAL	W = WIDE FLANGE BEAM
HT = HEIGHT	WVF = 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:

- 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 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.	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 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.

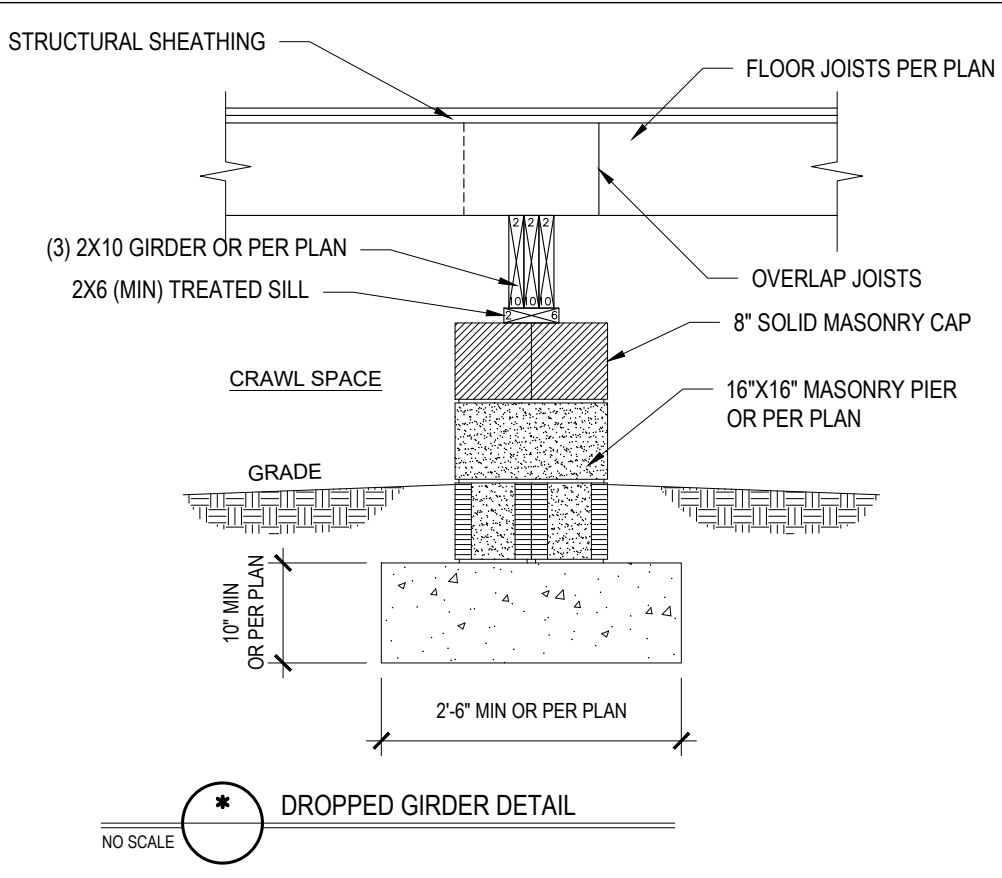


TABLE N1102.1 CLIMATE ZONES 3-5

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

NO SCALE

* TABLE N1102.1 CLIMATE ZONES 3-5

^a 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.

^b THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS. THE SQUARE-HEAT GAIN COEFFICIENT (SHGC) COLUMN APPLIES TO ALL GLAZED FENESTRATION.

^c *100% MEANS IS CONTINUOUS INSULATION (INCLUDING ON THE INTERIOR OR EXTERIOR OF THE HOME OR IN A CAVITY) INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.

^d FOR MONOLITHIC SLAB INSULATION SHALL BE APPLIED FROM THE INSULATION GAP COMMAND TO THE BOTTOM OF THE FOOTING OR ANCHORAGE BY BELOW GRADE W/ BENCHES OR LAGS. FOR CRAWL SPACE INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 2" ABOVE W/ BENCHES OR LAGS. R-4 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.

^e SELECTED

^f BASEMENT WALL INSULATION IS NOT REQUIRED IN WARMING LOCATIONS AS DEFINED BY FIGURE N1101.7 AND TABLE N1101.7.

^g OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY. 3" MINIMUM.

^h THE FIRST VALUE IS CAVITY INSULATION. THE SECOND VALUE IS CONTINUOUS INSULATION. 30" 13"4" MEANS R-13 CAVITY INSULATION PLUS R-13 INSULATED SHEATHING. 15"4" MEANS R-15 CAVITY INSULATION. PLUS R-4 INSULATED SHEATHING. 2" STRUCTURAL SHEATHING COVERS 25% OR LESS OF THE EXTERIOR INSULATING SURFACE. NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS USED. 3" STRUCTURAL SHEATHING COVERS MORE THAN 25% PERCENT OF THE EXTERIOR. SHALL BE SPECIFICATED WITH INSULATING SHEATHING AT LEAST 2" x 2" MEANS R-15 CAVITY INSULATION PLUS R-2.5 SHEATHING.

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 0.58 SHALL BE 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 0.35 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.

^l R-4 SHALL BE ADDED TO THE REQUIRED R-VALUE REQUIREMENT WHERE THE FULL HEIGHT OF AN INSULATED INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE GRADE. OTHERWISE R-3 INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION SHALL EXTEND TO EITHER THE INSULATION BATTLE OR OTHER TOP OF THE ROOF DECK.

^m TABLE VALUES EXCEPT FOR ROOF EDGE WHERE THE PITCH OF THE ROOF THERE THE INSULATION MUST FILL THE SPACE UP TO THE AIR BATTLE.

ⁿ 10' PERFORMS AS BOTH COMPRESSED AND NOT COMPRESSED. 2 x 4 FRAMING CAVITY IS DESIGNED TO COMP. 1" CROSS-SECTION BATTIS WITH R-19 OR HIGHER COMPRESSED AND RECALLED IN A 2x4 WALL IS NOT ALLOWED TO COMP.

^o BASEMENT WALL MEETING THE MINIMUM MASS WALL SPECIFIC-HEAT CONTENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

2086 SQ. FT. OF CRAWL SPACE / 190 = 13.9 SQ. FT. OF REQ'D VENTILATION WITHOUT CROSS VENTILATION
13.9 SQ. FT. OF VENTILATION REQ'D / 0.45 SQ. FT. PER VENT = 31 VENTS REQ'D

-OR-

2086 SQ. FT. OF CRAWL SPACE / 1500 = 1.4 SQ. FT. OF REQ'D VENTILATION WITH CROSS VENTILATION
1.4 SQ. FT. OF VENTILATION REQ'D / 0.45 SQ. FT. PER VENT = 3 VENTS REQ'D

- 1) VENT LOCATIONS MAY VARY FROM THOSE SHOWN ON PLAN, HOWEVER VENTS SHALL BE PLACED TO PROVIDE ADEQUATE VENTILATION AT ALL POINTS AND TO PREVENT DEAD AIR POCKETS.
- 2) THE TOTAL AREA OF VENTILATION OPENINGS MAY BE REDUCED TO 1/100 OF THE CRAWL SPACE GROUND AREA WHERE THE REQUIRED CLEARANCE IS PLACED AND TO PROVIDE CROSS VENTILATION OF THE CRAWL SPACE. THE INSTALLATION OF OPERABLE LOADERS SHALL NOT BE PROHIBITED. ONE FOUNDATION VENT SHALL BE INSTALLED AT EACH CORNER OF THE BUILDING. TO PREVENT RAINWATER ENTRY WHEN THE CRAWL SPACE IS BUILT ON A SLOPED SITE, THE UPWALL FOUNDATION WALLS SHALL BE CONSTRUCTED WITHOUT WALL VENT OPENINGS. VENT DAMPERS SHALL BE PROVIDED WHEN THE BOTTOM OF THE FOUNDATION VENT OPENING IS LESS THAN 6 INCHES ABOVE THE FINISHED EXTERIOR GRADE.

WALL VENTED CRAWL SPACES REQUIRE FULL COVERAGE GROUND WORK NETWORKS.

CRAWL SPACE VENTILATION CALCULATION

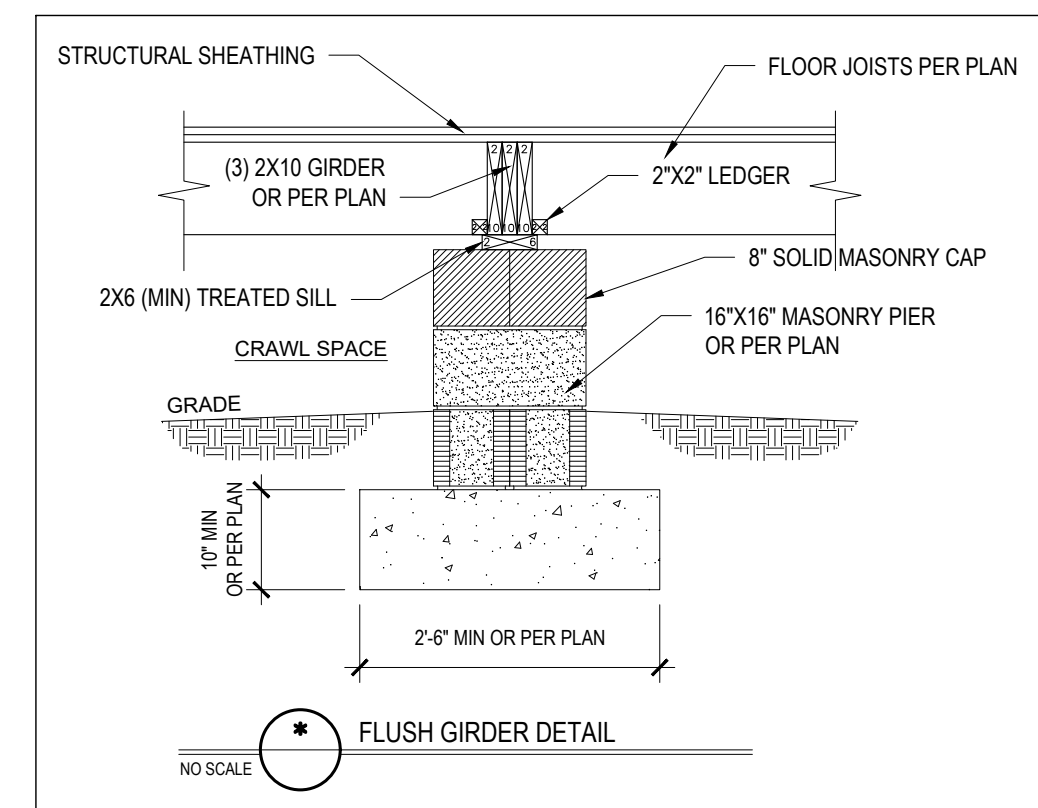
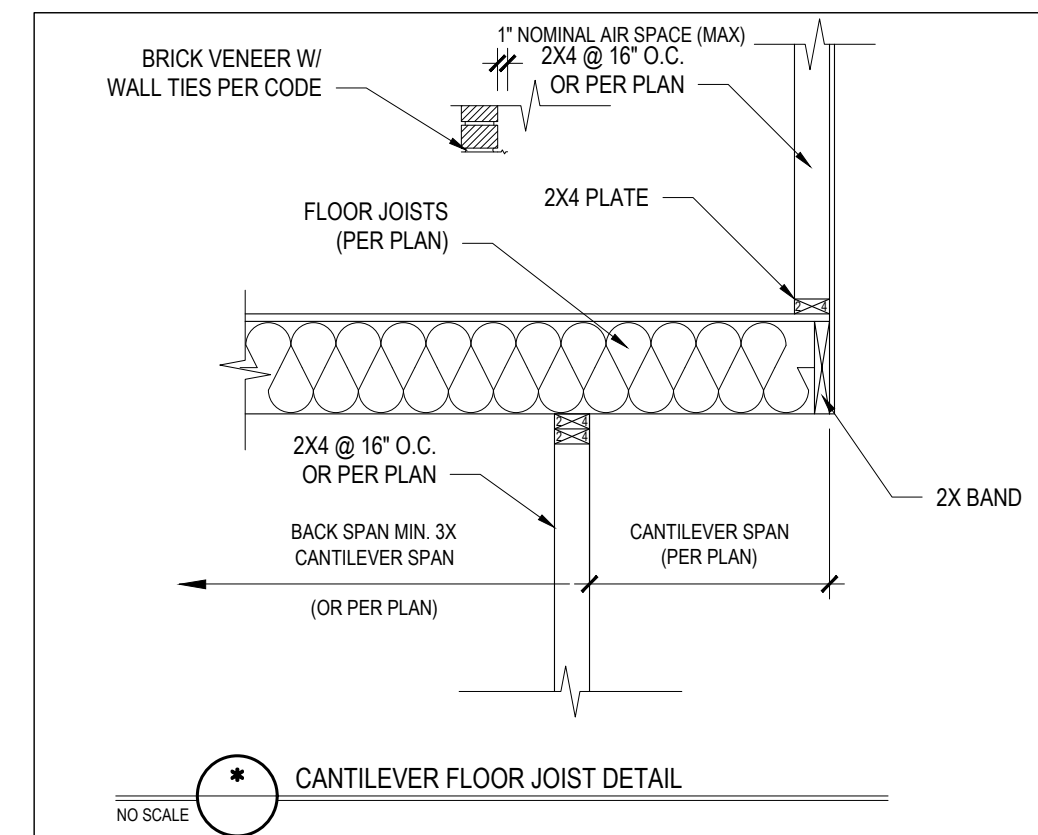
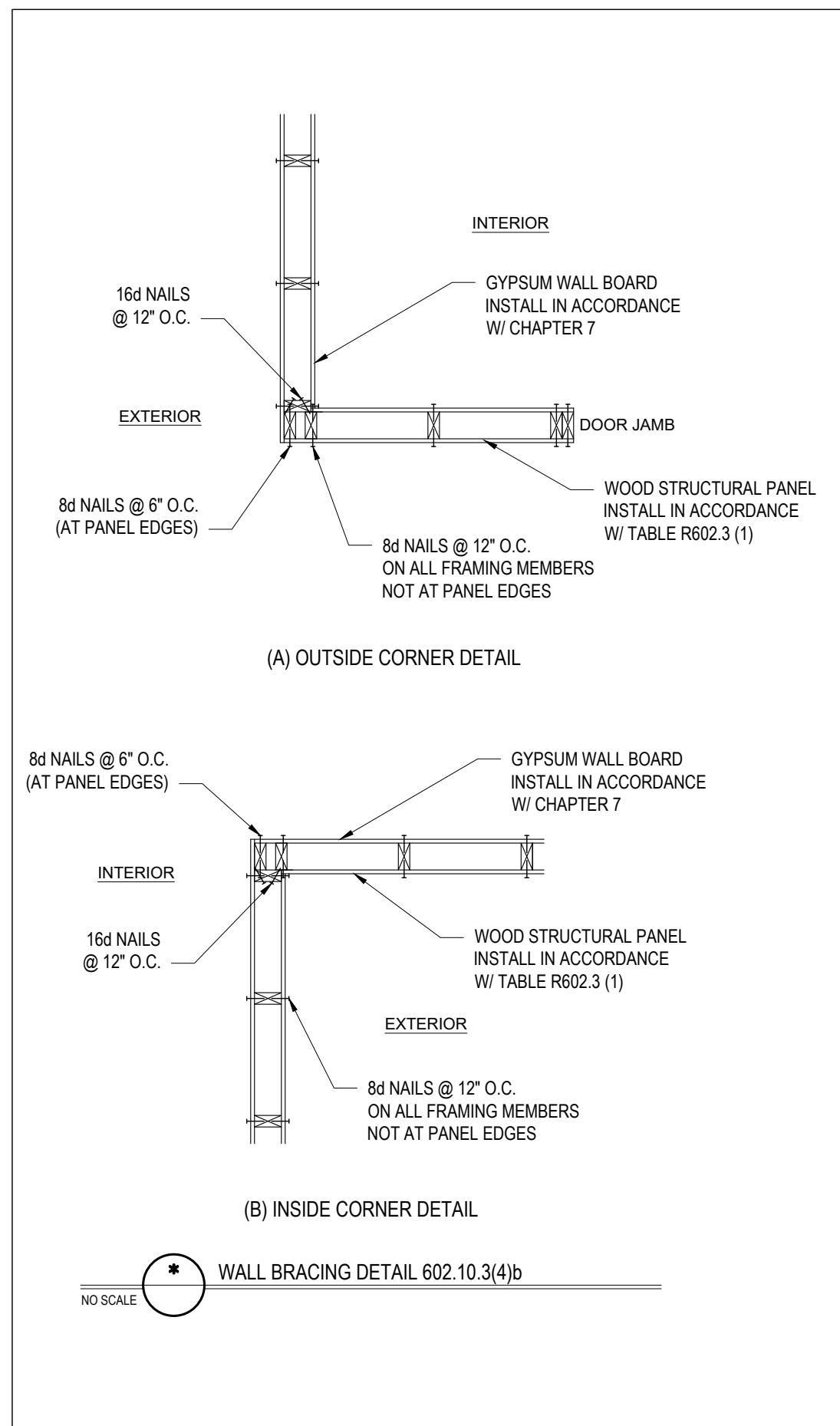
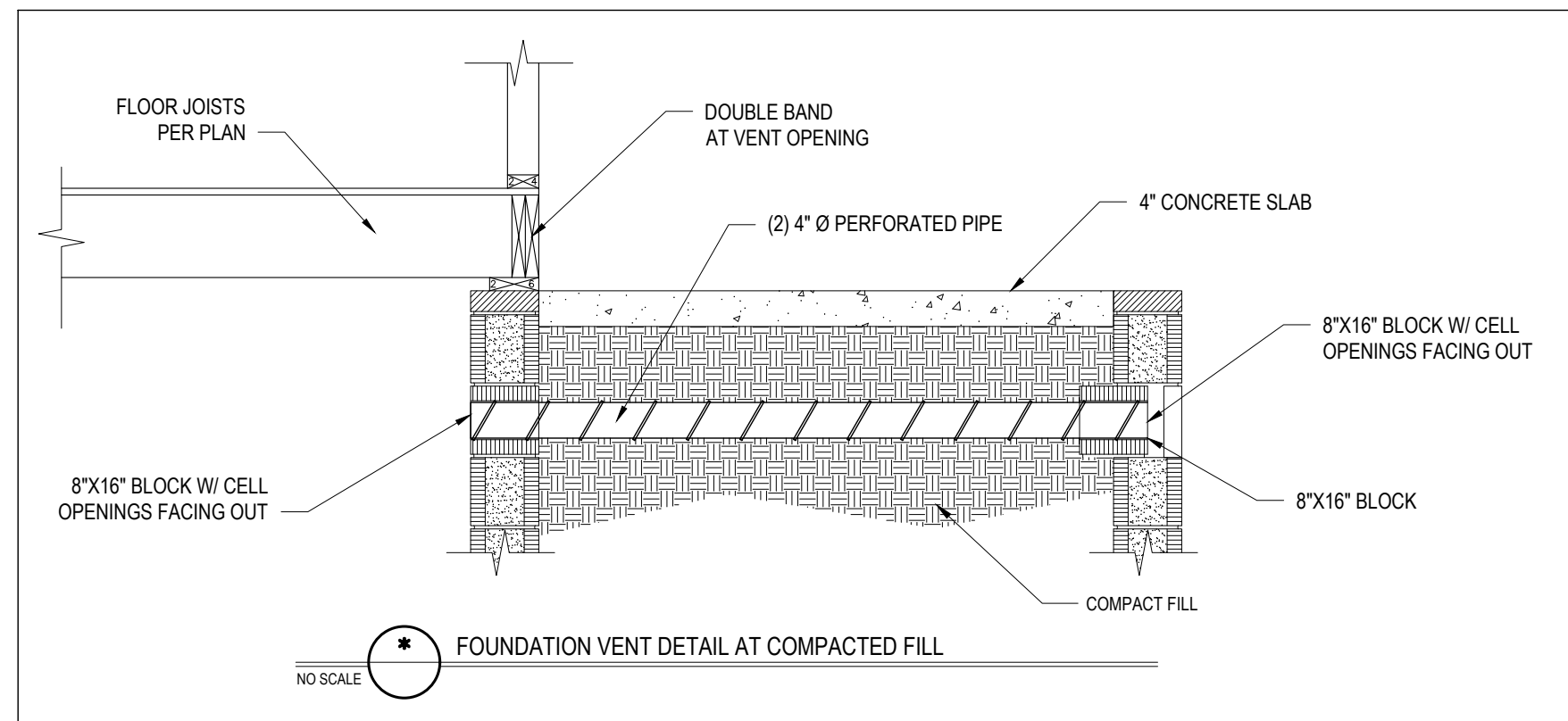
NO SCALE

ATTIC VENTILATION CALCULATION

NO SCALE

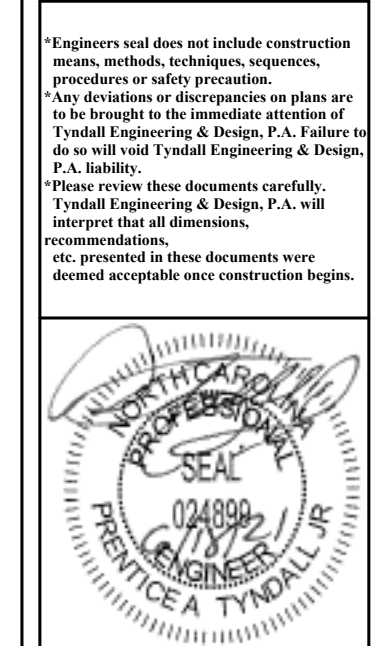
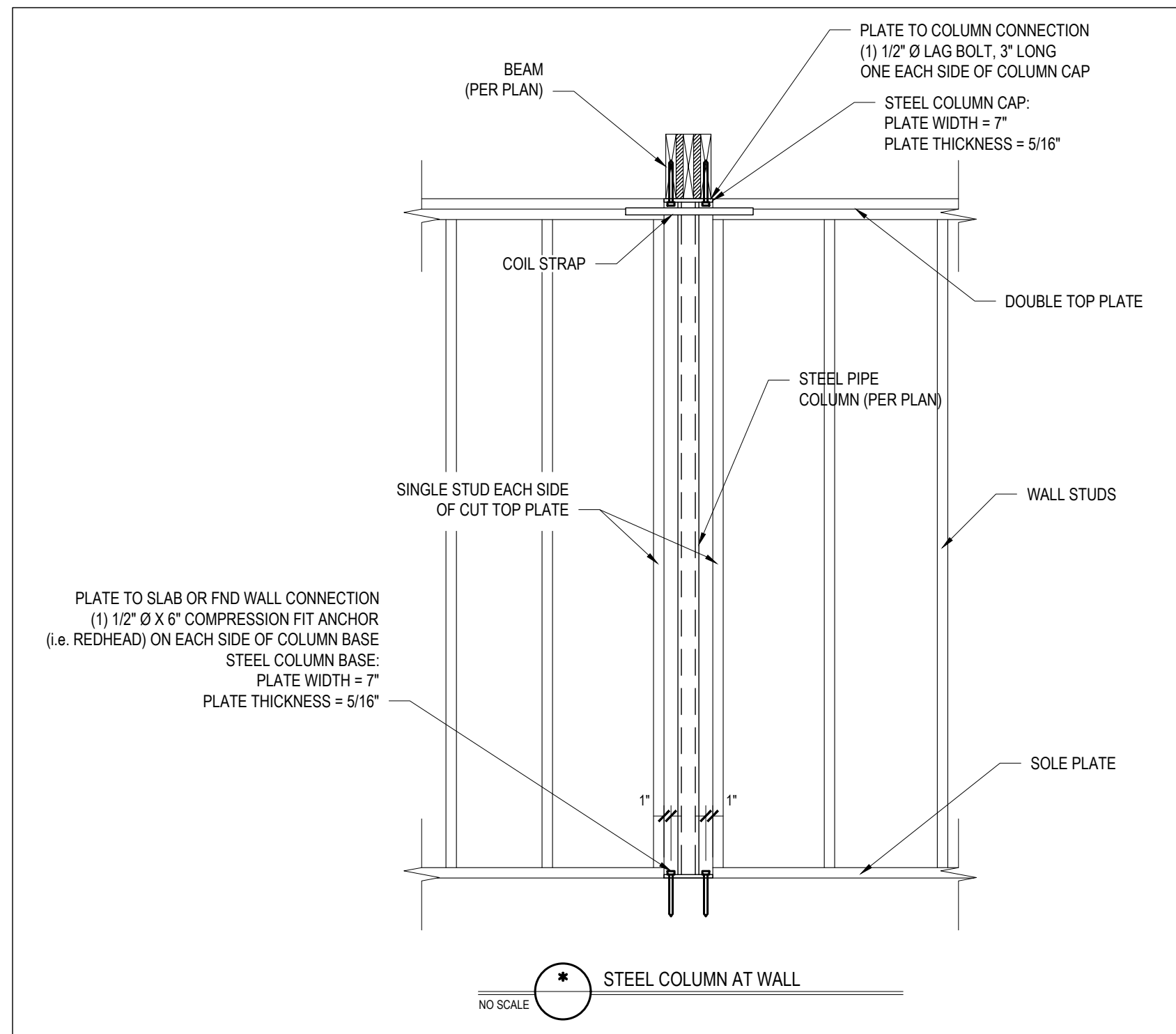
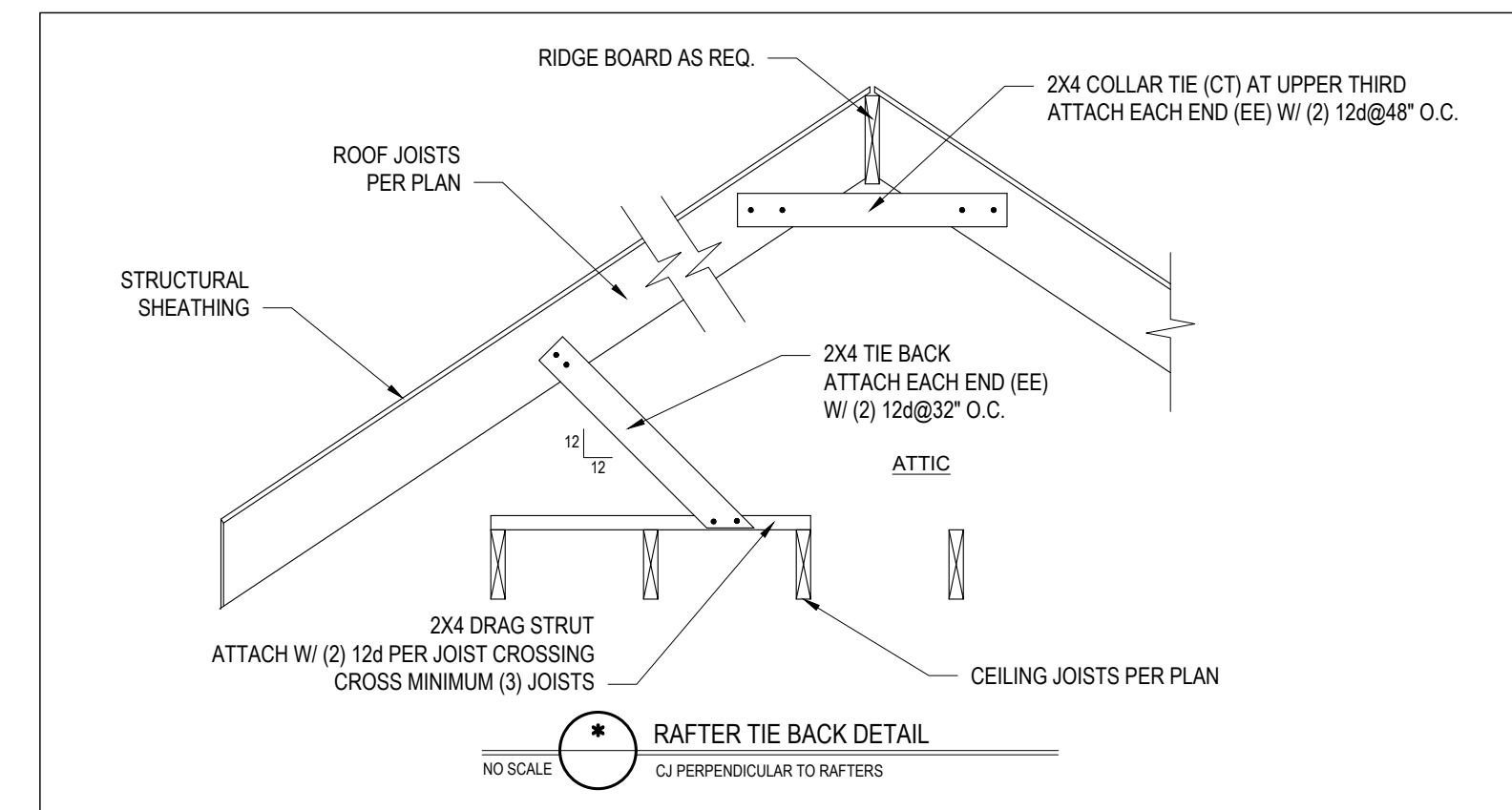
1800 SQ. FT. OF ATTIC / 300 = 6 SQ. FT. INLETS/OUTLETS REQUIRED

- 1) CALCULATION BASED ON VENTILATORS USED AT LEAST 3" ABOVE THE CORNER VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY INLET VENTS.
- 2) CORNER VENTS SHALL HAVE A 1" MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.



HARDWARE CROSS-REFERENCE CHART

SIMPSON STRONG-TIE PRODUCT NUMBER	USP STRUCTURAL CONNECTORS PRODUCT NUMBER
A3Z	MPA1
ABE	PAE
CBSQ	CBSQ
CCO	KCCO
CMSTC16	CMSTC16
CS	RS
H1	RT15
H2.5A	RT7A
H10	RT16
HD08-SD3	UPH8
HDU2-SD2.5	PHD2
HDUS-SD2.5	PHD5
HETA	HTA
HGAM10KTA	HGAM
HHDD14-SD2.5	UPHD14
HTS	HTW
HTT	HTT
HUS	HUS
LTA1	LPTA
LTHA26	HJC26
LTH4	MP4F
LUS	JUS
MAS	FA3
MSTAM	MSTAM
PC	PCM
PHD-SD3	PHD
SSP	RSP76
STC	TR1
STHD	STAD



TYNDALL ENGINEERING & DESIGN, P.A.
100 Blywood Drive • Garner, NC 27530
919.775.2500 • 919.775.4444
www.tyndallengineering.com

Client: **AARON & SUZANNE HISE**
Project: **HISE RESIDENCE**

STANDARD DETAILS

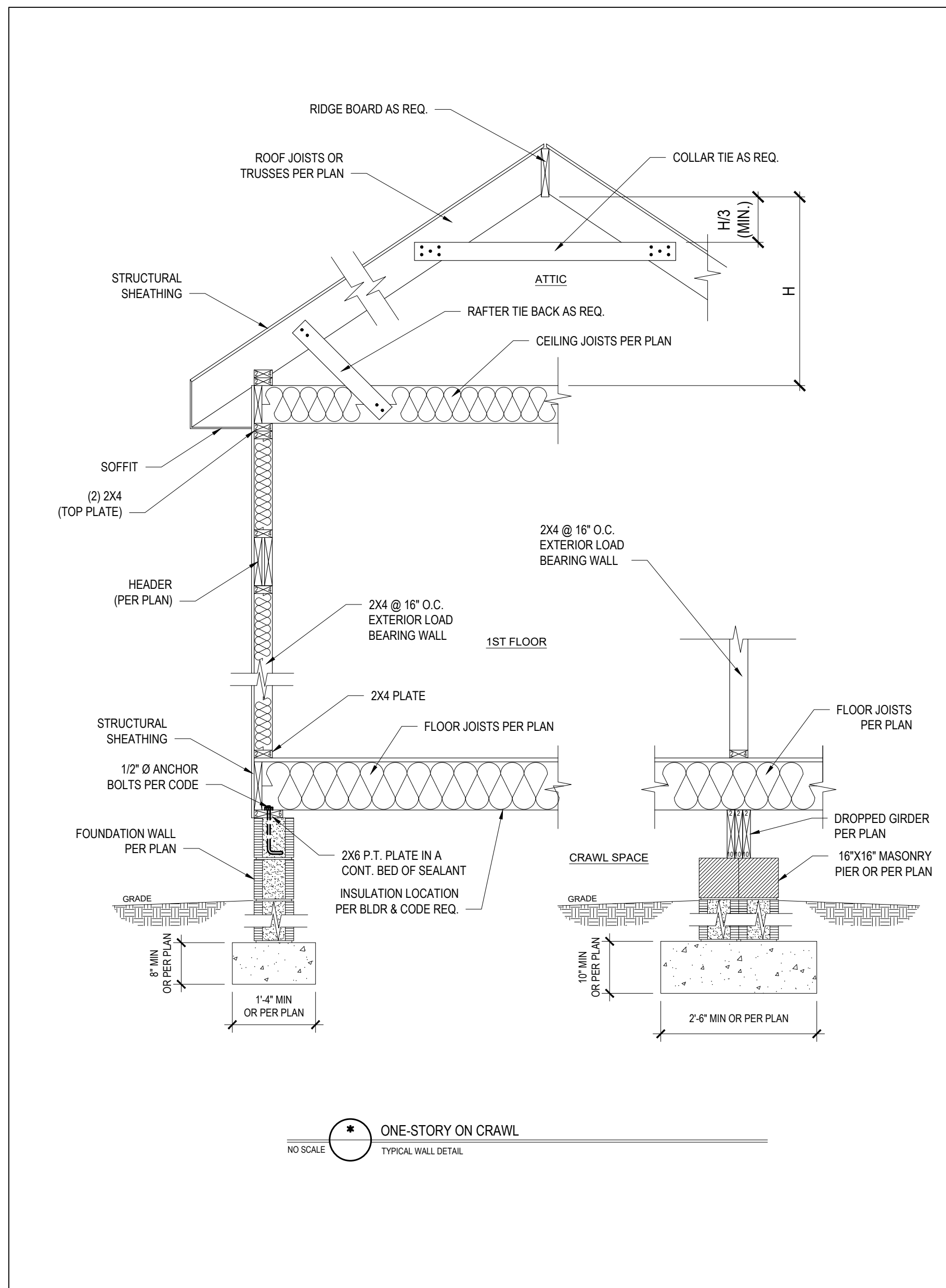
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Date: **6/18/21**
Drawn/Design By: **LJE**
DWG. Checked By: **PTIH**
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REVISIONS

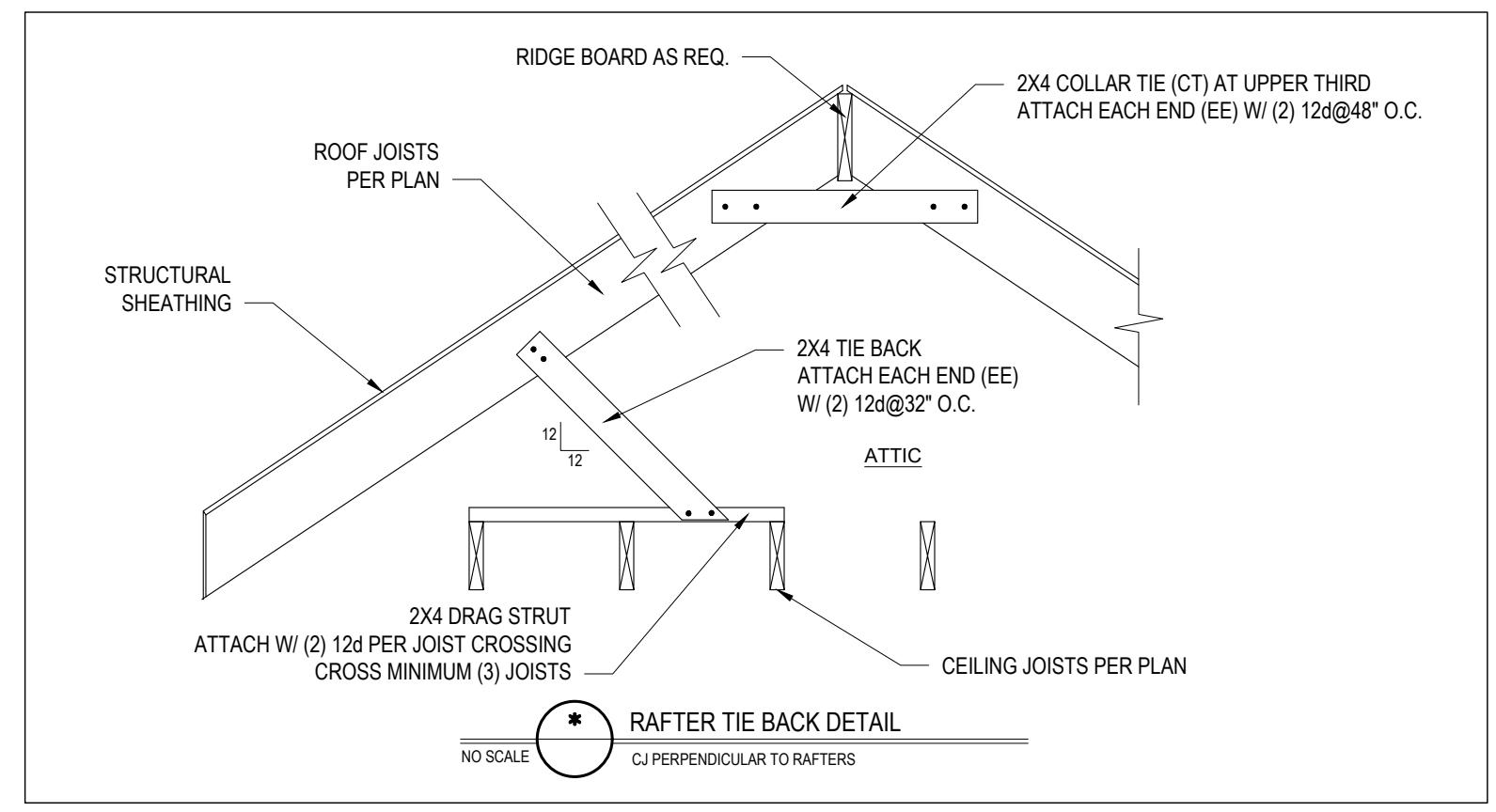
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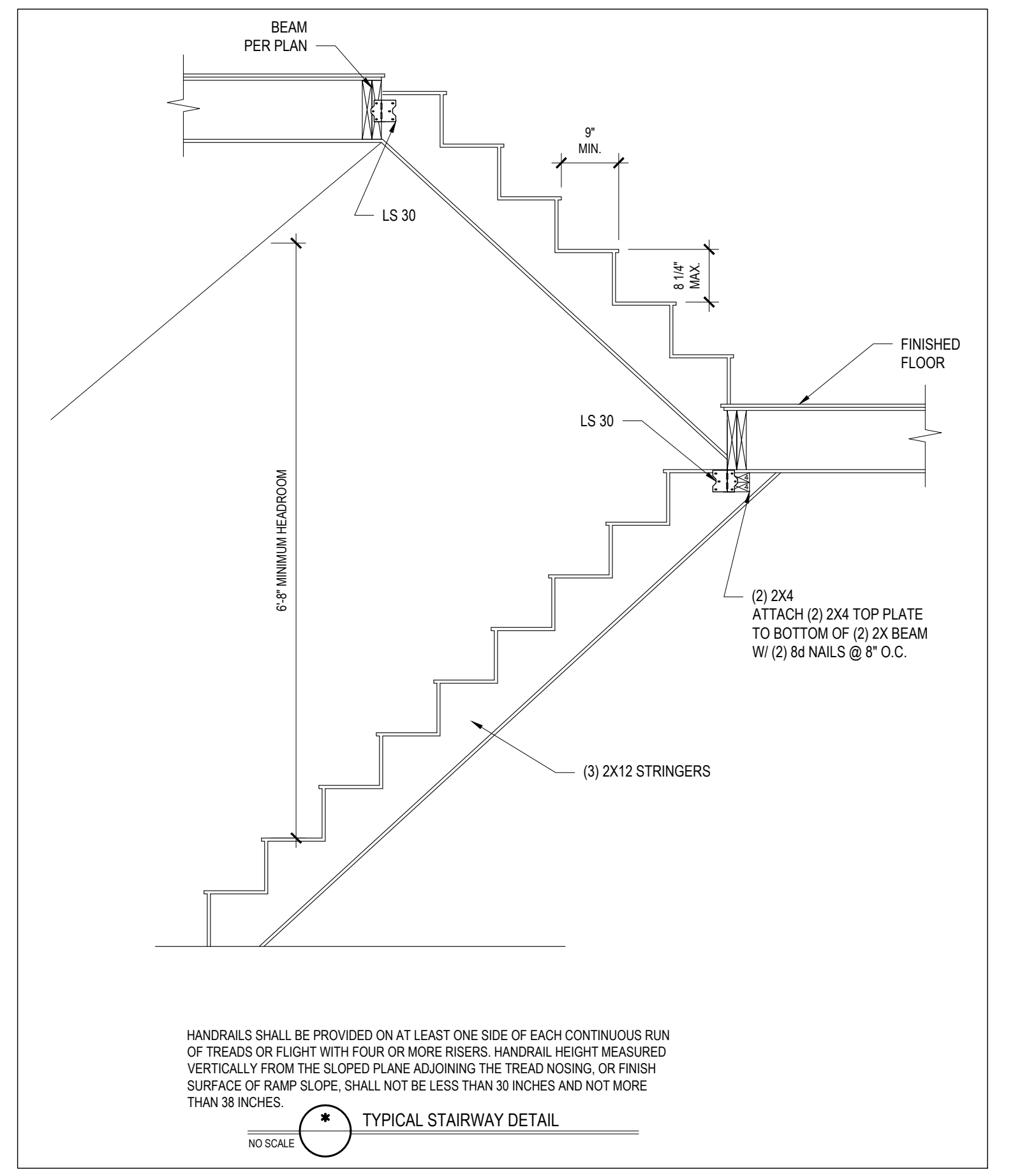
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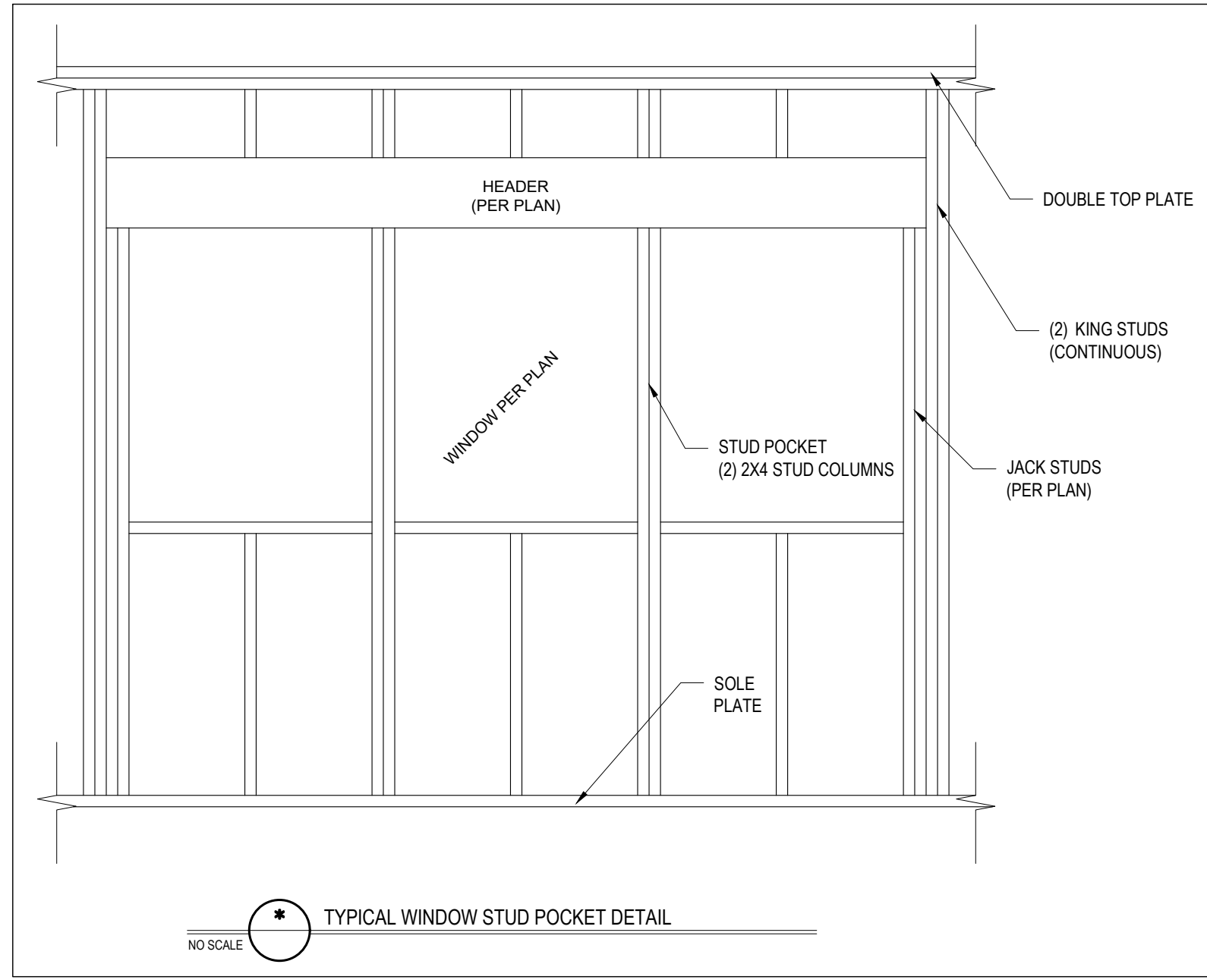
ONE-STORY ON CRAWL
TYPICAL WALL DETAIL
NO SCALE



RAFTER TIE BACK DETAIL
NO SCALE
CJ PERPENDICULAR TO RAFTERS



HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS. HANDRAIL HEIGHT MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL NOT BE LESS THAN 30 INCHES AND NOT MORE THAN 38 INCHES.
TYPICAL STAIRWAY DETAIL
NO SCALE



TYPICAL WINDOW STUD POCKET DETAIL
NO SCALE

*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 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.



TYNDALL
ENGINEERING & DESIGN, P.A.
1101 W. 10th Street, Suite 100
Raleigh, NC 27601
919.775.2500 • 919.775.4444
www.tyndallengineering.com

Client: **AARON & SUZANNE HISE**
Project: **HISE RESIDENCE**

STANDARD DETAILS

Project #: **DRB2101-0064**
Date: **6/18/21**
Drawn/Design By: **IJE**
DWG. Checked By: **PTII**
Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks

Sheet Number
D2
6 of 6

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