

## STRUCTURAL EVALUATION NOTES

STRUCTURAL EVALUATION BY: LICENSE # P-1716

HOWERTON SERVICES, PLLC  
CATHEDRAL BELL ROAD, RALEIGH, NC 27614

- \* ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION REVIEW, MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS.
- \* ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO IMMEDIATE ATTENTION OF THE ENGINEER. FAILURE TO DO SO WILL VOID ENGINEER'S LIABILITY.
- \* DO NOT SCALE THESE DRAWINGS – ENGINEERING APPROVAL EXPIRES FEBRUARY 15, 2026 OR UNTIL NEW CODE CYCLE OCCURS.

## STRUCTURAL GENERAL APPLICATION NOTES

STRUCTURAL GENERAL NOTES APPLY TO ALL STRUCTURAL PLANS

## GENERAL FOUNDATION NOTES:

- THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL CODE, 2018 EDITION.
- SLAB EDGE TO BEAR ON UNDISTURBED EARTH A MIN. OF 12" BELOW ADJACENT FINISH GRADE OR AS OTHERWISE DIRECTED BY LOCAL INSPECTOR.
- FOUNDATION DRAINAGE SHALL BE IN ACCORDANCE WITH SECTION R405 OF THE CODE "FOUNDATION DRAINAGE".
- THE FOUNDATION SHALL BE TREATED IN ACCORDANCE W/SECTION R406 OF THE CODE "FOUNDATION WATERPROOFING AND DAMPROOFING".
- THIS FOUNDATION DESIGN IS VALID FOR 120 MPH WIND ZONES.

## GENERAL FRAMING NOTES:

- THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL CODE, 2018 EDITION.
- GLAZING AREAS SHOWN ON THESE DESIGN DRAWINGS DO NOT EXCEED 1500' OF THE GROSS AREA OF THE EXTERIOR WALLS. THIS STRUCTURE MEETS THE REQUIREMENTS OF N1101.2.1, RESIDENTIAL BUILDING, TYPE A-1.
- WALL CLADDING IS DESIGNED FOR A 24.1 #/SF OR GREATER POSITIVE/NEGATIVE PRESSURE.
- ALL WALLS, FLOORS AND CEILINGS SHALL BE INSULATED IN ACCORDANCE WITH CODE SUMMARY.
- DESIGN CRITERIA:
 

	DEAD	LIVE
PRIMARY FLOOR	10 PSF	40 PSF
SECONDARY FLOOR	10 PSF	40 PSF
SLEEPING AREAS	10 PSF	30 PSF
ATTIC	10 PSF	20 PSF
ROOF	10 PSF	20 PSF

 DEFLECTION LIMITS:  
 FLOOR L/360 (LIVE LOAD ONLY)  
 ROOF L/240
- ALL HEADERS IN LOAD BEARING WALLS SHALL BE DOUBLE 2X10.

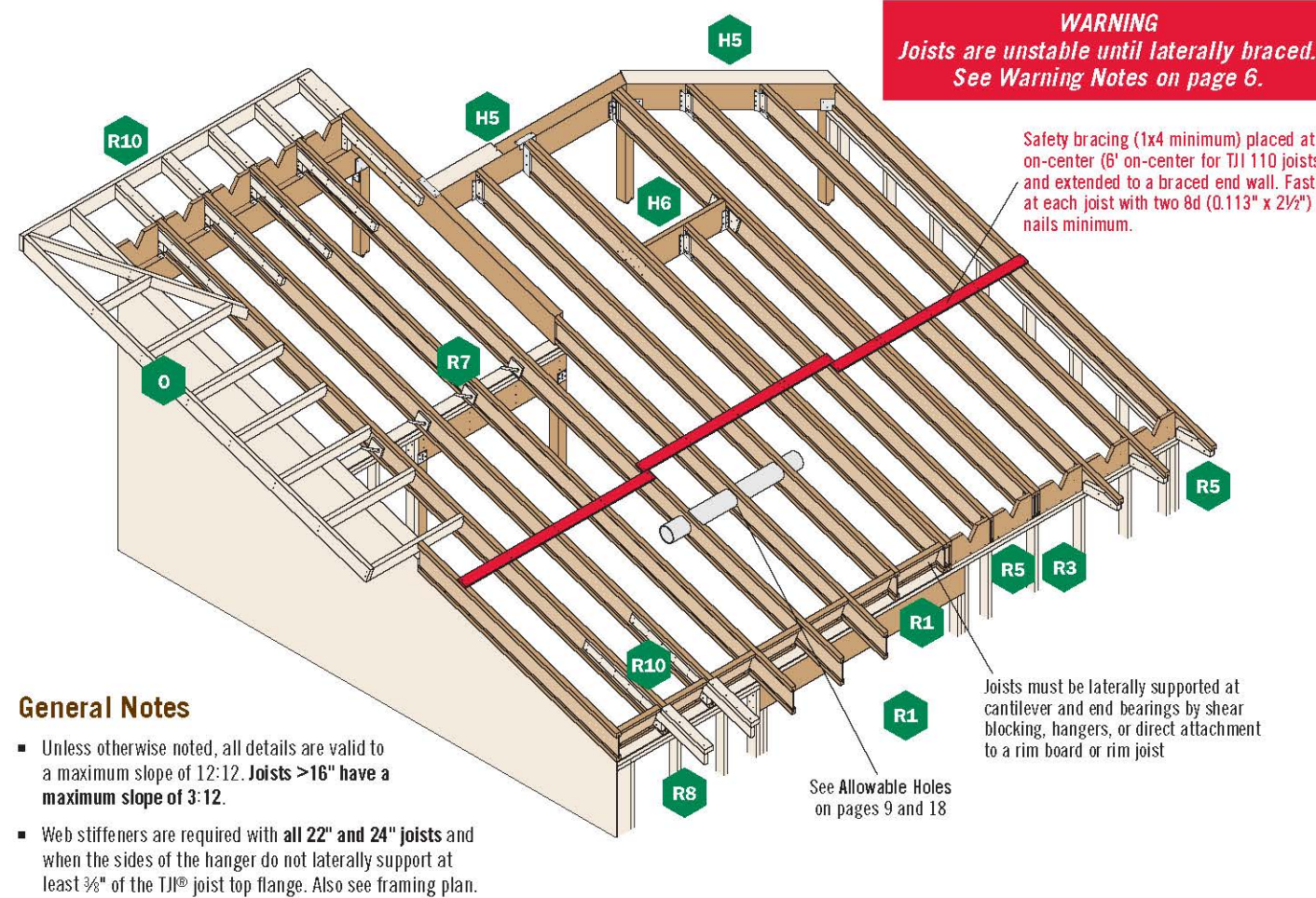
## GENERAL ROOF NOTES:

- THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL CODE, 2018 EDITION.
- ROOF CLADDING DESIGN VALUES (POSITIVE/NEGATIVE) SHALL BE AS FOLLOWS:  
 45.5 #/SF FOR ROOF PITCHES FROM 0/12 TO 2.25/12  
 34.5 #/SF FOR ROOF PITCHES FROM 2.25/12 TO 7/12  
 21 #/SF FOR ROOF PITCHES FROM 7/12 TO 12/12
- ALL ROOFING ELEMENTS SHALL MEET THE REQUIREMENTS OF CHAPTER 8 OF THE CODE.
- ALL LUMBER SHALL BE #2 SPF OR BETTER. RAFTERS MAY BE FINGER JOINTED PER NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION, AND MUST HAVE THE STRUCTURAL CERTIFICATION STAMPED ON THE MEMBER.
- RAFTER SIZES, SPANS AND SPACING SHALL NOT EXCEED THE FOLLOWING:
 

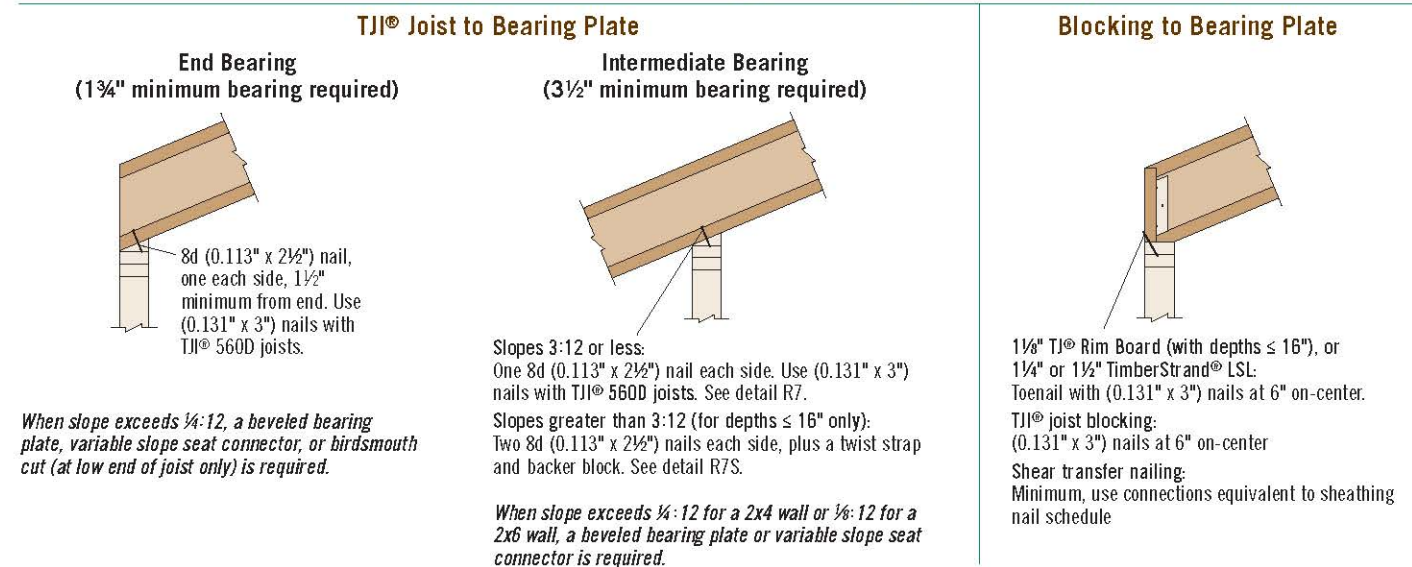
SIZE	2X6	2X8	2X10
SPACING 12" O.C.	14'-9"	19'-6"	
SPACING 16" O.C.	13'-5"	17'-9"	22'-3"
- ALL RAFTERS TO BE 2X8 @ 16" O.C. #2 SPF UNLESS NOTED OTHERWISE.
- ATTACH VAULTED RAFTERS WITH HURRICANE CLIP SIMPSON "H-5" OR EQUIVALENT. PROVIDE DOUBLE OPPOSING RAFTERS WHERE NOTED.
- THESE DESIGN DRAWINGS WERE PRODUCED BY HOWERTON SERVICES PLLC, ASSUMES NO LIABILITY FOR THE CORRECTNESS OF ARCHITECTURAL FEATURES, DIMENSIONS OR FIXTURES.
- CONTRACTOR IS RESPONSIBLE FOR REVIEWING DRAWINGS FOR CONSTRUCTABILITY PRIOR TO BEGINNING CONSTRUCTION.
- DO NOT SCALE THESE DRAWINGS. IF DISCREPANCIES ARE NOTED, CONTACT THE ENGINEER.
- DESIGN BASIS PROVIDED BY S&S CONTRACTING, AND THEY ARE RESPONSIBLE FOR ALL ARCHITECTURAL FEATURES, DIMENSIONS, COMPLIANCE WITH ALL ACCESS/EGRESS REQUIREMENTS, FIRE CODE AND LIFE SAFETY DESIGN ISSUES.

ALL JOIST DEPTHS

## ROOF FRAMING



## T1P Joist Nailing Requirements at Bearing (Maximum slope for 18"-24" joists is 3:12)

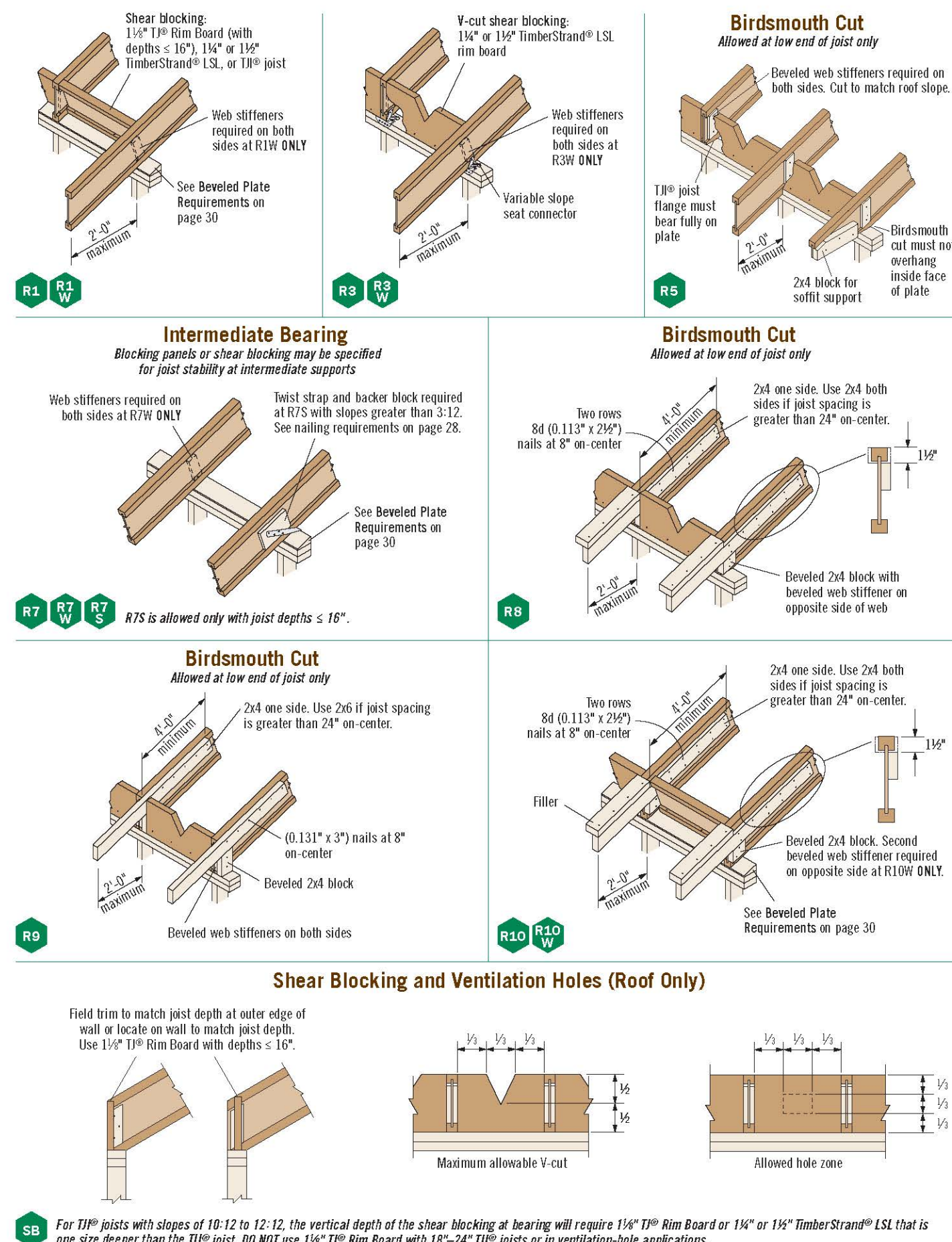


## These Conditions Are NOT Permitted:



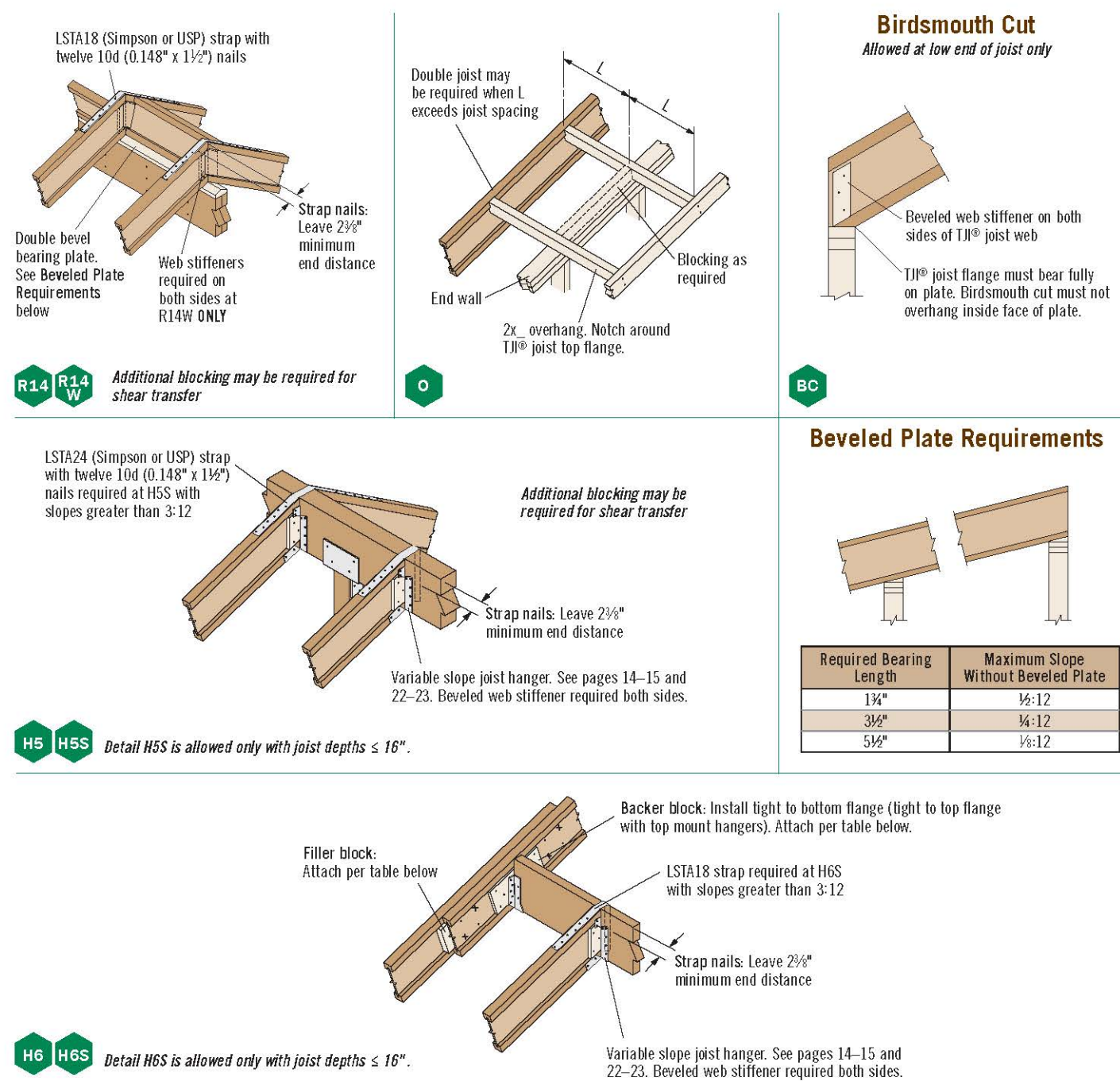
## ROOF DETAILS

ALL JOIST DEPTHS



## ROOF DETAILS

ALL JOIST DEPTHS



## Filler and Backer Block Sizes

T1P	110	210	230 or 300	360	500	560 or 5800	5600
Depth	9 1/2"-11 3/4"	14"-18"	9 1/2"-11 3/4"	14"-18"	11 3/4"-14"	18"-20"	22"-24"
Filler Block® (Detail H6)	2x6	2x8	2x6 + 1/4" sheathing	2x8 + 1/4" sheathing	2x6 + 1/4" sheathing	Two 2x6	Two 2x12
Backer Block® (Detail H6)	1/4" or 1/2"	1/2" or 3/4"	3/4" or 1" not	3/4" or 1" not	3/4" or 1" not	Two 2x6	Two 2x12
Nail Size	Backer	(0.131" x 3")					
Nail Quantity	Backer	15	32	15	15	50	50

- (1) If necessary, increase filler and backer block height for face mount hangers and maintain 1/4" gap at top of joist. See detail W on page 27. Filler and backer block dimensions should accommodate required nailing without splitting. The suggested minimum length is 24" for filler and 32" for backer blocks.
- (2) Clinch nails when possible.
- (3) For filler block connections, drive nails from alternating sides.

Also see nailing requirements on page 28

ROBERT AND JILL GRIFFIS  
CUSTOM PLAN - HARNETT COUNTY RESIDENCE

MATTHEWS ROAD AND CHESLEY DRIVE, HARNETT COUNTY, N.C.

DESCRIPTION:  
STRUCTURAL  
COVER SHEET

REVISION:

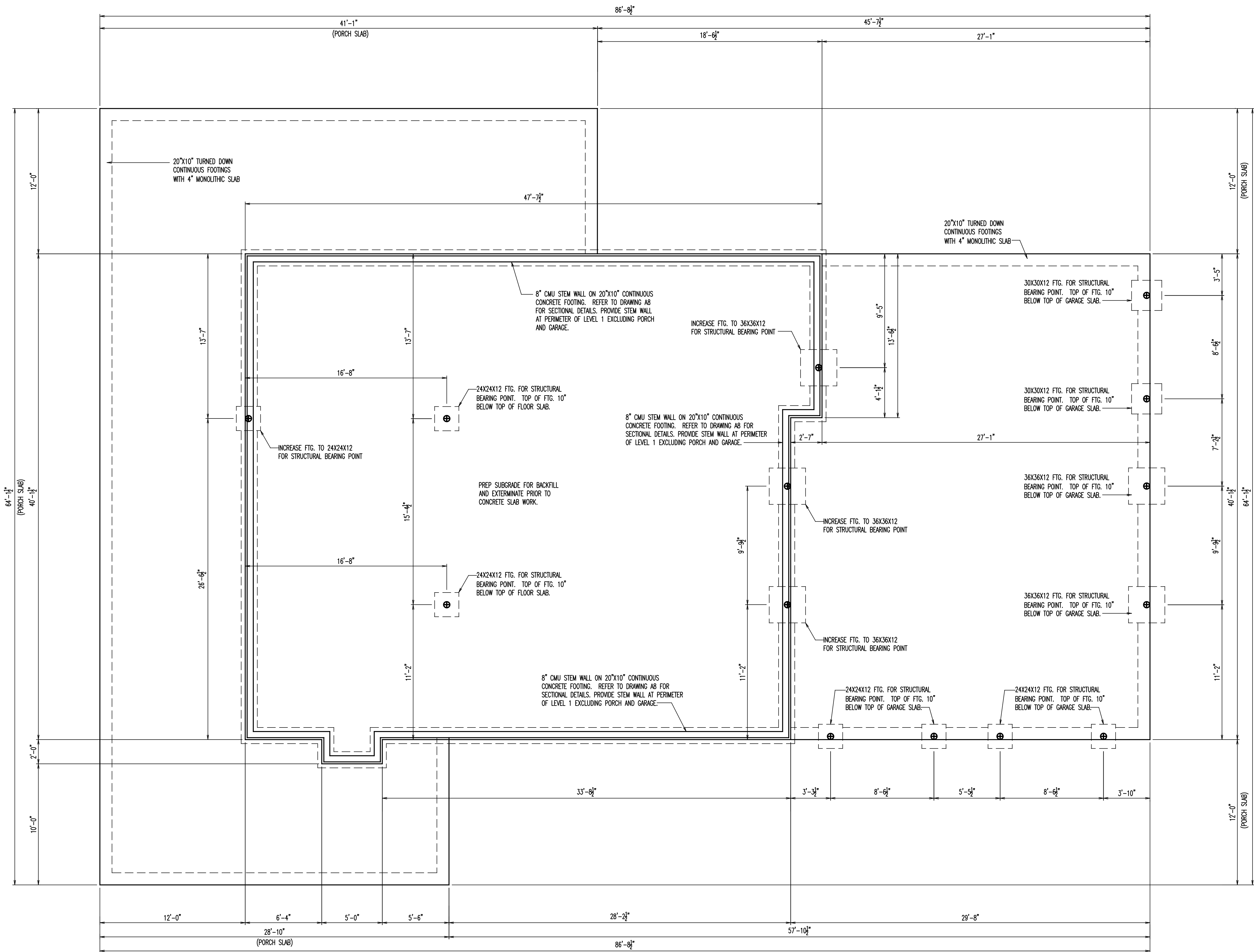
DATE:  
FEB/06/2025

DRAWING:

S1

STRUCTURAL EVALUATION BY:  
HOWERTON SERVICES, PLLC  
LICENSE # P-1716  
3515 CATHEDRAL BELL ROAD, RALEIGH, NC 27614BUILDING DESIGN BY:  
S&S CONTRACTING  
6349 RIVER ROAD, FLOUQUAY, NC 27536





**S2** FOOTING PLAN  
**01** SCALE: 1/4"=1'-0"



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BUILDING DESIGN BY:  
**S&S CONTRACTING**  
6349 RIVER ROAD, FLOUQUAY, NC 27536

**ROBERT AND JILL GRIFFIS**  
**CUSTOM PLAN - HARNETT COUNTY RESIDENCE**  
MATTHEWS ROAD AND CHESLEY DRIVE, HARNETT COUNTY, N.C.

DESCRIPTION:  
FOOTING PLAN

REVISION:

DATE:  
FEB/06/2025

DRAWING:

**S2**



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**S&S CONTRACTING**  
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**ROBERT AND JILL GRIFFIS**  
**CUSTOM PLAN - HARNETT COUNTY RESIDENCE**  
MATTHEWS ROAD AND CHESLEY DRIVE, HARNETT COUNTY, N.C.

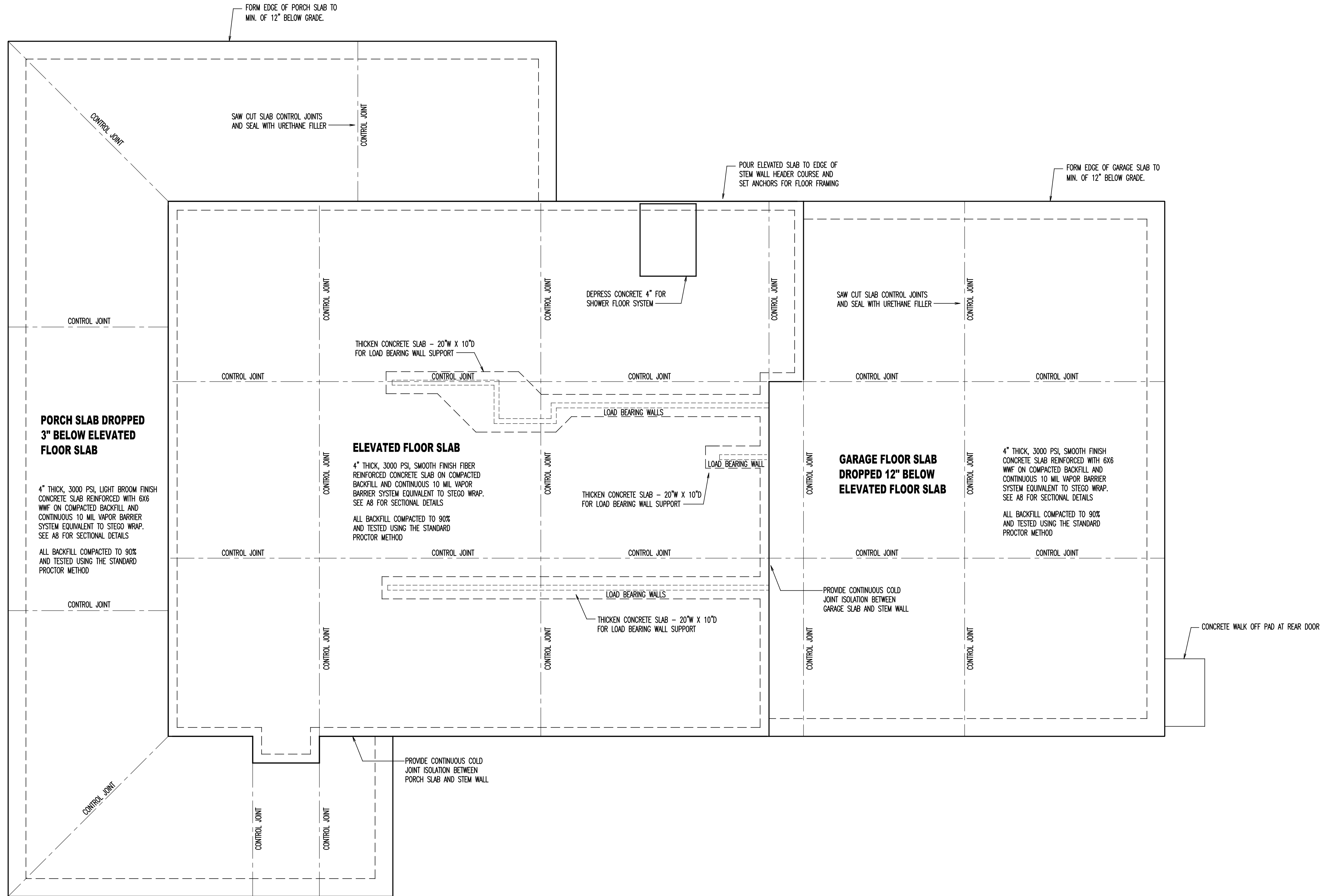
DESCRIPTION:  
SLAB PLAN

REVISION:

DATE:  
FEB/06/2025

DRAWING:

**S3**



**S3** **SLAB PLAN**  
**01** **SCALE: 1/4"=1'-0"**



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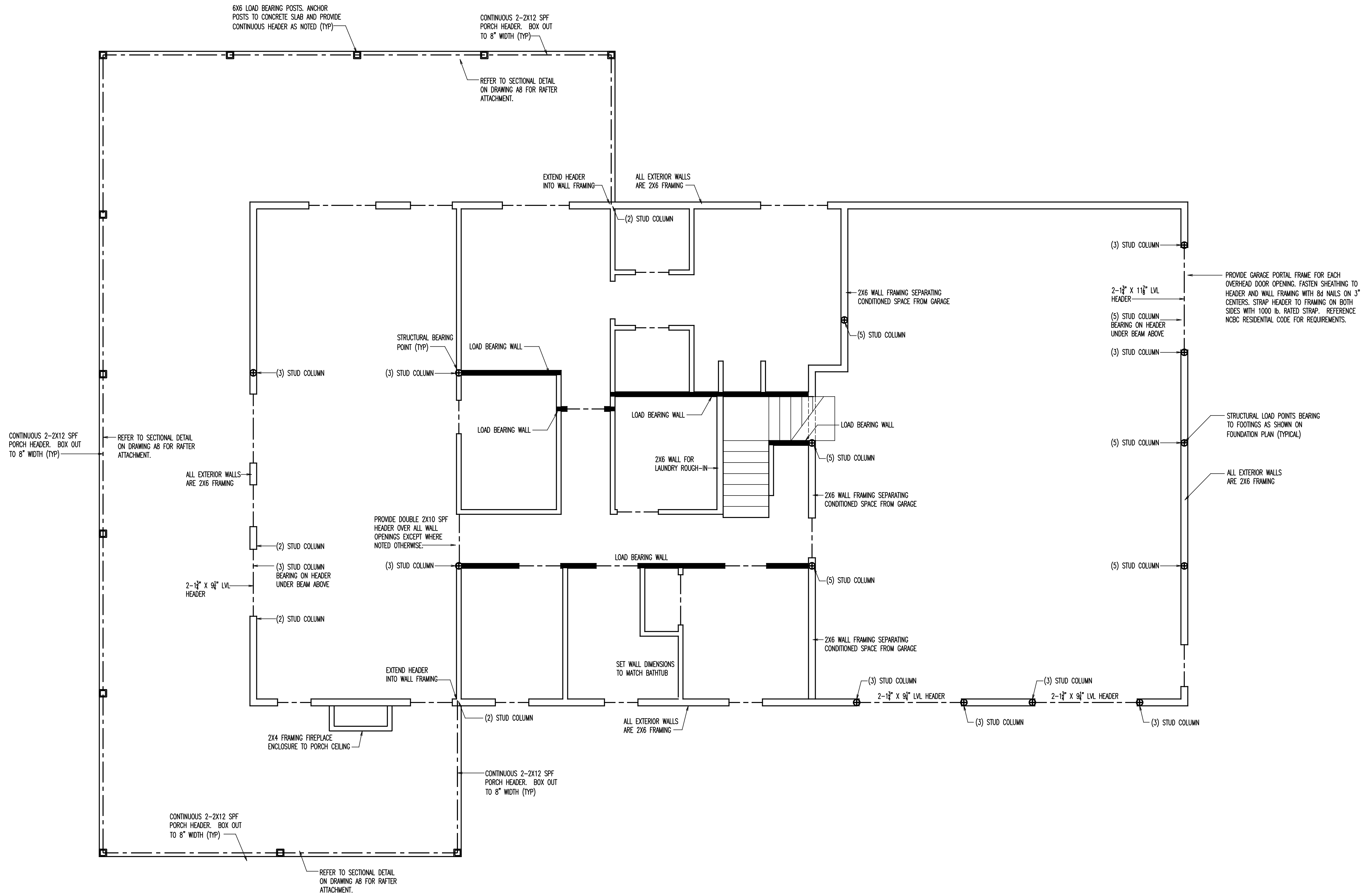
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LEVEL 1 FRAMING  
PLAN

REVISION:

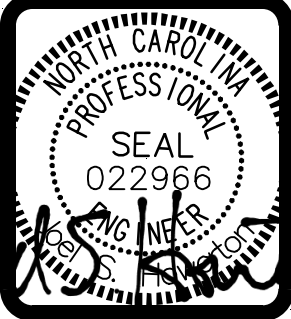
DATE:  
FEB/06/2025

DRAWING:

**S4**



**S4** LEVEL 1 FRAMING PLAN  
**01** SCALE: 1/4"=1'-0"



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BUILDING DESIGN BY:  
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**CUSTOM PLAN - HARNETT COUNTY RESIDENCE**  
MATTHEWS ROAD AND CHESLEY DRIVE, HARNETT COUNTY, N.C.

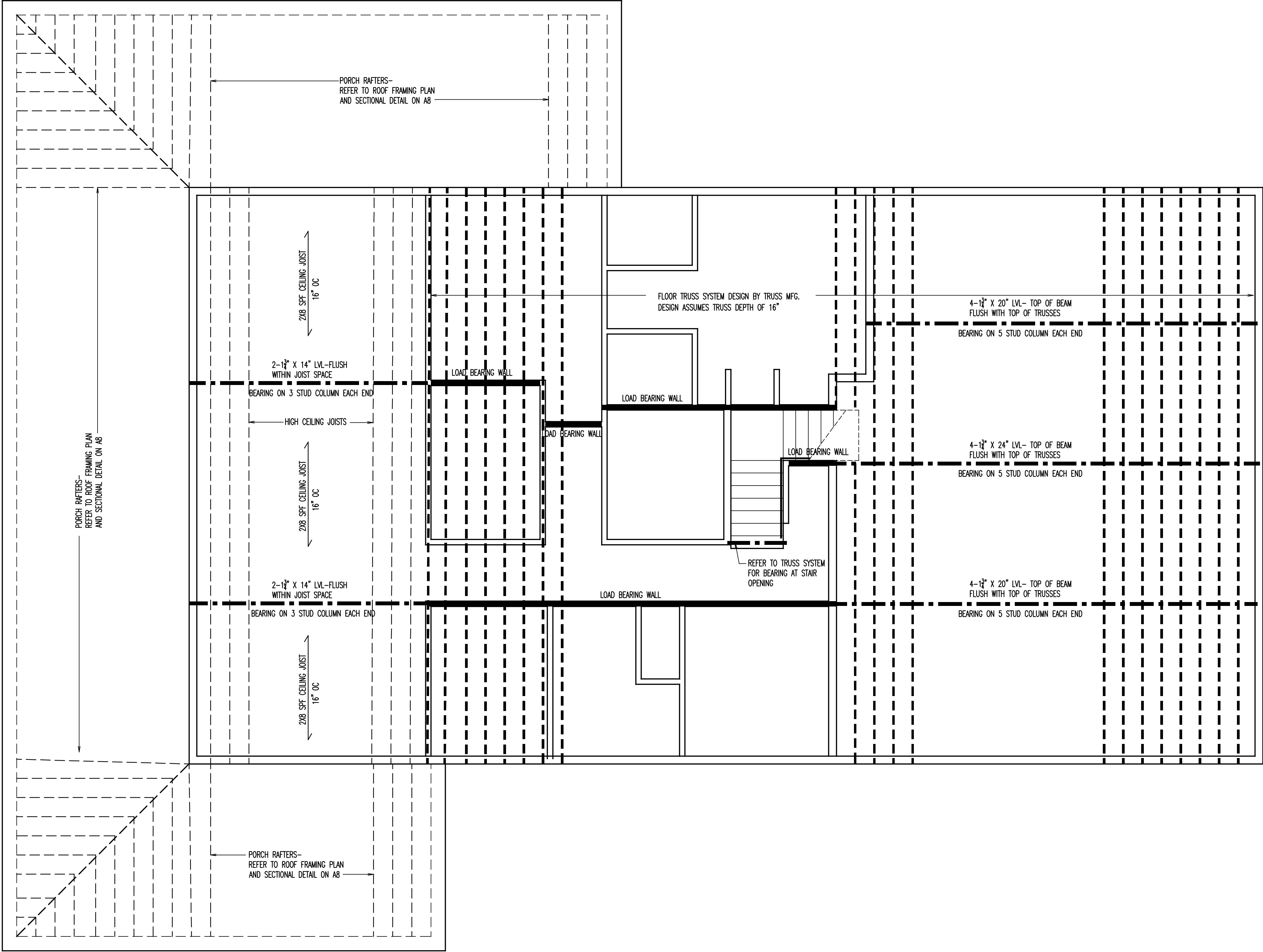
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LEVEL 1 CEILING  
FRAMING PLAN

REVISION:

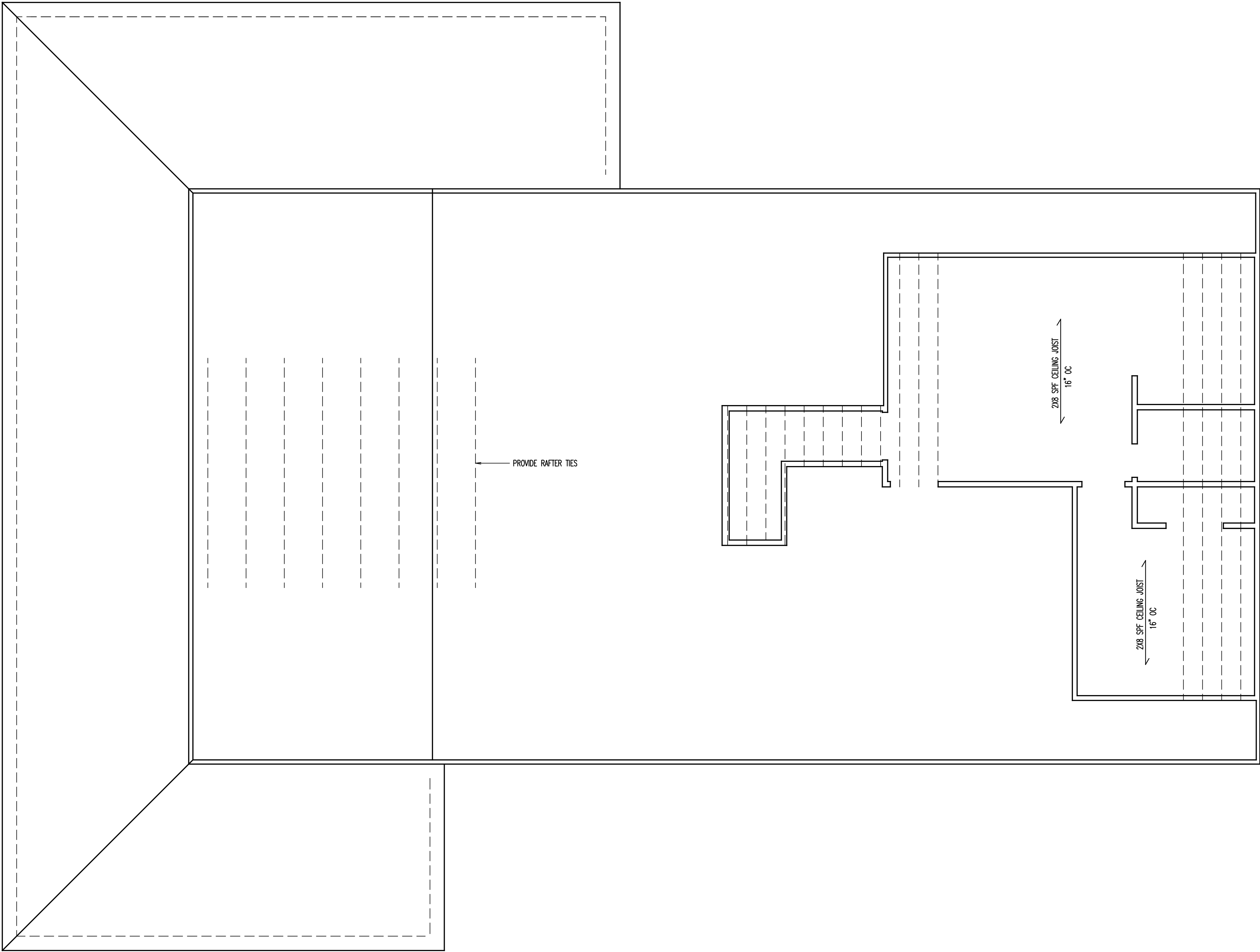
DATE:  
FEB/06/2025

DRAWING:

**S5**



**S5** **LEVEL 1 CEILING FRAMING PLAN**  
**01** SCALE: 1/4"=1'-0"



**S6** LEVEL 2 CEILING FRAMING PLAN  
**01** SCALE: 1/4"=1'-0"



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**CUSTOM PLAN - HARNETT COUNTY RESIDENCE**  
MATTHEWS ROAD AND CHESLEY DRIVE, HARNETT COUNTY N.C.

DESCRIPTION:  
LEVEL 2 CEILING  
FRAMING PLAN

REVISION:

DATE:  
FEB/06/2025

DRAWING:

**S6**



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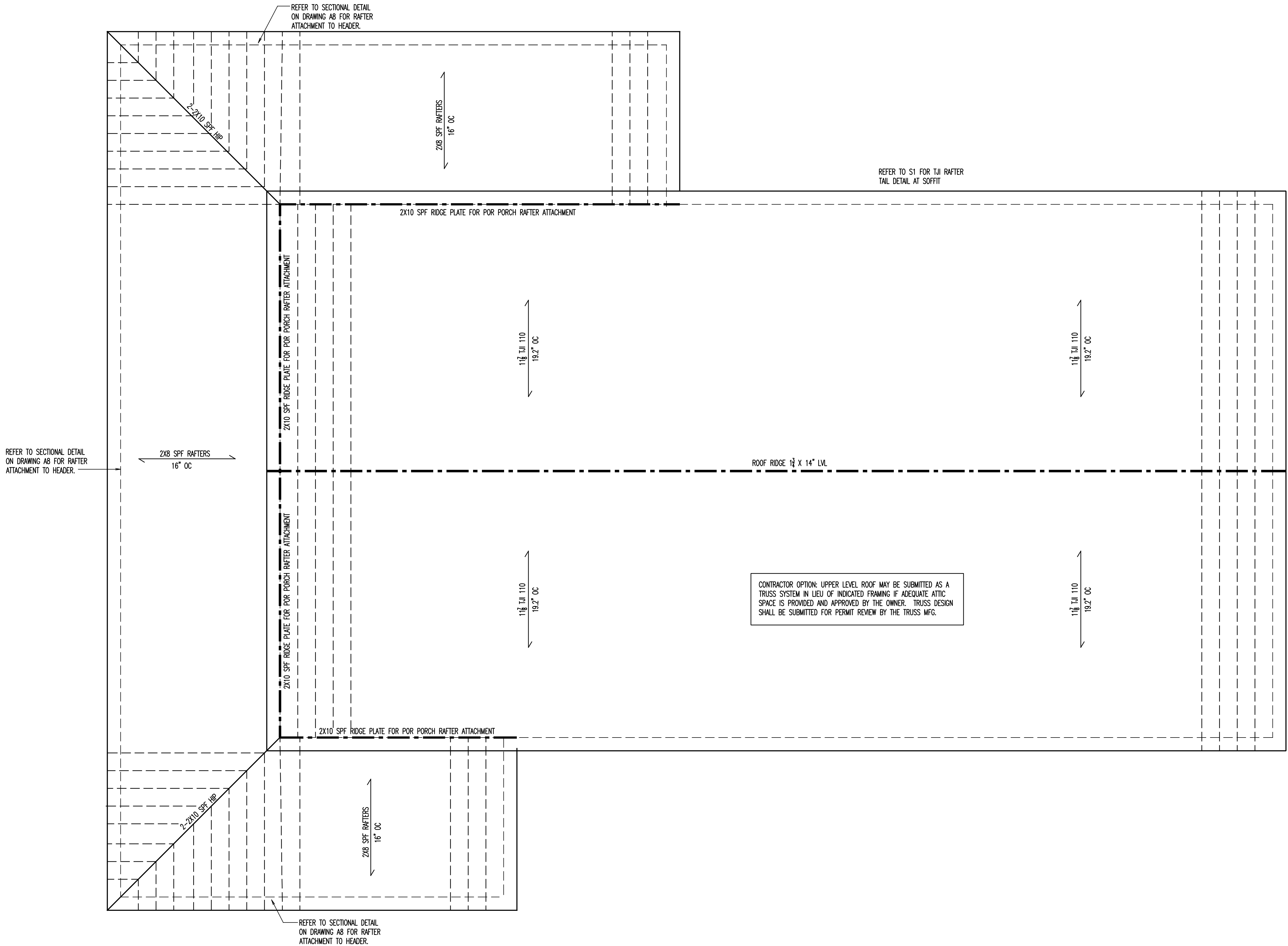
DESCRIPTION:  
ROOF FRAMING  
PLAN

REVISION:

DATE:  
FEB/06/2025

DRAWING:

**S7**



**S7** **ROOF FRAMING PLAN**  
**01** SCALE: 1/4"=1'-0"