

STRUCTURAL EVALUATION BY:
HOWERTON SERVICES, PLLC
 LICENSE # P-1716
 3513 CATHEDRAL BELL ROAD, RALEIGH, N.C. 27614

BUILDING DESIGN BY:
S&S CONTRACTING
 6349 RIVER ROAD, FUQUAY, NC 27526

SHOP PLANS FOR:
T.L. and ABBIE BRADLEY
 PONCHATRAN STREET, HARNETT COUNTY, N.C.

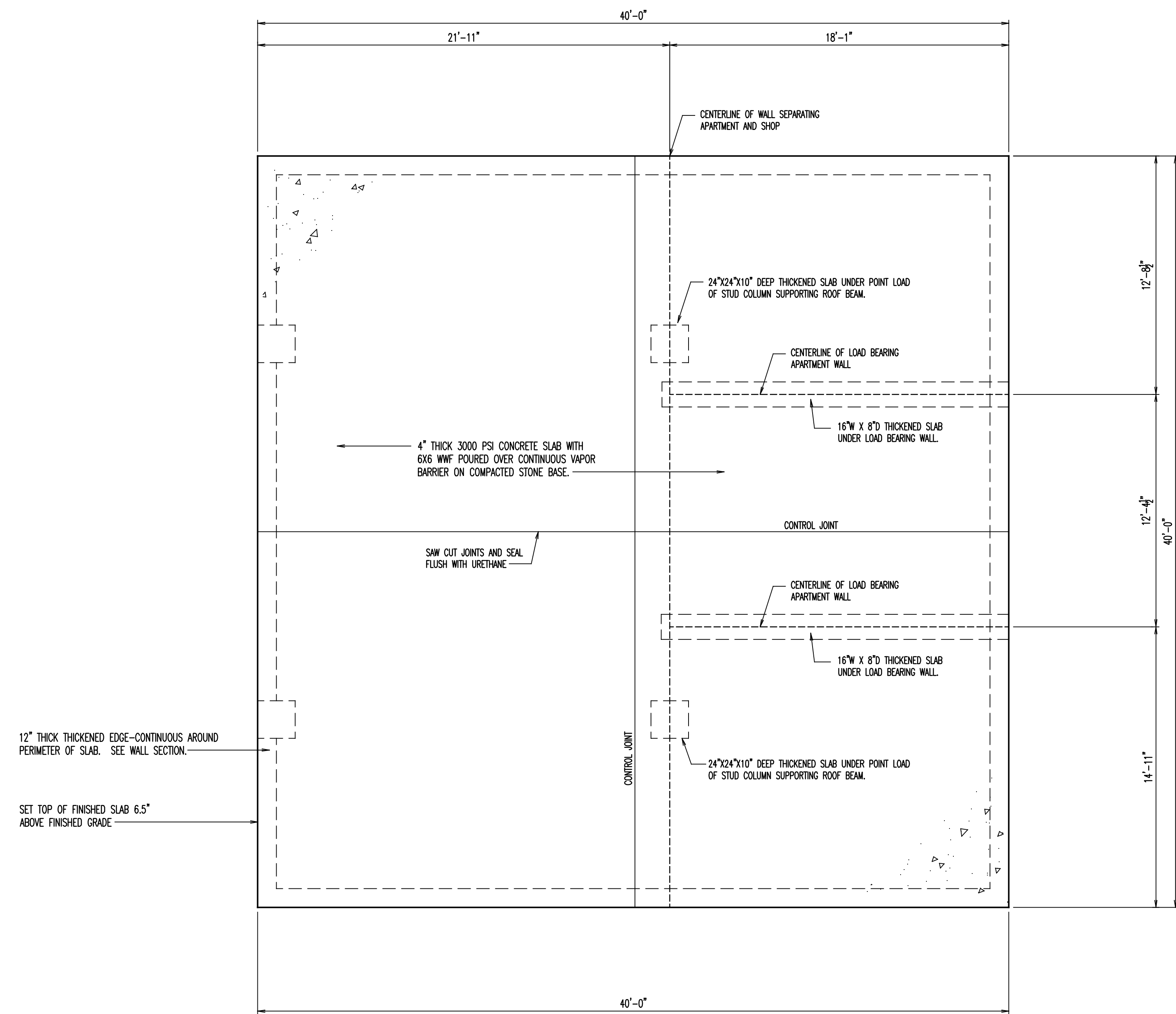
DESCRIPTION:
 FOUNDATION PLAN

REVISION:

DATE:
 JUNE 2021

DRAWING:

S1-S



GENERAL FOUNDATION NOTES:

1. THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL CODE, 2018 EDITION.
2. EXTERIOR WALL FOOTING TO BE 24" X 8" 3000 PSI STRUCTURAL CONCRETE UNLESS OTHERWISE NOTED. CONCRETE TO BE PREPARED AND PLACED IN ACCORDANCE WITH ACI 318. FOR FOUNDATION WALL HEIGHT, THICKNESS AND BACKFILL REQUIREMENTS, REFER TO STATE AND LOCAL BUILDING CODES. NOTE: ASSUMED SOIL BEARING CAPACITY=2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOIL ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.
3. FOOTINGS TO BEAR ON UNDISTURBED EARTH A MIN. OF 12" BELOW ADJACENT FINISH GRADE OR AS OTHERWISE DIRECTED BY LOCAL INSPECTOR.
4. FOUNDATION DRAINAGE SHALL BE IN ACCORDANCE WITH SECTION R405 OF THE CODE "FOUNDATION DRAINAGE".
5. THE FOUNDATION SHALL BE TREATED IN ACCORDANCE W/SECTION R406 OF THE CODE "FOUNDATION WATERPROOFING AND DAMPPROOFING".
6. THIS FOUNDATION DESIGN IS VALID FOR 100 MPH WIND ZONES ONLY.
7. FOUNDATION WALLS SHALL BE 12" IN WIDTH WHERE SUPPORTING FRAMING WITH BRICK VENEER.

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- * 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 06/28/2022 OR UNTIL NEW CODE CYCLE.

S1-S FOUNDATION PLAN
 01 1/4"=1'-0"



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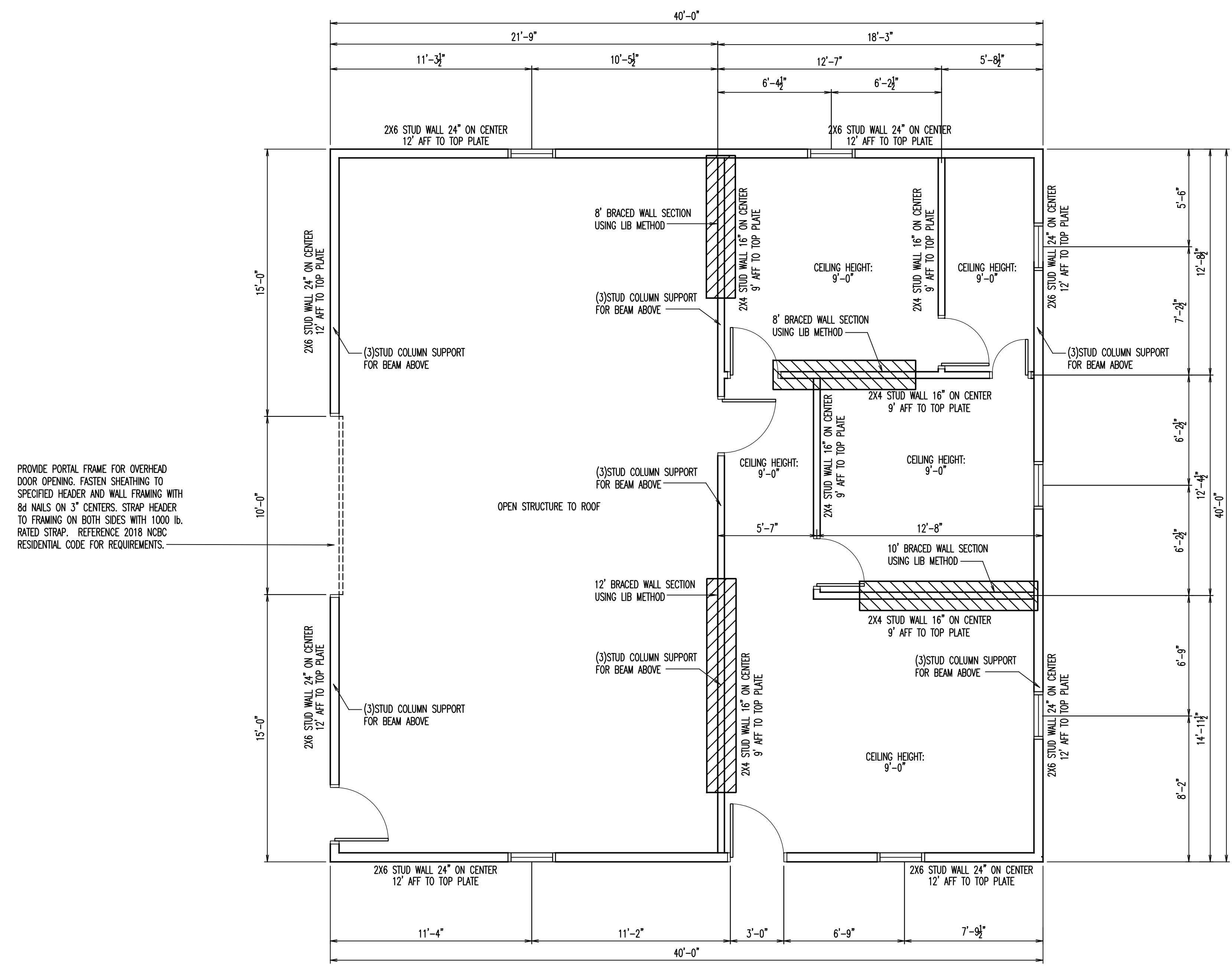
DESCRIPTION:
 WALL FRAMING and BRACING PLAN

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S2-S



PROVIDE PORTAL FRAME FOR OVERHEAD DOOR OPENING. FASTEN SHEATHING TO SPECIFIED HEADER AND WALL FRAMING WITH 8d NAILS ON 3\"/>

GENERAL FRAMING NOTES:

- THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL CODE, 2018 EDITION.
- GLAZING AREAS SHOWN ON THESE DESIGN DRAWINGS DO NOT EXCEED 15% 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.
- ALL EXTERIOR WALLS ARE 2X6 @ 24\"/>

BRACED WALL NOTES:

- BRACED WALLS ARE REQUIRED PER SECTION R602.10.1 2018 NCBC RESIDENTIAL CODE.
 - THE EXTERIOR WALL STRUCTURE SHALL BE CONTINUOUSLY SHEATHED, FULL HEIGHT WITH MIN. THICKNESS 7/16\"/>
- LIB METHOD:**
 INSTALL 1X4 WOOD OR CONTINUOUS METAL STRAPPING AT 45 DEGREES TO 60 DEGREES FROM TOP PLATE TO BOTTOM PLATE ACROSS STUDS WITH MAXIMUM STUD SPACING OF 16\"/>

GB METHOD:
 MINIMUM 1/2\"/>

 - SPECIAL BRACING DETAILS ARE ILLUSTRATED IN THE CODE AND ALLOWED WHERE WALLS DO NOT MEET THE MINIMUM REQUIREMENTS FOR SUPPORT.

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S2-S
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WALL FRAMING and BRACING PLAN

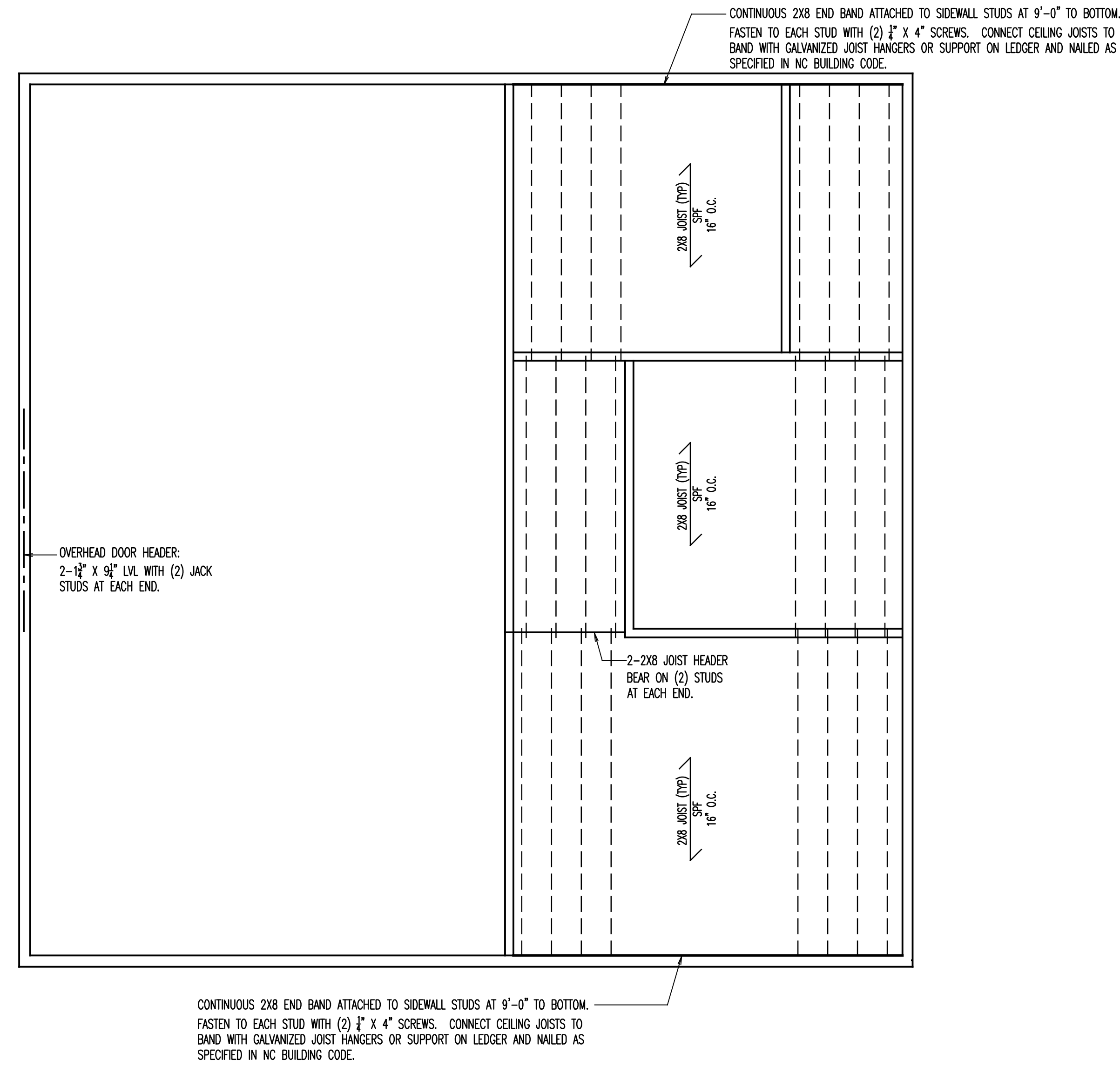
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SLEEPING AREAS	10 PSF	30 PSF
ATTIC	10 PSF	20 PSF
ROOF	10 PSF	20 PSF

DEFLECTION LIMITS:
 FLOOR L/360(LIVE LOAD ONLY)
 ROOF L/240
- ALL HEADERS IN LOAD BEARING WALLS SHALL BE DOUBLE 2X10.
- ALL EXTERIOR WALLS ARE 2X6 @ 24" O.C. UNLESS OTHERWISE NOTED.
- ALL INTERIOR WALLS ARE 2X4 @ 16" O.C. UNLESS OTHERWISE NOTED.
- ALL FRAMING MATERIAL TO BE SPF UNLESS NOTED OTHERWISE OR WHERE REQUIRED TO BE PRESSURE TREATED.

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S3-S CEILING FRAMING PLAN
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 SHOP FLOOR PLAN

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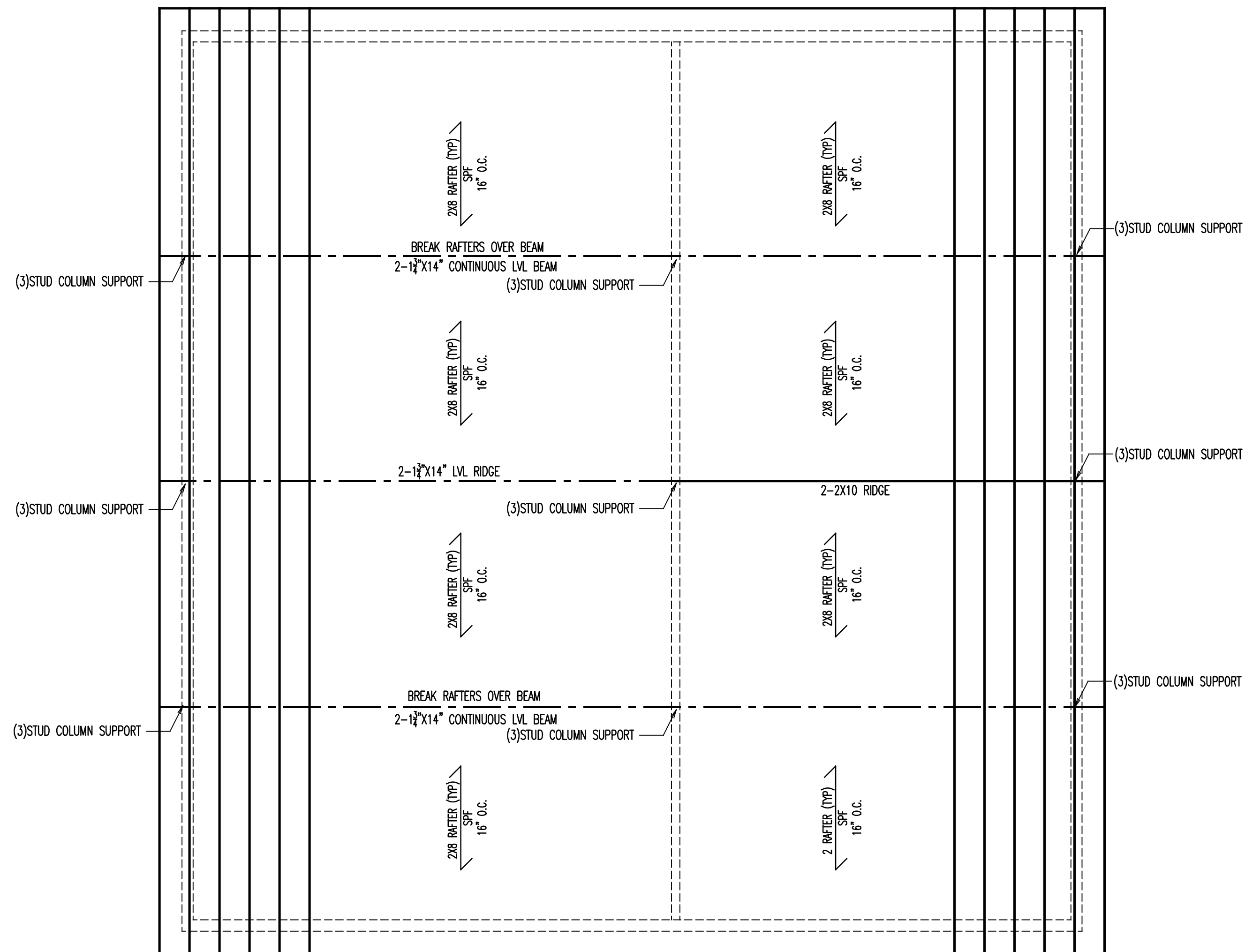
DESCRIPTION:
 ROOF FRAMING PLAN

REVISION:

DATE:
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DRAWING:

S4-S



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"	22'-3"
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.
- 2x8 RAFTERS @ CATHEDRAL OR VAULTED CEILINGS TO BE FURRED DOWN 2" OR USE 2x10 RAFTERS FOR INSULATION PER CODE.
- PROVIDE 2x4 COLLAR TIES EVERY SECOND RAFTER (TYPICAL)
- PROVIDE 2x4 RAFTER TIES @ 32" O.C. (TYPICAL)
- SHINGLES ASSUMED TO BE 240 LB. FIBERGLASS, OR EQUAL. MINIMUM ROOF PITCH TO BE AS INDICATED ON ARCHITECTURAL PLAN SHEETS.
- PROVIDE DOUBLE LAYER OF ROOF FELT WHERE ROOF PITCH IS LESS THAN 4 /12.
- THESE DESIGN DRAWINGS WERE PRODUCED BY HOWERTON CONSULTING ENGINEERING, INC. 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 INC., FUQUAY VARINA, NC AND THEY ARE RESPONSIBLE FOR ALL ARCHITECTURAL FEATURES, DIMENSIONS, COMPLIANCE WITH ALL ACCESS/EGRESS REQUIREMENTS, FIRE CODE AND LIFE SAFETY DESIGN ISSUES.

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ROOF FRAMING PLAN
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