PLAN DESIGN TO MEET REQUIREMENTS OF 2018 NORTH CAROLINA RESIDENTIAL CODE

STRUCTURES DESIGNED TO WITHSTAND 100 MPH, 3 SECOND GUST (85 FASTEST WIND), EXPOSURE B.

ANCHOR BOLTS SHALL BE MIN. 1/2" DIAMETER & SHALL EXTEND A MINIMUM 7" INTO MASONRY OR CONCRETE. ANCHOR BOLTS TO BE NO MORE THAN 6' O.C. AND WITHIN 12" OF THE CORNERS.

MEAN ROOF HEIGHT 24'-4"

COMPONENT AND CLADDING ARE DESIGNED FOR THE FOLLOWING LOADS:

MEAN ROOF HEIGHT	UP TO 30'	30'-1"-35'	35'-1"-40'	40'-1'-45'
ZONE 1	16.5,-18.0	17.3,-18.9	18.0,-19.6	18.5,-20.2
ZONE 2	16.5,-21.0	17.3,-22.1	18.0,-22.9	18.5,-23.5
ZONE 3	16.5,-21.0	17.3,-22.1	18.0,-22.9	18.5,-23.5
ZONE 4	18.0,-19.5	18.9,-20.5	19.6,-21.3	20.2,-21.8
ZONE 5	18.0,-24.1	18.9,-25.3	19.6, -26.3	20.2,-27.0

MINIMUM VALUES FOR ENERGY COMPLIANCE (CONDITIONED SPACES)

MAXIMUM GLAZING U-FACTOR=0.35

CEILING R-30 (UNCOMPRESSED)

WALLS R-13 CAVITY + R-2.5 SHEATHING OR R15 CAVITY

FLOORS R-19

PROPOSED RESIDENCE AREAS: CALCULATED TO INSIDE OF WALL FRAMING

CONDITIONE) LIVING SPACE —	2745st
GARAGE —		1073sf
BONUS ROO	M ABOVE GARAGE	490sf
FRONT POR	CH	625st
REAR PORCI	1	280st

ATTIC SPACE VENTILATION

1/150 X 3550 SQ.FT. ATTIC AREA=26.6 SQ.FT. NET FREE AREA OF LOUVER REQ'D

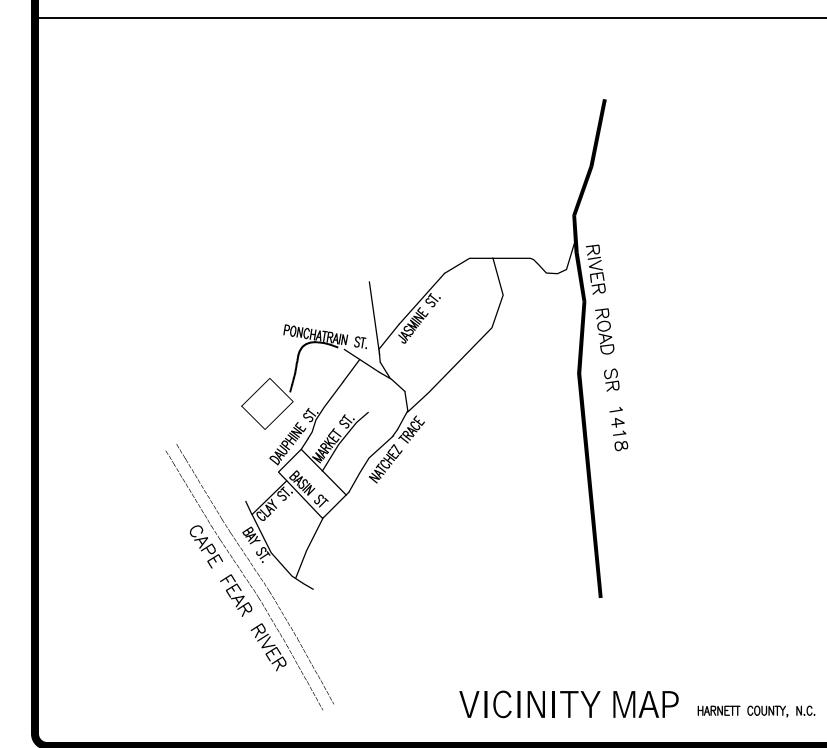
METHOD OF VENTILATION

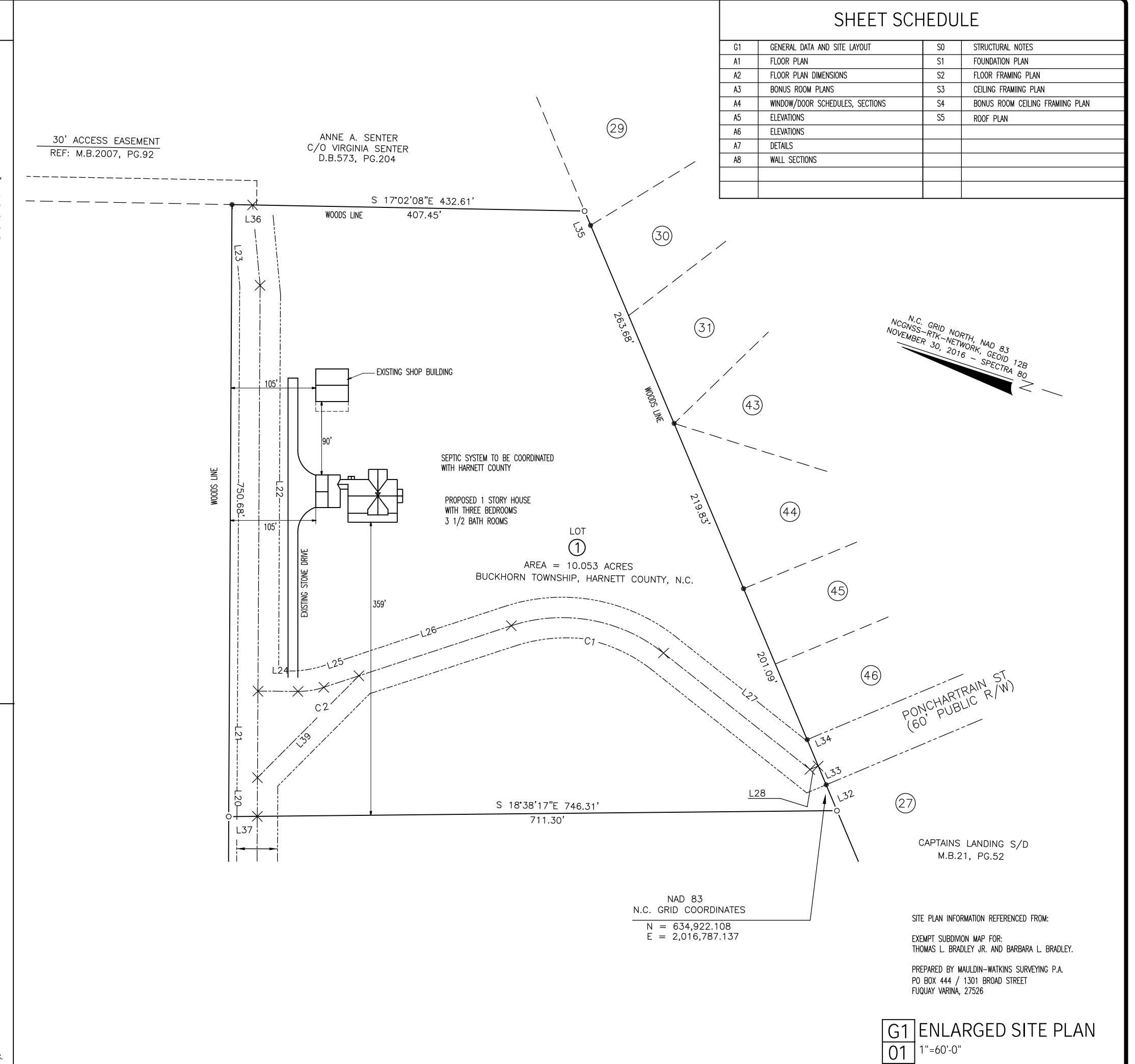
CONTINUOUS ROOF RIDGE VENTING WITH PERFORATED, CONTINUOUS SOFFIT VENTING FOR INTAKE.

CRAWL SPACE VENTILATION (INCLUDING MAIN FIRST FLOOR AND FRONT PORCH)

2597 SQ. FT. / 150 .47 SQ. FT. NET FREE AREA PER VENT =37 CRAWL SPACE VENTS CALCULATED (SEE NOTES 1,2)

- 1. ACTUAL VENT QUANTITY MAY BE REDUCED IF >75% OF CRAWL
- SPACE HAS CONTINUOUS VAPOR BARRIER.
- 2. VENTS MAY BE DELETED IF CRAWL SPACE IS ENCASED, INSULATED AND CONDITIONED.





ADL BR/ $\overline{\mathbb{B}}$ $\overline{\square}$ and **THOMAS**

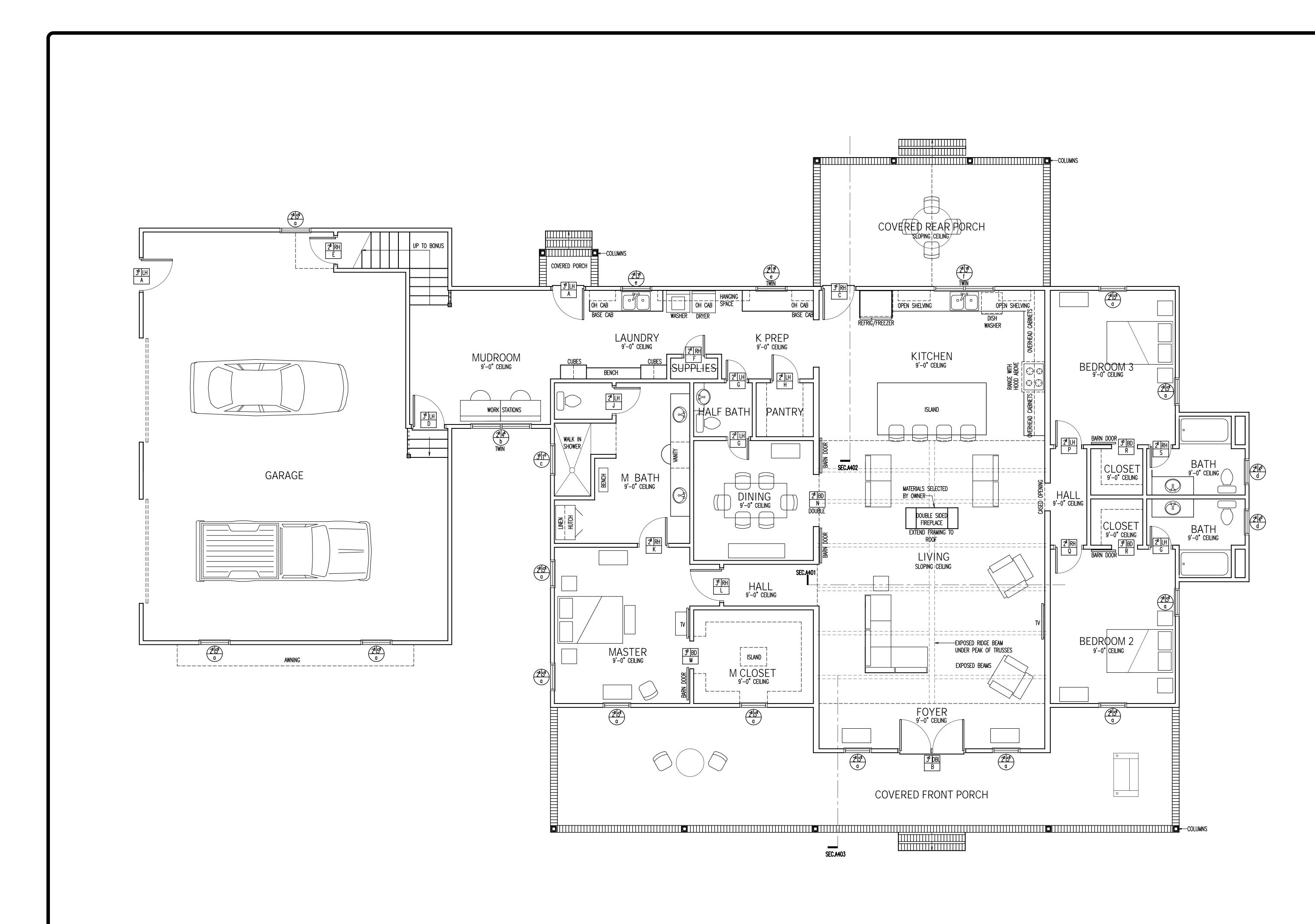
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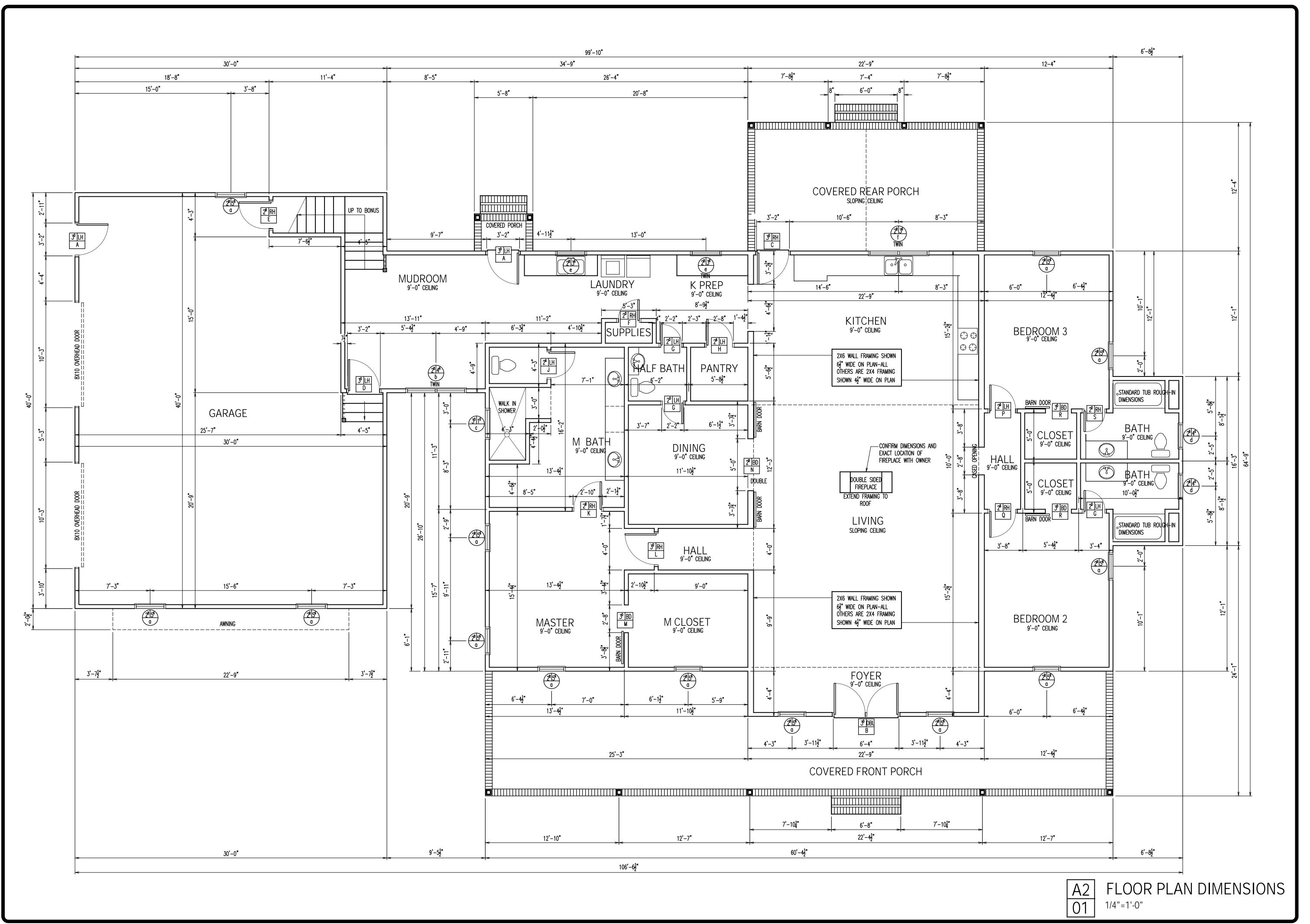
AUGUST 2023

G1

27526

SEPT 2023





BUILDING DESIGN BY:

S&S CONTRACTING

9 RIVER ROAD, FUQUAY, NC 27526

THOMAS and ABBIE BRADLE

DESCRIPTION:
FLOOR PLAN
DIMENSIONS

REVISION:

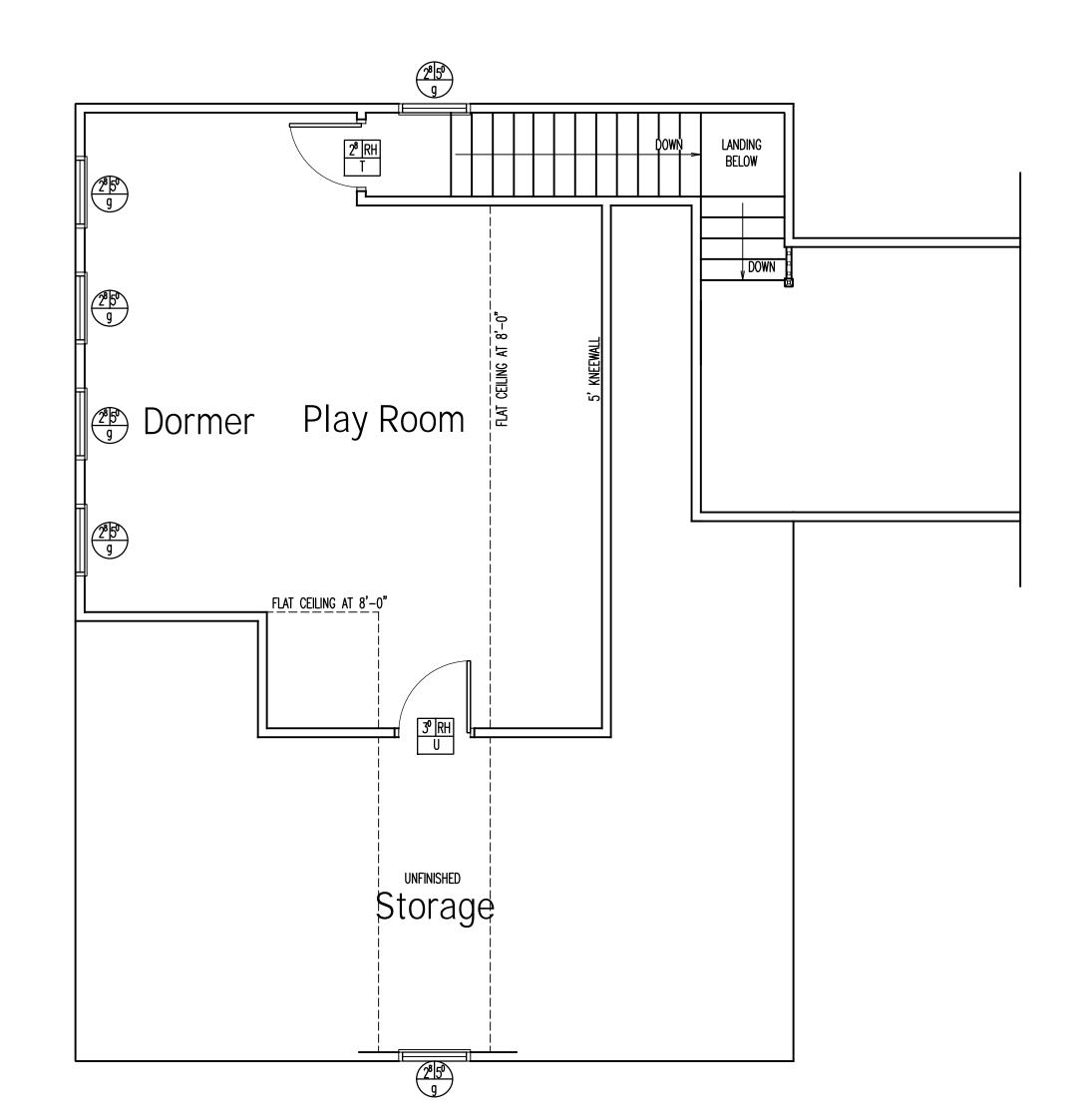
DATE:
SEPT 2023

A2



DATE:
DEC 2021





3'-3" 15'-0" 11'-9" Play Room Dormer 9 5'-9½" 3'-2" 13'-5" 7'-71" 22'-41" 30'-0" unfinished Storage

A3 BONUS ROOM PLAN
1/4"=1'-0"

BONUS ROOM PLAN DIMENSIONS

1/4"=1'-0"

-ENCLOSURE FOR FIRE PLACE VENT FALSE RIDGE BEAM - SCISSOR TRUSSES OVER LIVING ROOM — CEILING UNDER TRUSSES —— FALSE BEAMS UNDER CEILING 13'-0" TOP OF WALL FOR LIVING ROOM TRUSS BEARING. —FIREPLACE ENCLOSURE TO CEILING KITCHEN CEILING BEYOND 9'-0" TOP OF WALL FOR KITCHEN TRUSS _____2x6 studs—each side of LIVING ROOM —KITCHEN CABINETS AND APPLIANCES BEYOND FLOOR FRAMING SYSTEM FLOOR FRAMING SYSTEM —Double sided gas fireplace with vent THROUGH ROOF AND MAKE UP AIR DUCTED FROM CRAWL SPACE.

	INTERIOR SECTION LIVING ROOM
01	1/4"=1'-0"

	ROOF OVE SOFFIT — GABLE WII	ERHANG AND NDOWS	TOP PORTION OF SCISSORS TRUSSES EXPOSED TIMBER RIDGE UNDER TRUSS EXPOSED FALSE RAFTERS SLOPED CEILING
	PORCH ROOF		TOP OF LIVING RM WALL
HEADER BRACE	PORCH CEILING EXTERIOR WALL	FOYER CEILING 9' ABOVE FLOOR	8
SQUARE POSTS—ANCHOR TO STRUCTURE AT TOP AND BOTTOM———	COVERED FRONT PORCH	FOYER	LIVING RM
MASONRY CAP COURSE—	PORCH SLAB	FLO	OR FRAMING SYSTEM
MASONRY STEM WALL	PORCH SLAB BEARING WALL		

A4	INTERIOR SECTION FRONT PORCH TO FOYER
03	1/4"=1'-0"

WINDOW SCHEDULE SCHEDULE MARK B HEIGHT					
MARK	SIZE	DESCRIPTION		NOTES	
a	2'-8"W X 5'-6"H	DOUBLE HUNG		1,2,3	
b	2'-8"W X 4'-6"H	DOUBLE HUNG, TWIN		1,3,4	
С	3'-0"W X1'-0"H	FIXED TRANSOM ONLY		1,3	
d	2'-6"W X 4'-0"H	DOUBLE HUNG		1,3	
е	2'-8"W X 3'-6"H	DOUBLE HUNG		1,3	
f	2'-8"W X 3'-6"H	DOUBLE HUNG, TWIN		1,3	
g	2'-8"W X 5'-0"H	DOUBLE HUNG		1,2,3,5	
h	2'-8"W X 2'-10"H	FIXED		1,3	

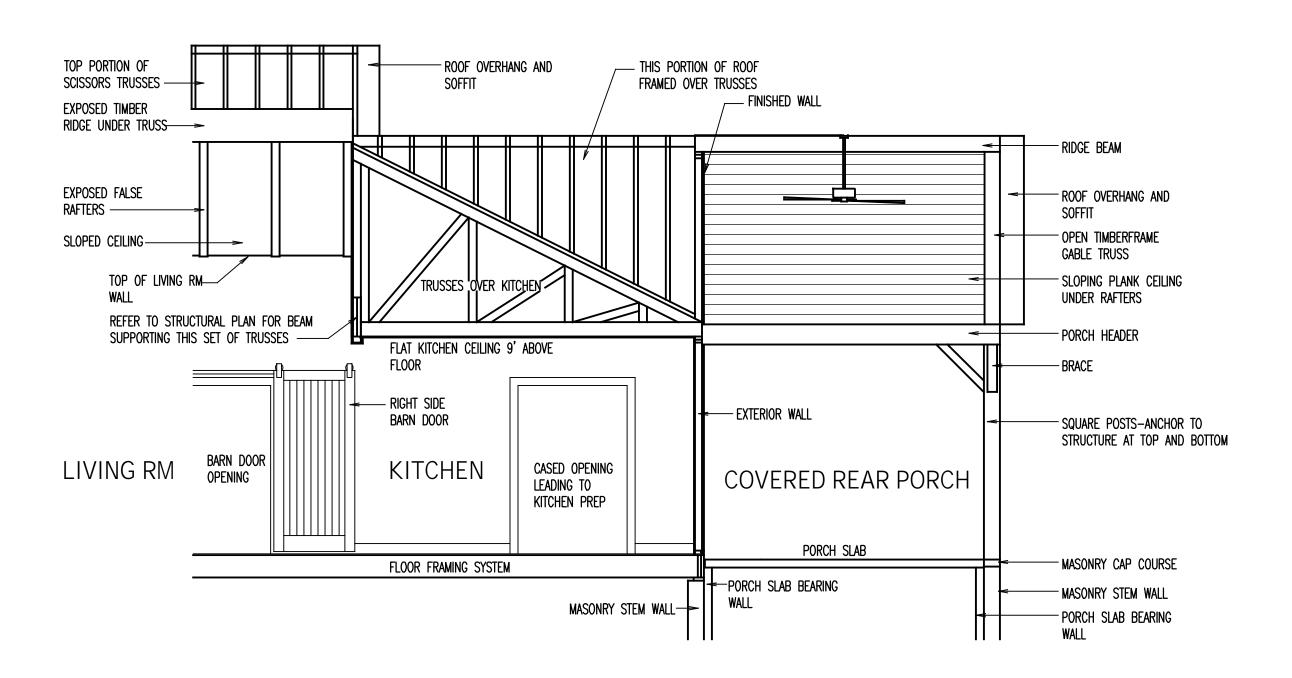
<u>WINDOW SCHEDULE NOTES:</u>

- . ALL WINDOWS SHALL BE LOW E, DOUBLE INSULATED PROVIDE SAFETY GLAZING FOR FOR ALL HAZARDOUS LOCATIONS DEFINED IN GLAZING SECTION OF NC BUILDING CODE-RESIDENTIAL CODE.
- 2. ALL EGRESS WINDOWS SHALL BE SIZED AND MOUNTED TO MEET THE EMERGENCY ESCAPE AND RESCUE OPENING REQUIREMENTS OF NC BUILDING CODE-RESIDENTIAL CODE.
- 3. MUTTON PATTERNS TO BE SELECTED BY THE OWNER.
- 4. TWIN WINDOW, FACTORY MULLED.
- 5. PROVIDE WINDOW OPENING LATCH DEVICE THAT WILL LIMIT SASH OPENING A MAX OF 4" TO AVOID FALL HAZARD.

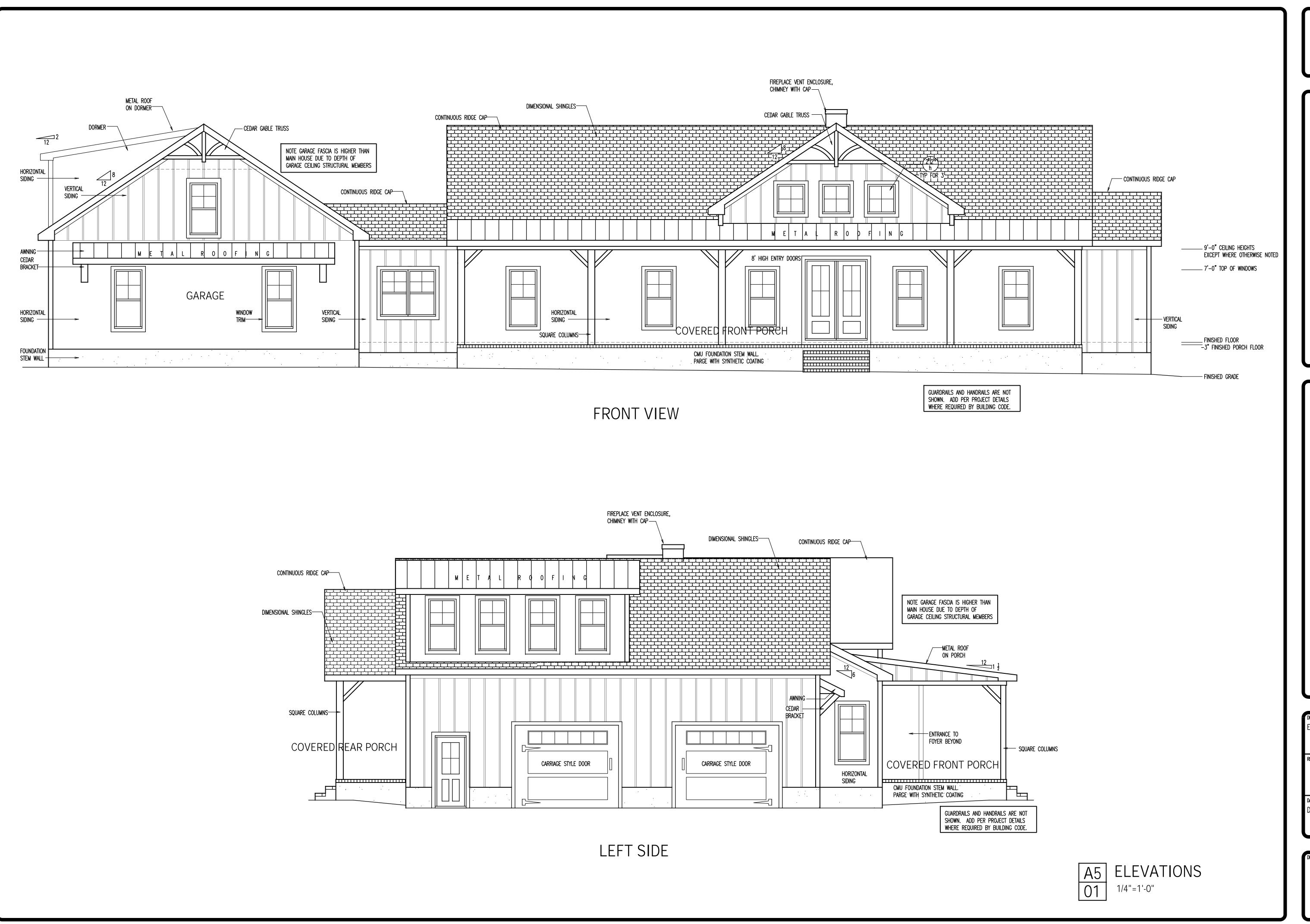
DOOR SCHEDULE WIDTH 3' RH HEIGHT SCHEDULE MARK X						
MARK	WIDTH	HEIGHT	SWING	DESCRIPTION	HARDWARE	COMMENTS
Α	3'-0"	6'-8"	LH	4 LITE EXTERIOR	ENTRY W/DEADBLT	
В	3'-0"	8'-0"	DOUBLE	FARMSTYLE MAHOGANY, 4 LITE (3/4) ENTRANCE	ENTRY W/DEADBLT	
С	3'-0"	6'-8"	RH	4 LITE EXTERIOR	ENTRY W/DEADBLT	
D	3'-0"	6'-8"	LH	ENTRY WITH 20 MIN. FIRE RATING	ENTRY W/DEADBLT	
E	2'-8"	6'-8"	RH	STORAGE RM WITH 20 MIN. FIRE RATING	PASSAGE	
F	2'-0"	6'-8"	RH	INTERIOR STORAGE	PASSAGE	
G	2'-0"	6'-8"	LH	Interior Bath	PRIVACY	
Н	2'-6"	6'-8"	LH	INTERIOR STORAGE	PASSAGE	
J	2'-6"	6'-8"	LH	Interior Bath	PRIVACY	
K	2'-8"	6'-8"	RH	Interior Bath	PRIVACY	
L	3'-0"	6'-8"	RH	INTERIOR BEDROOM	PRIVACY	
М	3'-0"	7'-0"	BD	SLIDING BARN DOOR	BARNDOOR	32"X80" FINISHED OPENING
N	2'-8"	6'-8"	BD	DOUBLE SLIDING BARN DOOR	BARNDOOR	60"X80" FINISHED OPENING
Р	2'-6"	6'-8"	LH	INTERIOR BEDROOM	PRIVACY	
Q	2'-6"	6'-8"	RH	INTERIOR BEDROOM	PRIVACY	
R	3'-0"	7'-0"	BD	SLIDING BARN DOOR	BARNDOOR	30"X80" FINISHED OPENING
S	2'-0"	6'-8"	RH	INTERIOR BATH	PRIVACY	
Т	2'-8"	6'-8"	RH	INTERIOR BONUS	PASSAGE	
U	3'-0"	6'-8"	RH	SOLID CORE ACCESS TO ATTIC	PRIVACY	SEALED JAMB

DOORS SCHEDULE NOTES:

- 1. ALL HARDWARE TO MATTE BLACK OR OTHER FINISH APPROVED BY OWNER.
- 2. OWNER TO SELECT/APPROVE DOOR STYLES AND FINISHES.



INTERIOR SECTION KITCHEN - REAR PORCH



BUILDING DESIGN BY:

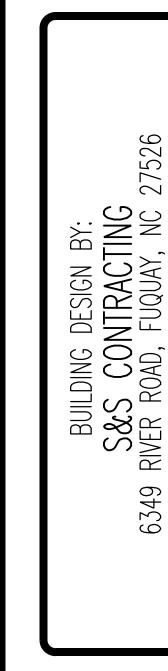
S&S CONTRACTING
6349 RIVER ROAD, FUQUAY, NC 27526

THOMAS and ABBIE BRADLEY

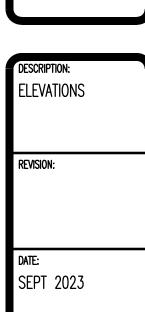
DESCRIPTION:
ELEVATIONS
REVISION:

DATE: DEC 2021

A5

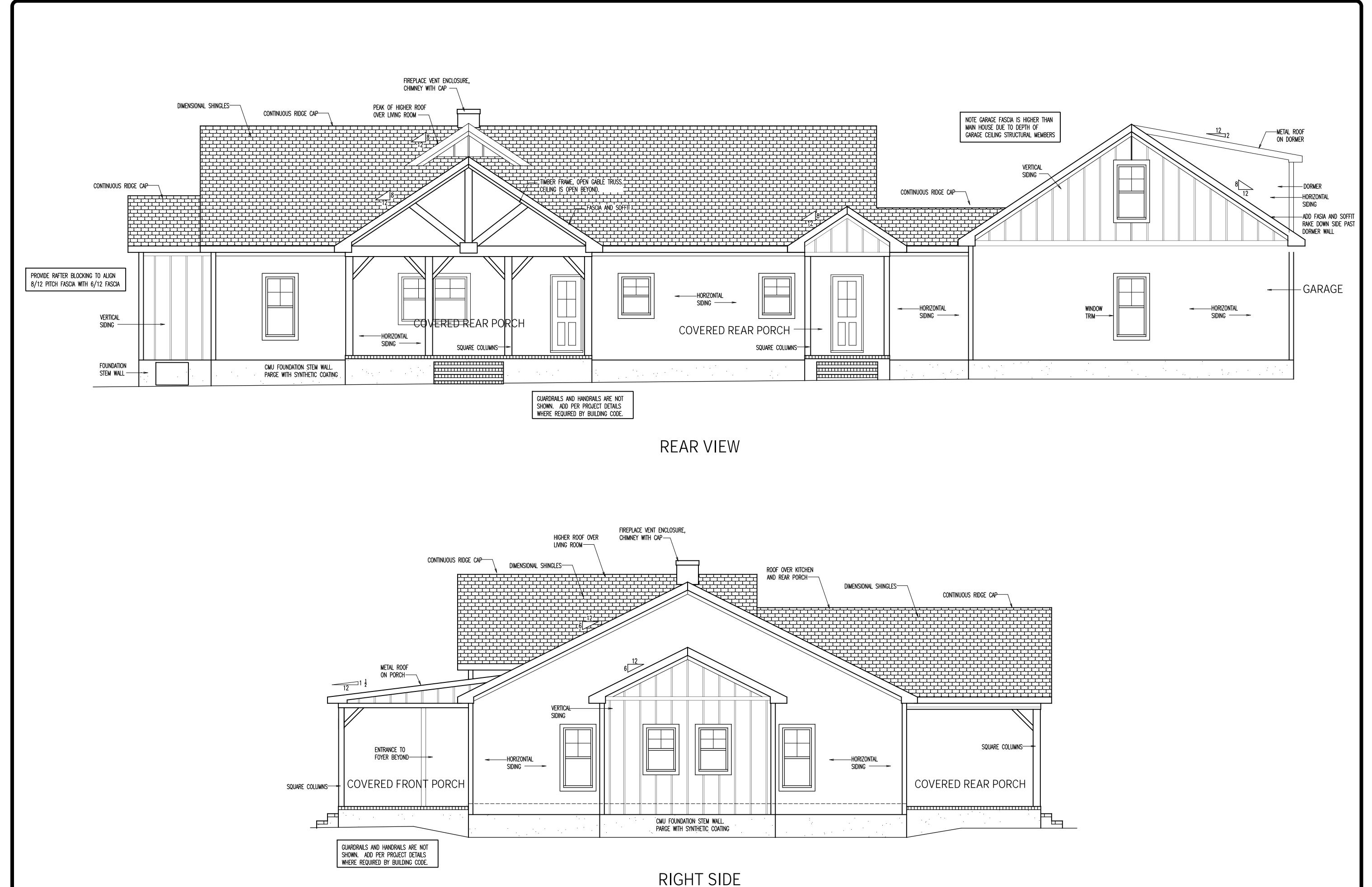








ELEVATIONS

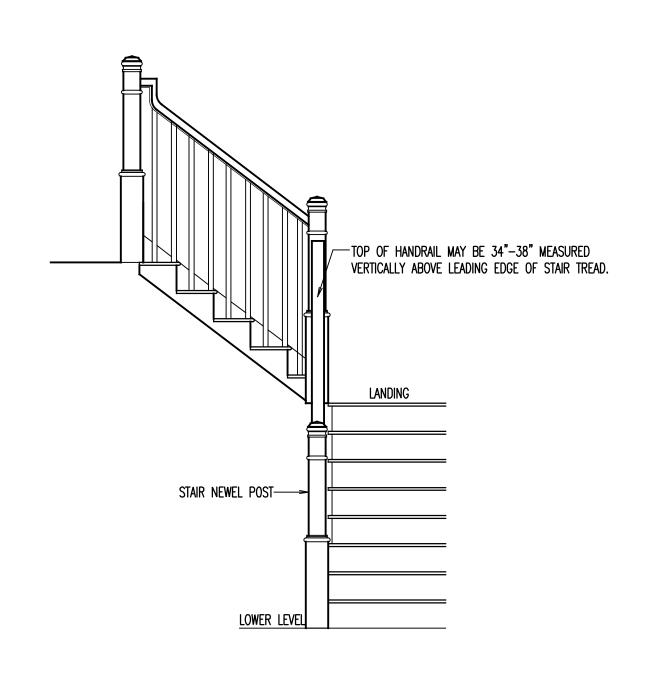


3'-6"

6349

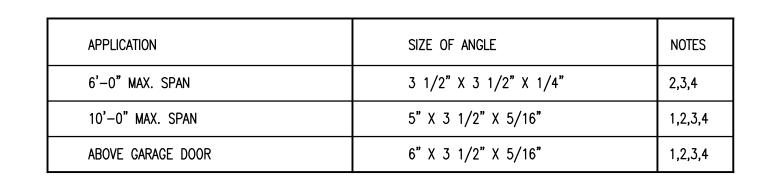
THOMAS

REVISION: SEPT 2023



DETAIL





— WATERPROOFING

- LANDSCAPE FABRIC

- MIN. 6" STONE FILL

— 4" PERFORATED PIPE DRAIN TO DAYLIGHT

74"MAX

CABINET

SECTION

SLOPE FINAL GRADE MIN 6" DOWN AND AWAY FROM FOUNDATION WALL

1. LONG LEG OF THE ANGLE SHALL BE PLACED IN A VERTICAL

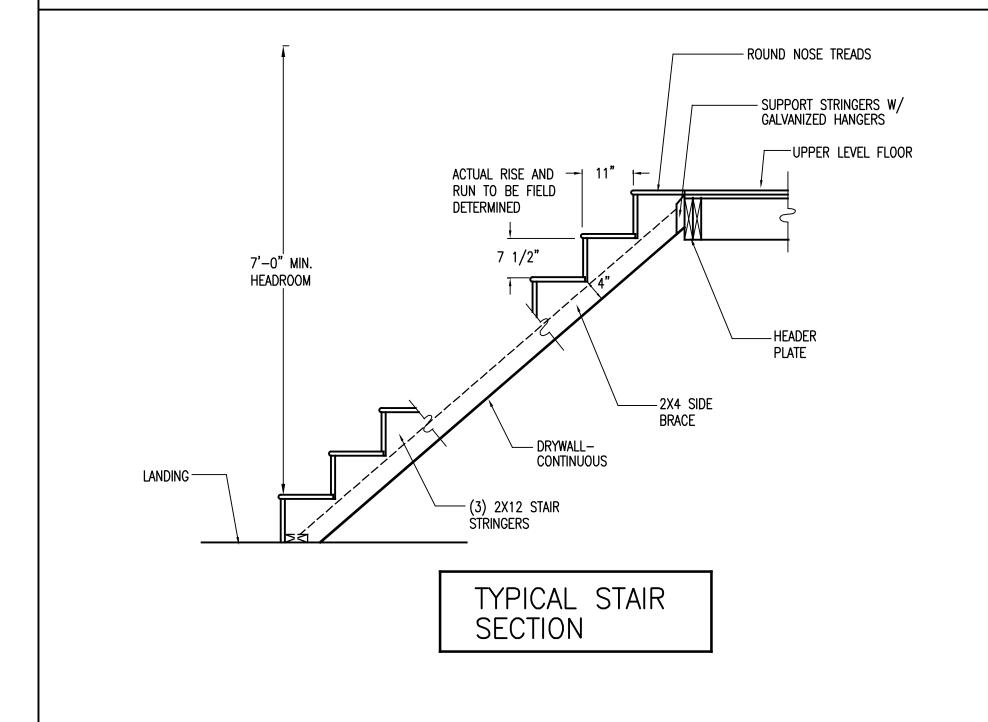
-- Undisturbed Earth

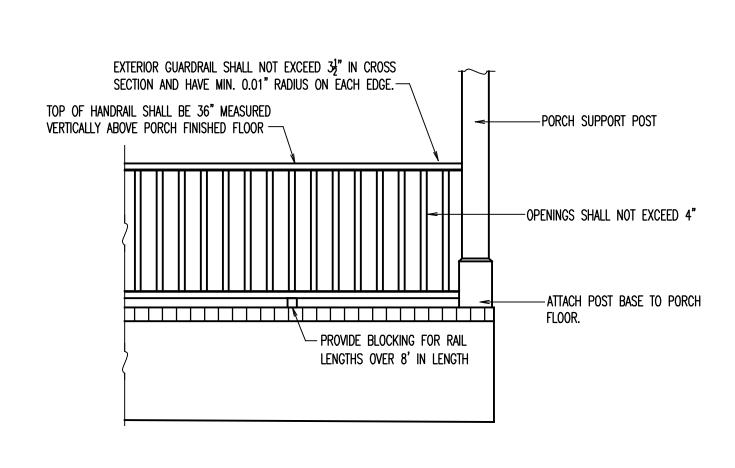
FOUNDATION

DRAINAGE

- 2. SPANS OVER 4' SHALL BE SHORED UP UNTIL CURED
- 3. ALL ANGLES SHALL BE PRIME PAINTED 4. ATTACH TO FRAMING HEADER WITH 1/2" GALVANIZED BOLTS @24" O.C.

LINTLE SCHEDULE





—PORCH SUPPORT POST

EXTERIOR PORCH FLOOR LEVEL

EXTERIOR HANDRAIL SHALL NOT EXCEED $3\frac{1}{2}$ " IN CROSS SECTION AND HAVE MIN. 0.01" RADIUS ON EACH EDGE.

TOP OF HANDRAIL MAY BE 34"-38" MEASURED VERTICALLY ABOVE LEADING EDGE OF STAIR TREAD.

-STAIR NEWEL POST

-OPENINGS SHALL NOT EXCEED 4"

—EMBED POST BASE AND ATTACH TO STAIR RISER

HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE

SIDE OF STAIR WITH CONTINUOUS RUN OF TREADS OR

FLIGHT WITH 4 OR MORE RISERS INCLUDING TOP OF PORCH.

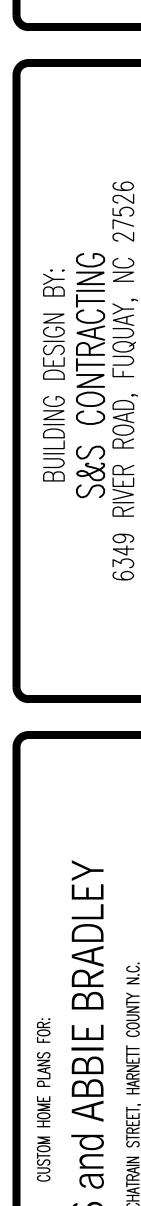
EXTERIOR GUARDRAIL DETAIL

EXTERIOR HANDRAIL

DETAIL

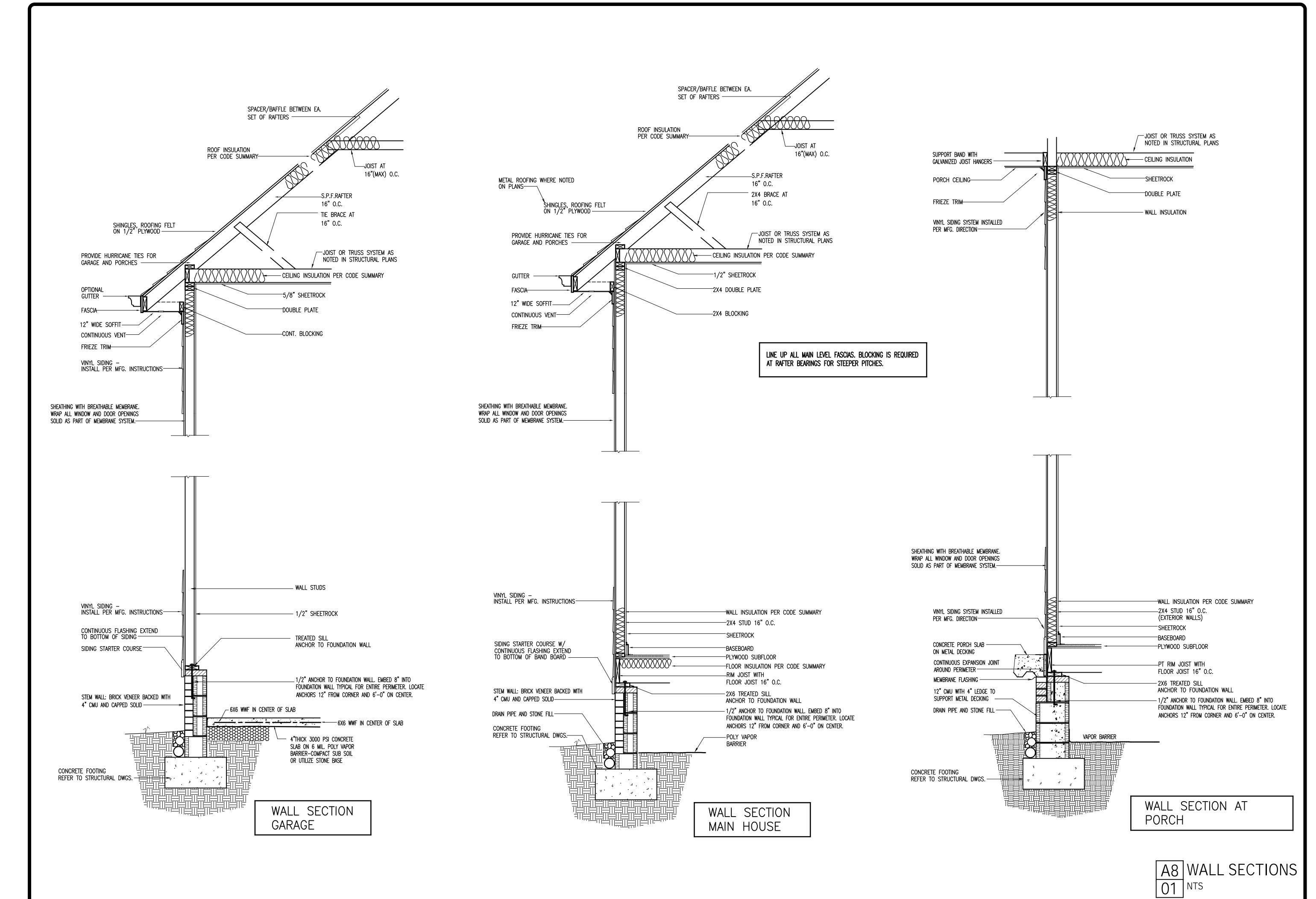
GUARDRAILS SHALL BE LOCATED ALONG EDGE OF EXTERIOR PORCHES THAT ARE LOCATED MORE THAN 30" ABOVE GRADE, MEASURED VERTICALLY TO GRADE AT ANY POINT WITHIN 36" HORIZONTALLTY TO EDGE OF PORCH.

A7 STAIR AND RAIL DETAILS
01 NTS





WALL SECTIONS REVISION: SEPT 2023



STRUCTURAL GENERAL APPLICATION NOTES STRUCTURAL GENERAL NOTES APPLY TO ALL STRUCTURAL PLANS

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
- 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.

GENERAL FRAMING NOTES:

- 1. THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL CODE, 2018
- 2. GLAZING AREAS SHOWN ON THESE DESIGN DRAWINGS DO NOT EXCEED 15%P OF THE GROSS AREA OF THE EXTERIOR WALLS. THIS STRUCTURE MEETS THE REQUIREMENTS OF N1101.2.1, RESIDENTIAL BUILDING, TYPE A-1.
- 3. WALL CLADDING IS DESIGNED FOR A 24.1 #/SF OR GREATER
- POSITIVE/NEGATIVE PRESSURE. 4. ALL WALLS, FLOORS AND CEILINGS SHALL BE INSULATED IN ACCORDANCE WITH
- CODE SUMMARY. 5. Design Criteria: 10 PSF 40 PSF PRIMARY FLOOR SECONDARY FLOOR 10 PSF 40 PSF SLEEPING AREAS 10 PSF 30 PSF ATTIC 10 PSF 20 PSF R00F 10 PSF 20 PSF DEFLECTION LIMITS:
- ROOF 6. ALL HEADERS IN LOAD BEARING WALLS SHALL BE DOUBLE 2X10.

L/360(LIVE LOAD ONLY)

- 7. ALL WALLS ARE 2X4 @ 16" O.C. UNLESS OTHERWISE NOTED.
- 8. PROVIDE DOUBLE FLOOR JOISTS UNDER WALLS ABOVE.
- 9. PROVIDE FOUNDATION VENT WITHIN 36" OF EACH CORNER EXCEPT NOT FOR CONCEALED CRAWL SPACES.
- 10. ALL JOISTS TO BE SPF.

FL00R

GENERAL ROOF NOTES:

- 1. THIS PLAN DESIGNED IN ACCORDANCE WITH NC RESIDENTIAL CODE, 2018 EDITION.
- 2. 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
- 3. ALL ROOFING ELEMENTS SHALL MEET THE REQUIREMENTS OF CHAPTER 8 OF THE
- 4. 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. 5. RAFTER SIZES, SPANS AND SPACING SHALL NOT EXCEED THE FOLLOWING: 2X6 2X8 2X10 SPACING 12" O.C. 14'-9" 19'-6"
- SPACING 16" O.C. 13'-5" 17'-9" 22'-3" 6. ALL RAFTERS TO BE 2X8 @ 16" O.C. #2 SPF UNLESS NOTED OTHERWISE. 7. 2-2X10 HIPS MAY BE SPLICED WITH A MIN. 6'-0" OVERLAP.
- 8. PROVIDE DOUBLE RAFTER EACH SIDE OF DORMERS WITH DOUBLE HEADER. 9. ATTACH VAULTED RAFTERS WITH HURRICANE CLIP SIMPSON "H-5" OR EQUIVALENT. PROVIDE DOUBLE OPPOSING RAFTERS WHERE NOTED.
- 10. 2X8 RAFTERS @ CATHEDRAL OR VAULTED CEILINGS TO BE FURRED DOWN 2" OR USE 2X10 RAFTERS FOR INSULATION PER CODE.
- 11. PROVIDE 2X4 COLLAR TIES EVERY SECOND RAFTER (TYPICAL) 12. PROVIDE 2X4 RAFTER TIES @ 32" O.C. (TYPICAL)
- 13. FRAME RAFTERS ON 2X4 PLATE ON TOP OF CEILING JOISTS UNLESS NOTED
- 14. SHINGLES ASSUMED TO BE 240 LB. FIBERGLASS, OR EQUAL. MINIMUM ROOF PITCH TO BE AS INDICATED ON ARCHITECTURAL PLAN SHEETS.
- 15. PROVIDE DOUBLE LAYER OF ROOF FELT WHERE ROOF PITCH IS LESS THAN 4 /12. 16. THESE DESIGN DRAWINGS WERE PRODUCED BY HOWERTON CONSULTING ENGINEERING, INC ASSUMES NO LIABILITY FOR THE CORRECTNESS OF ARCHITECTURAL FEATURES, DIMENSIONS OR FIXTURES.
- 17. ALL HIP RIDGES AND VALLEYS SHALL BE DOUBLE 2X10 UNLESS NOTED OTHERWISE. 18. CONTRACTOR IS RESPONSIBLE FOR REVIEWING DRAWINGS FOR CONSTRUCTABILITY PRIOR TO BEGINNING CONSTRUCTION.
- 19. VALLEY RAFTERS WITH SPANS LONGER THAN 15' SHALL BE LVLs SUPPORTED AS NOTED. PROVIDE TEMPORARY STIFF KNEE SUPPORT UNTIL ALL SHEATHING AND RAFTER TIES/COLLARS ARE INSTALLED.
- 20. DO NOT SCALÉ THESE DRAWINGS. IF DESCREPANCIES ARE NOTED, CONTACT THE

BRACED WALL NOTES:

- 1. BRACED WAILS ARE REQUIRED PER SECTION R602.10.1 2018 NCBC RESIDENTIAL CODE
- 2. THE EXTERIOR WALL STRUCTURE SHALL BE CONTINUOUSLY SHEATHED, FULL HEIGHT WITH MIN. THICKNESS 7/16" OSB. THESE WALLS SHALL BE CONSTRUCTED IN CONFORMANCE TO TYPE CS-WSP DETAILS. REFER TO PLAN FOR LOCATION OF REQUIRED BRACING LABLED "CS BRACING" AND LENGTH OF WALL BRACING LABELED IN LINEAR FEET.
- 3. INTERIOR WALLS WHERE NOTED SHALL BE BRACED PER INDICATED METHOD IN REFERENCE TO NCBC-RESIDENTIAL CODE, TABLE R602.10.2.

<u>LIB METHOD:</u> 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" ON CENTER. CONNECT AS INDICATED IN CODE SECTION.

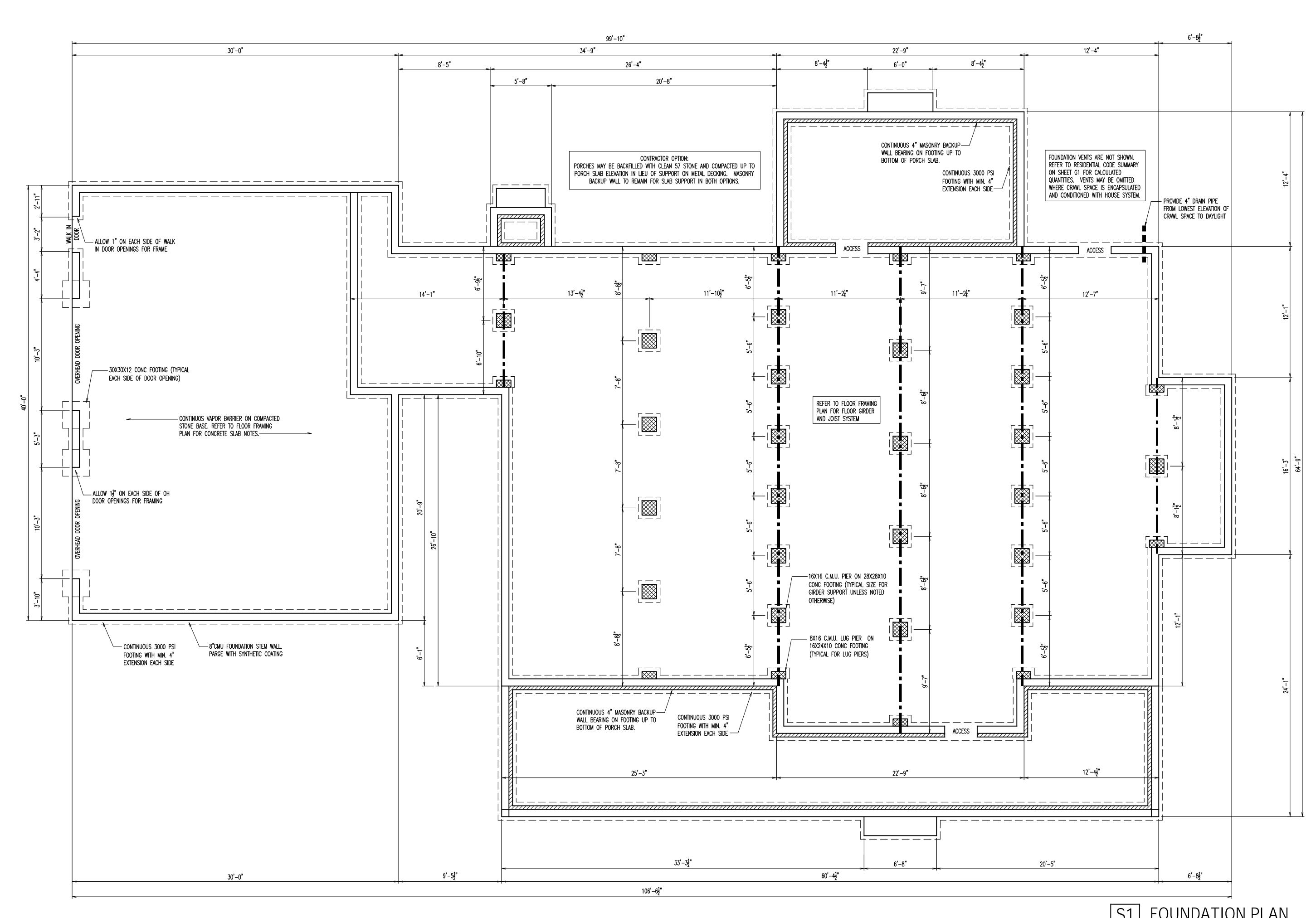
- MINIMUM $b \!\!\! / _2$ " Gypsum board turned vertically and continuou from top plate TO BOTTOM PLATE. SCREW CONNECTION TO FRAMING USING SPACING CRITERIA AS INDICATED IN CODE TABLES.
- 4. SPECIAL BRACING DETAILS ARE ILLUSTRATED IN THE CODE AND ALLOWED WHERE WALLS DO NOT MEET THE MINIMUM REQUIREMENTS FOR SUPPORT.
- 5. SEE TABLE R602.7.5 FOR CORRECT NUMBER OF KING STUDS PER HEADER.

STRUCTURAL EVALUATION NOTES

STRUCTURAL EVALUATION BY:

HOWERTON SERVICES, PLLC LISCENSE # P-1716 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 9/15/2024 OR UNTIL NEW CODE CYCLE.



HOWERTON Suscend 3513 CATHEDRAL BELL

 $\overline{\mathbb{B}}$ \Box and **THOMA**

FOUNDATION PLAN

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

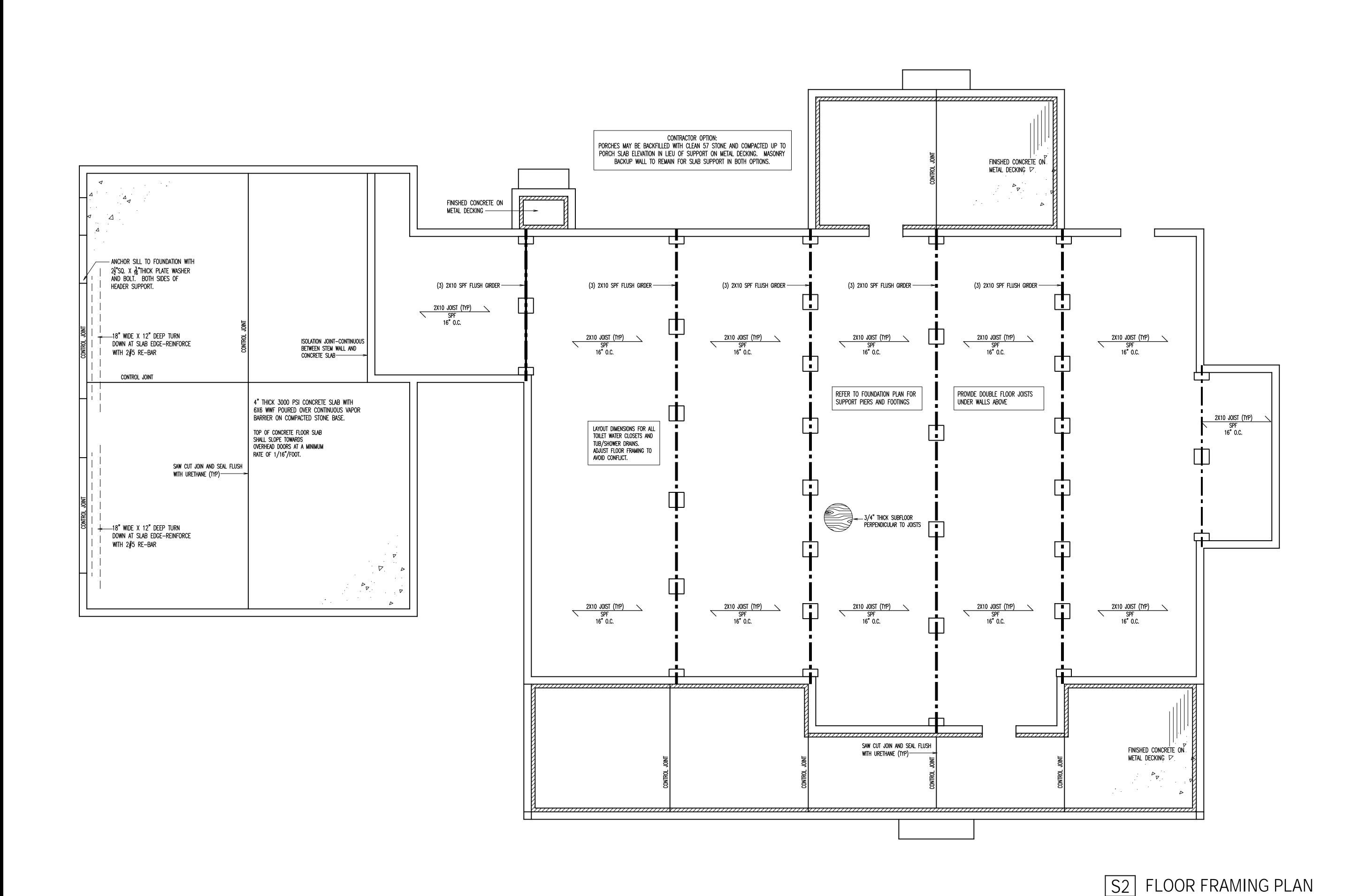
THOMAS and ABBIE BRADLEY

DESCRIPTION: FLOOR FRAMING

REVISION:

DATE: SEPT 2023

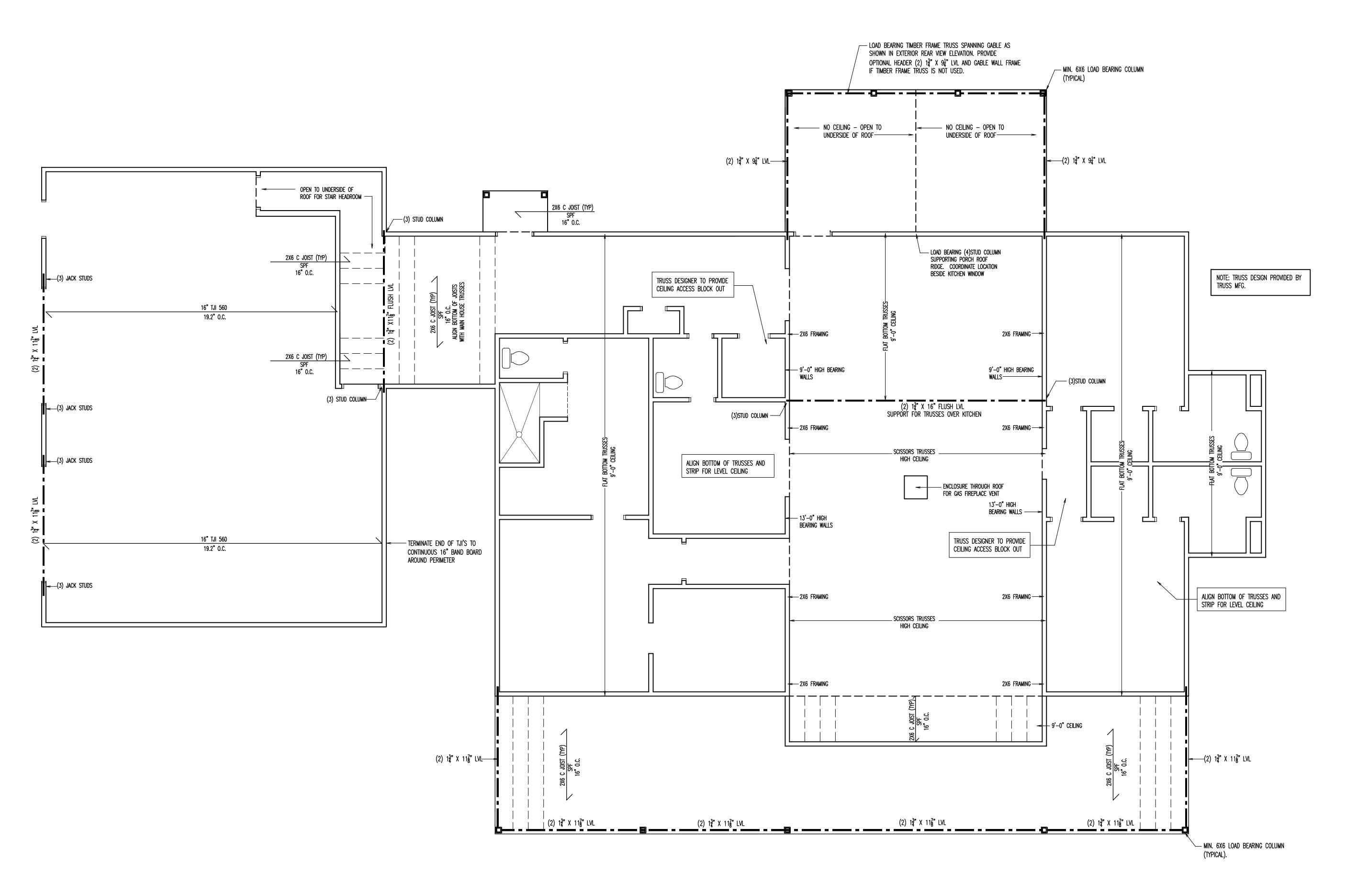
S2



SEPT 2023

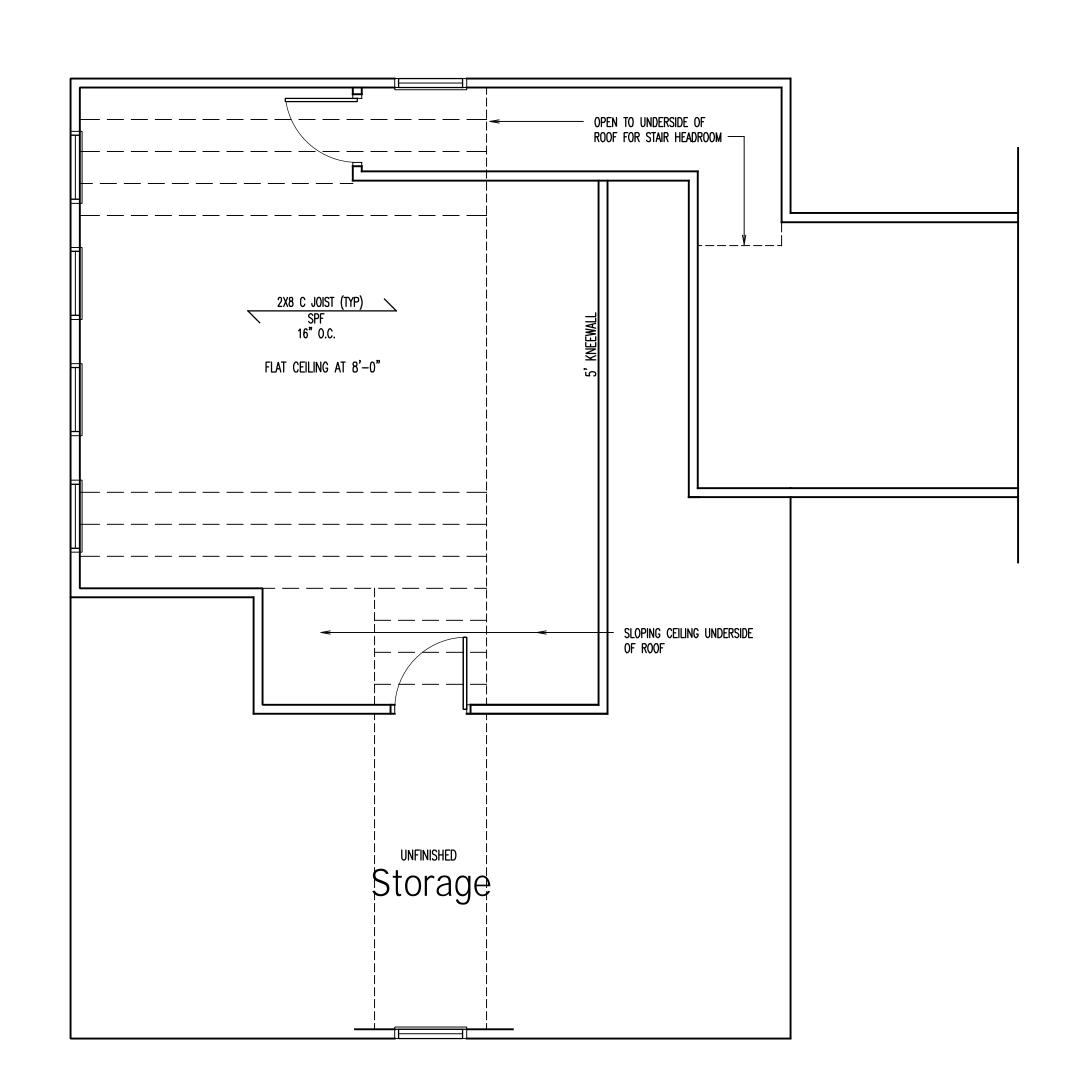
CEILING FRAMING PLAN

1/4"=1'-0"



FURR DOWN FOR INSULATION 16" DEEP GARAGE STRUCTURE 9'-0" CEILING DOOR TRACK --- HEIGHT TO TOP OF LANDING MUST BE COORDINATED TO MAINTAIN MIN OF 7' HEADROOM TO CEILING. MUDROOM STORAGE UNDER STAIR GARAGE FLOOR STRUCTURE CRAWL SPACE

S4 WORKING SECTION - GARAGE
1/4"=1'-0"



BONUS ROOM
CEILING FRAMING PLAN
1/4"=1'-0"

REVISION:

DATE: SEPT 2023

DRAWING:

