



FRONT ELEVATION

1/4" = 1'-0"



RIGHT ELEVATION

1/4" = 1'-0"

THE ATRIUM -
ALTERNATE ELEVATION

CIDER HOUSE STUDIO, INC.
424 E. MAIN ST.
CLAYTON, NC 27520
919.624.4776

WHITTENTON BUILDERS



REAR ELEVATION

1/4" = 1'-0"



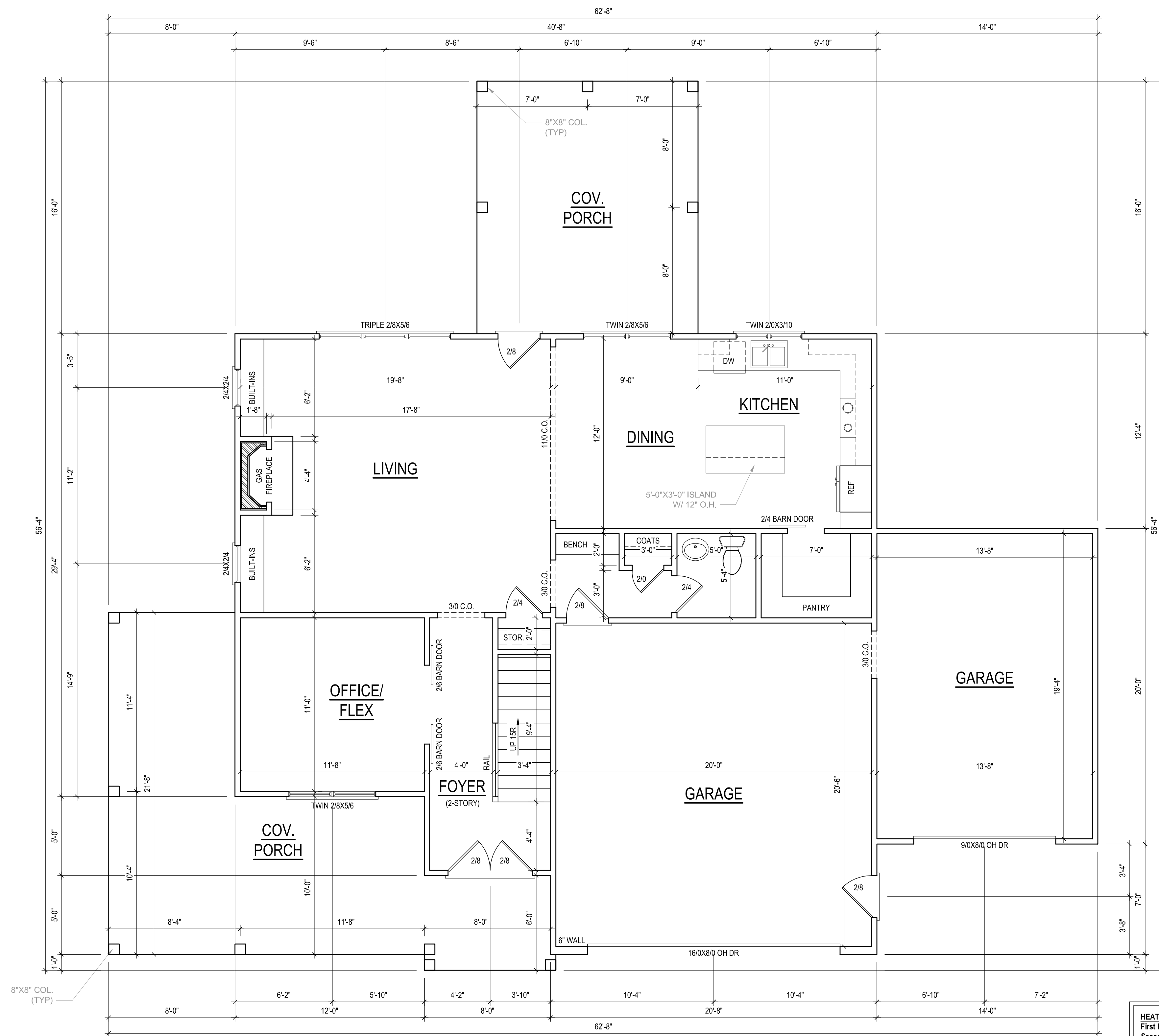
LEFT ELEVATION

1/4" = 1'-0"

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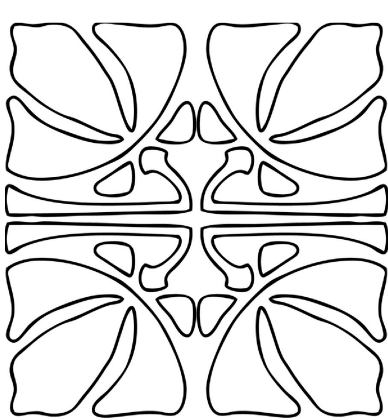


FIRST FLOOR PLAN

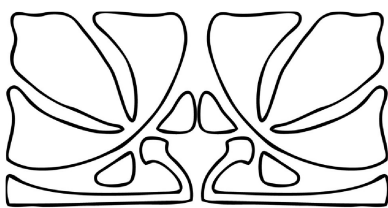
1/4" = 1'-0" CEILING HGT. = 9'-0"

*ALL LUMBER TO BE #2 SPF, UNO
ALL WALLS TO BE 4" THICK

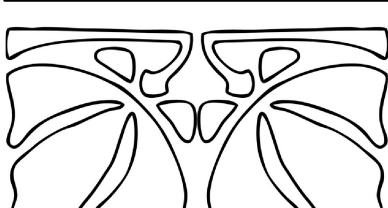
HEATED SF	
First Floor	1011
Second Floor	1278
TOTAL HEATED	2289
UNHEATED SF	
Garage	709
Front Porch	342
Rear Porch	224



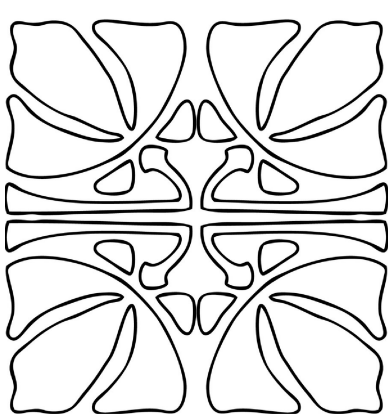
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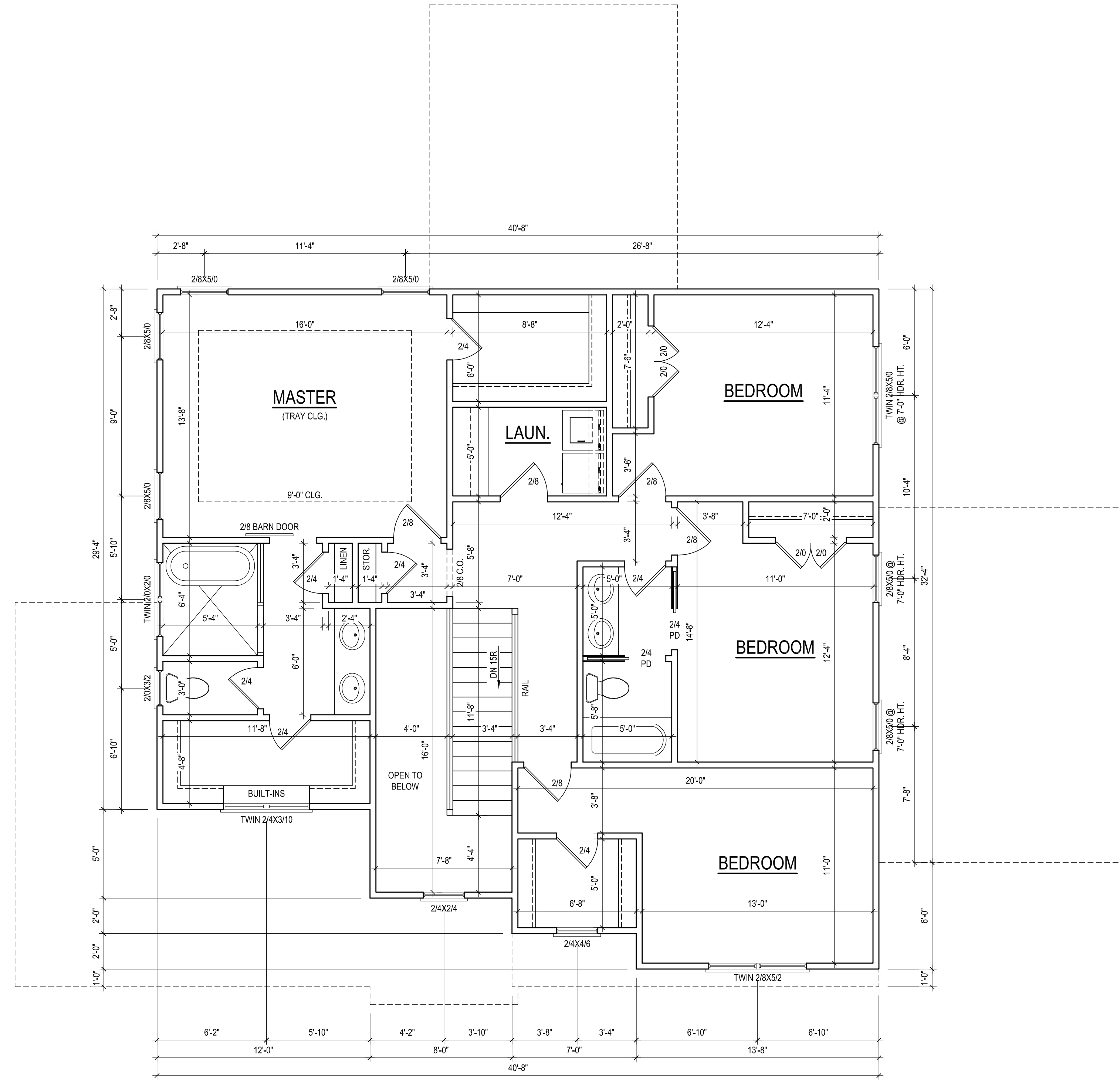


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WHITTENTON BUILDERS

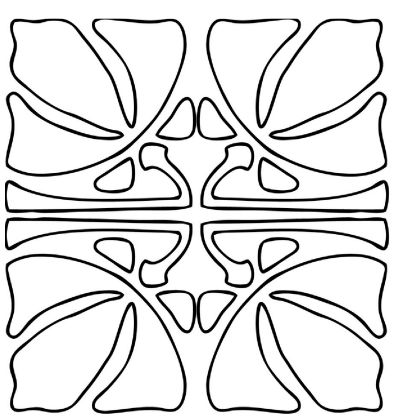




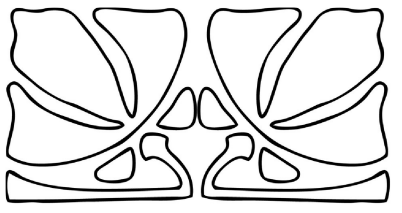
SECOND FLOOR PLAN

1/4" = 1'-0" CEILING HGT. = 8'-0"

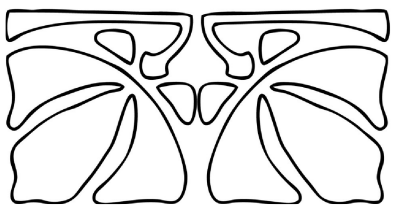
*ALL LUMBER TO BE #2 SPF, UNO
*ALL WALLS TO BE 4" THICK



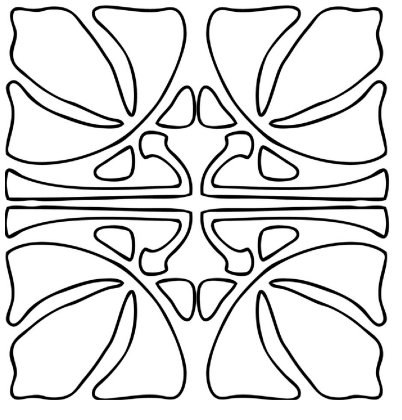
THE ATRIUM -
ALTERNATE ELEVATION



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WHITTENTON BUILDERS



GENERAL STRUCTURAL SPECIFICATIONS

APPLICABLE DESIGN CODES:

- 2018 NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE
- DESIGN WIND SPEED: Vult: 120 MPH

FOUNDATIONS AND SOIL CONDITIONS

- ALLOWABLE BEARING CAPACITY FOR SHALLOW PAD FOUNDATIONS: 2000 PSF (ASSUMED VALUE BASED ON CODE RECOMMENDATIONS)
- EXCAVATIONS TO BE FREE OF LOOSE SOIL MATERIAL, DEBRI, AND EXCESS WATER.

EXCAVATIONS

- CONTRACTOR SHALL FOLLOW ALL OSHA STANDARDS AND RECOMMENDATIONS FOR EXCAVATIONS. THIS INCLUDES BUT NOT LIMITED TO SLOPES OF CUTS AND SHORING OF EXCAVATIONS.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ANY EXISTING UTILITIES ON THE PROJECT SITE PRIOR TO ANY EXCAVATION. THE ENGINEERS OF RECORD SHALL BE NOTIFIED OF ANY CONFLICT DUE TO ANY EXISTING UTILITIES OR CONDITIONS.

CONCRETE

- COMPRESSIVE STRENGTH (F'c) = 3000 PSI
- ENTRAINED AIR = 6% ±1% BY VOLUME
- ALL CONCRETE TO BE DESIGNED AND CONSTRUCTION USING THE SPECIFICATIONS STATED IN ACI 318 (LATEST CODE ADOPTED EDITION).
- MINIMUM CONCRETE COVER AND EDGE DISTANCES TO FOLLOW ACI 318 (LATEST CODE ADOPTED EDITION).
- CONSTRUCTION JOINTS REQUIRE APPROVAL BY THE STRUCTURAL ENGINEER.
- CONCRETE SHALL BE THOROUGHLY VIBRATED IN FORMS.
- WHEN MULTIPLE POURS ARE REQUIRED, EXISTING CONCRETE SURFACES SHALL BE ROUGHENED. CONCRETE BONDING AGENT SHALL THEN BE APPLIED TO ALL ROUGHENED SURFACES. BONDING AGENT MUST CONFORM TO ASTM C1059, TYPE II.
- CONCRETE SLABS ON GRADE MUST SATISFY THE FOLLOWING
 - MIN. 4" THICK
 - CONTAIN WELDED WIRE FABRIC OR SYNTHETIC MICROFIBERS. MICROFIBERS MUST BE 1.5" LONG, HAVE A MINIMUM COMPRESSION STRESS OF 3400 PSI, AND APPLIED AT A RATE OF 1-15 LBS PER CUBIC YARD OF CONCRETE.
 - 6 MIL VAPOR BARRIER BELOW SLAB (CAN BE OMITTED FOR NON-HEATED SPACES)
 - PLACED ON 4" OF GRANULAR FILL THAT RESTS ON SOIL ACHIEVING 90% COMPACTION (OR GEOTECH APPROVED FILL)
- CONCRETE MUST CURE FOR A MINIMUM OF 28 DAYS PRIOR TO INSTALLING ANY STRUCTURE UNLESS GIVEN APPROVAL FROM ENGINEER OF RECORD.

REINFORCEMENT (IF REQ'D BY PLANS)

- REINFORCEMENT SHALL BE GRADE 60 AND CONFORM TO ASTM A615. SEE THE "MANUAL OF STEEL PRACTICE", LATEST EDITION, FOR DETAILING, FABRICATION, AND PLACEMENT PRACTICES
- REINFORCEMENT LAP SPLICES SHALL BE CLASS B AS DEFINED BY ACI 318, TYP UNO

MINIMUM LAP SPLICES	
REBAR SIZE	MIN. LAP SPLICE (IN)
#4	18"

- MINIMUM CONCRETE COVER FOR REINFORCEMENT (UNO)
 - EXPOSED TO EARTH = 2" MIN.
 - ALL OTHER = 1.5" MIN.

POST - INSTALLED ANCHORS

- POST INSTALLED ANCHORS INDICATED ON PLANS CAN BE SUBSTITUTED WITH AN ENGINEER APPROVED EQUIVALENT PRODUCT.
- IF ANCHOR NOT LISTED ON PLANS, THE FOLLOWING PRODUCTS CAN BE USED
 - ADHESIVE ANCHOR: HILTI HIT-RE 500 V3 EPOXY (USE MANUFACTURED APPROVED ANCHOR WITH EPOXY)
 - MECHANICAL ANCHOR: HILTI KWIK BOLT TZ, HILTI KWIK HUS-EZ
- SUBSTITUTIONS FOR ANCHORING PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.
- FOLLOW MANUFACTURE'S GUIDELINES FOR INSTALLATION.
- CONCRETE MUST CURE FOR A MINIMUM OF 7 DAYS PRIOR TO INSTALLING ANY POST - INSTALLED ANCHORS UNLESS GIVEN APPROVAL FROM ENGINEER OF RECORD.

WOOD LUMBER

- SAWN WOOD MEMBERS ARE DESIGNED BASED ON SOUTHERN YELLOW PINE #2 OR SPRUCE PINE #2. (LUMBER MUST MEET OR EXCEED THE PROPERTIES FOR THESE SPECIES)

ENGINEERED LUMBER

- MINIMUM PROPERTIES
 - LSL: E = 1300 KSI ; FB = 1900 PSI ; FV = 150 PSI ; FC = 670 PSI
 - LVL: E = 2000 KSI ; FB = 2600 PSI ; FV = 285 PSI ; FC = 750 PSI
 - PSL: E = 2000 KSI ; FB = 2900 PSI ; FV = 290 PSI ; FC = 625 PSI
- MULTI PLY BEAMS TO BE FASTENED TOGETHER PER MANU. RECOMMENDATIONS.

BOLTS AND LAG SCREWS

- BOLTS SHALL CONFORM TO ASTM A307 MINIMUM GRADE TYP UNO.
- BOLTS, WASHERS, AND NUTS SHALL BE GALVANIZED IN ACCORDANCE TO ASTM A153 IF EXPOSED TO ELEMENTS.
- LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981.D
- CAST IN PLACE CONCRETE ANCHORS TO BE PROTECTED FROM DAMAGE DURING CONCRETE INSTALL, INCLUDING THREAD CONTACT WITH WET CONCRETE.

ADDITIONAL NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE ENGINEER OF RECORD SHOULD BE CONTACTED PRIOR TO CONSTRUCTION IF:
 - THE PLANS CONTAINS INACCURATE INFORMATION
 - PLANS ARE INCOMPLETE OR LACK NECESSARY INFORMATION FOR CONSTRUCTION
- THE CONTRACTOR SHALL REVIEW ALL DIMENSION. ANY DISCREPANCY SHOULD BE REPORTED TO ENGINEER OF RECORD PRIOR TO CONSTRUCTION OR PROCEEDING.
- FOUNDATION CONTRACTOR SHALL COMPLY WITH ALL OSHA STANDARDS.

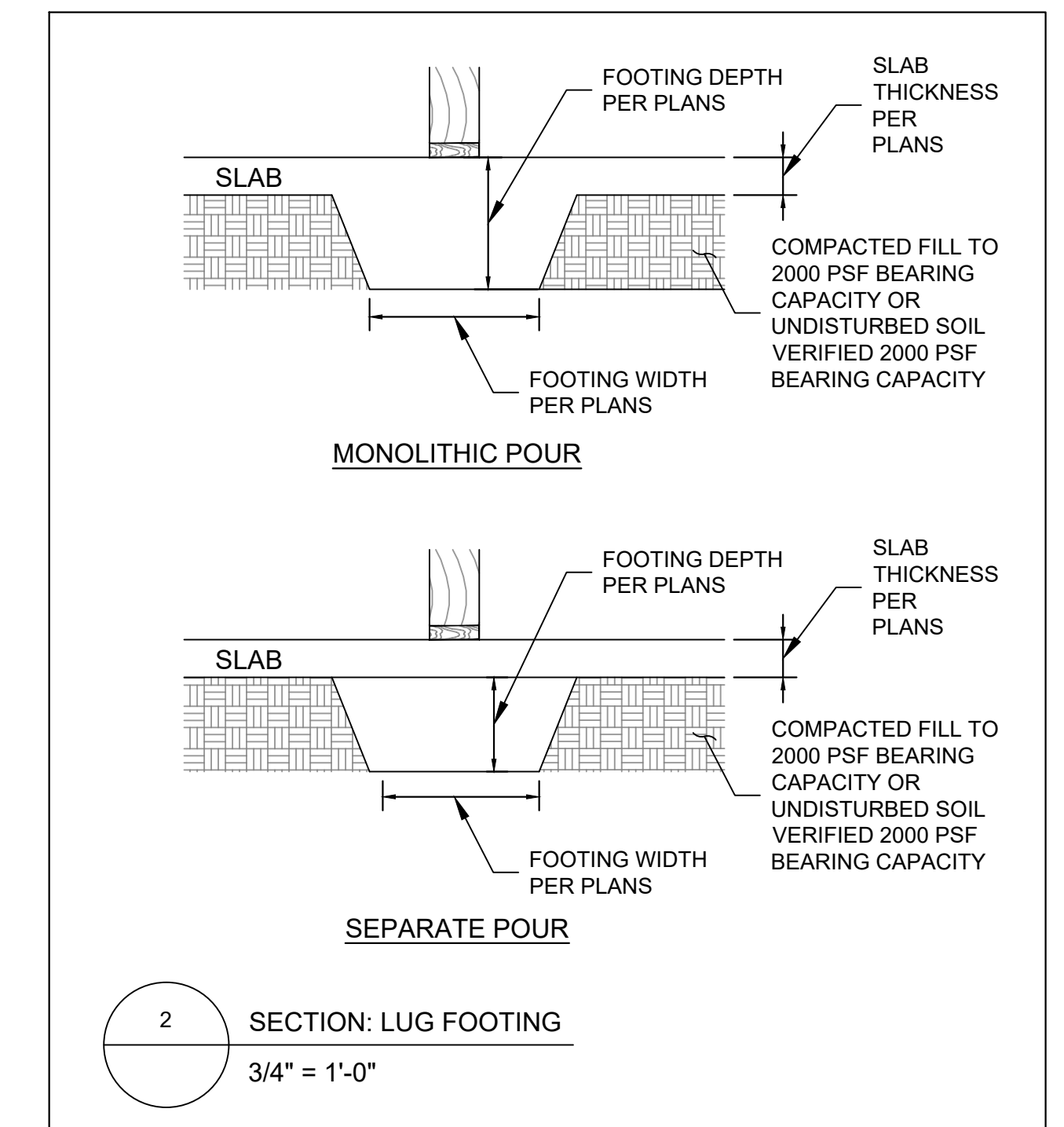
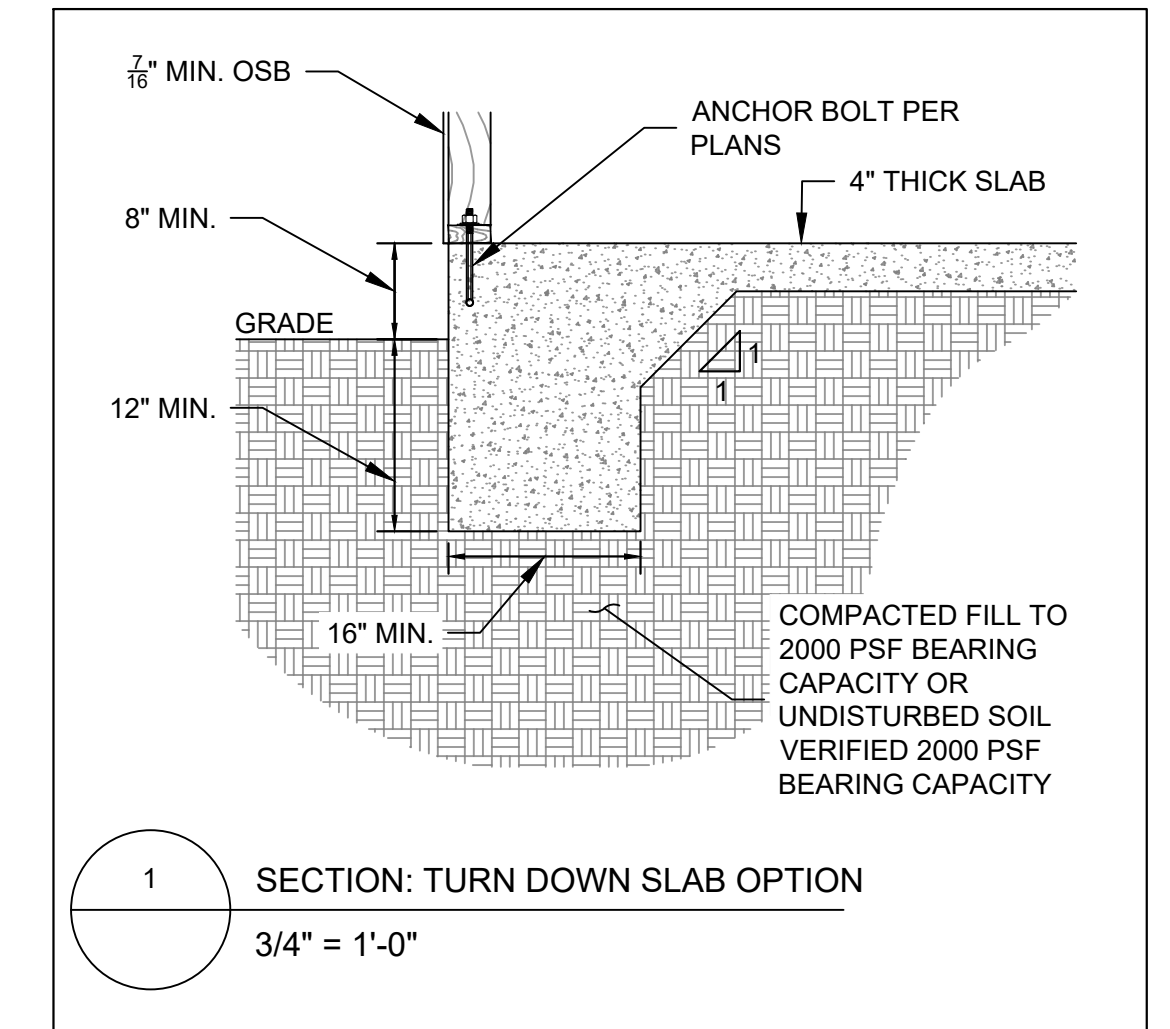
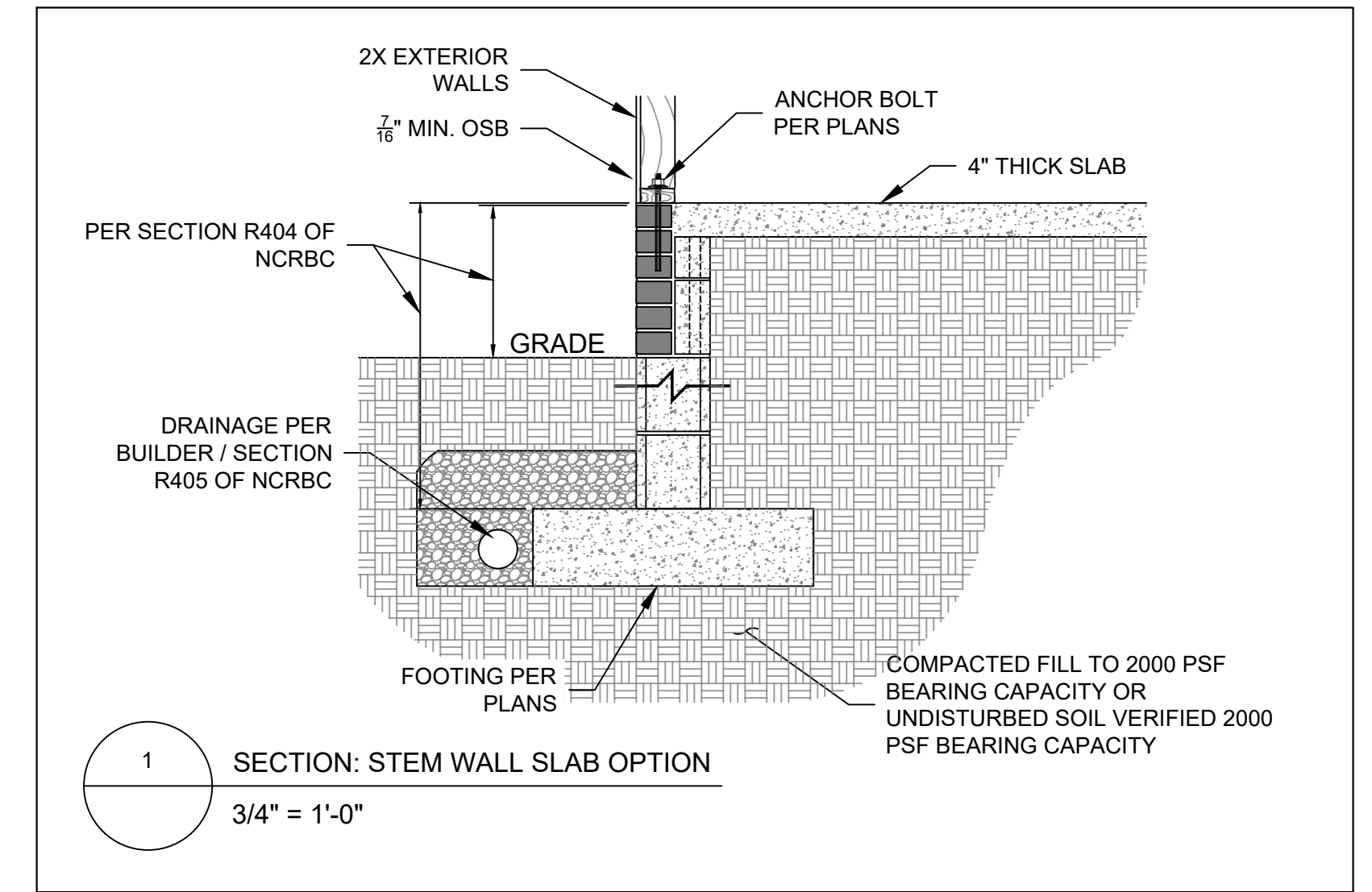
WALL BRACING

- CONTINUOUS SHEATHING
 - 7/16" (MIN.) OSB ON ALL EXTERIOR WALLS
 - INTERIOR OF PANEL NAILING: 6d NAILS @ 12" O.C.
 - PANEL EDGE NAILING: 6d NAILS @ 6" O.C.
- GB: GYPSUM BOARD BRACING (WHERE INDICATED)
 - 1/2" (MIN.) INSTALLED ON BOTH SIDES OF WALL
 - INTERIOR OF PANEL NAILING: 5d NAILS @ 7" O.C.
 - PANEL EDGE NAILING: 5d NAILS @ 7" O.C.
- WSP: WOOD STRUCTURAL PANEL BRACING (WHERE INDICATED)
 - 3/8" (MIN.) WSP
 - INTERIOR OF PANEL NAILING: 6d NAILS @ 12" O.C. (8d FOR 3/8" WSP) PANEL EDGE NAILING: 6d NAILS @ 6" O.C. (8d FOR 3/8" WSP)

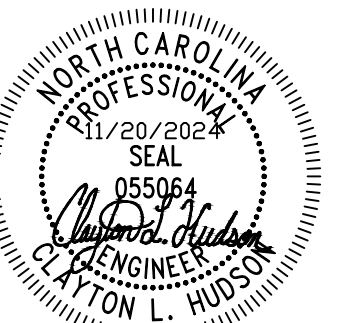
DOCUMENTS AND LIMITATIONS

- THIS DOCUMENT SERVES TO PROVIDE A TOOL FOR THE SPECIFIC NEEDS OF THE PARTICULAR JOB SITE AND INFORMATION GIVEN. ENDURE ENGINEERING PLLC DOES NOT ACCEPT LIABILITY FOR REUSE OR IMPROPER USE OF THIS DOCUMENT UNLESS GIVEN PRIOR WRITTEN AUTHORIZATION.
- THE DESIGNS IN THIS DOCUMENT ARE BASED ON THE STATED ADOPTED CODE TO BE USED AND CURRENT GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRACTICES. THE STRUCTURAL ENGINEER OF RECORD GIVES NO WARRANTY FOR ANY FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE.
- ALL FIELD MODIFICATIONS REQUIRE WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER OF RECORD. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR ANY WORK THAT HE/SHE DID NOT REVIEW OR WAS NOT COMPLETED IN ACCORDANCE WITH THE SEALED RELEASED PLANS.

ABBREVIATION	TERM
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
BE	BOTH ENDS
BF	BOTTOM FLUSH
BTWN	BETWEEN
BW	BOTH WAYS
CLR	CLR
CONC	CONCRETE
DIA	DIAMETER
DBL	DOUBLE
DSP	DOUBLE STUD POCKET
EQ	EQUAL
EA	EACH
FLG	FLANGE
FND	FOUNDATION
HDG	HOT-DIPPED GALVANIZED
MSN	MASONRY
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PL	PLATE
STD	STANDARD
SQ	SQUARE
THK	THICK
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
XJ	EXTRA JOIST
XS	EXTRA STRONG



THESE PLANS ARE INTENDED SOLELY FOR THE CLIENT LISTED AND DESIGNED SPECIFICALLY FOR THE ADDRESS GIVEN. CLIENT SHALL NOT COPY, REUSE, OR PERMIT EMPLOYEES AND/OR HIRED CONTRACTORS TO DISCLOSE INFORMATION IN THESE PLANS TO THIRD PARTIES WITHOUT WRITTEN PERMISSION FROM ENDURE ENGINEERING, PLLC.



PROJECT DETAILS	
CLIENT:	WHITTENTON BUILDERS
CLIENT EMAIL:	
SCOPE OF WORK:	STRUCTURAL PLANS
ADDRESS:	"THE ATRIUM" ALTERNATE ELEVATION
NOTES:	

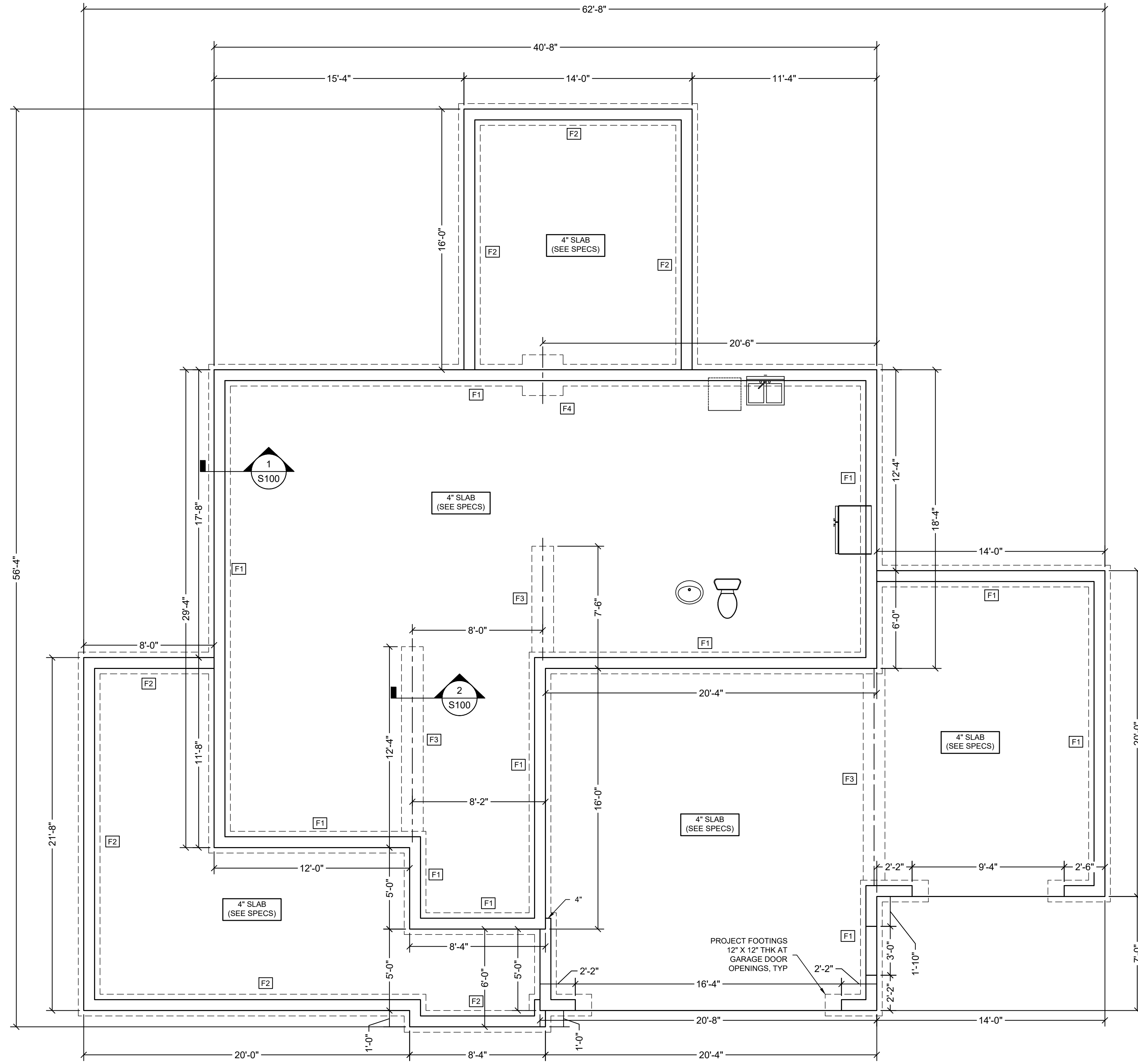
REV #	DESCRIPTION	BY	DATE
0	STRUCTURAL PLANS AND FOUNDATION	CLH	11/20/2024

SPECIFICATIONS AND DETAILS

PROJECT #
24-1-1-114
SHEET #

S100

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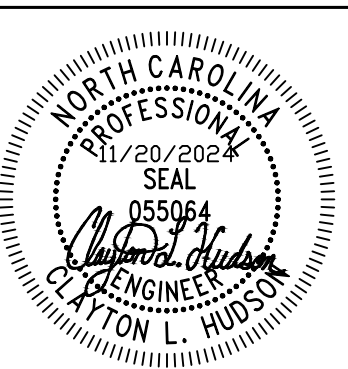


FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

FOUNDATION SCHEDULE	
TAG	DESCRIPTION
F1	MSN WALL: 8" MSN WALL ON A 18" WIDE BY 10" THK FOOTING
	TURNDOWN SLAB: 20" DEEP X 18" WIDE
F2	MSN WALL: 8" MSN WALL ON A 16" WIDE BY 8" THK FOOTING
	TURNDOWN SLAB: 12" DEEP X 16" WIDE
F3	18" WIDE BY 14" (TOTAL) THK LUG FOOTING
F4	36" X 36" X 10" THK FOOTING

NOTES

- 1/2" MIN. Ø ANCHOR BOLTS / 6'-0" O.C. SPACING / 12" MAX FROM CORNERS / 2 BOLT MIN. PER PLATE SECTION INSTALLED IN MIDDLE THIRD OF PLATE. 7" MIN. EMBED (SECTION R403.1.6 OF NCRBC)



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SCOPE OF WORK:	STRUCTURAL PLANS
ADDRESS:	"THE ATRIUM" ALTERNATE ELEVATION
NOTES:	

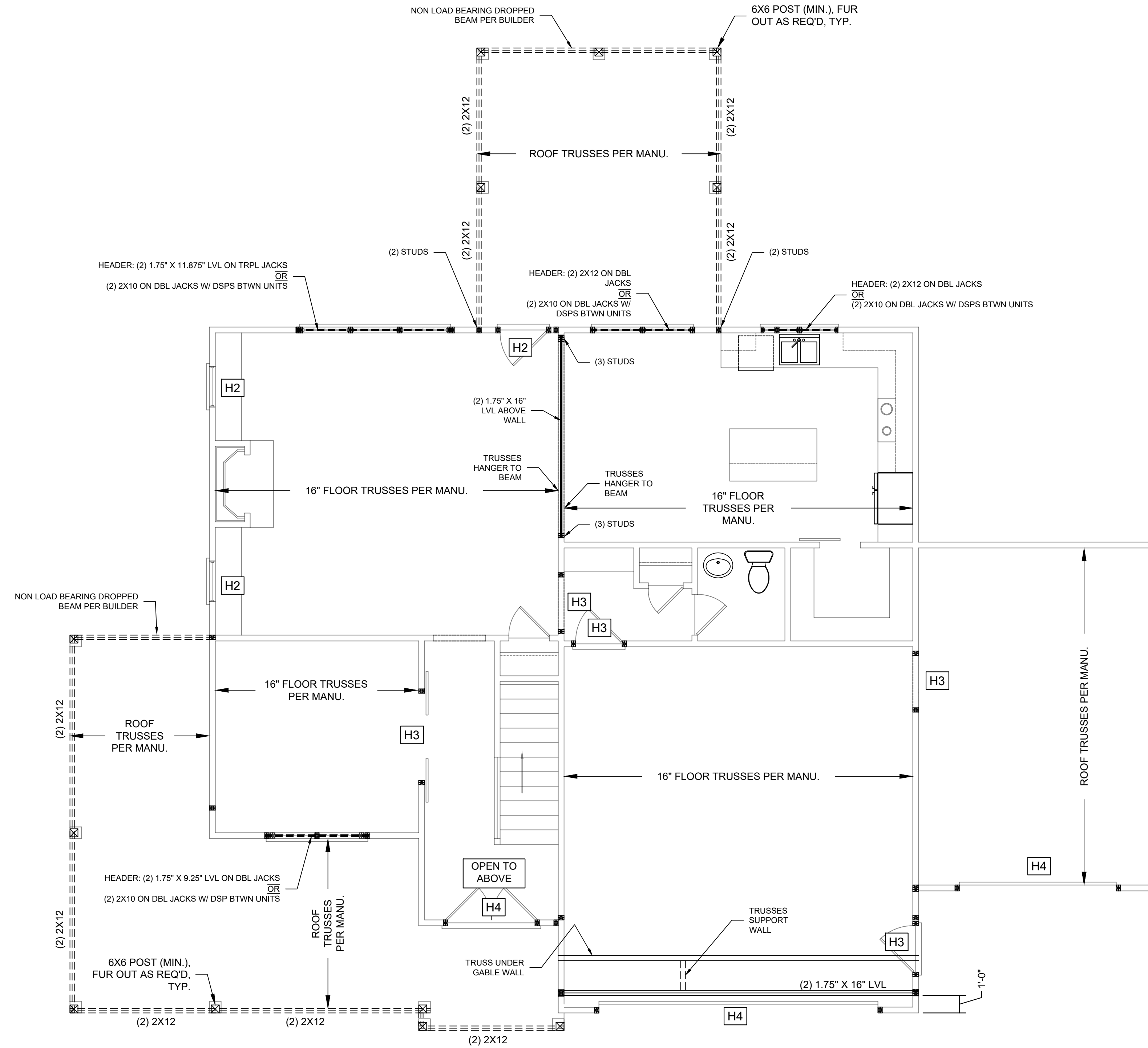
REV. #	DESCRIPTION	BY	DATE
0	STRUCTURAL PLANS AND FOUNDATION	CLH	11/20/2024

FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

PROJECT #
24-1-1-114
SHEET #
S200

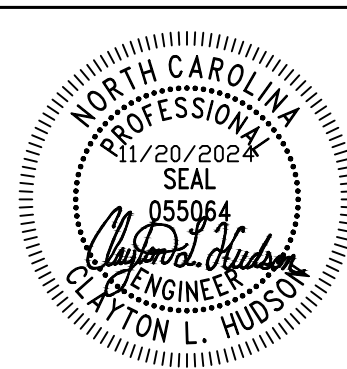
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1ST FLOOR WALLS AND CEILING PLAN
SCALE: 1/4" = 1'-0"

HEADER SCHEDULE	
LOAD BEARING HEADERS (LABELED)	
TAG	DESCRIPTION
H1	(2) 2X8 ON SINGLE JACKS
H2	(2) 2X10 ON SINGLE JACKS
H3	(2) 2X10 ON DBL JACKS
H4	(2) 2X12 ON DBL JACKS
NON-LOAD BEARING HEADERS:	
0" - 38" OPENINGS: SINGLE 2X4 TURNED FLAT	
38" TO 72" OPENINGS: DBL 2X4 ON SINGLE JACKS	
KING STUDS FOR BRACED WALLS (BOTH SIDES OF OPENING)	
# STUDS	MAX OPENING
1	5'-0"
2	8'-0"
3	10'-0"
4	12'-0"
5	15'-0"

- NOTES**
- BEAMS ARE ASSUMED TO BE SET BOTTOM FLUSH WITH FLOOR SYSTEM UNO
 - BEAMS SHALL BE SUPPORTED BY A CENTERED GANGED STUD COLUMN MATCHING OR EXCEEDING THE WIDTH OF THE BEAM, UNO.



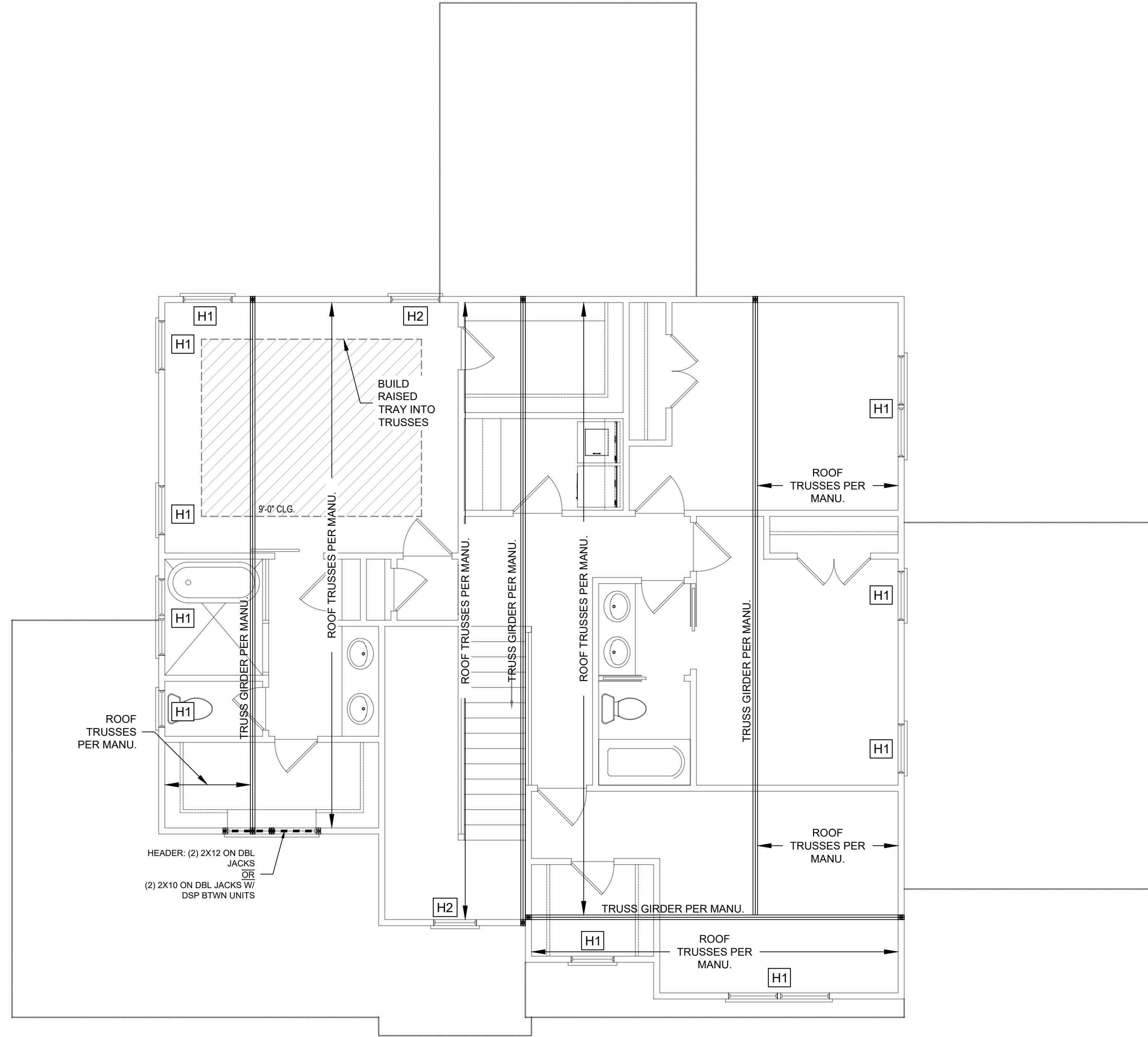
PROJECT DETAILS
 CLIENT: WHITTENTON BUILDERS
 CLIENT EMAIL:
 SCOPE OF WORK: STRUCTURAL PLANS
 ADDRESS: "THE ATRIUM" ALTERNATE ELEVATION
 NOTES:

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1ST FLOOR WALLS AND CEILING PLAN
 SCALE: 1/4" = 1'-0"

PROJECT #
24-1-1-114
 SHEET #
S210

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2ND FLOOR WALLS AND CEILING PLAN
SCALE: 1/4" = 1'-0"

HEADER SCHEDULE	
LOAD BEARING HEADERS (LABELED)	
TAG	DESCRIPTION
H1	(2) 2X8 ON SINGLE JACKS
H2	(2) 2X10 ON SINGLE JACKS
H3	(2) 2X10 ON DBL JACKS
H4	(2) 2X12 ON DBL JACKS
NON-LOAD BEARING HEADERS:	
0" - 38" OPENINGS: SINGLE 2X4 TURNED FLAT	
38" TO 72" OPENINGS: DBL 2X4 ON SINGLE JACKS	
KING STUDS FOR BRACED WALLS (BOTH SIDES OF OPENING)	
# STUDS	MAX OPENING
1	5'-0"
2	8'-0"
3	10'-0"
4	12'-0"
5	15'-0"

- NOTES**
- BEAMS ARE ASSUMED TO BE SET BOTTOM FLUSH WITH FLOOR SYSTEM UNO
 - BEAMS SHALL BE SUPPORTED BY A CENTERED GANGED STUD COLUMN MATCHING OR EXCEEDING THE WIDTH OF THE BEAM, UNO.

ENDURE ENGINEERING
 ENDURE ENGINEERING, PLLC (P-2652)
 2309 FURLONG PL., EASTOVER, NC 28312
 (910) 850-4443
 www.endureengineering.com

NORTH CAROLINA PROFESSIONAL SEAL
 11/20/2024
 05504
 KYLE L. WILSON
 CIVIL ENGINEER

REV. #	DESCRIPTION	BY	DATE
0	STRUCTURAL PLANS AND FOUNDATION	CLH	11/20/2024

PROJECT DETAILS

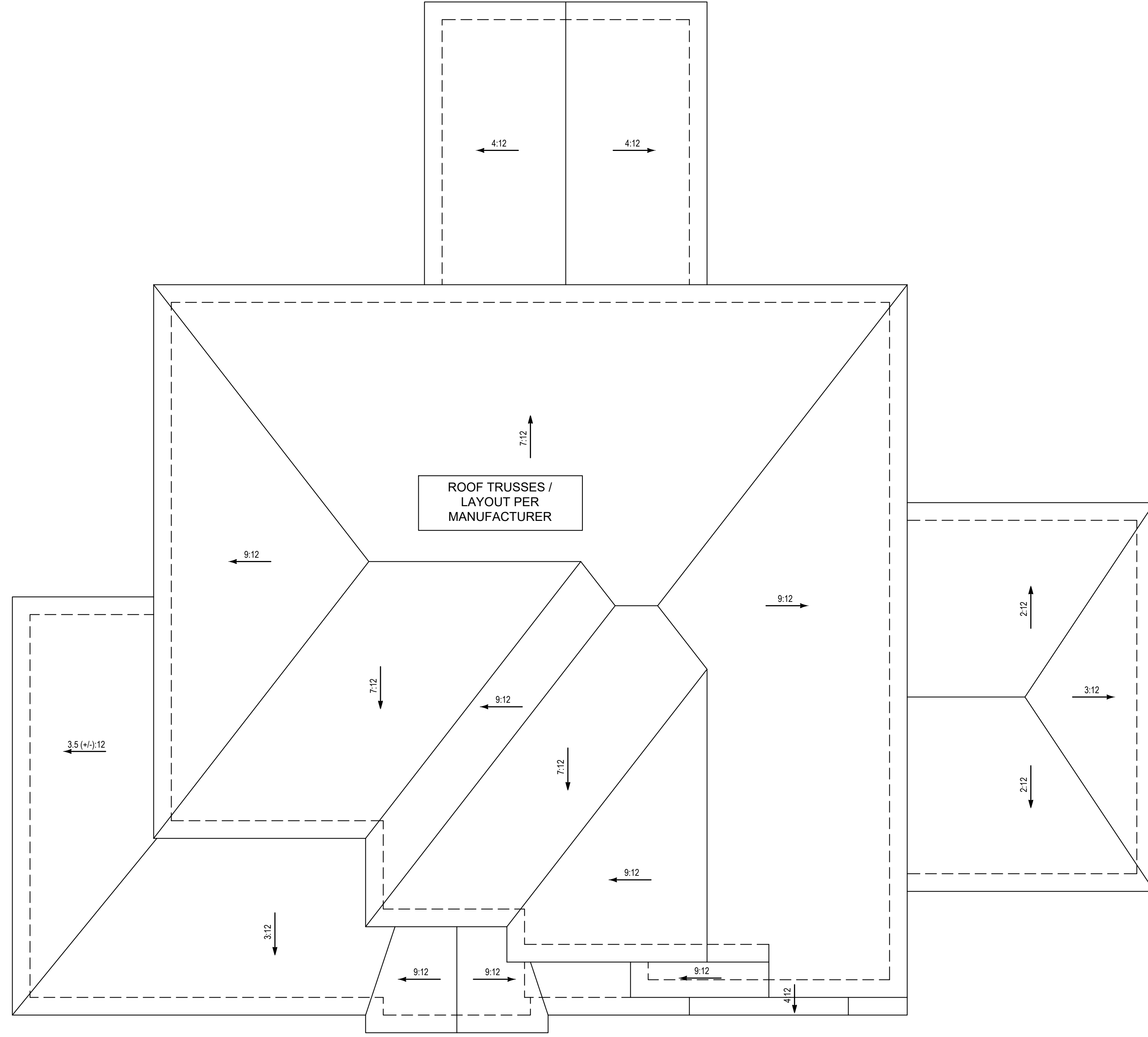
CLIENT: WHITTENTON BUILDERS
 CLIENT EMAIL:
 SCOPE OF WORK: STRUCTURAL PLANS
 ADDRESS: "THE ATRIUM" ALTERNATE ELEVATION
 NOTES:

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2ND FLOOR WALLS AND CEILING PLAN
 SCALE: 1/4" = 1'-0"

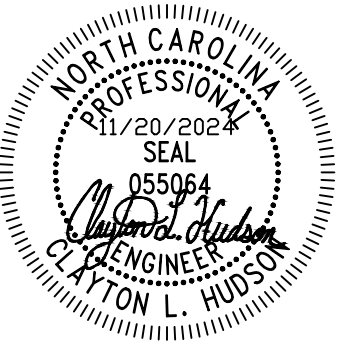
PROJECT #
24-1-1-114
SHEET #
S220

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

ROOF FRAMING NOTES
- ROOF PITCHES, KNEEWALLS, AND OVERHANGS TO BE VERIFIED WITH ARCH. DRAWINGS



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2309 FURLONG PL., EASTOVER, NC 28312
(910) 850-4043
www.endureengineering.com

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0	STRUCTURAL PLANS AND FOUNDATION	CLH	11/20/2024	CLIENT: WHITTENTON BUILDERS CLIENT EMAIL: SCOPE OF WORK: STRUCTURAL PLANS ADDRESS: "THE ATTRIUM" ALTERNATE ELEVATION NOTES:

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

PROJECT #
24-1-1-114
SHEET #
S230