

MALDONADO RESIDENCE - FIRE REPAIR

25 BRIARWOOD PL
SANFORD, NC, 27332

DESIGN CRITERIA

DESIGN CRITERIA			
1	BUILDING CODES	NORTH CAROLINA RESIDENTIAL BUILDING CODE 2018 EDITION MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, ASCE 7-05	
2	DEAD LOAD	ROOF	10 PSF
		FLOOR	10 PSF
3	LIVE LOAD (NBC 2018, TABLE 4-1)	ROOF	20 PSF
		FLOOR	40 PSF
4	SOIL LOADS (ASCE 7-05 & 2018 NBC)	ALLOWABLE SOIL BEARING PRESSURE	2000 PSF (TABLE 1806.2)
		SUB GRADE MODULUS (k)	100 PCI
		ULTIMATE FRICTION COEFFICIENT	0.25 (TABLE 1806.1)
		UNIT WEIGHT OF SOIL	110 PCF
		SNOW IMPORTANCE FACTOR, I_s	1.0 (TABLE 7-4)
5	SNOW LOAD (ASCE 7-10)	GROUND SNOW LOAD, P_g	15 PSF (FIG 7-1)
		SNOW EXPOSURE FACTOR, C_e	1.0 TABLE (7-2)
		THERMAL FACTOR, C_t	1.0 TABLE (7-3)
		ROOF SLOPE FACTOR, C_s	1.7 (FIG 7-2)
		BALANCED SNOW LOAD, P_f (BAL)	15.5 PSF (EQ. 7-1, SECT.7.10)
		SLOPED ROOF SNOW LOAD, P_s	15 PSF (EQ.7-2)
		ANALYSIS PROCEDURE	MEHOTD II ANALYTICAL
6	WIND LOADS - MAIN WIND FORCE RESISTING SYSTEM (ASCE 7-05)	WIND SPEED, V (β SECOND GUST)	120 MPH (FIG 6-1)
		WIND IMPORTANCE FACTOR, I_w	1.00 (TABLE 6-1)
		EXPOSURE	B (SEC.6.5.6.3)
		TOPOGRAPHY FACTOR, K_{zt}	1.00 (FIG 6-4)
		INTERNAL PRESSURE COEFFICIENT, G_{cpi}	± 0.18 (FIG 6-5)
		APPLIED DIRECTIONALITY FACTOR, K_d	0.85 (TABLE 6-4)
		W_x	6.4 KIPS
		W_y	14.8 KIPS
		ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
		RISK CATEGORY	II (IBC, TABLE 1604.5)
7	SEISMIC LOADS (ASCE 7-10)	SEISMIC IMPORTANCE FACTOR, I_s	1.0 (TABLE 11.5-1)
		SOIL SITE CLASS	C, SOIL REPORT
		MAPPED SPECTRAL RESPONSE ACCELERATION, S_s	0.198 (FIG 22-1)
		MAPPED SPECTRAL RESPONSE ACCELERATION, S_1	0.078 (FIG 22-2)
		LONG PERIOD TRANSITION PERIOD, T_l	8 SEC. (FIG 22-15)
		SEISMIC FORCE RESISTING SYSTEM	BEARING WALL SYSTEM, LIGHT-FRAMED WALLS SHEATHED IN WOOD PANELS RATED FOR SHEAR (AT3, TABLE 12.2-1)
		SEISMIC DESIGN CATEGORY	B (IBC, TABLE 1612.5.6)
		SEISMIC BASE SHEAR S_x	0.51 KIPS
		SEISMIC BASE SHEAR S_y	0.51 KIPS
		8	A PROGRAM OF SPECIAL INSPECTIONS IS NOT REQUIRED FOR THIS PROJECT. PER NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION SECTION 1704.1.2.

SITE PLAN



INDEX OF DRAWINGS

- G1 COVER SHEET
SITE PLAN
- A2 FIRST FLOOR PLAN
FRONT ELEVATION
- A3 PROPOSED SECOND FLOOR PLAN
REAR ELEVATION
- S4 SECOND FLOOR FRAMING PLAN
CEILING FRAMING PLAN
- S5 ROOF FRAMING PLAN
ROOF PLAN
DETAILS

GENERAL NOTES

HDS ENGINEERING IS NOT RESPONSIBLE FOR SAFETY PROGRAMS, METHODS OR PROCEDURES OF OPERATION OR CONSTRUCTION OF THE DESIGN SHOWN ON THESE DRAWINGS. DRAWINGS ARE FOR USE ON THIS PROJECT ONLY AND ARE NOT INTENDED FOR REUSE WITHOUT WRITTEN APPROVAL FROM HDS ENGINEERING.

DRAWINGS ARE ALSO NOT TO BE USED IN ANY MANNER THAT WOULD CONSTITUTE A DETRIMENT DIRECTLY OR INDIRECTLY TO HDS ENGINEERING.

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- ALL WORK SHALL COMPLY WITH THE CITY AND STATE OF NORTH CAROLINA CODES, AS WELL AS ALL OTHER APPLICABLE MUNICIPAL CODES AND STANDARDS. IN CASE OF CONFLICT BETWEEN REQUIREMENTS, THE MOST RESTRICTIVE SHALL APPLY.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE PROJECT CONFORMS TO THE CODES AND REGULATIONS OF ALL APPLICABLE GOVERNING BUILDING AUTHORITIES. THE 2018 NORTH CAROLINA BUILDING CODE, THE INTERNATIONAL BUILDING CODE WITH NORTH CAROLINA AMENDMENTS, AND MANUFACTURERS' RECOMMENDATIONS.
- THE PURPOSE OF THESE DRAWINGS IS TO SHOW THE INTENT OF THE DESIGN AND CONSTRUCTION PER THE OWNER'S SPECIFICATIONS. WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THESE DOCUMENTS TO AVOID MISTAKES, THE MAKER CANNOT GUARANTEE AGAINST HUMAN ERROR. ANY CHANGES TO THESE DOCUMENTS AFTER THE DATE ON THESE DRAWINGS WILL BE DONE AT THE OWNER'S EXPENSE AND RESPONSIBILITY. IN CASE OF DISCREPANCIES, THE DESIGNER AND ENGINEER SHALL BE IMMEDIATELY CONTACTED.
- THE CONTRACTOR IS RESPONSIBLE FOR SECURING ALL REQUIRED APPROVALS AND PERMITS FROM THE APPROPRIATE AGENCY AND FOR THE COORDINATION AND COSTS ASSOCIATED WITH CONSTRUCTION AND INSPECTION.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL CONDITIONS, DIMENSIONS, AND OTHER DETAILS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY THEREAFTER. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT PROVISIONS ARE MADE AND APPROVED METHODS ARE USED FOR CONSTRUCTION.
- THE CONTRACTOR SHALL ACCEPT RESPONSIBILITY FOR ANY UNSEEN CONFLICTS OR CONSTRUCTION COMPLEXITIES DISCOVERED DURING CONSTRUCTION NOT DESCRIBED IN THE CONSTRUCTION DOCUMENTS. THEY MUST NOTIFY THE ARCHITECT AND COORDINATE NECESSARY MEANS AND METHODS TO PROCEED.

SQUARE FOOTAGE

SQUARE FOOTAGE	
HEATED	
MAIN FLOOR	1,776 S.F.
SECOND FLOOR	1,762 S.F.
TOTAL	3,538 S.F.
UNHEATED	
FRONT PORCH	119.46 S.F.
TOTAL	119.46 S.F.
TOTAL AREA	3,657.46 S.F.

BUILDING SUMMARY

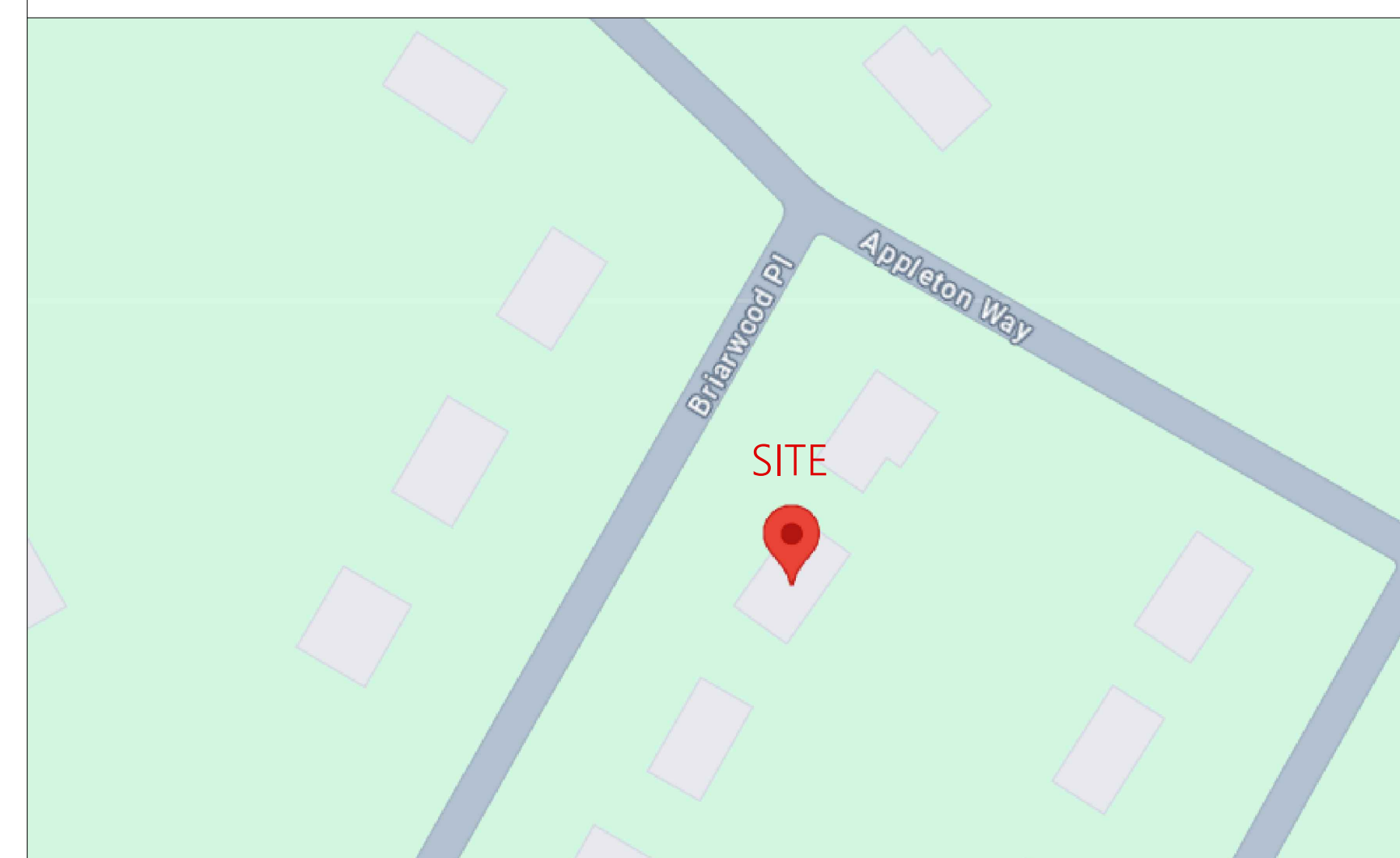
PIN:
RED:
LOCATION: SANFORD, NC
USE: SINGLE FAMILY
CALCULATED ACRES: 0.364

BUILDING DATA:
TWO STORY
CONSTRUCTION TYPE: WOOD FRAMING
CURRENT SQUARE FOOTAGE: 15,884 SQ FT

UTILITY NOTES

- THE CONTRACTOR SHALL COORDINATE AND BE RESPONSIBLE FOR ALL UTILITIES (INCLUDING ELECTRICAL, MECHANICAL, PLUMBING, AND GAS) REQUIRED TO CONSTRUCT THIS PROJECT.
- THE CONTRACTOR SHALL INVESTIGATE AND ASSESS THE CONDITION AND CAPABILITIES OF EXISTING UTILITY SERVICES TO ENSURE THEY MEET OR EXCEED THE NEEDS OF THIS PROJECT.
- THE CONTRACTOR SHALL PROPOSE THE MOST ENERGY-EFFICIENT SYSTEMS, SUGGEST UPGRADES AND MODIFICATIONS TO EXISTING SYSTEMS, AND PROVIDE SERVICE LOCATIONS AND RUNS PRIOR TO CONSTRUCTION FOR REVIEW BY THE OWNER (AND/OR OWNER'S REPRESENTATIVES).

SITE KEY MAP

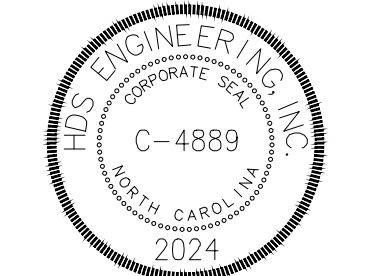


TYPICAL ABBREVIATIONS

&	= AND	MECH.	= MECHANICAL
@	= AT	MFR.	= MANUFACTURER
+	= PLUS OR MINUS	MIN.	= MINIMUM
A/E	= ARCHITECT/ENGINEER	N.T.S.	= NOT TO SCALE
A.F.	= ABOVE FINISHED FLOOR	O.C.	= ON CENTER
A.S.L.	= ABOVE SEA LEVEL	O.F.	= OVERFRAME
ARCH.	= ARCHITECTURAL	O.H.D.	= OVERHEAD DOOR
B.O.	= BY OTHERS	O.H.C.	= OVERHEAD CABINETS
C.F.S.	= COLD-FORMED STEEL	P.A.F.	= POWER ACTUATED FASTENER
C.J.	= CEILING JOIST	P.B.	= PERIMETER BAND
C.L.	= CENTER LINE	PL	= PLATE
C.R.C.	= COLD ROLLED CHANNEL	RAFT.	= RAFTERS
C.M.U.	= CONCRETE MASONRY UNIT	REQ.	= REQUIRED
CONC.	= CONCRETE	R&S	= ROD AND SHELF
CONT.	= CONTINUOUS	R.O.	= ROUGH OPENING
DEFL.	= DEFLECTION	S.H.	= SILL HEIGHT
DBL	= DOUBLE	SIM.	= SIMILAR
Ø	= DIAMETER	STL.	= STEEL
DR.	= DOOR	S.W.	= SHEAR WALL
DWG.	= DRAWING	STR.	= STRUCTURAL
ELEV.	= ELEVATION	TEMP.	= TEMPORARY
ENGR.	= ENGINEER	T.O.B.	= TOP OF BEAM
E.O.S.	= EDGE OF SLAB	T.O.C.	= TOP OF CONCRETE
EQ.	= EQUAL	T.O.S.	= TOP OF STEEL
E.W.	= EACH WAY	T.S.N.	= THE STEEL NETWORK
EXIST.	= EXISTING	TYP.	= TYPICAL
FLR.	= FLOOR	U.N.O.	= UNLESS NOTED OTHERWISE
F.J.	= FLOOR JOISTS	VERT.	= VERTICAL
GA.	= GAUGE	VER.	= VERIFY IN FIELD
HT.	= HEIGHT	V.S.C.	= VERTICAL SLIP CLIP
K.B.	= KNEE BRACE	WN.	= WINDOW
MAX	= MAXIMUM	W/	= WITH



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HDS ENGINEERING ASSUMES NO LIABILITY FOR DEVIATIONS FROM OR MODIFICATIONS MADE TO THE PLANS BY OTHERS. HDS ENGINEERING WILL NOT BE HELD RESPONSIBLE FOR CONTRACTOR'S FAILURE TO CONFORM TO CONSTRUCTION DOCUMENTS, FAILURE TO NOTIFY ENGINEER OF KNOWN DISCREPANCIES, OR CONSTRUCTION MEANS AND METHODS.

REVISIONS

NO.	DATE

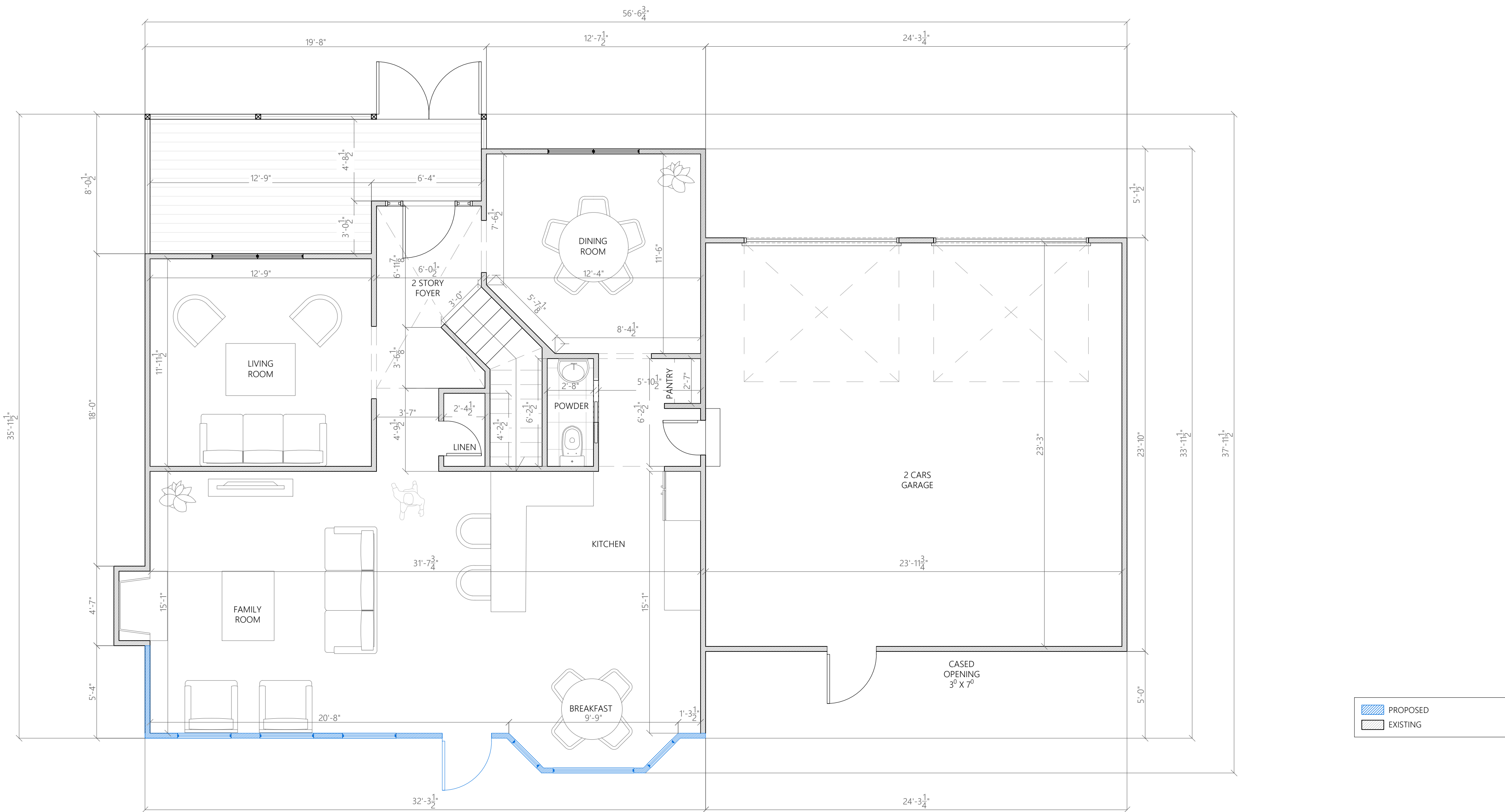
PLAN INFORMATION

PROJECT NO: 24-247
FILENAME: MALDONADO RESIDENCE-FIRE REPAIR
CHECKED BY: HDS
DRAWN BY: W.G.
DATE: 06-07-2024

CONTENT

LOWER LEVEL PLAN
MAIN LEVEL PLAN
UPPER LEVEL PLAN

SHEET



1
A2 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"



2
A2 FRONT ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. THESE PLANS ARE INTENDED FOR USE BY A LICENSED GENERAL CONTRACTOR.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL PHASES OF CONSTRUCTION COMPLY WITH ALL BUILDING CODE REQUIREMENTS.
3. PRIOR TO CONSTRUCTION, THE GENERAL CONTRACTOR IS TO REVIEW ALL PLANS AND BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS.
4. ANY DISCREPANCIES IN THE PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE DESIGNER BEFORE CONSTRUCTION BEGINS.
5. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS.
6. PLUMBING AND HVAC PLANS ARE TO BE MANAGED BY THE GENERAL CONTRACTOR UNLESS SPECIFIED OTHERWISE. EACH MUST COMPLY WITH ALL BUILDING CODE REQUIREMENTS.

STRUCTURAL NOTES

1. THE ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE STRUCTURAL ENGINEER OF RECORD FOR THIS PROJECT. NO OTHER PARTY MAY MODIFY OR REUSE THESE CONSTRUCTION DOCUMENTS WITHOUT WRITTEN PERMISSION FROM HDS ENGINEERING OR THE STRUCTURAL ENGINEER OF RECORD. THE ENGINEER'S SEAL ONLY APPLIES TO STRUCTURAL COMPONENTS AND SYSTEMS AND DOES NOT CERTIFY THE DIMENSIONAL ACCURACY OF THE ARCHITECTURAL LAYOUT.
2. THE ENGINEER SHALL HAVE NO LIABILITY TO THE HOMEOWNER OR OTHERS FOR ACTS OR OMISSIONS OF THE CONTRACTOR/BUILDER OR ANY OTHERS PERFORMING WORK ON THIS PROJECT. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION SEQUENCES, METHODS, TECHNIQUES, OR SAFETY REQUIREMENTS IN CONNECTION WITH THE CONSTRUCTION OF THIS STRUCTURE.
3. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR DEPICTED OR IMPLIED STRUCTURAL INFORMATION. SHOULD ANY DISCREPANCIES BECOME APPARENT, THE STRUCTURAL ENGINEER OF RECORD MUST BE NOTIFIED IMMEDIATELY BEFORE CONSTRUCTION BEGINS.
4. ONLY SEALED DRAWINGS WITH THE LATEST REVISIONS ARE APPLICABLE FOR CONSTRUCTION.
5. ALL CONSTRUCTION, WORKMANSHIP, AND MATERIALS SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE '2018 NORTH CAROLINA BUILDING CODE' AND LOCAL REGULATIONS.
6. DESIGN LOADS:

STRUCTURAL SYSTEM	LL	D.L.	T.L.	STRUCTURAL SYSTEM	LL	D.L.	T.L.
F.L.R. (PRIMARY DWELG.)	40	10	50	ATTICS W/ FIXED STAIRS	40	10	50
F.L.R. (SLEEPING RMS.)	30	10	40	STAIRS	40	5	45
BALCONIES (EXTERIOR)	60	10	70	GUARDRAIL/HANDRAIL	200		200
DECKS	40	10	50	ROOF SYSTEM	20	10	30
ATTICS W/OUT STOR.	10	10	20	CATHEDRAL	20	15	35
ATTICS W/ LIMITED STOR.	20	10	30	INTERIOR PART'N WALL	9	9	

SEISMIC DESIGN CATEGORY	DI
SNOW LOAD	25 PSF
SOIL BEARING PRESSURE	2000 PSF
WIND VELOCITY	115 MPH (ULTIMATE)
WIND EXPOSURE	B

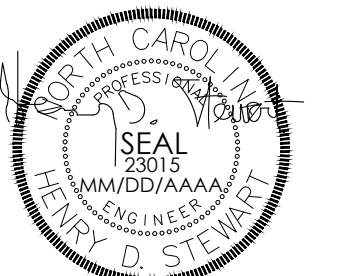
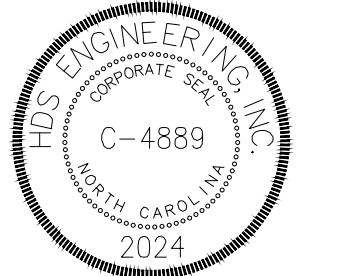
7. DEFLECTION: FLOOR: MIN L/480, ATTIC WITH CEILING: L/240, ROOF: L/180 - MORE STRINGENT CRITERIA MAY BE USED AT THE ENGINEER'S DISCRETION OR AS REQUESTED.
8. ALL GLASS IN DOORS, SIDELIGHTS, AND OTHER HAZARDOUS LOCATIONS TEMPERED GLASS (IRC 308.4)
9. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL CONTACT THE ARCHITECT FOR ITEMS NOT DIMENSIONED.

TRUSS SYSTEM REQUIREMENTS

1. ALL TRUSSES SHALL BE HANDLED, STORED, INSTALLED, RESTRAINED, AND BRACED AS REQUIRED PER IRC 2015, NCBRC 2018, ANS/TP1 1-2014, AND BUILDING COMPONENT SAFETY INFORMATION 2018 (BCSI).
2. THE TRUSS LAYOUT IS INDICATED ON THIS PLAN. THE TRUSS PLACEMENT PLAN, PROVIDED BY THE TRUSS MANUFACTURER, INCLUDING DIRECTION, SPAN, AND SUPPORT LOCATIONS, SHALL COINCIDE WITH THE LAYOUT SHOWN ON THIS PLAN. IF DISCREPANCIES ARE FOUND, CONTACT THE ENGINEER OF RECORD IMMEDIATELY.
3. TRUSS 'PROFILES' SHALL BE SEALED BY THE TRUSS MANUFACTURER.
4. NOTE THAT TRUSS PLACEMENT PLANS MAY REQUIRE APPROVAL BY THE STRUCTURAL ENGINEER AS REQUIRED BY THE BUILDING CODE OFFICIAL.
5. TRUSSES REQUIRE PERMANENT BRACING WITHIN ALL OF THE FOLLOWING PLANES: TOP CHORD, BOTTOM CHORD, AND WEB MEMBER. PERMANENT BRACING REQUIREMENTS SHALL BE PER BCSI-83 2013 / ATTACHED BCSI-83 SUMMARY SHEET OR THE PERMANENT BRACING PLAN PROVIDED. CONTACT THE ENGINEER OF RECORD TO REQUEST A PERMANENT BRACING PLAN.
6. PERMANENT BRACING ASSUMPTIONS: TOP CHORD - SHEATHING; BOTTOM CHORD - GYPSUM BOARD. IF TOP AND BOTTOM CHORDS ARE NOT CLAD PER ASSUMPTIONS, CONTACT THE ENGINEER OF RECORD IMMEDIATELY.
7. GABLE END FRAME REQUIRES PERMANENT BRACING. IN ADDITION TO PERMANENT WEB MEMBER BRACINGS SPECIFIED BY THE TRUSS MANUFACTURER, BOTTOM CHORD LATERAL RESTRAINT (BCLR) AND GABLE END/WALL PERMANENT DIAGONAL BRACING ARE REQUIRED AS FOLLOWS:
 - GABLE HEIGHT LESS THAN 4'-0": 2X4 SPACED 8' O.C. - BCLR 8' LONG.
 - 4'-0" TO 8'-0": 2X4 SPACED 6' O.C. - BCLR 8' LONG.
 - 8'-0" TO 13'-0": 2X4 SPACED 4' O.C. - BCLR 8' LONG.
 - 13'-0" TO 18'-0": 2X6 SPACED 4' O.C. - BCLR 10' LONG.

STEEL NOTES

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION'S 'CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES' AND VOLUMES I AND II OF THE 'MANUAL OF STEEL CONSTRUCTION: LOAD AND RESISTANCE FACTOR DESIGN,' LATEST EDITION.
2. STRUCTURAL STEEL SHALL BE ASTM GRADE A992 (FY=50KSI). STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3-1/2" AND THE FULL FLANGE WIDTH, OR MORE IF INDICATED. STEEL BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO 1/2" DIA. X 4" LAG SCREWS AND LATERALLY SUPPORTED. LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED JOISTS ARE TOE-NAILED TO THE SOLE PLATE AND THE SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE AT 24" O.C.
3. ALL BOLTS SHALL BE HIGH-STRENGTH, CONFORMING TO ASTM A-325.
4. FLITCH BEAMS TO BE FASTENED TOGETHER USING 1/2 INCH DIAMETER A307 BOLTS WITH WASHERS UNDER THE THREADED END OF THE BOLT. SQUARE WASHERS PREFERRED. BOLTS WILL BE SPACED AT A MAXIMUM OF 24" STAGGERED TOP AND BOTTOM OF THE BEAM, WITH NO BOLT LESS THAN 2" FROM EACH END.



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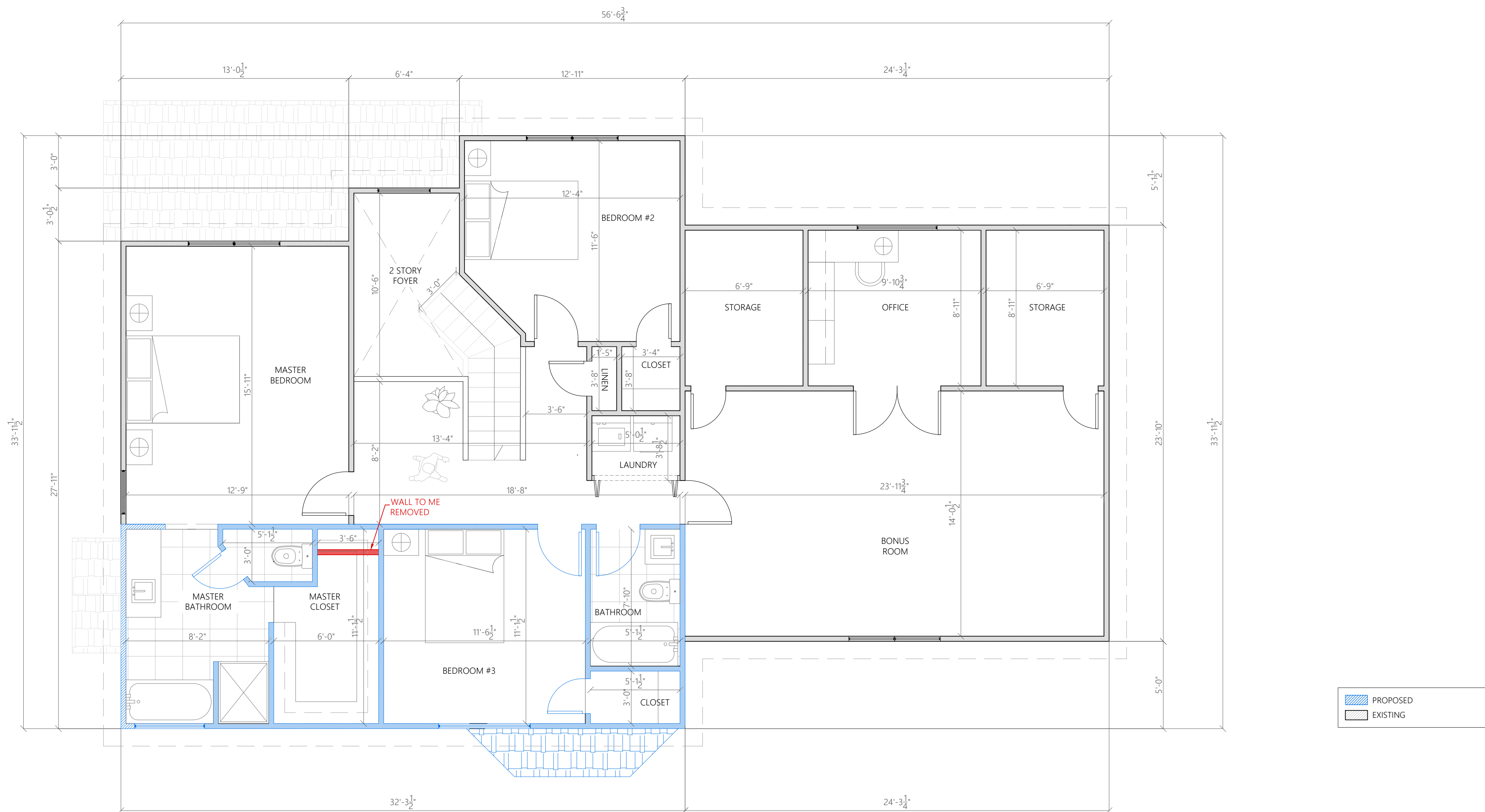
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PROJECT NO: 24-247
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RESIDENCE-FIRE REPAIR
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CONTENT

FIRST FLOOR PLAN
FRONT ELEVATION
NOTES

SHEET



1
A3 PROPOSED SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"



2
A3 REAR ELEVATION
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FLOOR PLAN NOTES:

- VINYL FRAME WINDOWS TYPICAL. ROUGH OPENINGS MAY VARY, VERIFY ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- CABINET DESIGN BY OTHERS TO BE VERIFIED WITH ACTUAL FRAMED (AS-BUILT) DIMENSIONS ON SITE.
- FOR ALL BEAM SIZES AND LOCATIONS, REFER TO STRUCTURAL FRAMING PLANS AND ENGINEERING CALCULATIONS DURING CONSTRUCTION.
- SEE STRUCTURAL PLANS, FOUNDATION, FRAMING, AND SHEAR WALL SHEETS FOR ALL SIMPSON HOLD-DOWNS, STRAPS, AND HANGERS.
- PROVIDE TEMPERED GLAZING IN ALL WINDOWS WITH EXPOSED AREAS GREATER THAN 9 SQ. FT. AND IN WINDOWS WITH THE BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR.

FRAMING NOTES:

- ALL FRAMING LUMBER SHALL BE SPF #2 (E = 1,400,000 PSI, FB = 875 PSI). TREATED LUMBER SHALL BE SYP #2 (E = 1,400,000 PSI, FB = 975 PSI). STUDS SHALL BE MIN #2 OR STUD GRADE.
- LVL SHALL BE LAMINATED VENEER LUMBER OR PARALLEL STRAND LUMBER (PSL) WITH THE FOLLOWING PROPERTIES: E = 2,000,000 PSI, FB = 2900 PSI, FV = 290 PSI.
- PROVIDE DOUBLE TOP PLATES IN ALL EXTERIOR WALLS. STAGGER JOINTS MIN 24" W/ (4) 16D NAILS.
- WALL BRACING SHALL CONFORM TO R602.10.
- SET ALL JOISTS AND BEAMS WITH NATURAL CAMBER UP. ENDS LAPPED MIN. 6" OVER BEARING SHALL BE SECURELY NAILED TOGETHER. PROVIDE AT MIN. 1-1/2" BEARING FOR ALL JOISTS AND MIN. 3" FOR BEAMS (U.N.O.).
- ALL FRAMING EXPOSED TO CONCRETE OR WEATHER TO BE PRESSURE TREATED. SILLS MIN. 2X6.
- STRUCTURAL MEMBER FASTENING TO CONFORM TO TABLE R602.3 (1) AND (2).
- DOUBLE ALL JOISTS: A) UNDER PARALLEL PARTITIONS; B) OPENING HEADERS/TRIMMERS; C) UNDER TUBS W/ 12" OR GREATER SPAN.
- STUDS SHALL NOT BE CUT FOR PLUMBING/ELECTRICAL/MECHANICAL RUNS WITHOUT STRAPPING AT EACH SIDE PER R602.6. ENGINEER IS NOT RESPONSIBLE FOR FAILURES IN CUT MEMBERS. DO NOT CUT BEAMS OR GIRDERS.
- BALLOON FRAME GABLE END VAULTED WALLS AND ALL WALLS HIGHER THAN 10' W/ 2X4 @ 12" O.C. OR (2)2X4 @ 16". MULTIPLE UNIT WINDOWS IN WALLS HIGHER THAN 10' TO HAVE MIN. DOUBLE STUD POCKETS, U.N.O.
- INSTALL I-JOISTS PER MANUFACTURER'S SPECIFICATIONS. MIN. I-JOIST BEARING: 1-3/4" AT ENDS, 3-1/2" AT INTERMEDIATE SUPPORTS.
- TRUSS DRAWINGS MUST BE SEALED BY THE TRUSS MANUFACTURER AND REVIEWED BY HDS ENGINEERING. TRUSS DRAWINGS TO DESIGN AND DOCUMENT ALL REQUIRED BEAMS, HANGERS, AND POINT LOAD REACTIONS. TRUSS DESIGN, FABRICATION, AND DOCUMENTATION SHALL MEET ALL REQUIREMENTS OF R502.11.
- ALL POINT LOADS TO BE COLUMNS/BLOCKED DOWN TO FOUNDATION.
- FIREBLOCK TO CONFORM WITH R302.11.
- MINIMUM HEADER SIZE AND SUPPORT

# JACK STUD REQUIREMENTS FOR HEADERS				
SPAN	BEAM*	ROOF/CLG	ROFF/CLG + FLR	ROOF/CLG+2FLR
4'-0"	2-2X6	2X4	2X4	2-2X4
4'-6"	2-2X10	2X4	2X4	3-2X4
6'-8"	2-2X10	2X4	3-2X4	4-2X4
8'-10"	2-2X12	2-2X4	4-2X4	4-2X4
10'-0"	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN

FLOOR FRAMING:

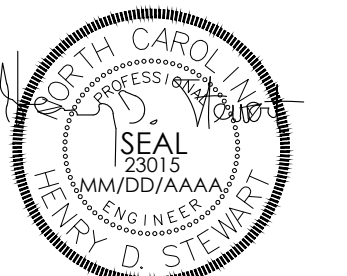
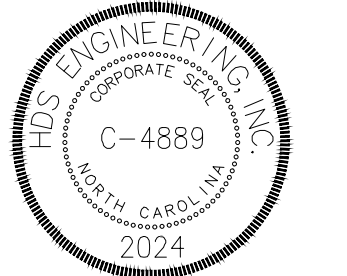
- TO BE FRAMED IN ACCORDANCE WITH SPECIFICATIONS OF DRAWINGS.
- ALLOWABLE FLOOR LOADS AS SET FORTH IN IRC SEC R502.3 AND R502.3.2.
- ALL STRUCTURAL MEMBERS OF FLOOR TO BE PROPERLY SET AND FASTENED IN ACCORDANCE WITH IRC.
- STRUCTURAL LUMBER TO BE #2 SOUTHERN YELLOW PINE (SYP) OR BETTER.

WALL FRAMING AND BRACED WALL REQUIREMENTS:

- EXTERIOR WOOD FRAMED WALLS TO BE 2X6 SYP #2 WITH STUDS @ 16" O.C. PER IRC 602.3. HEIGHT OF EXTERIOR WALL AS SHOWN.
- ALL EXTERIOR WALLS TO BE SHEATHED WITH 1/2" STRUCTURAL PLYWOOD OR 1/16" OSB.
- WINDOW HEADERS AND BEARING WALL BEAMS TO BE 4X10 UNLESS SPECIFIED ON DRAWINGS.
- INTERIOR WALLS TO BE 2X4 CONSTRUCTION PLACED @ 16" O.C. STUD HEIGHT AS SHOWN.
- INTERIOR BATHROOM WALLS WITH EXTENSIVE PLUMBING FIXTURES MAY HAVE 2X6 FRAMED WALLS.
- BATHROOM WALL COVERINGS TO BE MOISTURE-RESISTANT CEMENT PLASTER, TILE, OR APPROVED EQUAL TO 12" ABOVE DRAIN AT SHOWERS OR TUBS WITH SHOWERS (R102.2.5 & R102.4.2).
- NOTCHING & DRILLING OF FRAMING TO BE DONE IN ACCORDANCE WITH IRC 602.6 & 602.6.1.
- BRACING MATERIALS & METHODS TO COMPLY WITH SECTION R602.10.1 AND LOAD PATH DETAILING IN ACCORDANCE WITH SECTION R602.10.4.
- EXTERIOR WALL BRACING, UNLESS SPECIFIED OTHERWISE, SHALL BE CONTINUOUS SHEATHING METHOD (CS-WSP) AS SPECIFIED IN TABLE R602.10.1.
- INTERIOR WALL BRACING PANELS, UNLESS SPECIFIED OTHERWISE, SHALL BE GYPSUM BOTH SIDES (GB) AS SPECIFIED IN TABLE R602.10.1.
- EXTERIOR AND INTERIOR BRACED WALL PANELS, IF SPECIFIED, SHALL BE ATTACHED TOP AND BOTTOM PER SECTION R602.10.4.4 AND FIGURES R602.10.4.4(1) OR R602.10.4.4(2).
- EXTERIOR WALL BRACING PORTAL FRAMES, IF SPECIFIED WITHOUT HOLD DOWNS, SHALL BE INSTALLED PER FIGURE R602.10.1 OR ALTERNATE DETAIL PROVIDED.

CONNECTIONS:

- ALL CONNECTORS ARE SPECIFIED AS SIMPSON, EQUIVALENT LUMBERLOCK CONNECTORS WILL BE SATISFACTORY.
- NAILING SCHEDULE TO BE IN ACCORDANCE WITH TABLE R602.3 (1).



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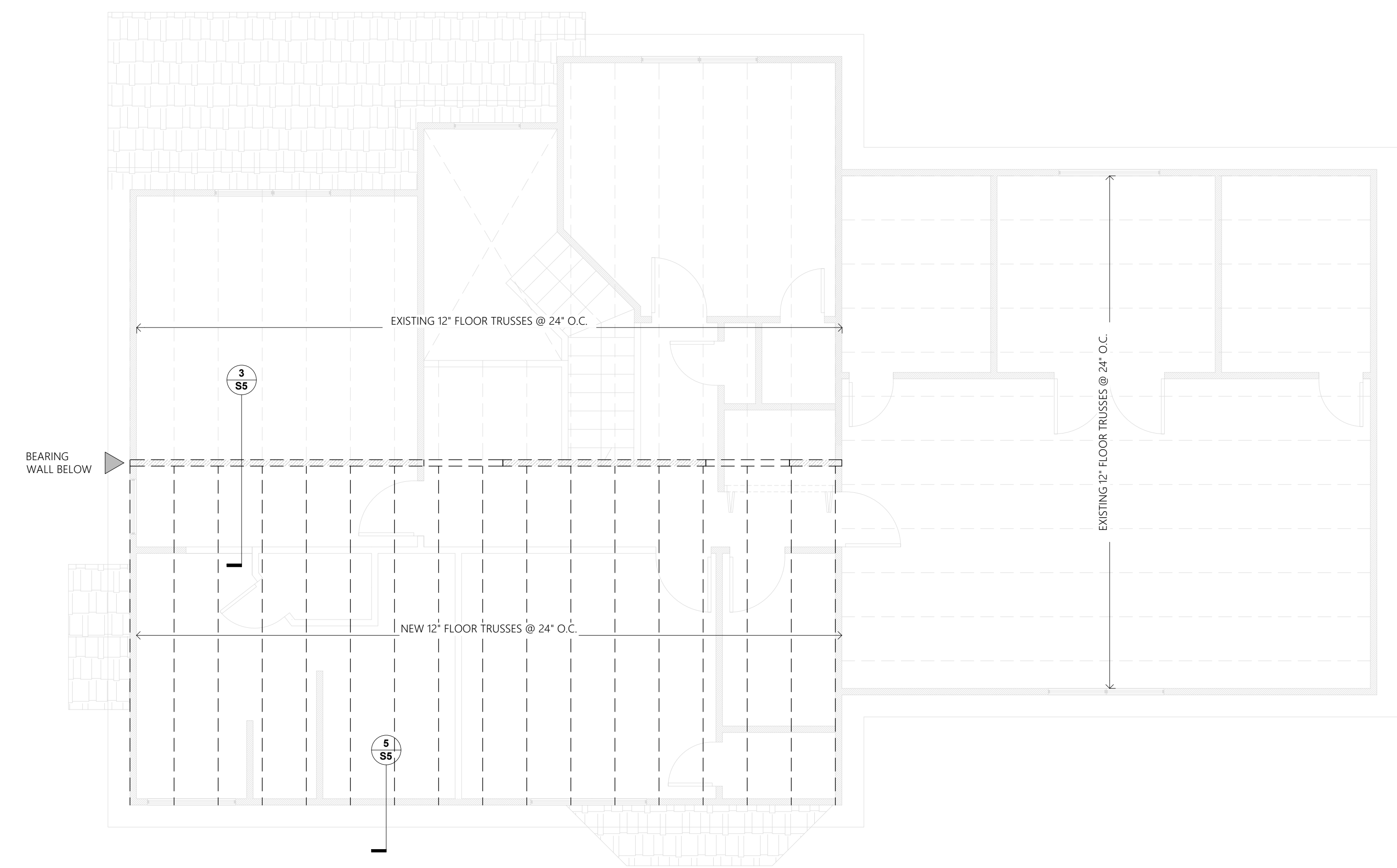
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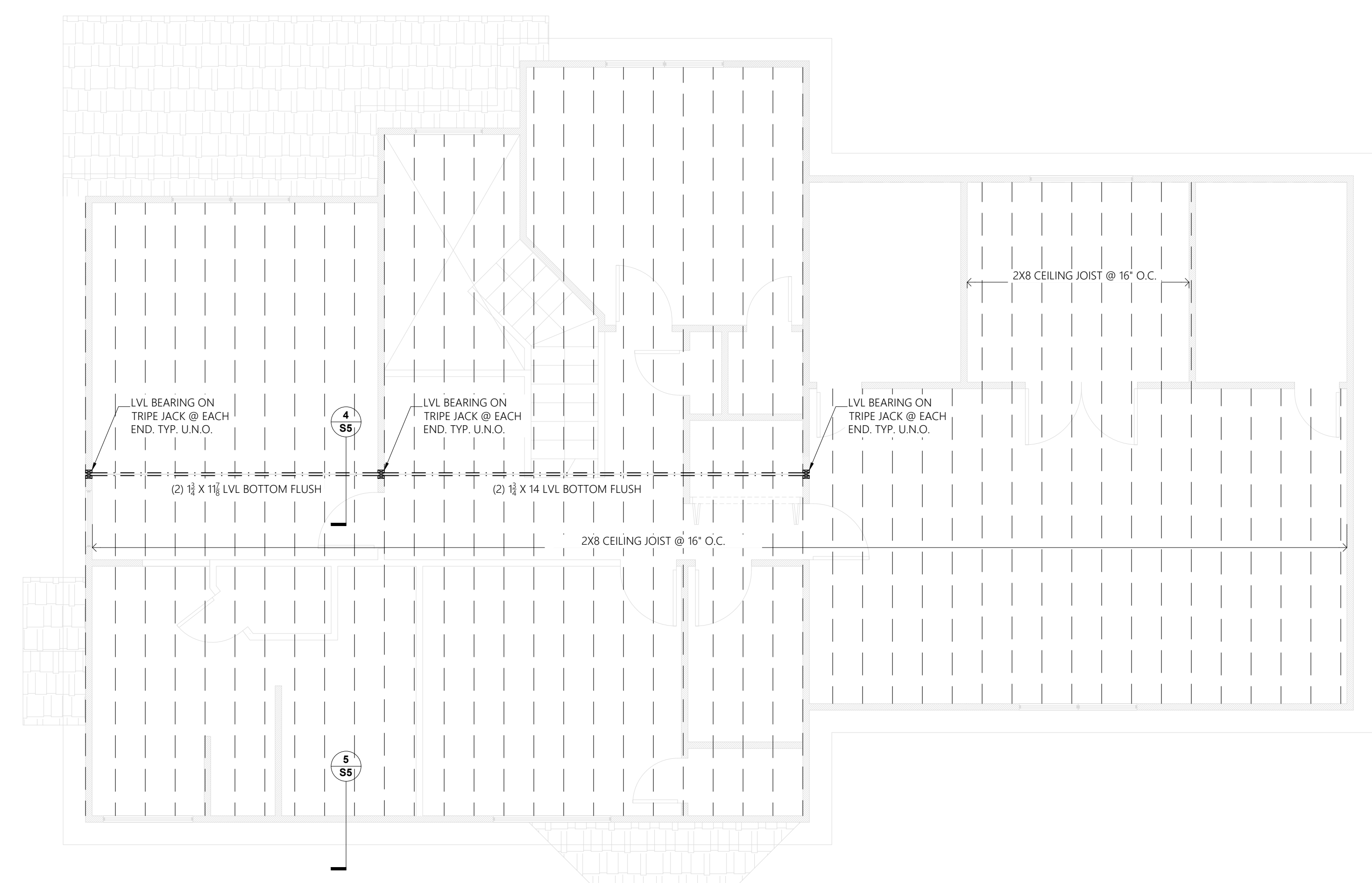
CONTENT

PROPOSED SECOND FLOOR PLAN
REAR ELEVATION
NOTES

SHEET



1
S4 2ND FLOOR FRAMING PLAN
SCALE: 1/4" = 1'-0"



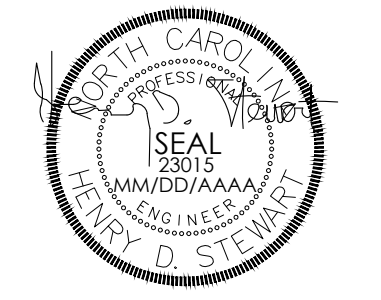
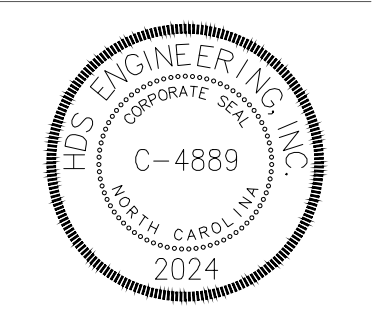
2
S4 CEILING FRAMING PLAN
SCALE: 1/4" = 1'-0"

- ROOF FRAMING NOTES:**
- DRAWINGS WILL SPECIFY WHETHER TRUSSES OR RAFTER CONSTRUCTION IS TO BE USED.
 - STANDARD SNOW LOAD TO BE VERIFIED PER SIDE ISSUING JURISDICTION PSF TOTAL LOAD, UNLESS SPECIFIED OTHERWISE ON DRAWINGS.
 - ROOF SHEATHING TO BE 1/2" CDX STANDARD.
 - THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, INCLUDING WATERPROOFING ALL ROOF INTERSECTIONS AND PROVIDING ADEQUATE ROOF VENTILATION AS PER CODE.
 - ALL RIDGE BEAMS, HIP RAFTERS, AND VALLEY RAFTERS TO BE 2" X 10", NO.2 S.Y.P. OR AS REQUIRED BY THE ENGINEER.
 - THE CONTRACTOR TO VERIFY ALL ROOF PITCHES WITH EXTERIOR ELEVATIONS PRIOR TO CONSTRUCTION.
 - PROVIDE 2x4 ATTIC COLLAR TIES AT 48" O.C. AT THE UPPER 1/3 OF THE ATTIC SPACE (U.N.O.).
 - ALL RAFTER SPANS ARE CALCULATED ON SPF #2 (U.N.O.), WITH A MINIMUM SIZE OF 2x8 UNLESS NOTED OTHERWISE. ALIGN ALL RAFTERS OVER STUDS BELOW.
 - RAFTER SIZES SHOWN ARE MINIMUMS TO MEET STRUCTURAL REQUIREMENTS. SIZES MAY BE INCREASED TO PROVIDE MINIMUM INSULATION VALUES OR AIR PASSAGES.
 - USE 2x10 OR FUR DOWN RAFTERS FOR VAULTED AREAS. ATTACH VAULTED RAFTERS WITH HURRICANE CONNECTORS SUCH AS SIMPSON H2.5A OR EQUIVALENT, TYPICALLY.
 - DOUBLE HIPs MAY BE SPLICED WITH A MINIMUM 6'-0" OVERLAP AT THE CENTER. DO NOT SPLICE VALLEY BEAMS.
 - FUR RIDGE AS REQUIRED FOR FULL RAFTER CONTACT.
 - DESIGN DEAD LOAD BASED ON 240 LB FIBERGLASS SHINGLES (U.N.O.).

- INSULATION SPECIFICATIONS**
2018 NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE
- A. MINIMUM INSULATION:**
- CEILING: R-38 INSULATION.
 - VAULTED CEILING: R-38 INSULATION.
 - WALLS ABOVE GRADE: R-19 INSULATION.
 - FLOOR: R-19 INSULATION.
 - SLAB ON GRADE: R-10 INSULATION (ENTIRE SLAB).
- B. EXTERIOR WALLS AND VAPOR BARRIER:**
- ALL EXTERIOR WALLS ARE TO HAVE EITHER VAPOR BARRIER (A) OR (B) INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS, WITH WINDOW AND JOINT TAPE PER IRC 103 & TABLE IRC 103.3(1).
 - USE TYVEK HOUSE WRAP AND DUPONT FLASHING SYSTEMS FOR ALL WINDOWS AND DOORS. CONSULT THE DUPONT MANUAL AND REPRESENTATIVE FOR INSTALLATION INSTRUCTIONS.

- FLASHING:**
- CONTRACTOR & HOME OWNER TO INSTALL ADEQUATE FLASHING AT ALL WATER INFILTRATION POINTS SUCH AS, BUT NOT LIMITED TO WINDOWS, DOORS, DECKS SKYLIGHTS, CHIMNEYS, VENTS, TRIM BOARDS, BALCONIES AND ROOF VALLEYS.
 - WATER PROOF DECKS AND BALCONIES TO BE FLASHED PER MANUF. SPECS FOR WATER PROOF MEMBRANE.
 - ALL CAULKING MUST BE INSPECTED & MAINTAINED ANNUALLY BY HOME OWNER USING APPROVED EXTERIOR SIDING CAULK CODES.
 - VALLEY FLASHING - IRC 905.2.8/ IRC 905.4.6 OTHER FLASHING - IRC 905.2.8, 905.3.8, 905.4.6, 905.6.6, 905.7.6, 905.8.9
 - WATERPROOF WEATHER EXPOSED AREAS I.E. DECKS & BALCONIES IRC 103.4, MASONRY - R103.8 AND WINDOWS - R610 AND R103.4

SMOKE ALARM NOTE:
SMOKE ALARMS TO BE INTERCONNECTED OR WIRELESSLY CONNECTED SO THAT THE ACTIVATION OF ONE ALARM ACTIVATES ALL ALARMS IN A DWELLING UNIT.



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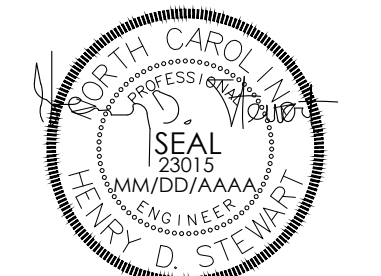
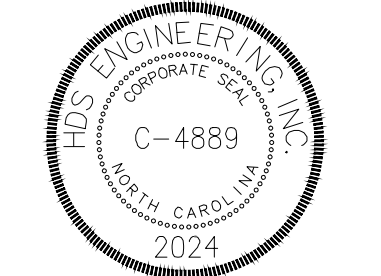
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CONTENT
2ND FLOOR FRAMING PLAN
CEILING FRAMING PLAN
NOTES

SHEET



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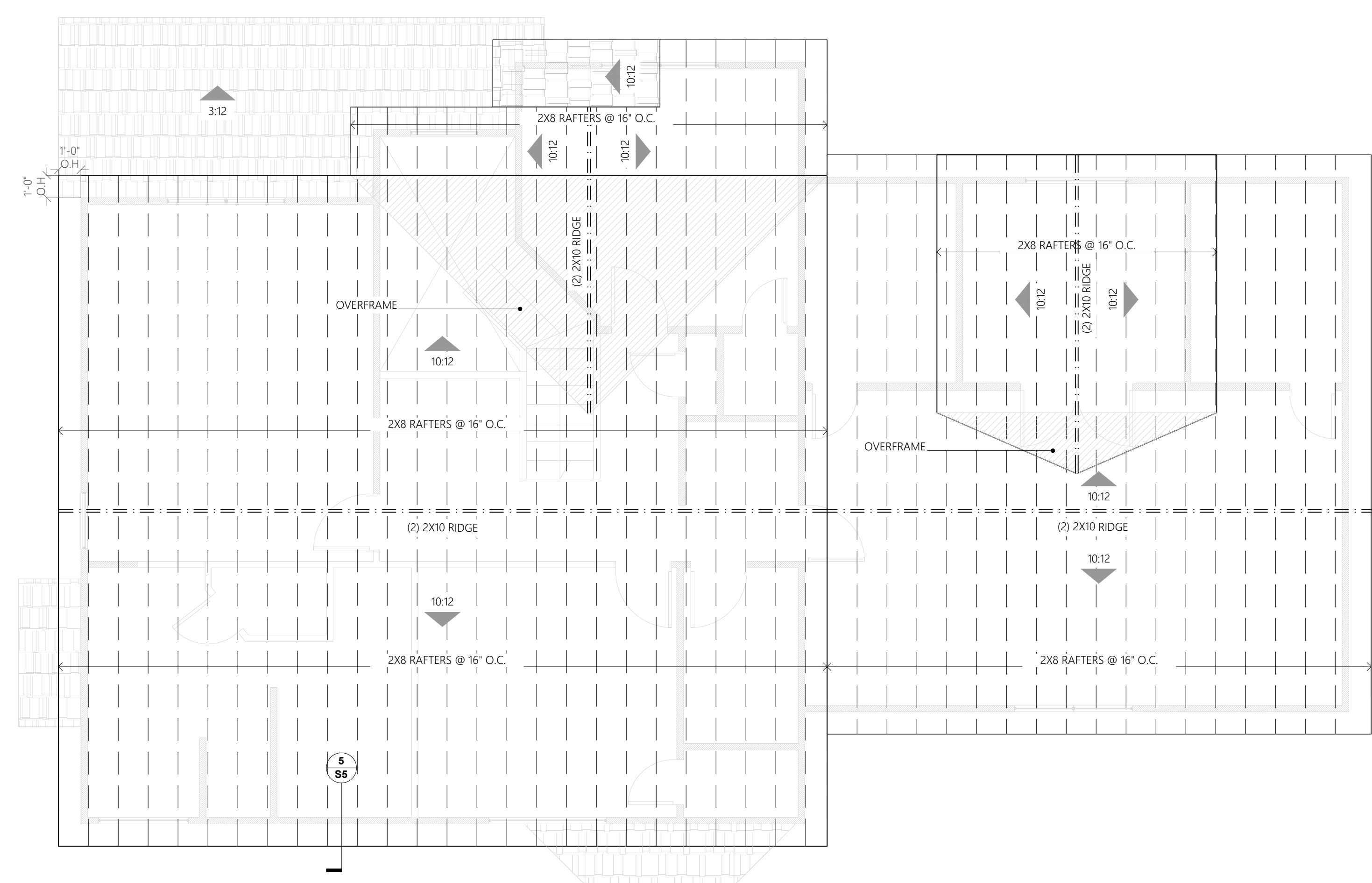
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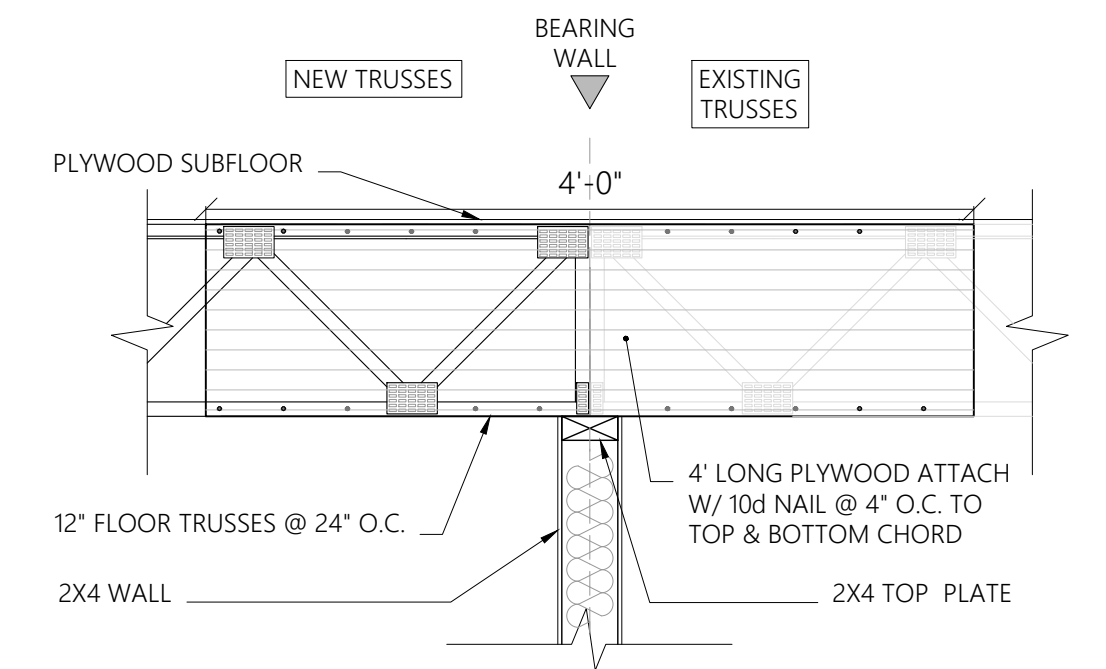
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ROOF FRAMING PLAN
ROOF PLAN
DETAILS

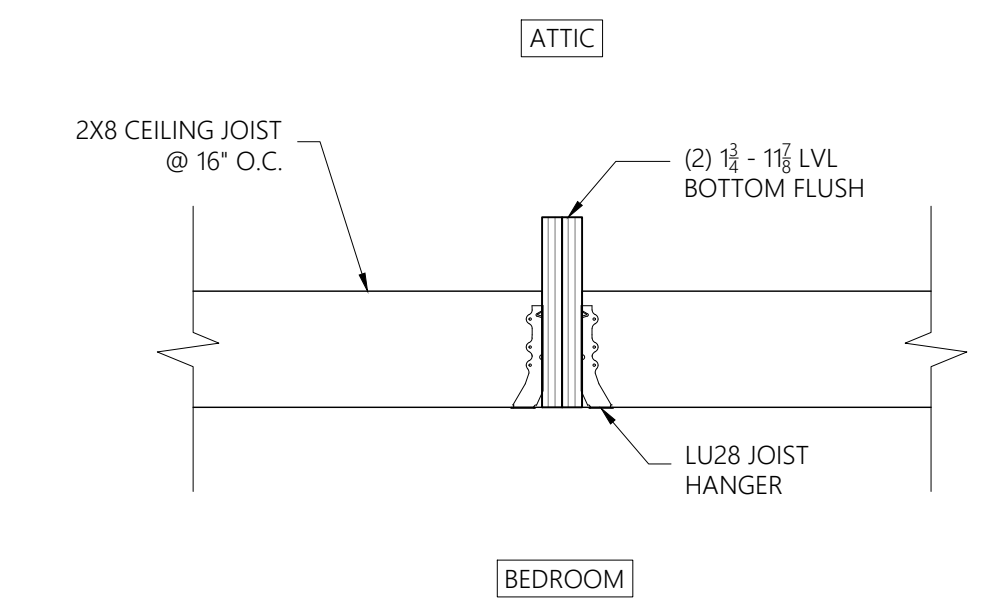
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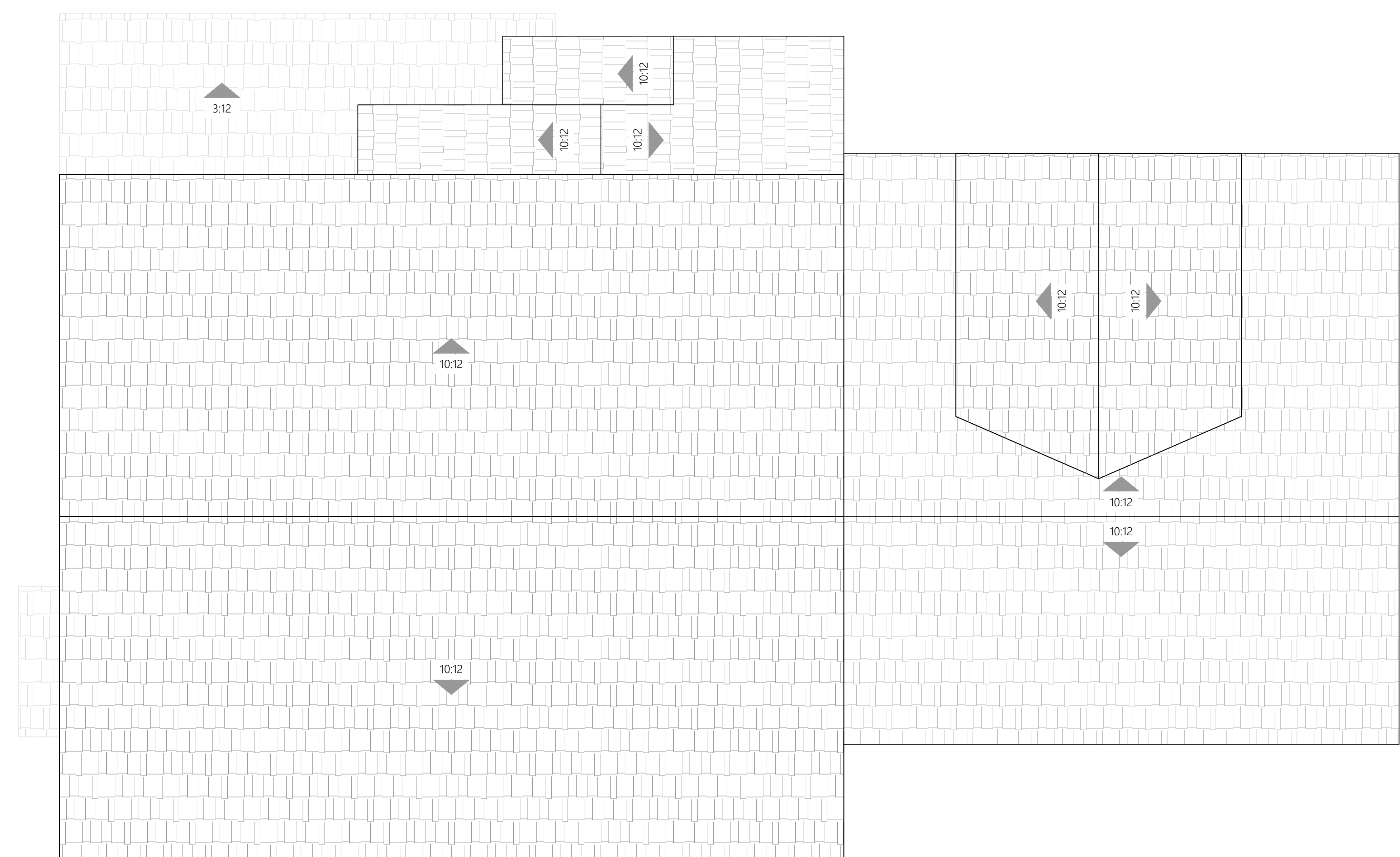
1
S5 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"



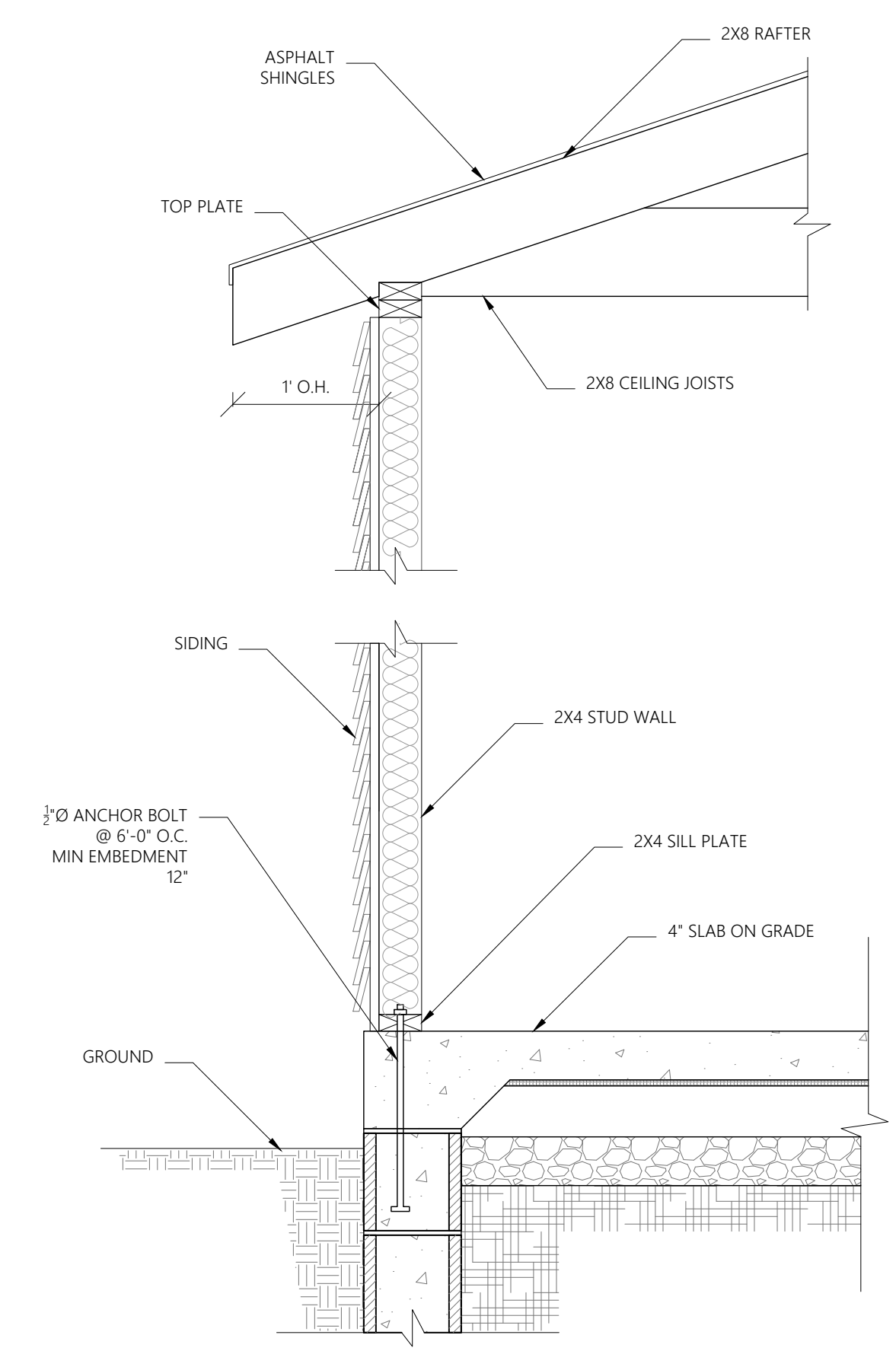
3
S5 TRUSSES DETAIL
SCALE: 1" = 1'-0"



4
S5 LVL DETAIL
SCALE: 1" = 1'-0"



2
S5 ROOF PLAN
SCALE: 1/4" = 1'-0"



5
S5 SECTION WALL
SCALE: 1" = 1'-0"