- 2018 NORTH CAROLINA STATE BUILDING CODE: RESIDENTIAL.
- DESIGN LOADS
- --- LIVE LOAD (ROOF) = 20 PSF
- --- LIVE LOAD (FLOOR) = 40 PSF
- --- LIVE LOAD (SLEEPING AREAS) = 30 PSF
- --- LIVE LOAD (DECK) = 40 PSF
- --- GROUND SNOW LOAD = 15 PSF --- ULTIMATE WIND VELOCITY = 120 MPH
- --- EXPOSURE CATEGORY = C
- --- BASE WIND VELOCITY = 94 MPH
- --- ASSUMED GROUND BEARING CAPACITY 12" BELOW GRADE: 2,000 PSF
- --- ALL BOTTOM OF FOOTINGS SHALL BE CAST A MINIMUM OF 1'-0" BELOW ORIGINAL GROUND LINE. NO FOOTINGS SHALL BE CAST ON LOOSE FILL MATERIAL.

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE THEIR WORK ACTIVITIES WITH THE OWNER. 3. CONTRACTOR SHALL MAKE A CAREFUL INSPECTION OF THE SITE TO FAMILIARIZE HIM/HERSELF
- WITH THE ACTUAL CONDITIONS OF THE SITE.
- 4. CONTRACTOR SHALL CHECK AND VERIFY GIVEN DIMENSIONS, TAKE ADDITIONAL DIMENSIONS
- AS REQUIRED AND REPORT ANY INACCURACIES TO THE ENGINEER. 5. CONTRACTOR SHALL COORDINATE THESE STRUCTURAL DRAWINGS WITH DRAWINGS OF
- 6. ALL WORK SHALL CONFORM TO THE THE CURRENT EDITIONS OF THE NORTH CAROLINA STATE BUILDING CODE, THE AISC CODE, THE ACI BUILDING CODE (ACI 318), THE AMERICAN WELDING
- SOCIETY CODE, AND ALL APPLICABLE ASTM STANDARDS. IN CASES OF CONFLICT, THE MOST STRINGENT REQUIREMENT SHALL GOVERN. 7. CONTRACTOR SHALL COORDINATE AND VERIFY THE SIZE, LOCATION, TYPE, AND DIRECTION OF
- ALL PADS, DEPRESSIONS, BOLTS, SLEEVES, ANCHORS, INSERTS, OPENINGS, ETC. TO BE SET OR CAST IN CONCRETE OR MASONRY PRIOR TO PLACEMENT.
- 8. CONTRACTOR SHALL COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO FOUNDATION LAYOUT AND FABRICATION OF ANY STRUCTURAL MEMBERS.
- 9. CONTRACTOR SHALL DESIGN AND INSTALL ALL TEMPORARY SHORING REQUIRED TO STABILIZE NEW AND EXISTING STRUCTURES AND FOUNDATIONS UNTIL CONSTRUCTION IS COMPLETE.
- 10. OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS SPECIFICATIONS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, AND RESOLVED BEFORE PROCEEDING WITH WORK.
- 11. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION.
- 12. APPLY TERMITE TREATMENT TO GROUND SURFACES WITHIN THE DEFINED SCOPE OF WORK AS REQUIRED BY CODE AND LOCAL BUILDING INSPECTOR.
- 13. ONLY SEALED DRAWINGS WITH MOST RECENT REVISIONS ARE APPLICABLE FOR
- 14. STRUCTURAL PLANS DO NOT INCORPORATE ADA, PLUMBING, MECHANICAL, ELECTRICAL, OR
- SITE FEATURES. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY. 15. SECTIONS AND DETAILS SHOWN AT LOCATIONS INDICATED ON PLAN ARE TYPICAL FOR OTHER SIMILAR CONDITIONS OF BUILDING, EVEN IF NO SECTION CUT IS INDICATED AT A SIMILAR CONDITION. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DETAILS WITH OTHER TRADES, DISCIPLINES, AND ALL SECTIONS AND DETAILS WITHIN STRUCTURAL DOCUMENTS. ALL SECTIONS AND DETAILS ARE NOT COMPLETE REPRESENTATIONS OF CONDITIONS BUT ARE SPECIFIC TO ITEMS INDICATED IN DETAILS. COORDINATION WITH VIEWS OF OTHER SECTIONS PLANS, AND DETAILS MAY BE REQUIRED TO COMPLETE ASSEMBLY.

- EXCAVATION OF THE FOOTINGS ARE TO THE DEPTHS REQUIRED AND INDICATED ON PLANS. ANY OVER-EXCAVATION OF UNSUITABLE MATERIALS MAY BE NECESSARY BELOW FOOTING DEPTH. BACKFILL USING NO. 57 STONE IN 8" UNIFORM LIFTS COMPACTED TO 95% OF THE DRY
- DENSITY TO RE-ESTABLISH FOOTING SUB-GRADE. 2. USE OF A SMOOTH EDGE BUCKET IS RECOMMENDED TO EXCAVATE FOR FOOTINGS. TOOTHED BUCKETS MAY ALLOW BEARING SOILS TO PERFORM INEFFECTIVELY AND ALLOW WATER TO
- SATURATE THE FOUNDATION SUB-GRADE. SOILS SHALL BE DETERMINED TO HAVE 2,000-PSF NET ALLOWABLE BEARING CAPACITY.
- 4. FOOTINGS ARE TO BE PLACED WITH A MINIMUM DEPTH FROM FINISHED GRADE TO BEARING OF NOT LESS THAN 12-INCHES.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING FOUNDATION BEARING SOILS FROM DISTURBANCE AND DAMAGE DURING CONSTRUCTION AND FROM OVER-SATURATION. CARE IS TO BE TAKEN TO REMOVE AND REPLACE BEARING SOILS WITH 8"
- UNIFORM LIFTS OF NO. 57 STONE AS NEEDED, COMPACTED TO 95% OF THE DRY DENSITY. 6. ONCE FOOTINGS ARE ABLE TO HANDLE LATERAL LOADING, BACKFILL WITH ENGINEERED STONE OR NO. 57 STONE IN 8" UNIFORM LIFTS. EXTERIOR OF THE FOOTING MAY BE BACKFILLED WITH 8" UNIFORM LIFTS OF SUITABLE SOILS COMPACTED TO 95% OF THE DRY DENSITY BEYOND THE PLACEMENT OF THE FOOTING DRAIN.

- 1. CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (LATEST EDITION), ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (LATEST EDITION), AND ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (LATEST EDITION).
- 2. REINFORCING STEEL SHALL BE FABRICATED AND PLACED IN COMPLIANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (LATEST EDITION).
- MIX DESIGN SHALL BE IN ACCORDANCE WITH ACI 318 (CURRENT EDITION).
- MINIMUM CEMENT CONTENT = 500 LBS PER CUBIC YARD. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A MINIMUM
- COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS (4,000 PSI FOR SLABS-ON-GRADE). 6. MAXIMUM SLUMP = 4" PLUS OR MINUS 1".
- THE MAX. AGGREGATE SIZE SHALL BE 3/4".
- 8. CONCRETE AGGREGATES SHALL COMPLY WITH ASTM C33 AND SHALL BE FREE OF CLAY, FOAM, LUMPS, OR OTHER DELETERIOUS SUBSTANCES.
- 9. REINFORCING BARS SHALL BE DEFORMED AND CONFORMING TO ASTM A615, GRADE 60. 10. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 AND BE SUPPLIED IN SHEETS, NOT
- ROLLS, U.N.O. 11. CONCRETE SHALL BE AIR ENTRAINED WITH 6% AVERAGE AIR CONTENT WITH A 1.5%
- TOLERANCE. AIR ENTRAINMENT SHALL COMPLY WITH ASTM C260.
- 12. REINFORCEMENT LAP SPLICES SHALL BE 44 TIMES THE BAR DIAMETER, U.N.O.
- 13. REINFORCEMENT COVER SHALL BE 3" WHEN POURED ADJACENT TO GROUND SURFACE AND 1.5" ELSEWHERE, U.N.O.
- 14. CONCRETE SHALL BE CONSOLIDATED USING CONCRETE VIBRATOR IN ACCORDANCE WITH

- LOG WALL CONSTRUCTION NOTES ALL EXTERIOR LOG WALLS SHALL BE 8" "D" LOGS STACKED VERTICALLY, BY OTHERS. PROVIDE
- DOVETAIL NOTCHING AT INTERSECTION OF PERPENDICULAR LOG WALLS. 2. EACH LOG COURSE SHALL BE ATTACHED FROM ABOVE WITH SIMPSON SDWS221100 LOG
- SCREWS SPACED AT 36" O/C, U.N.O. PROVIDE HALF LOG AT BOTTOM COURSE AND ATTACH TO DOUBLE RIM BAND BELOW WITH (2) STAGGERED ROWS OF SIMPSON SDWS22800DB SCREWS SPACED AT 32" O/C, (1 SCREW EVERY
- 4. CONTRACTOR/BUILDER TO PROVIDE ADEQUATE PRESERVATIVE TREATMENT TO EXTERIOR LOGS TO PREVENT DETERIORATION DUE TO EXPOSURE.

# HEAVY TIMBER FRAME NOTES

- ALL HEAVY TIMBER RAFTERS SHALL BE E.W.P. #1 OR BETTER, U.N.O. TREATED FOR EXTERIOR
- APPLICATION WHERE NECESSARY. ALL OTHER HEAVY TIMBER FRAMING MEMBERS SHALL BE DOUGLAS FIR-LARCH #1 OR BETTER,
- TREATED FOR EXTERIOR APPLICATION WHERE NECESSARY HEAVY TIMBER MEMBERS SHALL BE "GREEN" AT THE TIME OF FABRICATION AND EXPECTED TO BE LESS THAN 19% MOISTURE CONTENT IN SERVICE, FREE OF HEART CENTER AND FINISHED
- S4S IN ACCORDANCE WITH NDS 2012 TABLE 1B. 4. ALL TIMBER SIZES ARE TO THE 1/2", I.E. 12X12 TIMBER = 11-1/2"X11-1/2" TIMBER.
- WHEN TIMBERS ARE USED IN EXPOSED LOCATIONS, SPECIAL CARE SHALL BE TAKEN TO PROVIDE PROTECTIVE FLASHING, SEALING, OR OILING OF TIMBERS, AND ONGOING/ACTIVE MAINTENANCE AND OBSERVATION TO PREVENT PREMATURE DETERIORATION FROM ROT, DECAY, AND UV DEGRADATION. THE DESIGN AND DETAILING OF SUCH SYSTEM AND COATINGS
- AND INSPECTION/MAINTENANCE PROCEDURES IS THE RESPONSIBILITY OF OTHERS. SHRINKAGE DUE TO LOSS OF MOISTURE SHOULD BE EXPECTED UNTIL THE TIMBERS REACH THE EMC (EQUILIBRIUM MOISTURE CONTENT). SEPARATION AT JOINERY SHOULD BE EXPECTED DUE TO SHRINKAGE OF THE TIMBERS.

# GENERAL FRAMING DESIGN NOTES

- 1. FRAMING STANDARD: COMPLY WITH AF&PA'S "DETAILS FOR CONVENTIONAL WOOD FRAME
- CONSTRUCTION", UNLESS OTHERWISE INDICATED. 2. ALL WALLS FRAMED WITH NOMINAL LUMBER SHALL BE 2X4 STUDS SPACED AT 16" O/C, U.N.O.
- ALL WALLS TO BE BALLOON FRAMED FROM BOTTOM PLATE TO TOP PLATE, U.N.O. 3. USE 5/8" DIAMETER ANCHOR BOLTS, 7" MINIMUM EMBEDMENT IN CONCRETE, WITH SIMPSON
- BPS 5/8-6 PLATE WASHER AT 4'-0" O/C SPACING, U.N.O. . METAL FRAMING ANCHORS: INSTALL METAL FRAMING ANCHORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 5. DO NOT SPLICE BUILT-UP BEAM MEMBERS BETWEEN SUPPORTS UNLESS OTHERWISE INDICATED. IF SPLICE IS REQUIRED, SPLICE 1-PLY OF THE MULTI-PLY BEAM AT ALLOWABLE
- ALLOWABLE LOCATIONS ARE AS FOLLOWS:
- --- DIRECTLY CENTERED OVER SUPPORT --- AT 20% OF THE SPAN LENGTH FROM INTERIOR SUPPORTS (POINT OF INFLECTION).
- 6. WHERE BUILT-UP BEAMS OR GIRDERS OF 2-INCH NOMINAL DIMENSIONAL LUMBER ON EDGE ARE REQUIRED. FASTEN TOGETHER WITH 2 ROWS OF 16D NAILS SPACED NOT LESS THAN 16-INCHES O/C. LOCATED ONE ROW 1.5" FROM TOP EDGE AND ONE ROW 1.5" FROM BOTTOM
- 7. FOR BUILT-UP (GANG) COLUMNS, CONNECT EACH PLY W/ (2) ROWS OF 10D NAILS AT 12" O/C.

# DIMENSIONAL LUMBER FRAMING

- MAXIMUM MOISTURE CONTENT: 19%.
- 2. NO. 2 GRADE OR BETTER (EXCEPT STUD WALLS) AND ANY OF THE FOLLOWING SPECIES: --- HEM-FIR (NORTH), NLGA.
- --- SOUTHERN PINE, SPIB.
- --- DOUGLAS FIR-LARCH, WCLIB OR WWPA.
- --- MIXED SOUTHERN PINE, SPIB. --- SPRUCE-PINE-FIR, NLGA.
- --- DOUGLAS FIR-SOUTH, WWPA. --- HEM-FIR, WCLIB OR WWPA.
- DOUGLAS FIR-LARCH (NORTH), NLGA.
- 3. EXTERIOR, LOAD BEARING, AN INTERIOR PARTITION WALLS: ANY SPECIES (STUD GRADE OR BETTER) WITH A MODULUS OF ELASTICITY OF AT LEAST 1,300,000 PSI AND EXTREME FIBER STRESS IN BENDING OF AT LEAST 650 PSI FOR 2" NOMINAL THICKNESS AND 12" NOMINAL WIDTH
- 4. JOISTS, RAFTERS, AND OTHER FRAMING NOT LISTED ABOVE: ANY SPECIES (NO. 2 OR BETTER) WITH A MODULUS OF ELASTICITY OF AT LEAST 1,300,000 PSI AND AN EXTREME FIBER STRESS IN BENDING OF AT LEAST 850 PSI FOR 2" NOMINAL THICKNESS AND 12" NOMINAL WIDTH FOR SINGLE MEMBER USE.

- PROVIDE FASTENERS OF SIZE AND TYPE INDICATED THAT COMPLY WITH REQUIREMENTS
- SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURER. 2. WHERE ROUGH CARPENTRY IS EXPOSED TO WEATHER, IN GROUND CONTACT, OR IN AREA OF HIGH RELATIVE HUMIDITY, PROVIDE FASTENERS WITH HOT-DIPPED ZINC COATING COMPLYING WITH ASTM A153 A153M.
- 3. POWER DRIVEN FASTENERS: CABO NER-272
- WOOD SCREWS: ASTM B18.6.1
- LAG BOLTS: ASME B18.2.1 BOLTS: STEEL BOLTS COMPLYING WITH ASTM A-307, GRADE 1 (ASTM F568M, PROPERTY CLASS 4.6); WITH ASTM A563 (ASTM A563M) HEX NUTS AND, WHERE INDICATED, FLAT WASHERS.
- 4. EXPANSION ANCHORS: ANCHOR BOLTS AND SLEEVE ASSEMBLY OF MATERIAL INDICATED BELOW WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO 6 TIMES THE LOAD IMPOSED WHEN INSTALLED IN UNIT MASONRY ASSEMBLIES AND EQUAL TO 4 TIMES THE LOAD IMPOSED WHEN INSTALLED IN CONCRETE AS DETERMINED BY TESTING PER ASTM E488 CONDUCTED BY A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY.
- 5. MATERIAL: CARBON-STEEL COMPONENTS, ZINC PLATED TO COMPLY WITH ASTM B633, CASS

# SHEAR WALL DESIGN NOTES FOR NOMINAL LUMBER WOOD-FRAMED WALLS

3. HORIZONTAL BLOCKING MAY BE 2X LAID FLAT AGAINST SHEATHING.

- 1. UNLESS NOTED OTHERWISE; USE 7/16" OSB/PLY (APA GRADE 24/16) WITH 8D NAILS AT 6" O/C EDGES, 12" O/C FIELD, BLOCKING REQUIRED.
- 2. MEMBERS AND BLOCKING AT ADJOINING PANEL EDGES SHALL BE MINIMUM 3" NOMINAL OR DOUBLE 2" NOMINAL WITH STAGGERED NAILING AT ALL PANEL EDGES.

# SHEATHING DESIGN NOTES

- 1. SHEATH ROOF WITH 1X6 TONGUE AND GROOVE DECKING, E.W.P #1 WITH EXPOSURE 1, 15/32 APA RATED OSB (GRADE 32/16) ABOVE DECKING. PROVIDE 16D NAILS AT 6" O/C EDGES, 12" O/C FIELD, BLOCKING NOT REQUIRED AT PANEL EDGES. BUILT-UP ROOF SYSTEM ABOVE OSB SHEATHING SHALL BE BY OTHERS.
- 2. INSTALL "H" CLIPS AT OSB PANEL EDGES AT 16" O/C FOR ALL ROOF SHEATHING. 3. NAIL ALL SHEATHING AT GABLE AND EAVE ROOF OVERHANGS WITH 8D NAILS AT 6' O/C EDGES,
- 6" O/C FIELD. NAIL ALL SHEATHING AT PERIMETER AND PEAK OF ROOF WITH 8D NAILS AT 6" O/C EDGES, 6' O/C
- 5. UPPER LEVEL SUBFLOORING: 2X6 TONGUE AND GROOVE DECKING, E.W.P. #2 OR BETTER, INSTALLED PERPENDICULAR TO FLOOR JOISTS IN A TWO-SPAN CONTINUOUS LAYUP. FASTEN T&G BOARD ENDS TO SUPPORTING TIMBER MEMBERS WITH (3) 16D NAILS AND FASTEN TO INTERMEDIATE SUPPORTING TIMBER MEMBERS WITH (2) 16D NAILS.
- 6. MAIN LEVEL SUBFLOORING: 1X6 TONGUE AND GROOVE DECKING, S.Y.P. #2 OR BETTER, INSTALLED 45° TO FLOOR JOISTS IN A TWO-SPAN CONTINUOUS LAYUP. FASTEN T&G BOARD ENDS TO SUPPORTING TIMBER MEMBERS WITH (3) 8D NAILS AND FASTEN TO INTERMEDIATE SUPPORTING TIMBER MEMBERS WITH (2) 8D

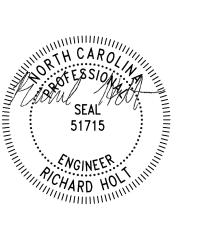
# METAL FRAMING ANCHORS

- PROVIDE FRAMING ANCHORS OF STRUCTURAL CAPACITY, TYPE, AND SIZE INDICATED.
- ALLOWABLE DESIGN LOADS: PROVIDE PRODUCTS WITH ALLOWABLE DESIGN LOADS, AS PUBLISHED BY MANUFACTURER, THAT MEET OR EXCEED THOSE INDICATED. MANUFACTURER'S PUBLISHED VALUES SHALL BE DETERMINED FROM EMPIRICAL DATA OR BY RATIONAL ENGINEERING ANALYSIS AND DEMONSTRATED BY COMPREHENSIVE TESTING PERFORMED BY QUALIFIED INDEPENDENT TESTING AGENCY.
- EXPOSED METAL FRAMING CONNECTORS SHALL BE HOT-DIPPED, ZINC COATED STEEL SHEET
- COMPLYING WITH ASTM A653/A653M, G60 (Z180) COATING DESIGNATION. 4. BRIDGING: RIDGE, V-SECTION, NAILLESS TYPE, 0.062" THICK, LENGTH TO SUIT JOIST SIZE AND SPACING.
- 5. HOLD-DOWNS: BRACKETS FOR BOLTING TO WALL STUDS AND SECURING TO FOUNDATION WALLS WITH ANCHOR BOLTS OR TO OTHER HOLD-DOWNS WITH THREADED RODS AND DESIGNED WITH FIRST OF TWO BOLTS PLACED SEVEN BOLT DIAMETERS FROM REINFORCED BASE, UNLESS NOTED OTHERWISE ON DRAWINGS.

# WOOD-PRESERVATIVE-TREATED MATERIALS

CONTACT WITH EARTH.

- PRESERVATIVE TREATMENT BY PRESSURE PROCESS: AWPA C2 (LUMBER) AND AWPA CP (PLYWOOD), EXCEPT THAT LUMBER THAT IS NOT IN CONTACT WITH THE GROUND AND IS CONTINUOUSLY PROTECTED FROM LIQUID WATER MAY BE TREATED ACCORDING TO AWPA C31 WITH INORGANIC BORON (SBX).
- PRESERVATIVE CHEMICALS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION AND ONE OF THE FOLLOWING:
- --- CHROMATED COPPER ARSENATE (CCA). --- AMMONIACAL COPPER ZINC ARSENATE (ACZA).
- AMMONIACAL, OR AMINE, COPPER QUAT (ACQ).
- AMMONIACAL COPPER CITRATE (CC).
- --- COPPER AZOLE, TYPE A (CBA-A). 3. FOR EXPOSED ITEMS INDICATED TO RECEIVE A STAINED OR NATURAL FINISH, USE CHEMICAL FORMULATIONS THAT DO NOT REQUIRE INCISING, CONTAIN COLORANTS, BLEED THROUGH, OR OTHERWISE ADVERSELY AFFECT FINISHES.
- 4. KILN-DRY MATERIAL AFTER TREATMENT TO A MAXIMUM MOISTURE CONTENT OF 19 PERCENT FOR LUMBER AND 15 PERCENT FOR PLYWOOD. DO NOT USE MATERIAL THAT IS WARPED OR DOES NOT COMPLY WITH REQUIREMENTS FOR UNTREATED MATERIAL
- MARK EACH TREATED ITEM WITH THE TREATMENT QUALITY MARK OF AN INSPECTION AGENCY APPROVED BY THE AMERICAN LUMBER STANDARDS COMMITTEE BOARD OF REVIEW. 6. FOR EXPOSED LUMBER INDICATED TO RECEIVE A STAINED OR NATURAL FINISH, MARK END OR
- 7. APPLICATION: TREAT ITEMS INDICATED ON DRAWINGS, AND THE FOLLOWING: --- WOOD CANTS, NAILERS, CURBS, EQUIPMENT SUPPORT BASES, BLOCKING, STRIPPING, AND SIMILAR MEMBERS IN CONNECTION WITH ROOFING, FLASHING, VAPOR BARRIERS,
- AND WATERPROOFING. WOOD SILLS, SLEEPERS, BLOCKING, FURRING, STRIPPING, AND SIMILAR CONCEALED
- MEMBERS IN CONTACT WITH MASONRY OR CONCRETE.
- WOOD FRAMING MEMBERS LESS THAN 18 INCHES ABOVE GRADE. --- WOOD FLOOR PLATES THAT ARE INSTALLED OVER CONCRETE SLABS DIRECTLY IN



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REVISIONS

DESCRIPTION

FOR CONSTRUCTION

AS SHOWN

06.25.2021

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	ABBREVIA	4TIC	NS	NO.	[
AВ.	ANCHOR BOLT	L.L.	LOWER LEVEL	0	06.
AFF.	ABOVE FINISH FLOOR	MAX.	MAXIMUM	-	
AFG.	ABOVE FINISH GRADE	MIN.	MINIMUM		
ARCH.	ARCHITECTURAL, ARCHITECT	M.L.	MAIN LEVEL		
3/0	BY OTHERS	K.O.	KNOCK-OUT		
CL.	CENTER LINE	N.T.S.	NOT TO SCALE		
CLR.	CLEAR	O/C	ON CENTER		
C.J.	CONTROL JOINT	O.D.	OUTSIDE DIAMETER		
CMU	CONCRETE MASONRY UNIT	PSF	POUNDS PER SQUARE FOOT		
CONN.	CONNECTION, CONNECT	PSI	POUNDS PER SQUARE INCH		
CONT.	CONTINUOUS	REINF.	REINFORCEMENT, REINFORCING		
D.F.	DOUGLAS FIR	S.O.G.	SLAB-ON-GRADE		
D.J.	DOUBLE JOIST	S.P.	SOUTHERN PINE		
DWG	DRAWING, DRAWINGS	STD.	STANDARD		
ENG.	ENGINEER, ENGINEERING	S.T.T.	SIMPSON STRONG TIE	S	CAL
EQ.	EQUAL	T.B.D.	TO BE DECIDED	1	
-C	COMPRESSIVE STRENGTH STRESS	T.O.	TOP OF	R	EVIE
DN	FOUNDATION	TYP.	TYPICAL	D	RAW
Y.	YIELD STRESS	U.L.	UPPER LEVEL	_	
G.C.	GENERAL CONTRACTOR	U.N.O.	UNLESS NOTED OTHERWISE	D,	ATE:
G.N.	GENERAL NOTES	W.W.F.		<b></b>	
2B	CRADE	۱۸//	\//ITH	4	

DIAMETER

**HEAVY TIMBER** 

SHEET INDEX

MAIN LEVEL FLOOR FRAMING PLAN & DETAILS

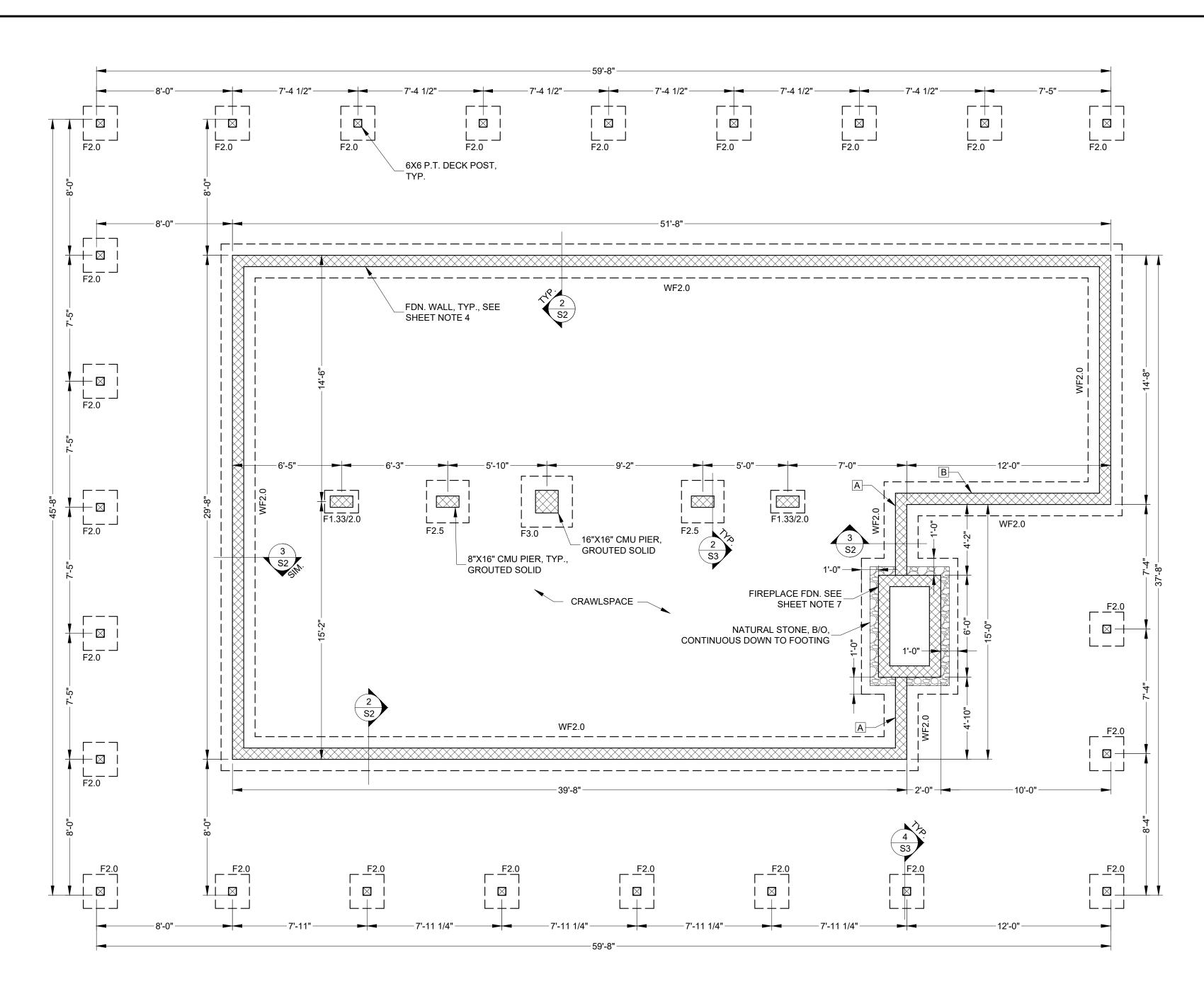
CEILING LEVEL FRAMING PLAN & DETAILS

UPPER LEVEL FLOOR FRAMING PLAN & DETAILS

**COVER SHEET & GENERAL NOTES** 

ROOF FRAMING PLAN & DETAILS

FOUNDATION PLAN & DETAILS

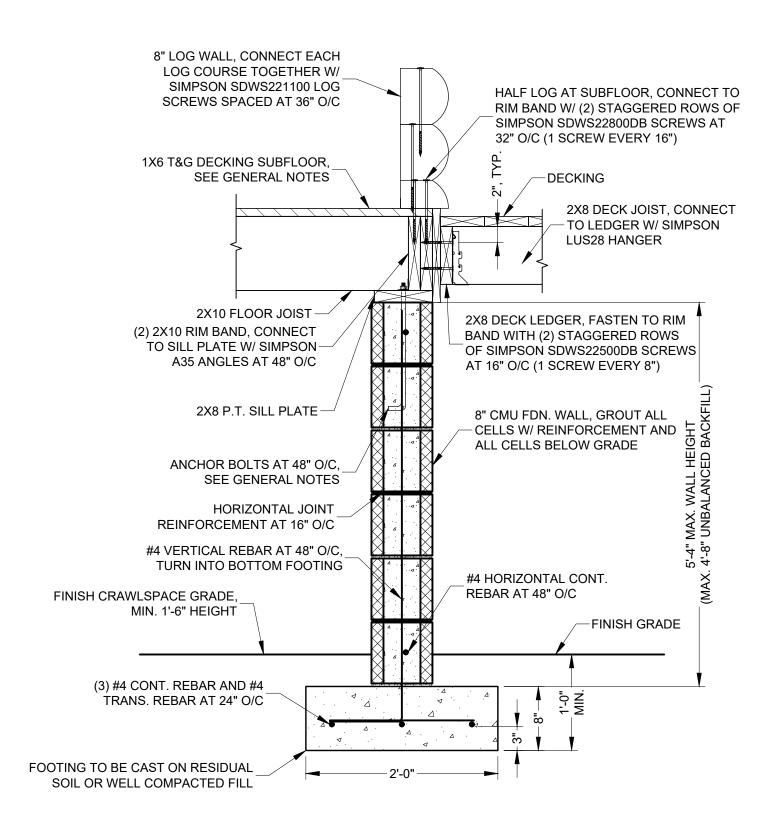




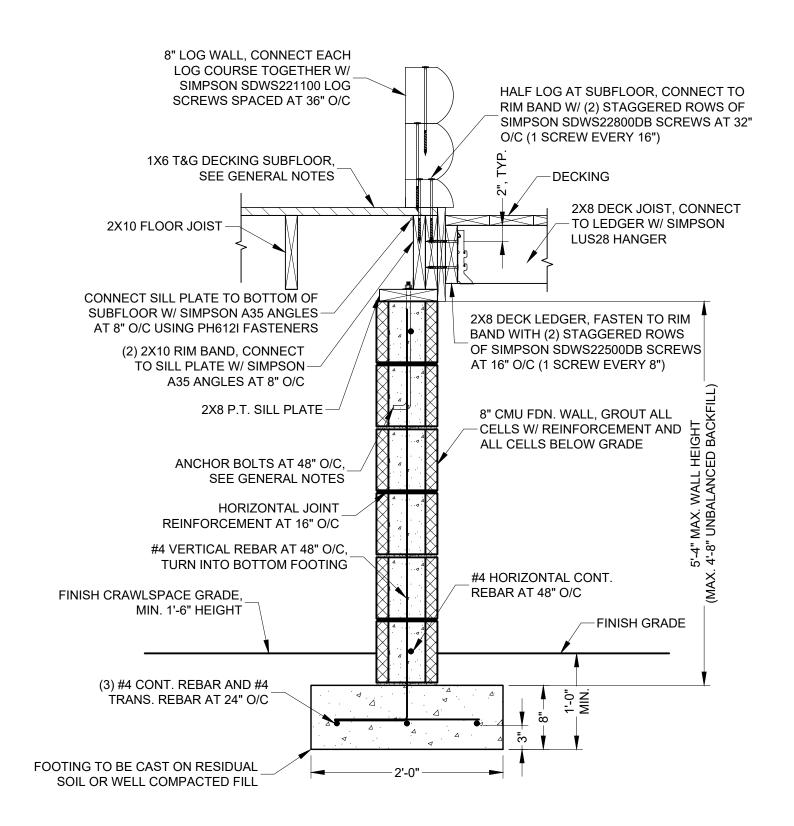
- 1. ALL FOOTINGS MUST BE CAST A MINIMUM OF 12" BELOW FINISHED GRADE ON RESIDUAL SOIL, OR WELL COMPACTED FILL. CONTRACTOR SHALL VERIFY ALL FOUNDATION BEARING CONDITIONS. DESIGN IS BASED ON ASSUMED 2,000 PSF ALLOWABLE BEARING PRESSURE. IF ROCK, RUBBLE, OR ANY OTHER POTENTIALLY UNSUITABLE SUBGRADE EXIST, CONTACT ENGINEER.
- 2. SEE PLAN AND KEYNOTES FOR FOUNDATION WALL AND FOOTING INFORMATION. 3. INSTALL PROPER DRAINAGE SYSTEM ADJACENT TO FOUNDATION AS REQUIRED BY CODE. DRAIN OUTLETS SHALL BE LOCATED DOWNHILL FROM STRUCTURE AT LEAST 10-FT FROM ANY FOUNDATION.
- 4. FOUNDATION WALLS SHALL BE 8" CMU WITH #4 VERTICAL REBAR INSTALLED AT 48" O/C AND HORIZONTAL CONTINUOUS REBAR SPACED VERTICALLY AT 48" O/C, U.N.O. FILL ALL CELLS WITH REINFORCEMENT AND ALL CELLS BELOW GRADE SOLID WITH
- USE 5/8"Ø SILL PLATE ANCHOR BOLTS, 15" MINIMUM IN CMU, WITH SIMPSON BPS5/8-6 PLATE WASHER AT 48" O.C, U.N.O. RIM JOIST SHALL BE CONNECTED TO SILL PLATES WITH SIMPSON A35 FRAMING ANGLES AT 48" O/C, U.N.O.
- 7. FIREPLACE FOUNDATION TO BE CONSTRUCTED OF 8" CMU, FILLED SOLID WITH GROUT. PROVIDE #4 VERTICAL REBAR IN EACH CELL AND HORIZONTAL JOINT REINFORCEMENT AT EACH COURSE.

FOUNDATION SCHEDULE					
MARK	LENGTH	WIDTH	DEPTH	REINFORCEMENT	
WF2.0	CONT.	2'-0"	0'-8"	(3) #4 CONT. REBAR AND #4 TRANSVERSE REBAR AT 24" O/C	
F1.33/2.0	2'-0"	1'-4"	0'-8"	(2) #4 LONG. REBAR AND (3) #4 TRANS. REBAR, EVENLY SPACED, BOTTOM	
F2.0	2'-0"	2'-0"	0'-10"	(3) #4 REBAR, EACH WAY, EVENLY SPACED, BOTTOM	
F2.5	2'-6"	2'-6"	1'-0"	(4) #4 REBAR, EACH WAY, EVENLY SPACED, BOTTOM	
F3.0	3'-0"	3'-0"	1'-0"	(4) #4 REBAR, EACH WAY, EVENLY SPACED, BOTTOM	

- A LONG THIS LENGTH OF WALL PROVIDE 5/8"Ø ANCHOR BOLTS AT 16" O/C. CONNECT THE RIM BAND TO THE SILL PLATE W/ SIMPSON A35 ANGLES AT 8" O/C AND TO THE BOTTOM OF THE SUBFLOOR WITH SIMPSON A35 ANGLES AT 8" O/C USING PH612I FASTENERS
- B ALONG THIS LENGTH OF WALL CONNECT THE RIM BAND TO THE SILL PLATE W/ SIMPSON A35 ANGLES AT 16" O/C







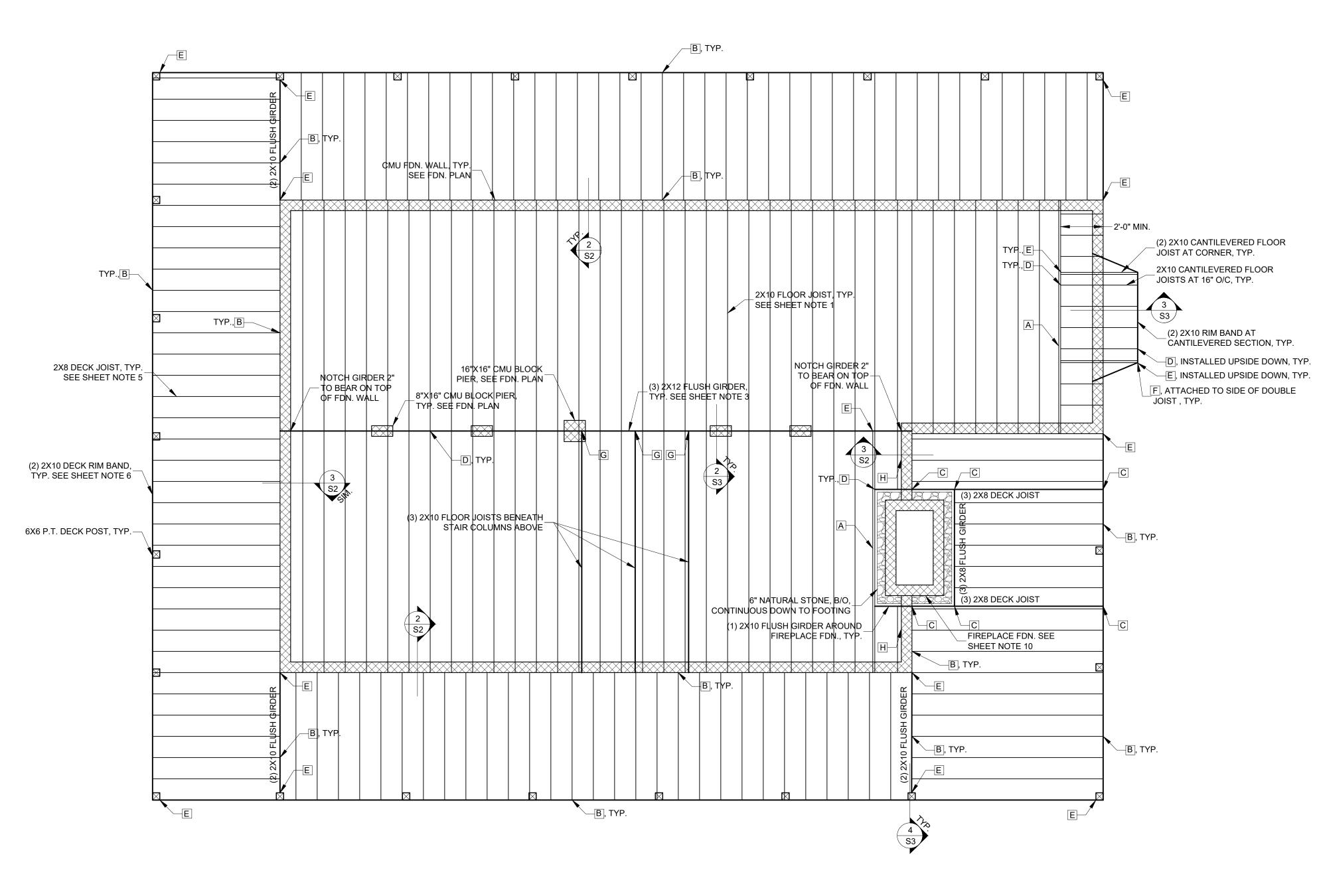






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REVISIONS NO. DATE DESCRIPTION FOR CONSTRUCTION 0 06.25.2021 AS SHOWN REVIEWED BY: DRAWN BY: 06.25.2021





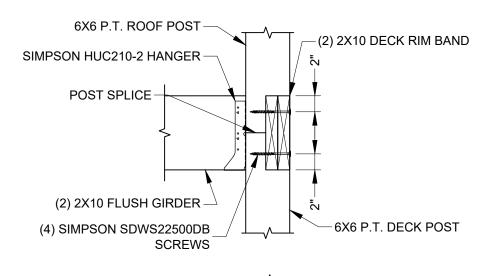
- 1. PROVIDE 2X10 FLOOR JOISTS AT 16" O/C TO SUPPORT THE MAIN LEVEL, U.N.O. CONNECT TO FLUSH BEAMS WITH SIMPSON LUS210 HANGERS. PROVIDE DOUBLE JOISTS BENEATH NON-LOAD BEARING WALLS PARALLEL TO FLOOR JOISTS AND CONNECT TO FLUSH GIRDER WITH SIMPSON LUS210-2 HANGERS.
- 2. SUBFLOOR SHALL BE 1X6 T&G, S.Y.P. #2 OR BETTER, DECKING INSTALLED DIAGONALLY TO FLOOR JOISTS AT 45°. PROVIDE (3) 8D COMMON NAILS AT ALL BOARD ENDS AND (2) 8D COMMON NAILS AT INTERMEDIATE SUPPORTS ALONG BOARDS.
- PROVIDE A (3) 2X12 FLUSH GIRDER TO SUPPORT THE MAIN LEVEL FLOOR JOISTS.
- 4. BUILT-UP COLUMNS SHALL BE CONTINUOUS TO FOUNDATION THRU FLOOR CAVITIES BY BLOCKING, UNLESS BEARING ON BEAM 5. PROVIDE 2X8 DECK JOISTS AT 16" O/C, U.N.O. DECK FRAMING SHALL BE SOUTHERN PINE #2 OR BETTER, TREATED FOR EXTERIOR APPLICATION. RETREAT ALL FIELD CUTS, NOTCHES, BEVELS, MITERS, DRILLED HOLES, ETC. WITH "COPPER-GREEN-BROWN" OR
- EQUIVALENT WOOD PRESERVATIVE PRODUCT. PROVIDE A (2) 2X10 DECK RIM BAND ALONG THE PERIMETER OF THE DECK, U.N.O.
- EXTERIOR DECKING SHALL BE 5/4 TREATED PINE, U.N.O. EACH DECK BOARD SHALL BE FASTENED TO EACH SUPPORTING MEMBER WITH (2) #10X3" DECK SCREWS, U.N.O.
- 8. DECK POSTS SHALL BE BRACED LATERALLY IN ACCORDANCE WITH APPENDIX M OF THE NORTH CAROLINA STATE BUILDING
- CODE: RESIDENTIAL. 9. A GUARD RAILING SHALL BE PROVIDED AROUND THE PERIMETER OF ALL DECK AREAS, STAIRS, LANDINGS, ETC. IN ACCORDANCE
- WITH THE NORTH CAROLINA STATE BUILDING CODE. 10. FIREPLACE TO BE CONSTRUCTED OF 8" CMU, FILLED SOLID WITH GROUT. PROVIDE #4 VERTICAL REBAR IN EACH CELL AND
- HORIZONTAL JOINT REINFORCEMENT AT EACH COURSE.

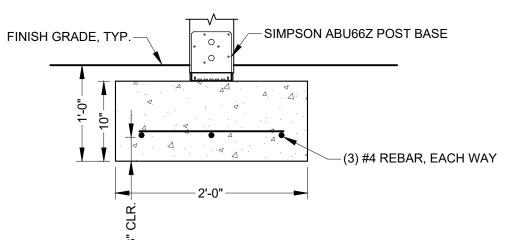
# KEY NOTES:

- A DOUBLE JOIST
- B SIMPSON LUS28 HANGER
- C SIMPSON LUS28-3 HANGER
- D SIMPSON LUS210 HANGER

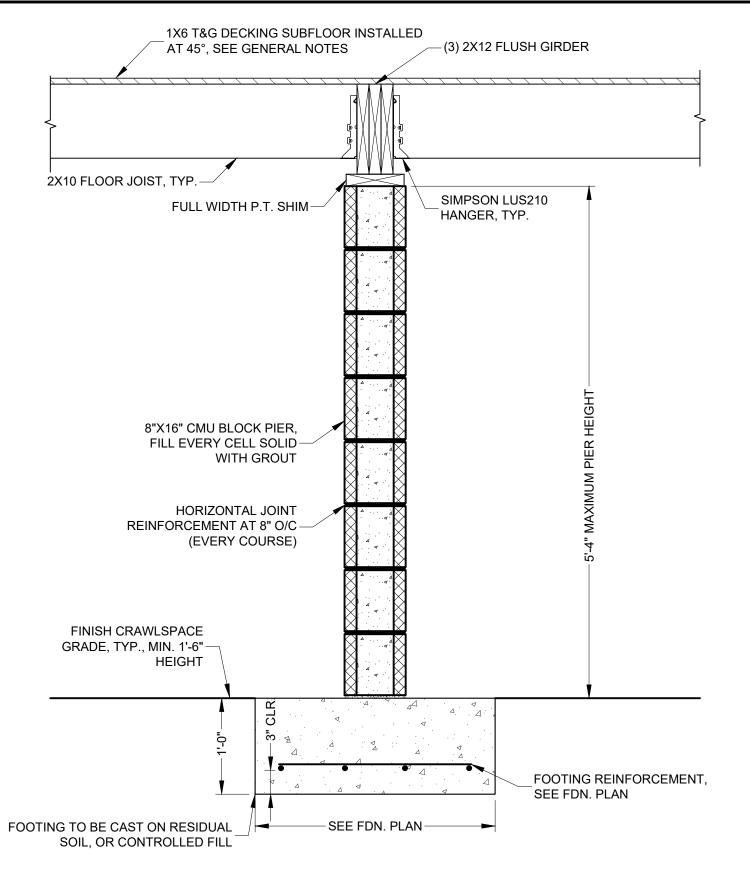
E SIMPSON HUC210-2 HANGER

- F SIMPSON HUC210-2 HANGER, SKEWED
- G SIMPSON HUC210-3 HANGER
- H ALONG THIS LENGTH OF WALL, CONNECT THE BOTTOM LOG WALL COURSE TO THE DOUBLE RIM BAND WITH (2) STAGGERED ROWS OF SIMPSON SDWS22800DB SCREWS SPACED AT 16" O/C (1 SCREW EVERY 8")

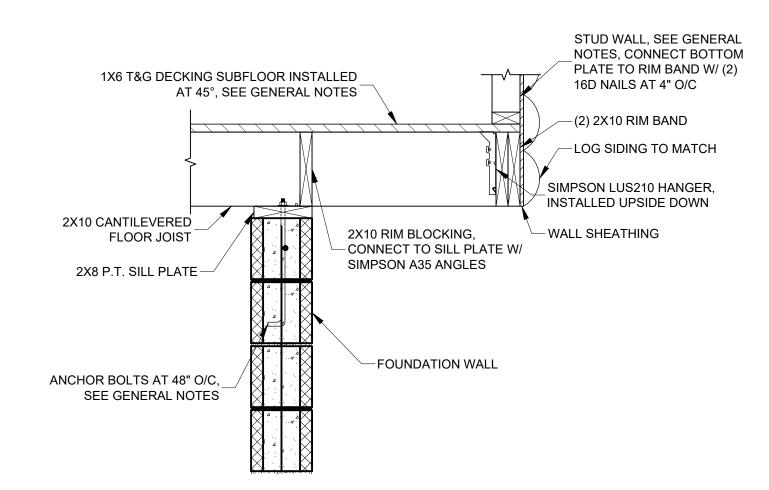




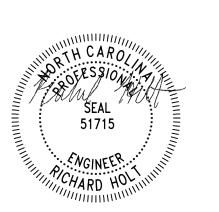










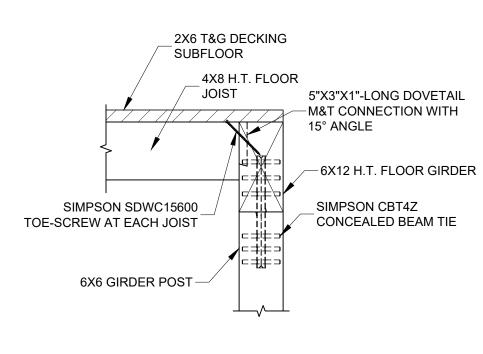




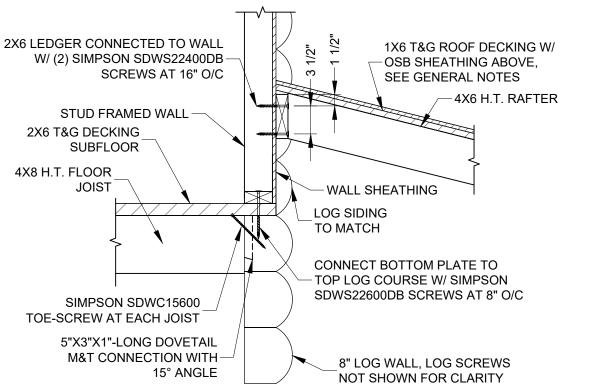
NIGHSWONGER RESIDENCE CHRIS NIGHSWONGER 371 RUDOLPH ROAD DUNN, NC

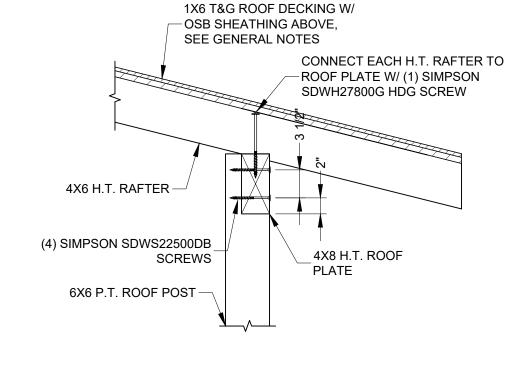
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KEY NOTES:

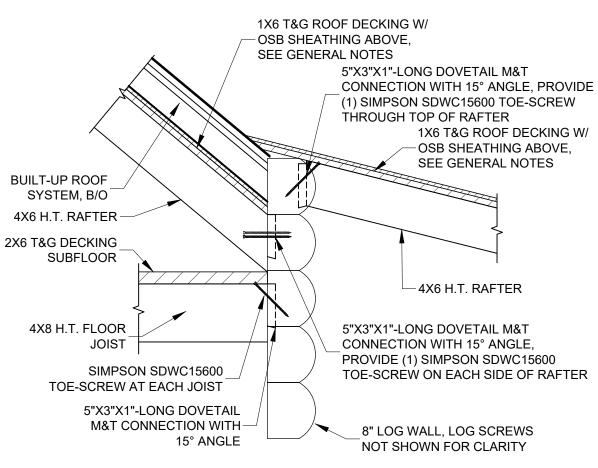




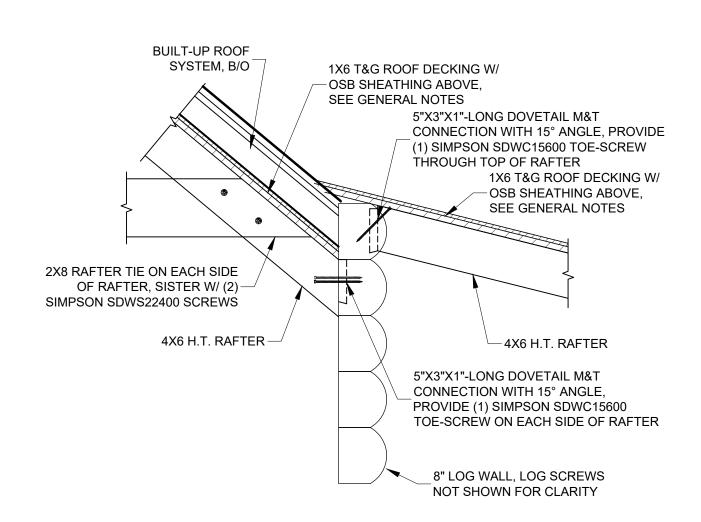




TYPICAL FLOOR CONNECTION AT LOG WALL

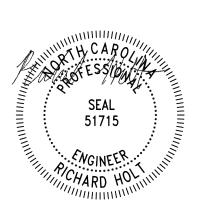


# TYPICAL PORCH RAFTER BEARING S4 | SCALE: 1"= 1'-0"



TYPICAL RAFTER BEARING AT LOG WALL S4 SCALE: 1"= 1'-0"





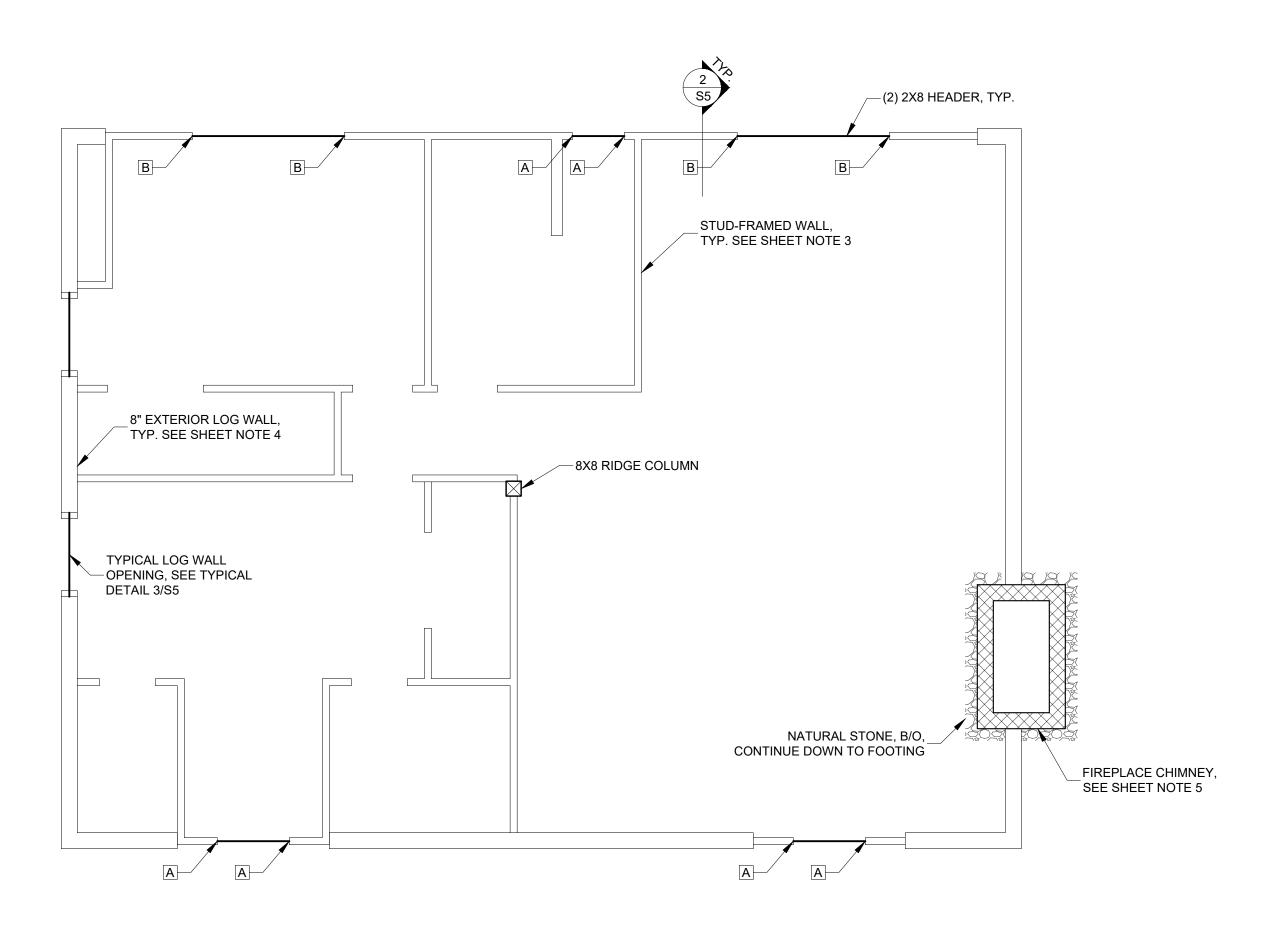


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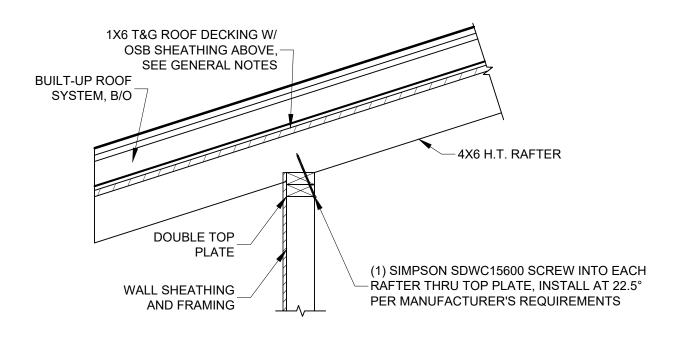


# SHEET NOTES

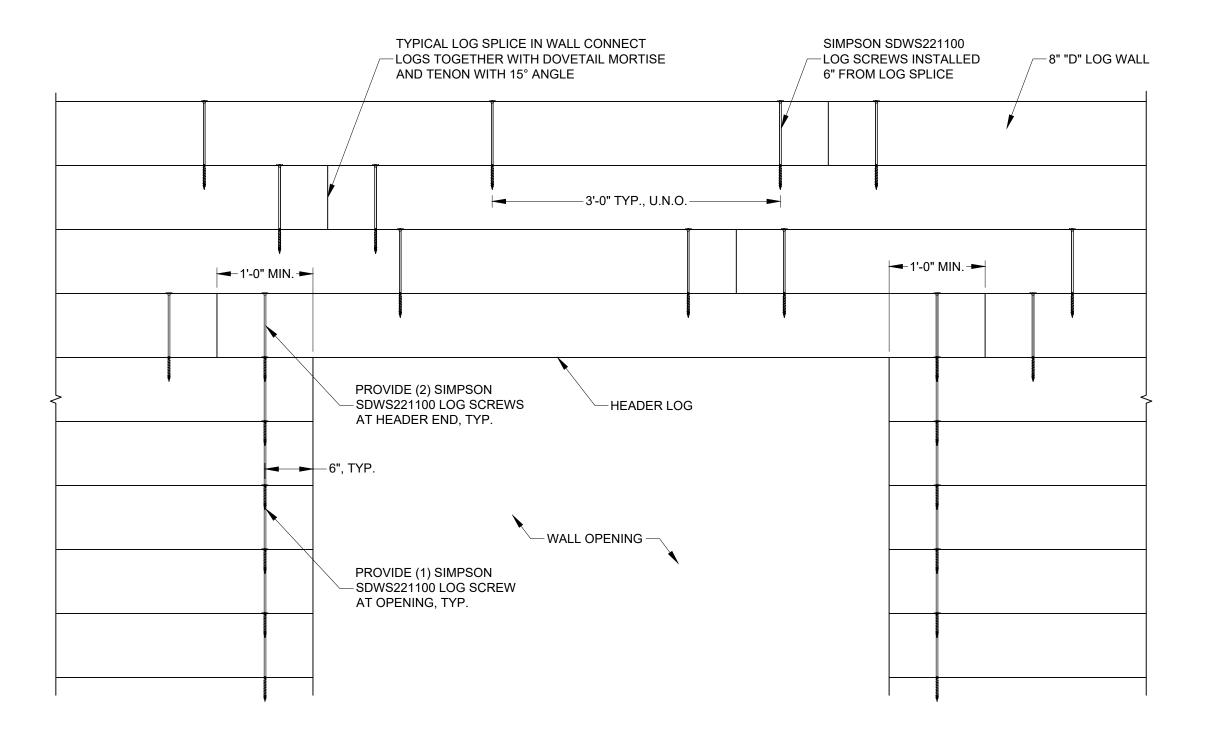
- COORDINATE DIMENSIONS AND WALL PLATE HEIGHTS WITH ARCHITECTURAL DRAWINGS.
   BUILT-UP COLUMNS SHALL BE CONTINUOUS TO FOUNDATION THRU FLOOR CAVITIES BY BLOCKING, UNLESS BEARING ON BEAM
- OR HEADER.
  ALL STUD-FRAMED WALLS SHALL BE FRAMED WITH 2X4 STUDS AT 16" O/C LLN O
- 3. ALL STUD-FRAMED WALLS SHALL BE FRAMED WITH 2X4 STUDS AT 16" O/C, U.N.O. 4. ALL EXTERIOR LOG WALLS SHALL BE CONSTRUCTED WITH 8" "D" LOGS. U.N.O.. SE
- 4. ALL EXTERIOR LOG WALLS SHALL BE CONSTRUCTED WITH 8" "D" LOGS, U.N.O., SEE GENERAL NOTES FOR WALL CONSTRUCTION.
  5. FIREPLACE CHIMNEY TO BE CONSTRUCTED OF 8" CMU, FILLED SOLID WITH GROUT. PROVIDE #4 VERTICAL REBAR IN EACH CELL
- AND HORIZONTAL JOINT REINFORCEMENT AT EACH COURSE.

# KEY NOTES:

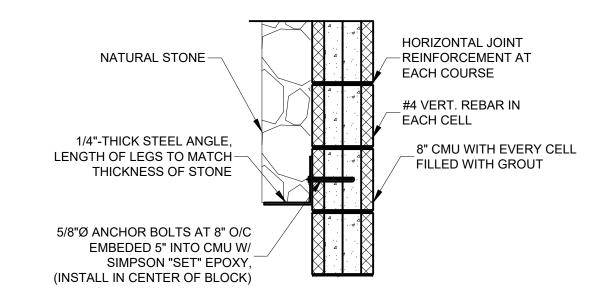
- A (1) 2X4 JACK STUD WITH (2) 2X4 KING STUDS
- B (1) 2X4 JACK STUD WITH (3) 2X4 KING STUDS



# 2 TYPICAL RAFTER BEARING AT STUD WALL S5 SCALE: 1"= 1'-0"



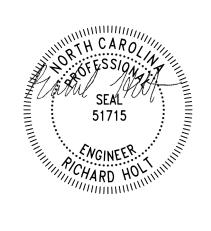
# 3 TYPICAL LOG WALL OPENING DETAIL S5 SCALE: NOT TO SCALE



NOTE: ANGLE NOT REQUIRED FOR STONE WIDTHS LESS THAN 3"

TYPICAL STONE LINTEL SUPPPORT (WHERE NECESSARY)

S5 SCALE: NOT TO SCALE



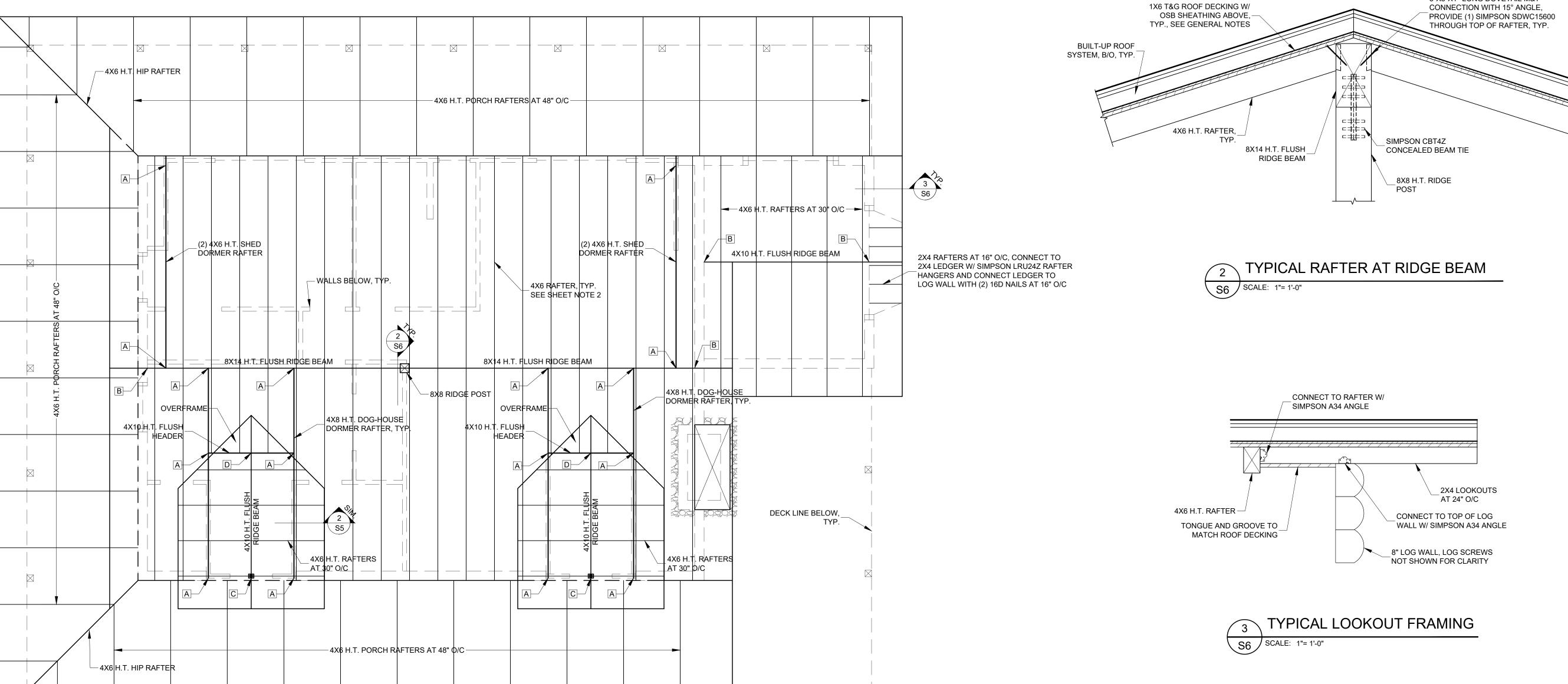
GINEERS
CHAPEL HILL ROAD, SUITE 200
EIGH, NC 27607 (919) 465-3801

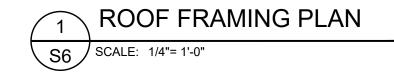


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**S5** 





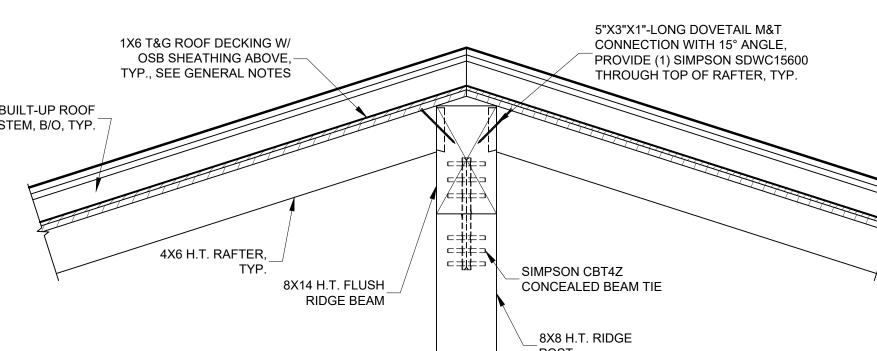
ROOF PLATE AND POSTS BELOW, TYP.

1. SHEATH ROOF WITH 1X6 TONGUE AND GROOVE DECKING, E.W.P #1 WITH EXPOSURE 1, 15/32 APA RATED OSB (GRADE 32/16) ABOVE DECKING. PROVIDE 16D NAILS AT 6" O/C EDGES, 12" O/C FIELD, BLOCKING NOT REQUIRED AT PANEL EDGES. BUILT-UP ROOF SYSTEM ABOVE OSB SHEATHING SHALL BE BY OTHERS.

- 2. FRAME ROOF WITH 4X6 H.T. RAFTERS AT 24" O/C, U.N.O. SEE ARCHITECTURAL PLANS FOR ROOF SLOPES AND DIMENSIONS. ALL HEAVY TIMBER RAFTERS SHALL BE E.W.P. #1, OR BETTER, U.N.O.
- 3. ALL OTHER HEAVY TIMBER SHALL BE DOUGLAS FIR-LARCH #1, OR BETTER, U.N.O. TREATED FOR EXTERIOR APPLICATION WHERE NECESSARY. RE-TREAT ALL FIELD CUTS, NOTCHES, BEVELS, MITERS, DRILLED HOLES, ETC. WITH "COPPER-GREEN-BROWN" OR EQUIVALENT WOOD PRESERVATIVE PRODUCT.
- 4. SEE ARCHITECTURAL DRAWINGS FOR WALL PLATE HEIGHTS, CEILING HEIGHTS, AND DIMENSIONS.

- A CONNECT MEMBER USING 5"X3"X1"-LONG MORTISE AND TENON CONNECTION, SEE DETAIL 2/S6 FOR TYPICAL MORTISE AND TENON CONNECTION.
- B POCKET RIDGE BEAM INTO LOG WALL TO ALLOW FOR A MINIMUM OF 4" OF FULL
- BEARING. FASTEN RIDGE BEAM TO LOG WALL WITH (2) SIMPSON SDWC15600 TOE-SCREWS ON EACH SIDE OF BEAM. PROVIDE (3) 2X4 JACK STUDS AND CONNECT RIDGE TO JACK STUDS W/ (1)
- D CONNECT RIDGE BEAM TO HEADER WITH (2) SIMPSON SDWC15600 TOE-SCREWS ON EACH SIDE OF RIDGE, DOWN INTO THE HEADER BELOW. NOTCH RIDGE IS NECESSARY FOR BEARING ON TOP OF HEADER.

SIMPSON SDWC15600 INSTALLED IN EACH STUD PLY (3 TOTAL SCREWS).







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