

SEE ARCHITECTS DRAWINGS FOR DESIRED ELEVATION HEIGHTS OF FOUNDATION WALLS AND CONCRETE SLAB

STRUCTURAL NOTES
SEE SHEET "S-2" FOR STRUCTURAL NOTES.

1 FOUNDATION PLAN
S-1

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

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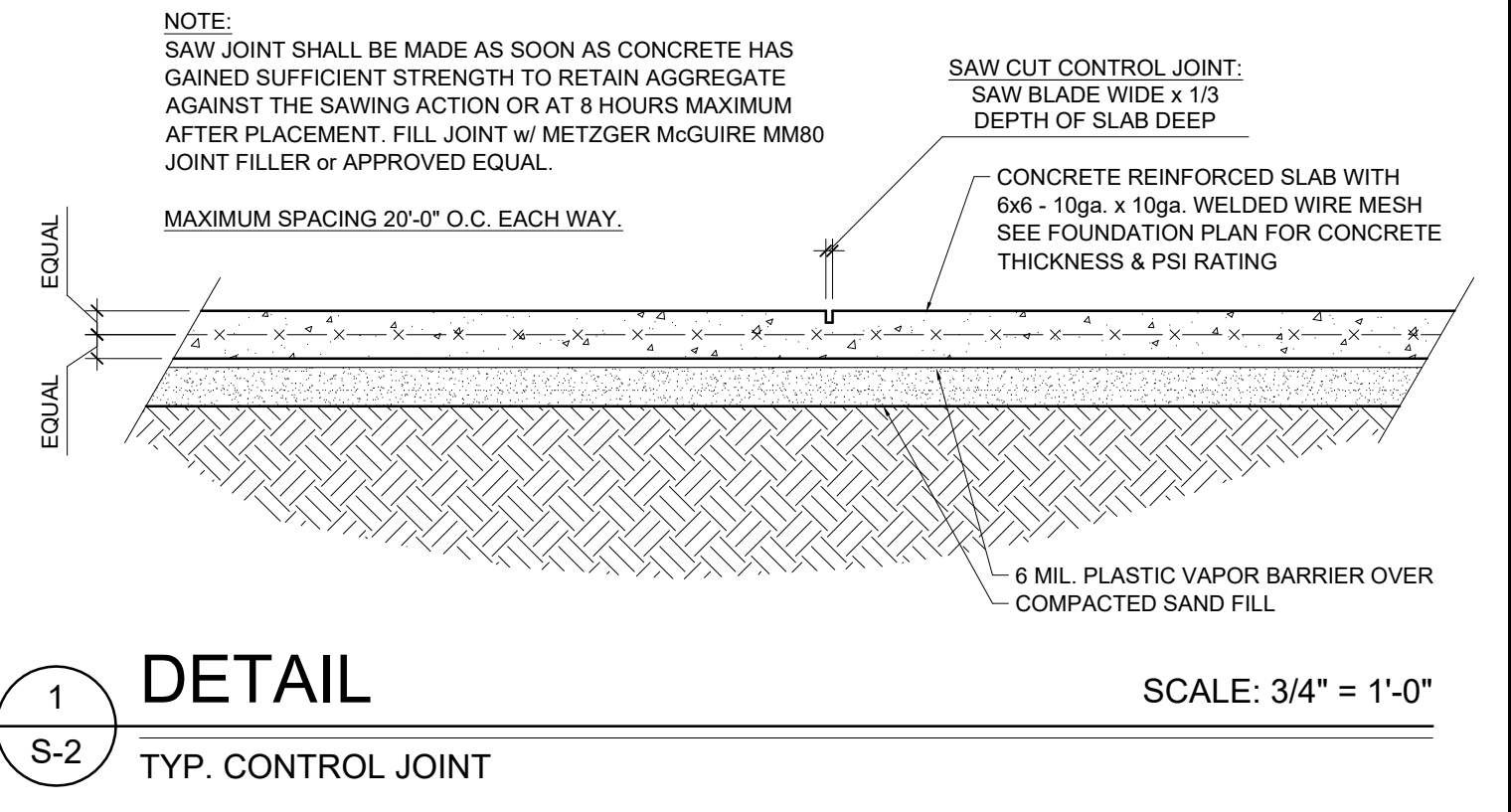
Professional Engineer Seal
 SEAL 20106
 ROBERT S. BARTLETT
 12-15-2021

Rev.	Date:	Description:

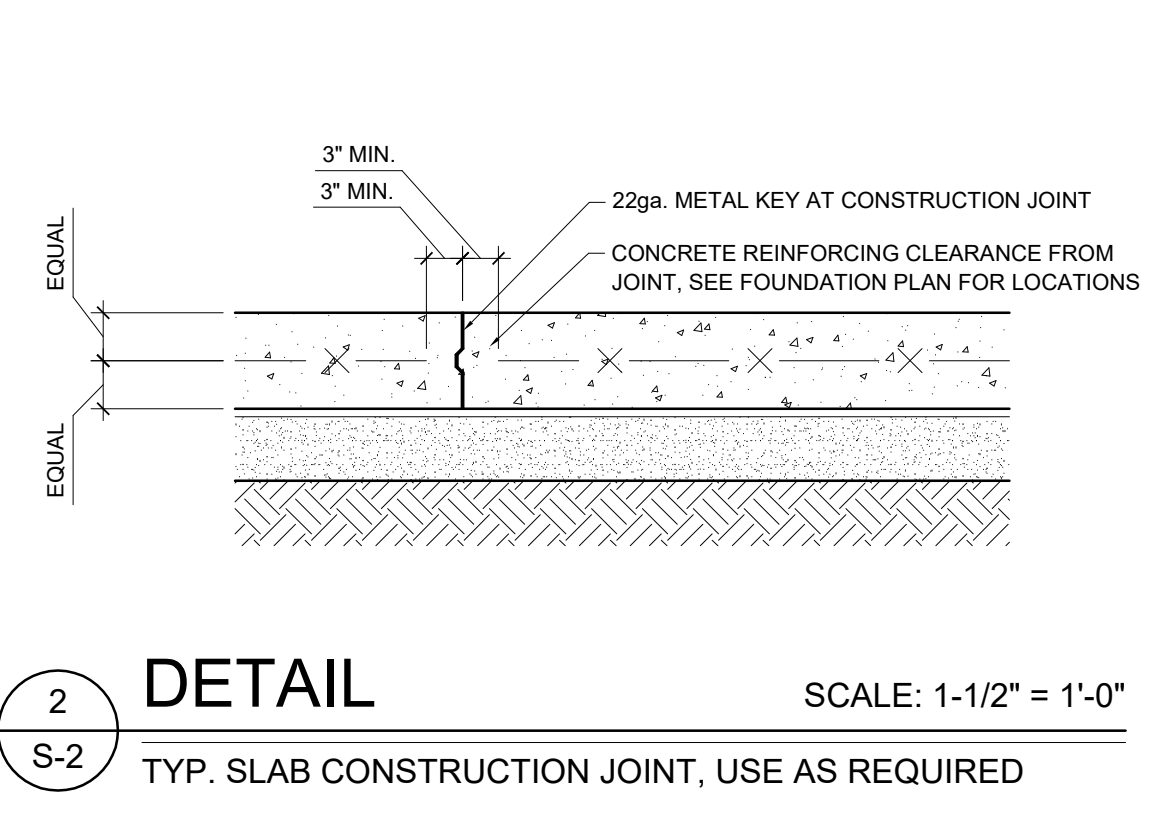
Title Sheet:
FOUNDATION PLAN

Structural Plans for:
Single Family Residence
 Atkins Road Fuquay Varina, NC

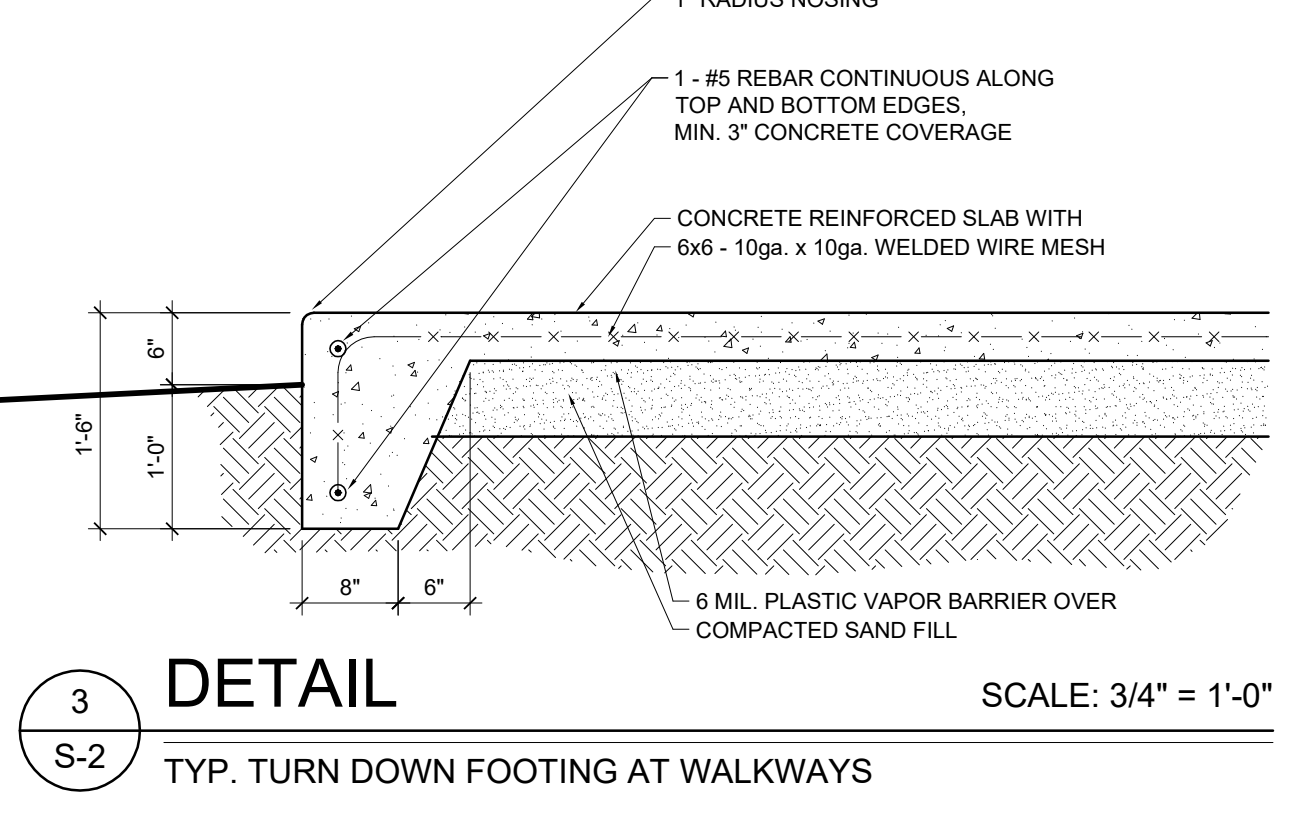
Drawn by: M. Morgan
 Issue Date: 12-15-2021
 Project Number:
 Sheet: **S-1**



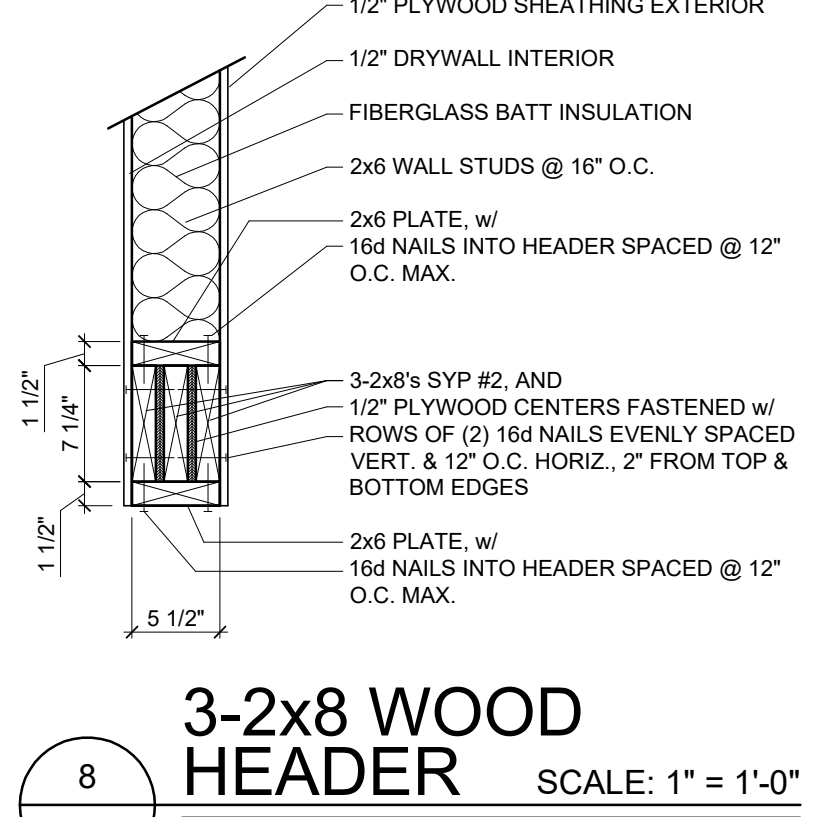
1 DETAIL SCALE: 3/4" = 1'-0"
S-2 TYP. CONTROL JOINT



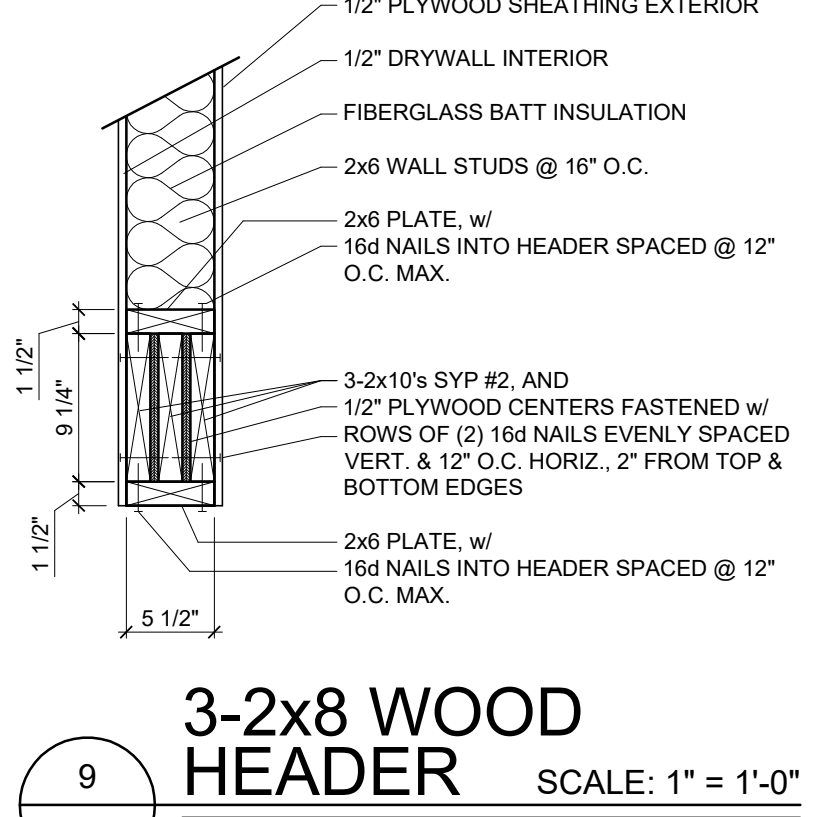
2 DETAIL SCALE: 1-1/2" = 1'-0"
S-2 TYP. SLAB CONSTRUCTION JOINT, USE AS REQUIRED



3 DETAIL SCALE: 3/4" = 1'-0"
S-2 TYP. TURN DOWN FOOTING AT WALKWAYS



8 3-2x8 WOOD HEADER SCALE: 1" = 1'-0"
S-2 EXTERIOR HEADER FOR ACCESS DOORS & WINDOWS SEE HEADER DETAIL BELOW FOR KING & JACK STUDS NOT FOR OVERHEAD GARAGE DOORS



9 3-2x8 WOOD HEADER SCALE: 1" = 1'-0"
S-2 EXTERIOR HEADER FOR ACCESS DOORS & WINDOWS SEE HEADER DETAIL BELOW FOR KING & JACK STUDS NOT FOR OVERHEAD GARAGE DOORS

STRUCTURAL NOTES

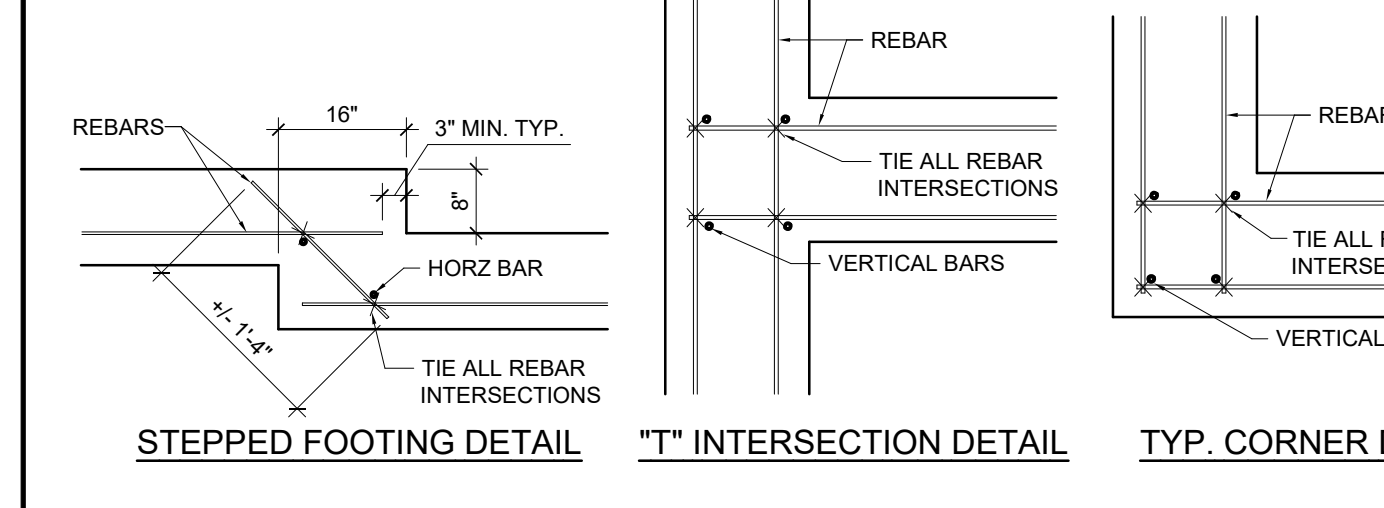
- FOUNDATIONS**
- ALLOWABLE DESIGN SOIL BEARING PRESSURE OF 1500 PSF ASSUMED SHALL BE VERIFIED IN THE FIELD BEFORE START OF CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
 - FOOTINGS SHALL BE CARRIED TO LOWER ELEVATIONS THAN THOSE SHOWN ON THE DRAWINGS IF REQUIRED BY THE ENGINEER IN ORDER TO REACH FIRM SOIL.
 - COMPACT ALL FILL UNDER BUILDING TO 98 PERCENT MAXIMUM DENSITY AS DETERMINED BY ASTM D698. PLACE IN LAYERS 8" MAXIMUM LOOSE THICKNESS. VERIFY FIELD DENSITY, ASTM D1556, WITH AT LEAST ONE TEST PER 1,000 SQUARE FOOT PER LAYER.
- CONCRETE**
- CONCRETE COMPRESSIVE STRENGTH IN 28 DAYS = 3,000 PSI.
 - REINFORCING: ASTM A615 - STIRRUPS AND TIES GRADE 40, ELSEWHERE GRADE 60.
 - GRout UNDER BASE PLATES SHALL BE NON-SHRINKING TYPE AS APPROVED BY THE ENGINEER.
 - BAR DETAILS AND SUPPORTS: ACI DETAILING MANUAL AND BUILDING CODE. LAP ALL SPLICES 48 TIMES THE BAR DIAMETER, U.N.O.
 - COVERAGE FROM FACE OF CONCRETE TO STEEL: FOOTINGS _____ 3 INCHES SLABS EXPOSED TO EARTH AND WEATHER _____ 1 1/2 INCHES
 - PROVIDE WWF REINFORCING IN ALL SLABS ON GROUND: 4" SLAB _____ 6 X 6 - W1.4 X W1.4 PLACE WWF AT MID DEPTH OF SLAB, TYPICAL U.N.O.
 - ALL EXPANSION STRIPS SHALL BE 1/2" THICK U.N.O.

- STRUCTURAL MASONRY**
- MASONRY WALLS, FOUNDATION WALLS, AND OTHER MASONRY SO DESIGNATED ON THE DRAWINGS ARE CONSIDERED HERE TO BE STRUCTURAL MASONRY.
 - COMPRESSIVE STRENGTH OF MASONRY UNITS: CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C 90, TYPE II AND BE MADE WITH LIGHTWEIGHT AGGREGATE. SOLID CLAY UNITS _____ 8,000 PSI CONCRETE UNITS _____ 2,000 PSI ON NET AREA
 - MORTAR - TYPE S ASTM C 270, AGGREGATE FOR MORTAR SHALL COMPLY WITH ASTM C 144.
 - MORTAR FOR REINFORCED MASONRY - TYPE S ASTM C270.
 - GRout FOR REINFORCED MASONRY: 9" TO 11" SLUMP, 3/8" MAXIMUM SIZE PEA GRAVEL. CONCRETE FOR GRout SPACE 3"x4" AND GREATER, 5" SLUMP FINE GRout ASTM C476 FOR GRout SPACE 2"x4" TO 3"x4". COMPRESSIVE STRENGTH - 3,000 PSI.
 - PROVIDE CLEAN-OUT OPENINGS AT THE BOTTOM OF EACH GROUT LIFT. CLEAN-OUT OPENINGS SHALL BE PROVIDED AT EACH CELL TO FILLED WITH GRout.
 - REINFORCING GRADE AND DETAILS AS FOR CONCRETE. TIE IN POSITION AND PLACE CONCRETE AROUND REINFORCING DURING CONSTRUCTION OF MASONRY. DO NOT PUSH REINFORCING DOWN INTO PREVIOUSLY PLACED GRout FILL. SET BOLTS SIMILARLY.
 - PROVIDE STANDARD 9 GAGE TRUSS TYPE HORIZONTAL JOINT REINFORCING IN CMU WALLS AT 16" O.C. VERTICAL AND IN TWO JOINTS IMMEDIATELY ABOVE AND BELOW ALL OPENINGS.
 - CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO THE "SPECIFICATIONS FOR MASONRY STRUCTURES" ACI 530.1-99 / ASCE 6-99.
 - REINFORCING STEEL SHALL COMPLY WITH ASTM A-615, GRADE 60. SHOP FABRICATE REINFORCING BARS WHICH ARE SHOWN TO BE BENT OR HOOKED.

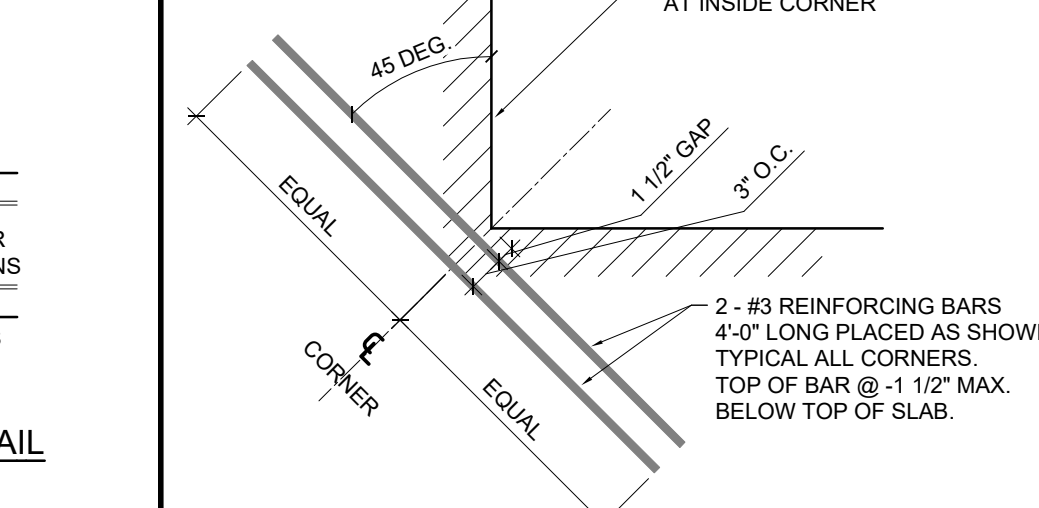
- STRUCTURAL STEEL**
- STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS. STRUCTURAL STEEL SHAPES, PLATES AND BARS: ASTM A36. "W" STRUCTURAL STEEL SHAPES: ASTM A992, GRADE 50. STRUCTURAL TUBE SHAPES: ASTM A500, GRADE B. ANCHOR BOLTS: ASTM A307.
 - DESIGN, FABRICATION AND ERECTION: AISC SPECIFICATIONS FOR BUILDINGS.
 - CONNECTIONS NOT DETAILED SHALL BE DESIGNED FOR LOADS SHOWN ON DRAWINGS OR FOR LOADS GIVEN IN STANDARD AISC LOAD TABLES FOR SPAN, SECTION AND STRENGTH SPECIFIED. BOLTED CONNECTIONS WITH 3/4" DIAMETER A325 BOLTS U.N.O. TIGHTEN NUTS TO A MINIMUM OF 200 FT-LB OF TORQUE.
 - WELDS SHALL BE IN ACCORDANCE WITH AWS D1.1 AND SHALL BE MADE ONLY BY OPERATORS CERTIFIED BY THE STANDARD QUALIFICATION PROCEDURE PLUS FROM SOLE PLATE AT TOP OF FND. WALL TO RAFTER BEARING PLATE ABOVE.
 - RETURN ALL WELDS AT THE CORNERS TWICE THE NORMAL SIZE OF THE WELD MINIMUM.
 - WHERE PLATES ARE FILLET WELDED OT MEMBERS AND NO WELD SIZE IS SPECIFIED PROVIDE FULL LENGTH FILLET WELDS BOTH SIDES OF PLATE AS FOLLOWS:

PLATE	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"
WELD	3/16"	3/16"	3/16"	1/4"	1/4"	5/16"	3/8"	7/16"

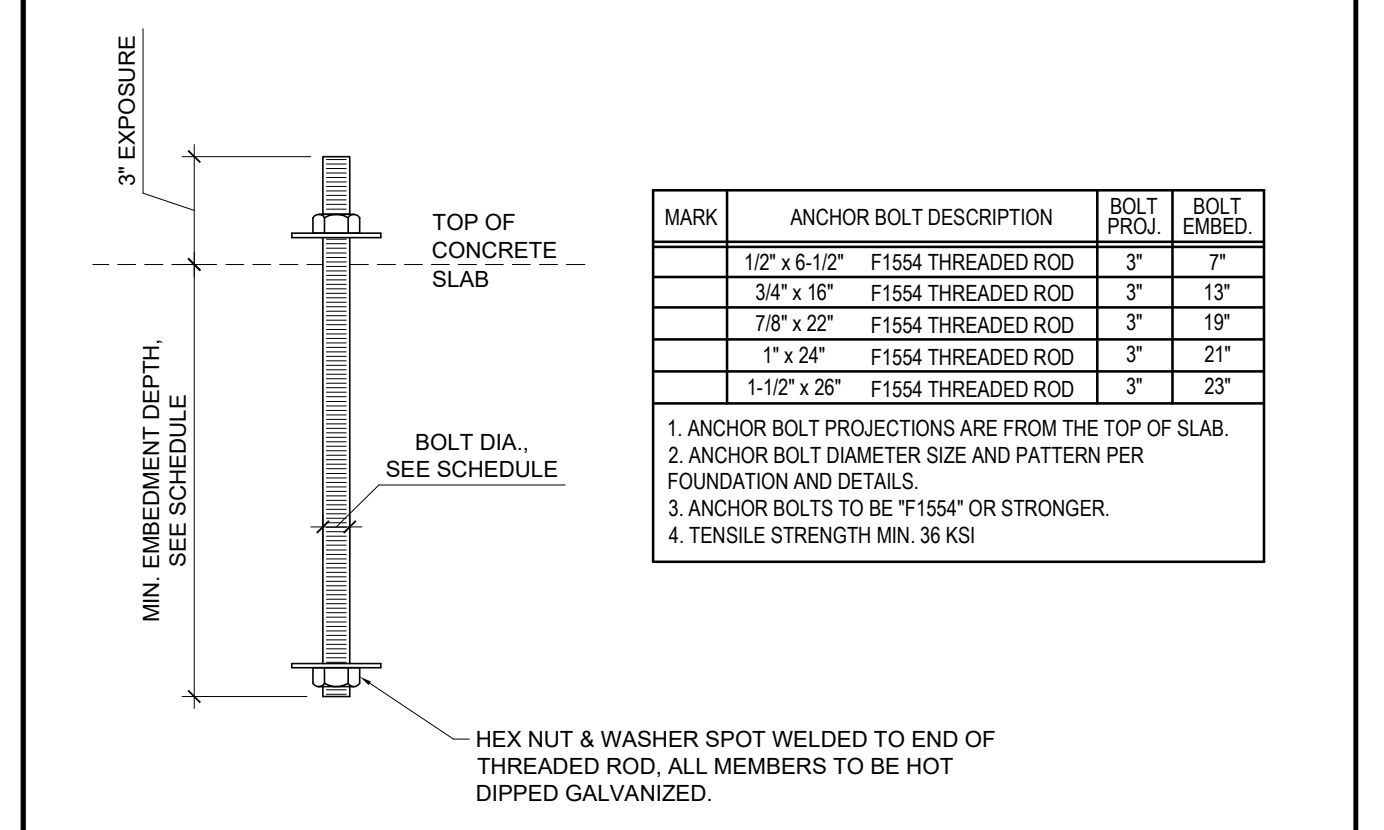
- METAL ROOF TIE OPTIONS**
- ROOF RAFTERS, REPETITIVE MEMBERS:
- SIMPSON H16 HURRICANE TIE EACH RAFTER EACH END FASTENED W/ SIMPSON 10d x1-1/2" NAILS IN EACH HOLE OF CONNECTOR
 - "OR"
 - SIMPSON H2.5A HURRICANE TIE EACH RAFTER (OPPOSITE SIDES) EACH END FASTENED W/ SIMPSON 10d x1-1/2" NAILS IN EACH HOLE OF CONNECTORS
- ROOF HIP & VALLEY MEMBERS:
- SIMPSON H10 HURRICANE TIE EACH MEMBER EACH END FASTENED W/ SIMPSON 10d x1-1/2" NAILS IN EACH HOLE OF CONNECTOR
- ENGINEERED WOOD FRAMING**
- ALL ENGINEERED WOOD LVL'S SPECIFIED ARE TO GEORGIA PACIFIC BRAND RATED AT 2.0E OR EQUAL.
 - ALL ASPECTS OF ENGINEERED WOOD INSTALLATION SHALL BE DONE STRICTLY ACCORDING TO THE MANUFACTURERS SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. IT IS THE RESPONSIBILITY OF THE BUILDER TO BECOME AWARE AND WELL VERSED OF SAME.
 - ALL METAL CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD TO HAVE MANUFACTURERS FACTORY APPLIED ADDITIONAL CORROSION PROTECTION FROM PRESSURE TREATED WOOD PRESERVATIVES, SEE MANUF. SPEC'S. FOR MORE INFORMATION.
 - MIN. 2 BEARING STUDS ARE TO BE USED UNDER EACH END OF ALL BEAMS AND HEADERS UNLESS NOTED WITH THIS SYMBOL. IF BEARING LOCATION IS NOTED WITH THIS SYMBOL, IT INDICATES THE NUMBER OF BEARING STUDS TO BE USED. (MIN. #2 SPF UNLESS NOTED OTHERWISE)



4 TYP. FTG. DETAILS SCALE: 1/2" = 1'-0"
S-2



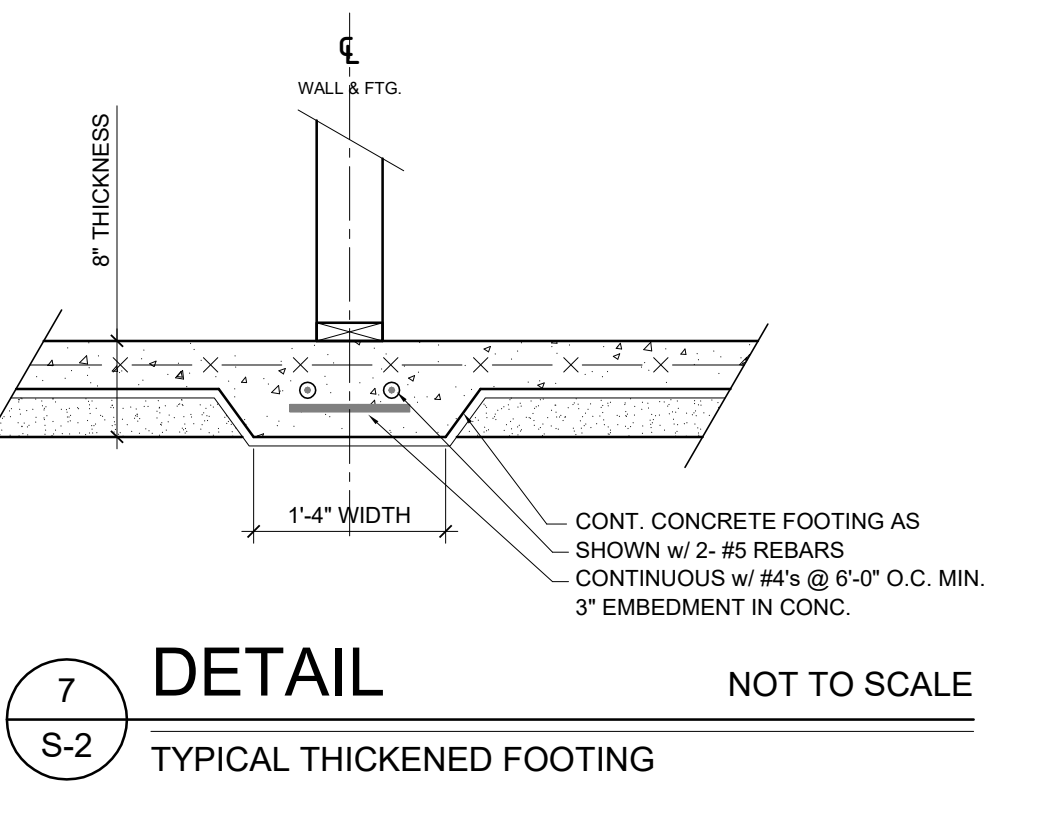
5 DETAIL SCALE: 3/4" = 1'-0"
S-2 INSIDE CORNER SLAB REINFORCING



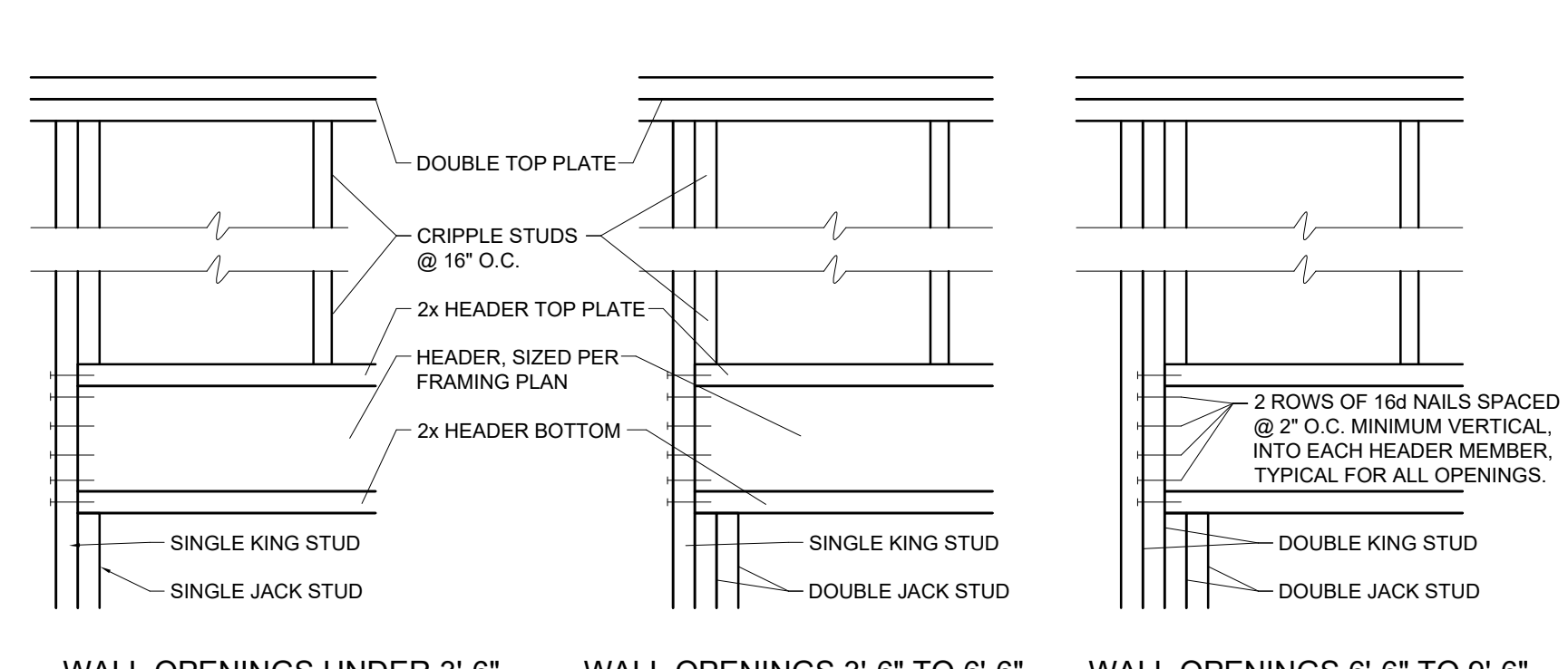
6 DETAIL NOT TO SCALE
S-2 TYP. ANCHOR BOLT

MARK	ANCHOR BOLT DESCRIPTION	BOLT PROJ.	BOLT EMBED.
1/2" x 6-1/2"	F1554 THREADED ROD	3"	7"
3/4" x 16"	F1554 THREADED ROD	3"	13"
7/8" x 22"	F1554 THREADED ROD	3"	19"
1" x 24"	F1554 THREADED ROD	3"	21"
1-1/2" x 28"	F1554 THREADED ROD	3"	23"

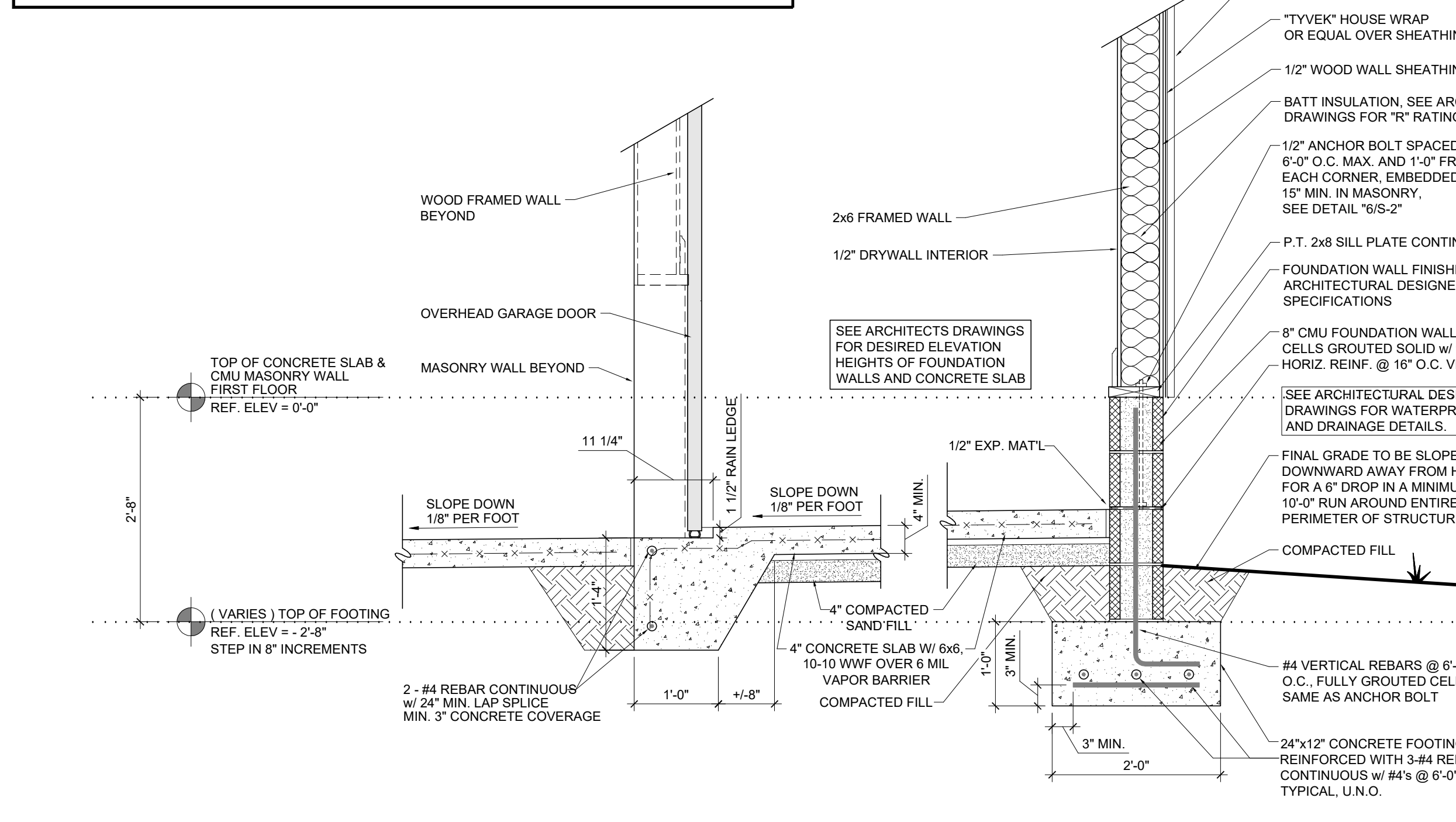
- ANCHOR BOLT PROJECTIONS ARE FROM THE TOP OF SLAB.
- ANCHOR BOLT DIAMETER SIZE AND PATTERN PER FOUNDATION AND DETAILS.
- ANCHOR BOLTS TO BE "F1554" OR STRONGER.
- TENSILE STRENGTH MIN. 36 KSI



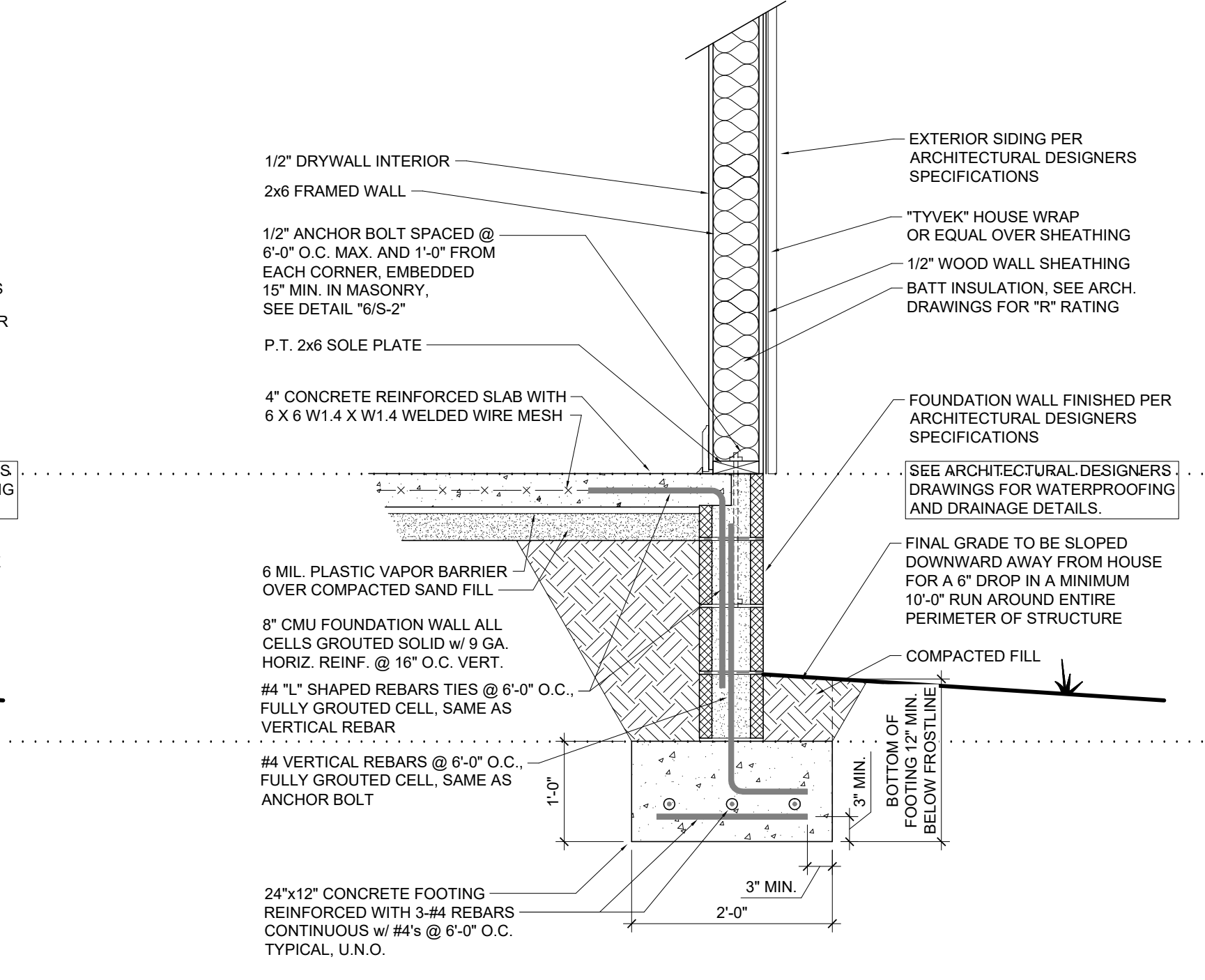
7 DETAIL NOT TO SCALE
S-2 TYPICAL THICKENED FOOTING



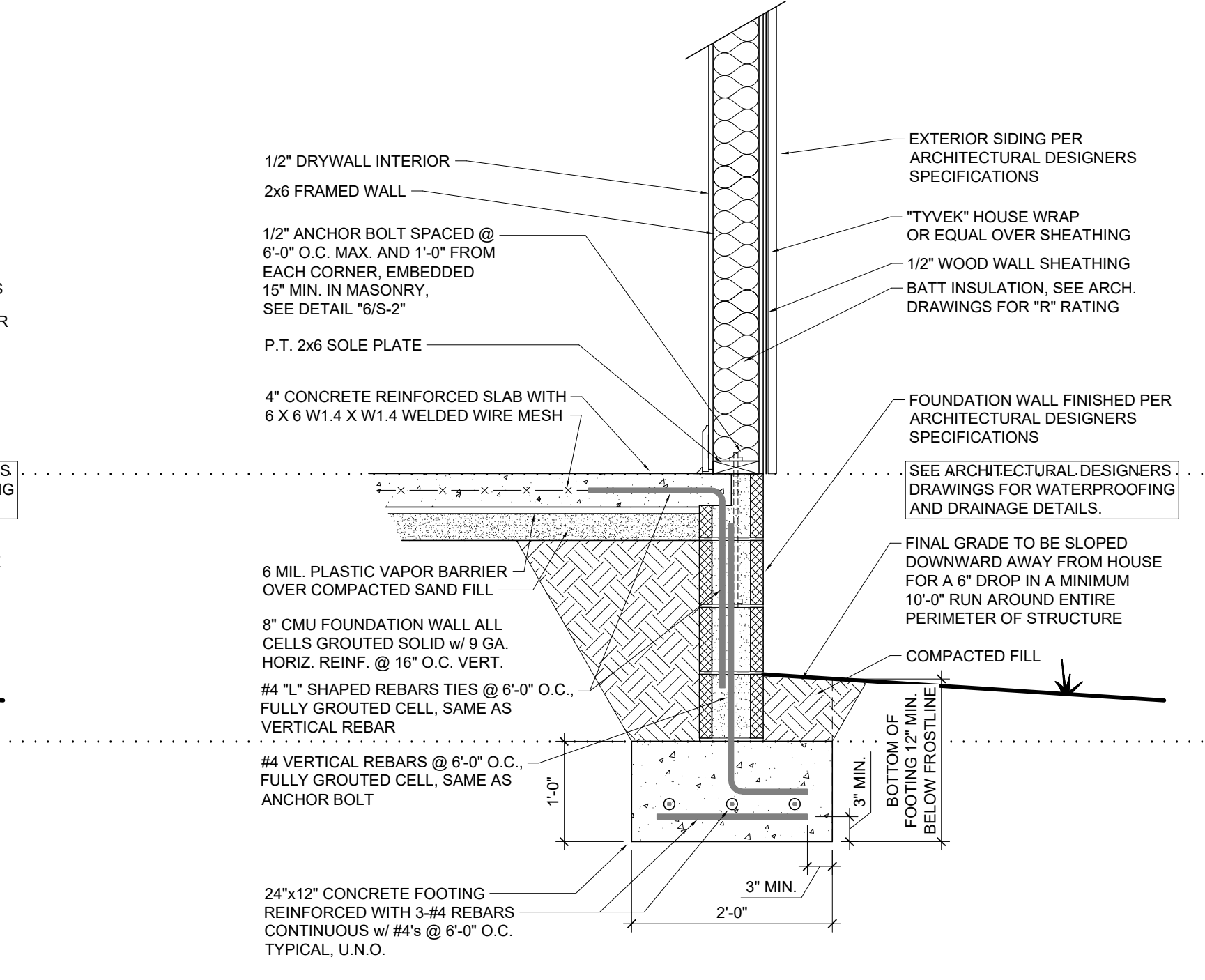
10 HEADER DETAIL SCALE: 1" = 1'-0"
S-2 TYPICAL KING AND JACK STUD CONFIGURATION FOR UP TO 9'-6" WALL OPENINGS, UNLESS OTHERWISE NOTED ON PLANS NOT FOR OVERHEAD GARAGE DOORS



11 SECTION SCALE: 3/4" = 1'-0"
S-2 GARAGE DOOR RAIN LEDGE



12 SECTION SCALE: 3/4" = 1'-0"
S-2 TYPICAL GARAGE FOUNDATION WALL



13 SECTION SCALE: 3/4" = 1'-0"
S-2 TYPICAL HOUSE FOUNDATION WALL

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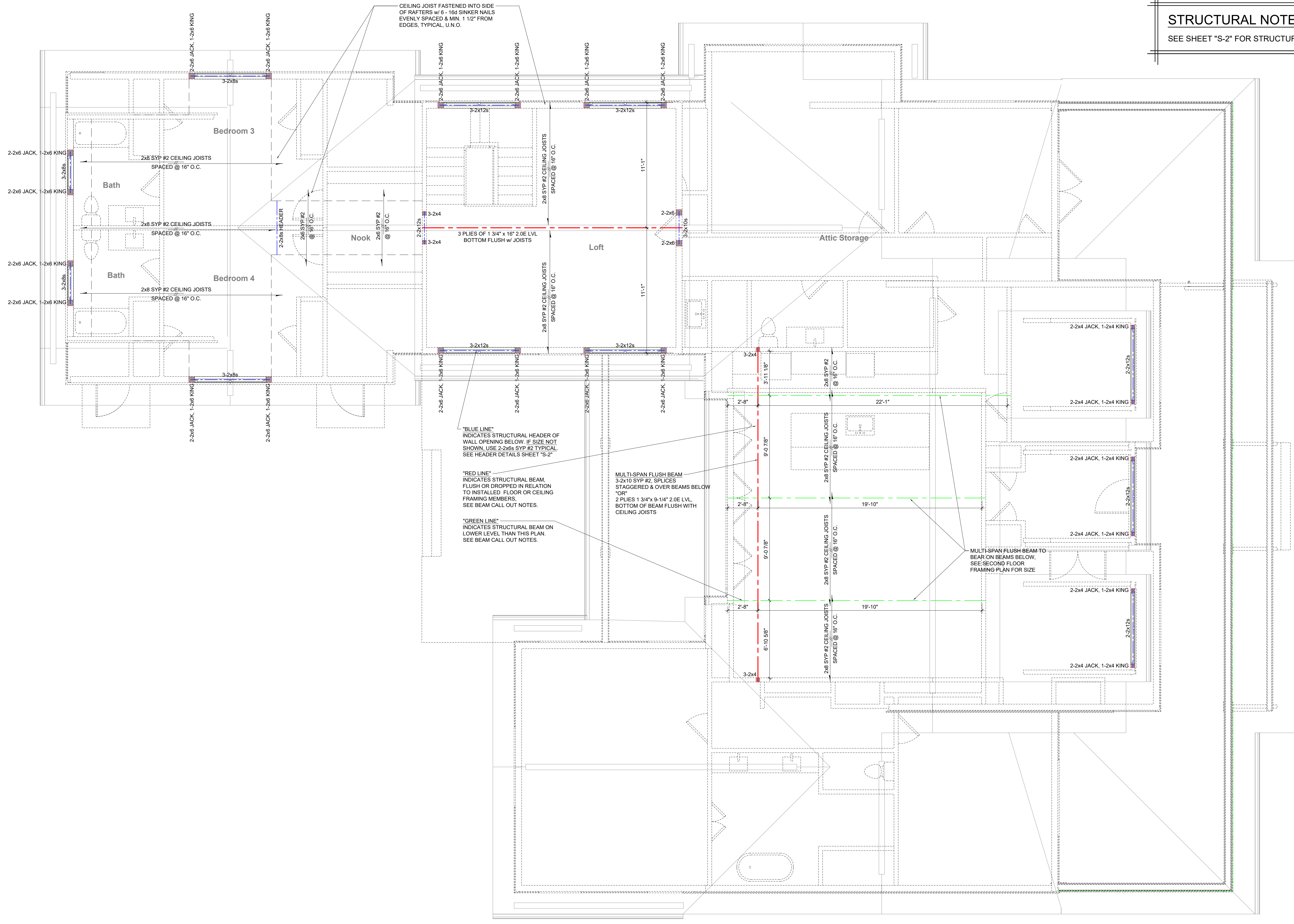
Professional Seal
ROBERT S. BARTLETT
ENGINEER
12-15-2021

Title Sheet:	Description:
Rev:	Date:

Foundation Details & Notes
Structural Plans for:
Single Family Residence
Atkins Road Fuquay Varina, NC
Drawn by: M. Morgan
Issue Date: 12-15-2021
Project Number:
Sheet: **S-2**

STRUCTURAL NOTES

SEE SHEET "S-2" FOR STRUCTURAL NOTES.



"BLUE LINE"
INDICATES STRUCTURAL HEADER OF
WALL OPENING BELOW. IF SIZE NOT
SHOWN, USE 2-2x6 SYP #2 TYPICAL.
SEE HEADER DETAILS SHEET "S-2".

"RED LINE"
INDICATES STRUCTURAL BEAM,
FLUSH OR DROPPED IN RELATION
TO INSTALLED FLOOR OR CEILING
FRAMING MEMBERS.
SEE BEAM CALL OUT NOTES.

"GREEN LINE"
INDICATES STRUCTURAL BEAM ON
LOWER LEVEL THAN THIS PLAN.
SEE BEAM CALL OUT NOTES.

MULTI-SPAN FLUSH BEAM
3-2x10 SYP #2, SPLICES
STAGGERED & OVER BEAMS BELOW
"OR"
2 PLYS 1 3/4"x 9-1/4" 2.0E LVL
BOTTOM OF BEAM FLUSH WITH
CEILING JOISTS

MULTI-SPAN FLUSH BEAM TO
BEAR ON BEAMS BELOW,
SEE SECOND FLOOR
FRAMING PLAN FOR SIZE

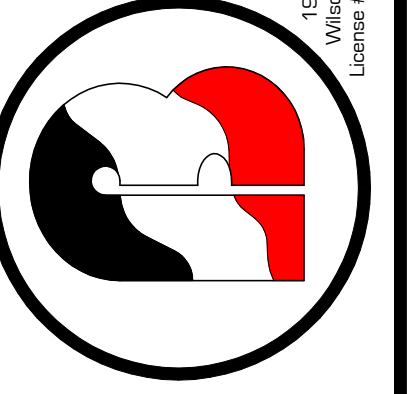
1 SECOND FLOOR CEILING FRAMING PLAN

S-4

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

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12-15-2021

Rev	Date	Description

Title Sheet:
SECOND FLOOR CEILING FRAMING

Project:
Single Family Residence
Structural Plans for:
Atkins Road Fuquay Varina, NC

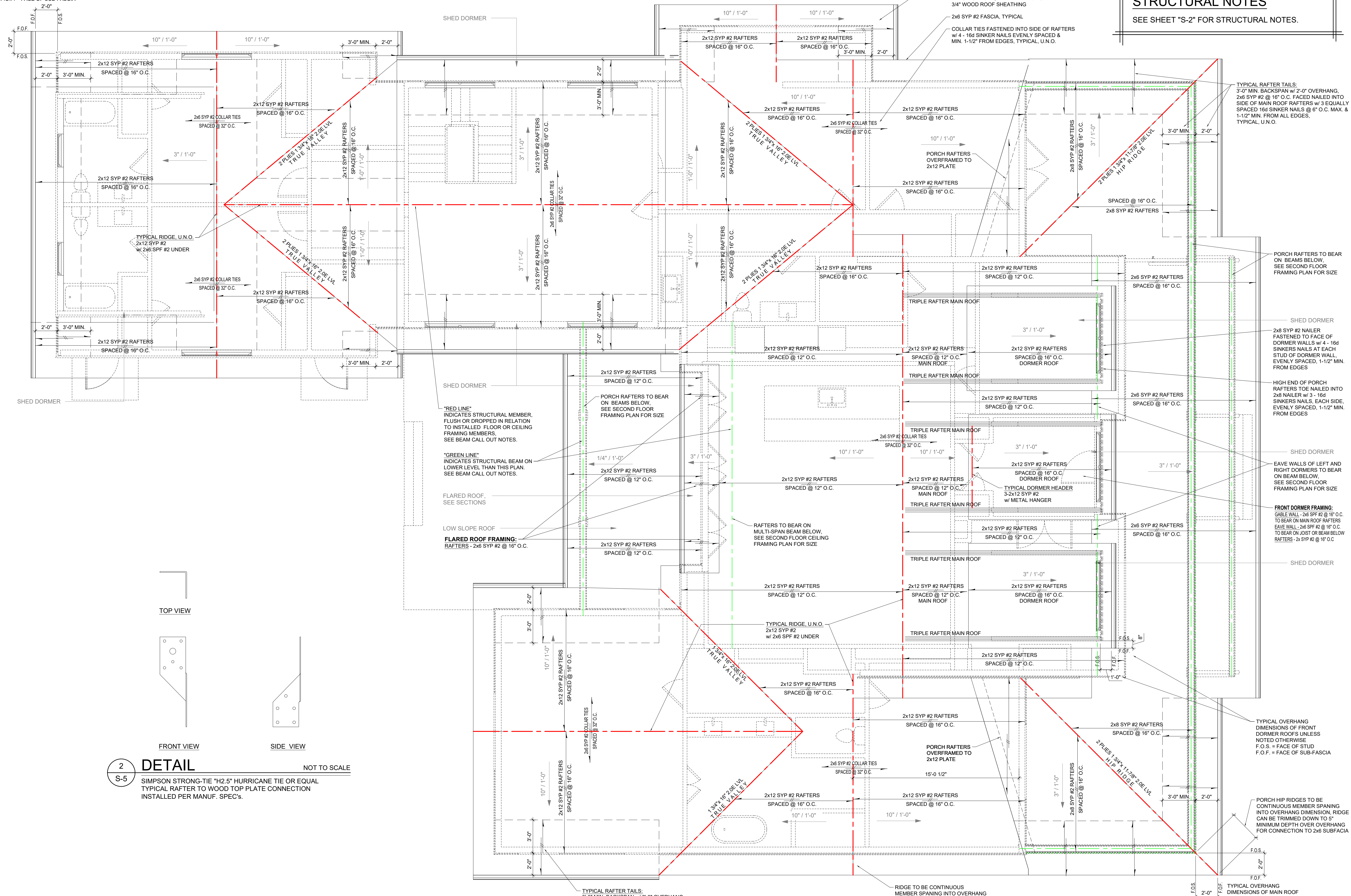
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Sheet: **S-4**

TYPICAL OVERHANG DIMENSIONS OF MAIN ROOF UNLESS NOTED OTHERWISE
 F.O.S. = FACE OF STUD
 F.O.F. = FACE OF SUB-FASCIA

TYPICAL ROOF FRAMING: WOOD FRAMING AS SHOWN, SECURED TO TOP PLATE OF WALL "or" BEARING PLATE, w/ SIMPSON H2.5 HURRICANE TIES OR EQUAL, INSTALLED PER MANUF. SPECIFICATIONS. SEE DETAIL "2x6-5" 3/4" WOOD ROOF SHEATHING

STRUCTURAL NOTES
 SEE SHEET "S-2" FOR STRUCTURAL NOTES.

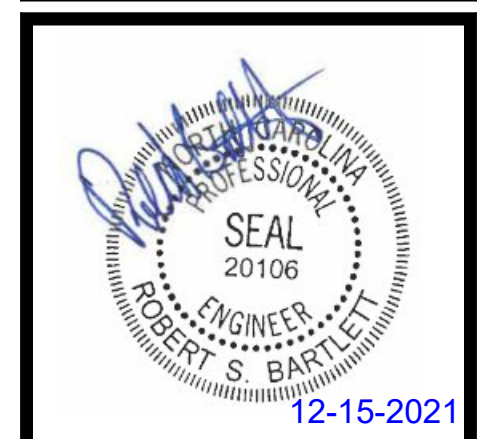
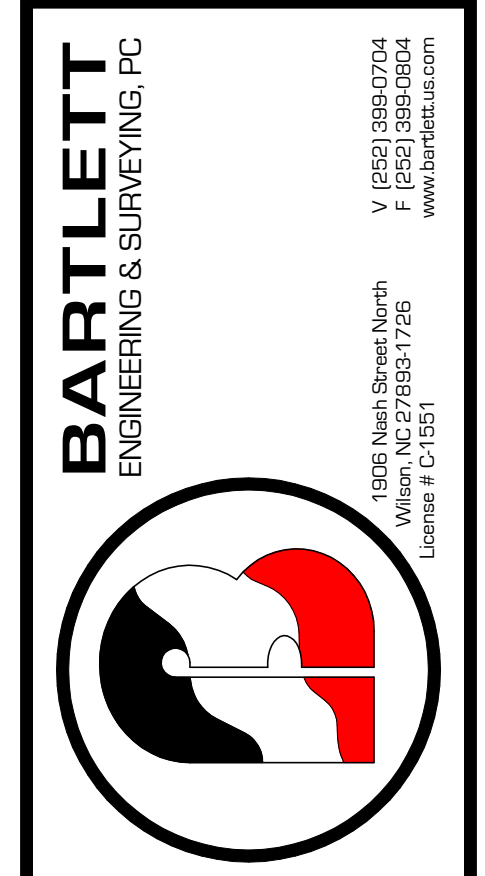
TYPICAL RAFTER TAILS: 3'-0" MIN. BACKSPAN w/ 2'-0" OVERHANG. 2x6 SYP #2 @ 16" O.C. FACED NAILED INTO SIDE OF MAIN ROOF RAFTERS w/ 3 EQUALLY SPACED 16d SINKER NAILS @ 6" O.C. MAX. & 1-1/2" MIN. FROM ALL EDGES. TYPICAL, U.N.O.



2 DETAIL NOT TO SCALE
 S-5 SIMPSON STRONG-TIE "H2.5" HURRICANE TIE OR EQUAL TYPICAL RAFTER TO WOOD TOP PLATE CONNECTION INSTALLED PER MANUF. SPEC'S.

1 ROOF FRAMING PLAN
 S-5

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Title Sheet:	Roof Framing Plan
Rev:	
Date:	
Description:	

Structural Plans for:
Single Family Residence
 Atkins Road Fuquay Varina, NC

Drawn by: M. Morgan
 Issue Date: 12-15-2021
 Project Number:
 Sheet: **S-5**