

## DESIGN SPECIFICATIONS

**DESIGN CODE:**  
2020 FLORIDA BUILDING CODE – RESIDENTIAL

**DESIGN IS VOID ONE YEAR AFTER THE DATE OF THE ORIGINAL PLANS.**  
UNLESS PLANS HAVE BEEN REVIEWED FOR CODE COMPLIANCE.

**DESIGN LOADS:** ACTUAL AND UNIFORM

	ROOF	FLOOR
ROOF LOADING	(cd+1.25)	(cd+1.00)
TOP CHORD LIVE LOAD	20 psf	40 psf
TOP CHORD DEAD LOAD	7 psf (ARCH SHINGLES)	10 psf
TOP CHORD DEAD LOAD	20 psf (TILE SHINGLES)	10 psf
BOTTOM CHORD LIVE LOAD	10 psf	0 psf
BOTTOM CHORD DEAD LOAD	5 psf	5 psf

**DEFLECTION CRITERIA:**  
ROOF FRAMING: LIVE LOAD L/240 TOTAL LOAD L/180  
FLOOR FRAMING: LIVE LOAD L/360 & TOTAL LOAD L/240  
0.75" MAX ANY CASE

**WIND LOADING:**  
ASCE 7/16 FOR WIND UPLIFT, TRUSSES SHALL BE DESIGNED WITH A MIN. DEAD LOAD CONDITION OF 5 PSF TOP CHORD AND 5 PSF BOTTOM CHORD. REACTIONS CALCULATED FOR THE BEARING POINTS OF ROOF TRUSSES SHALL BE REDUCED. SPECIFICALLY, ATTIC FLOOR LIVE LOADS COMBINED WITH ROOF LIVE LOADS SHALL BE MULTIPLIED BY 0.75 WHEN COMBINED W/ DEAD LOAD.

BASIC WIND SPEED (ASCE 7-16) ----- **130 MPH**

IMPORTANCE FACTOR ----- 1.00

MEAN ROOF HEIGHT ----- 20.0 FT

ROOF PITCH ----- 7/12

BUILDING CATEGORY ----- C

EXPOSURE CATEGORY ----- C

ENCLOSURE CLASSIFICATION ----- ENCLOSED

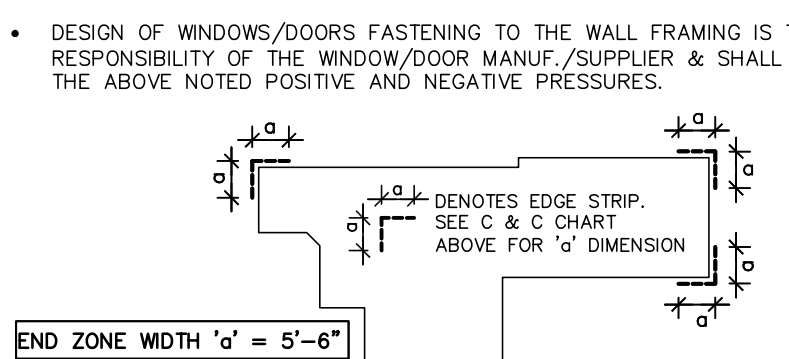
INTERNAL PRESSURE COEFFICIENT ----- ± 18

## MATERIAL SPECIFICATIONS

**HARDWARE AND ANCHORS:**  
ANCHOR BOLTS & THREADED ROD: SHALL BE IN ACCORDANCE WITH ASTM A 307 OR ASTM F 1554 GRADE 36.  
WASHERS: SHALL BE IN ACCORDANCE WITH ASTM A500 (GRADE B).  
NUTS: SHALL BE IN ACCORDANCE WITH ASTM A 563 GRADE A HEX.  
METAL CONNECTORS: ALL METAL CONNECTORS WHICH ARE EXPOSED TO EXTERIOR SHALL BE GALVANIZED.  
RETROFIT REBAR/ROD INSTALLATION: EMBEDMENT OF RODS OR REBAR DOWELS SHALL BE 12 BAR DIAMETER MINIMUM. HOLES SHALL BE 1/4" LARGER THAN REBAR SIZE AND 1/4" LARGER THAN THREADED ROD SIZE. (U.O.N.)  
ANCHORING ADHESIVE: SHALL BE ONE OF THE FOLLOWING PRODUCTS (DUAL CARTRIDGE INSTALLATION ONLY):  
EPOXY: ITW RED HEAD A7  
REINFORCING STEEL: SHALL BE ASTM A615, GRADE 60.  
STRUCTURAL STEEL: SHALL BE ASTM A992, GRADE 50.  
WELODED WIRE FABRIC (WVF): SHALL BE ASTM A185.  
LAMINATED VENEER LUMBER (LVL): ALL LAMINATED VENEER LUMBER SHALL MEET OR EXCEED THE FOLLOWING DESIGN PROPERTIES – ELASTIC MODULUS (E):900ksi, BENDING STRESS (Fb): 2600psi

TRIBUTARY AREA (sf)	COMPONENTS & CLADDING ALLOWABLE DESIGN PRESSURES		GARAGE DOOR PRESSURES (PSF)
	INTERIOR ZONE (PSF)	EDGE STRIP (PSF)	
10	+25.6 -27.7	+2.1 -34.2	1 CAR GARAGE DOOR (8'x7') +22.9 2 CAR GARAGE DOOR (16'x7') -23.9
50	+22.9 -25.0	+22.9 -28.8	
100	+21.8 -23.9	+21.8 -26.6	

- THE VALUES ABOVE ARE ALLOWABLE WIND PRESSURE VALUES (ASD). THE ABOVE WIND PRESSURES HAVE BEEN REDUCED BY 0.60 AS PERMITTED BY THE ALLOWABLE STRESS DESIGN METHODOLOGY. NO FURTHER REDUCTION SHALL BE PERMITTED
- COMPONENT & CLADDING WALL ELEMENTS SHALL BE DESIGNED FOR BOTH POSITIVE AND NEGATIVE PRESSURES SHOWN IN TABLE ABOVE.
- LINEAR INTERPOLATION IS PERMISSIBLE.
- PLUS = PRESSURE AND MINUS = SUCTION.
- DESIGN OF WINDOWS/DOORS FASTENING TO THE WALL FRAMING IS THE RESPONSIBILITY OF THE WINDOW/DOOR MANUF./SUPPLIER & SHALL MEET THE ABOVE NOTED POSITIVE AND NEGATIVE PRESSURES.



## SCOPE OF SERVICE

**MEANS AND METHODS:**  
THE STRUCTURAL ENGINEER SHALL NOT HAVE CONTROL OR BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, OR SEQUENCES; FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR OR ANY OTHER PERSONS PERFORMING THE WORK OR FOR THE FAILURE FOR ANY OF THEM TO CONSTRUCT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

**LIMITS OF STRUCTURAL ENGINEERING DESIGN RESPONSIBILITIES:**  
THE ITEMS SPECIFICALLY DESIGNED BY THE STRUCTURAL ENGINEER ARE LIMITED TO THE FOLLOWING: CONTINUOUS LOAD PATH FOR WIND UPLIFT, WOOD PANEL SHEARWALLS, WALL FRAMING AND REQUIRED SHEATHING AND HEADERS DIRECTLY SUPPORTING ROOF FRAMING. ITEMS NOT DESIGNED PRE-ENGINEERED WOOD FLOOR AND ROOF TRUSSES, FLOOR FRAMING NOT SPECIFICALLY ADDRESSED, TRUSS-TO-TRUSS CONNECTION, AND ANY ARCHITECTURAL, MECHANICAL OR ELECTRICAL SYSTEM.

## GENERAL NOTES & CONSTRUCTION SPECIFICATIONS

### FLOOR SHEATHING SPECIFICATIONS

23/32" T&G OSB OR PLYWOOD SHEATHING, GLUE AND NAIL WITH 10d COMMON @ 6" O.C. EDGE & FIELD

### ROOF SHEATHING SPECIFICATIONS:

SHINGLE- MIN. 15/32", 32/16, APA RATED OSB OR PLYWOOD SHEATHING, NAILED W/ 0.113x2 1/8" RING SHANK NAILS @ 6" O.C. EDGE & 6" O.C. FIELD (AT GABLE ENDS DECREASE EDGE NAIL SPACING TO 4" O.C. WITHIN 4'-0" OF ROOF EDGE).

TILE - MIN. 15/32" 32/16, APA RATED PLYWOOD SHEATHING, NAILED W/ 0.113x2 1/8" RING SHANK @ 6" O.C. EDGE & 6" O.C. FIELD (AT GABLE ENDS DECREASE EDGE NAIL SPACING TO 4" O.C. WITHIN 4'-0" OF ROOF EDGE).

METAL - MIN. 1/2", 24/16, APA RATED PLYWOOD SHEATHING, NAILED W/ 0.113x2 1/8" RING SHANK NAILS @ 6" O.C. EDGE & 6" O.C. FIELD (AT GABLE ENDS DECREASE EDGE NAIL SPACING TO 4" O.C. WITHIN 4'-0" OF ROOF EDGE).

### WALL SHEATHING SPECIFICATIONS:

FLEXIBLE FINISH- MIN. 7/8", 24/16, APA RATED OSB OR PLYWOOD SHEATHING, FASTENED W/ 8d @ 6" O.C. EDGE AND 6" O.C. FIELD. SHEATHING SHALL EXTEND FULL HEIGHT FROM BOTTOM PLATE TO UPPER TOP PLATE. FLEXIBLE FINISH WALLS INCLUDE: WOOD, CEMENT, OR VINYL SIDING, HARDI PANEL & BRICK. ALL OTHER WALL BE CONSIDERED BRITTLE FINISH.

STUCCO FINISH- MIN. 7/8", 24/16, APA RATED OSB OR PLYWOOD SHEATHING, FASTENED W/ 8d @ 6" O.C. EDGE AND 6" O.C. FIELD. SHEATHING SHALL ORIENTED WITH THE LONG DIMENSION PERPENDICULAR TO THE STUDS. CONTRACTOR MAY USE 3/4" STRUCTURAL 1-GIN. DUAL SHEATHING OR 3/8" OSB SHEATHING AND ORIENT THE PANELS VERTICALLY.

### MASONRY SPECIFICATIONS:

MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH ACI 530-05, AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 530.1-05. GROUT SHALL BE IN ACCORDANCE WITH ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2000 psi per ASTM C1019. GROUT SHALL HAVE A MAXIMUM COURSE AGGREGATE SIZE OF 1/2" PLACED AT AN 8" TO 11" SLUMP. MORTAR SHALL CONFORM TO ASTM C270 AND TYPE M OR S. TYPE N MORTAR MAY BE USED IN BRICK VENEER. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL FLASHING.

### CONCRETE MASONRY UNITS (CMU):

CMU SHALL BE IN ACCORDANCE WITH ASTM C90-75, HOLLOW LOAD-BEARING (CMU), TYPE 1, GRADE N-1, NORMAL WEIGHT, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 psi (f'm=1500 psi). GROUT ALL CELLS CONTAINING VERTICAL REINFORCEMENT IN 5'-0" MAXIMUM LIFTS PROVIDE CLEANOUTS PER ACI 530.1-02 IN THE BOTTOM OF COURSE OF MASONRY WHEN THE WALL HEIGHT EXCEEDS 5'-0".

**MASONRY STEM WALLS:** ALL CONCRETE MASONRY UNITS SHALL BE COMPOSED OF ASTM C90E, E GRADE N-1 HOLLOW CONCRETE MASONRY UNITS WITH TYPE "S" MORTAR. WALL COURSING SHALL BE RUNNING BONDS, STACK BOND SHALL NOT BE USED. GROUT ALL CELLS CONTAINING VERTICAL REINFORCEMENT WITH 3000 PSI PEA ROCK CONCRETE GROUT. SPLICES IN REINFORCING, WHERE PERMITTED, SHALL BE 48 BAR DIAMETERS. ALL EXTERIOR WALLS SHALL BE REINFORCED FULL HEIGHT WITH #4 @ 4'-0" O.C. MAX. AND AT EACH CORNER, WALL END, AND WALL INTERSECTIONS. PROVIDE CONTINUITY OF REINFORCING AT INTERSECTIONS OF PERPENDICULAR MASONRY ELEMENTS BY INSTALLING CORNER BARS, MINIMUM OF 40 BAR DIAMETERS INTO EACH ELEMENT. AT STEM WALL CONSTRUCTED OF 5 OR MORE COURSES, PROVIDE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. VERTICALLY, (EVERY OTHER COURSE), AND VERTICAL REINFORCING SHALL BE INCREASED AS NOTED ON 1/2" O.C. UNLESS NOTED OTHERWISE. LAP JOINT REINFORCING SHALL BE A MINIMUM OF 6".

### CONCRETE SPECIFICATIONS:

ALL CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH ACI 318-08, AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 301. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE AT GARAGE AND PORCH SLABS SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI.

### GENERAL NOTES:

#### FOOTING AND FOUNDATIONS:

FOOTINGS AND FOUNDATIONS SHALL BE IN ACCORDANCE WITH LOCAL BUILDING CODES. FOOTING HAVE BEEN DESIGNED WITH A SOIL BEARING (DESIGN MAXIMUM) OF 2000 PSF. A SOILS INVESTIGATION REPORT IS RECOMMENDED TO VERIFY SUITABLE SUBSURFACE CONDITIONS. IF THE FOOTING ELEVATIONS SHOWN OCCUR IN A DISTURBED OR UNSTABLE SOIL, THE ENGINEER SHALL BE NOTIFIED. SOIL SHALL BE FREE OF ORGANIC MATERIAL AND COHESIVE (CLAY) SOILS. SOIL COMPACTION AND FILL SHALL BE COMPACTED TO A MIN. OF 95% MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D 1557.

FOUNDATION PLAN ONLY CONVEYS STRUCTURAL INFORMATION, FOR GENERAL FEATURES, CONDUITS, ELECTRICAL EMBEDS, STEP HEIGHTS, ETC., SEE ARCHITECTURAL PLANS. DO NOT SCALE FOOTING DIMENSIONS AND LOCATION FROM THE FOUNDATION PLAN SHOWN ON S.I.O. DO NOT DETERMINE FOOTING LOCATION BASED ON EITHER THE ARCHITECTURAL PLAN OR FRAMING PLAN, BUT BY DIMENSIONS PROVIDED ON FOUNDATION PLAN. IF FOOTING SIZE OR LOCATION IS NOT DETERMINED ON PLAN THEN CONTACT ENGINEER OF RECORD (EOR)

UNLESS OTHERWISE NOTED ON DRAWINGS, MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE 3" IN FOOTINGS AND MESH SHALL BE CENTERED IN SLAB ON GRADE. IN ALL CONTINUOUS FOOTINGS PROVIDE #3 @ 48" O.C. OR ROD CHAIRS. PROVIDE CONTINUITY OF REINFORCING AT INTERSECTIONS OF PERPENDICULAR CONCRETE ELEMENTS BY INSTALLING CORNER BARS, MINIMUM OF 40 BAR DIAMETERS INTO EACH ELEMENT. SPLICES IN REINFORCING, WHERE PERMITTED, SHALL BE 48 BAR DIAMETERS

#### CONCRETE SLABS ON GRADE:

SHALL BE INSTALLED OVER MINIMUM 6 MIL POLYETHYLENE VAPOR RETARDER WITH JOINTS LAPPED 6" AND SEALED OVER CLEAN, COMPACTED EARTH OR FILL WITH APPROVED CHEMICAL SOIL TREATMENT FOR PREVENTION OF SUBTERRANEAN TERMITES. SAWCUTS FOR CONTROLLED CRACKING CUT A 1" SAWCUT INTO SLAB IN A 12"x12" GRID WITHIN 12 HOURS OF CONCRETE PLACEMENT, PROVIDE SAWCUTS THROUGH OUT SLAB CALL EOR FOR ALTERNATIVE METHODS.

#### WOOD FRAMING SPECIFICATIONS:

ALL WOOD FRAMING HAS BEEN DESIGNED IN ACCORDANCE WITH NATIONAL DESIGN SPECIFICATIONS (NDS) FOR WOOD CONSTRUCTION, LATEST EDITION. ALL WOOD MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY, CONCRETE OR SOIL SHALL BE PRESSURE-TREATED. IF, ACQ OR NON-DOT BORATE PRESERVATIVE TREATMENT IS USED, ALL ATTACHED FASTENERS SHALL BE HOT DIPPED GALVANIZED. IF ACZA PRESERVATIVE IS USED, ALL ATTACHED FASTENERS SHALL BE STAINLESS STEEL.

#### PRE-ENGINEERED WOOD TRUSSES:

SHALL BE THE SEAL OF AN ENGINEER IN THE STATE WHERE PROJECT IS BEING BUILT AND SHALL COMPLY WITH NFPA, TPI, AND AITC 100. CONTRACTOR SHALL VERIFY THAT ADEQUATE TRUSS BEARING IS INSTALLED AT ALL TRUSSES AS INDICATED IN THE TRUSS SHOP DRAWINGS. ALL TRUSS-TO-TRUSS CONNECTIONS AND TRUSS PROFILES ARE THE RESPONSIBILITY OF THE DELEGATED TRUSS ENGINEER. ALL TRUSSES SHALL HAVE TEMPORARY BRACING PER COMMENTARY AND RECOMMENDATION FOR HANDLING, INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES, HIB-91." AT MULTIPLE STRAP CONNECTIONS, SPREAD STRAPS TO AVOID NAILING CONFLICTS THROUGH TRUSS. WHEN USING (2) STRAPS ON SINGLE PLY TRUSSES, PLACE STRAPS DIAGONALLY ACROSS DBL. TOP PLATE FROM EA. OTHER.

#### ROOF COVERING SPECIFICATIONS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF THE ROOF COVERING SYSTEM. ASPHALT SHINGS SHALL COMPLY WITH ASTM D3161 AND BE INSTALLED ACCORDING TO THE MANUFACTURER'S REQUIREMENTS. CLAY AND TILE ROOFS SHALL BE INSTALLED PER THE "CONCRETE AND CLAY ROOF INSTALLATION MANUAL" AND THE MANUFACTURER'S REQUIREMENTS. STANDING SEAM METAL ROOFS SHALL COMPLY WITH ASTM E1514 AND BE INSTALLED ACCORDING TO THE MANUFACTURER'S REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL METAL FLASHING AND VALLEY MATERIALS.

#### WATERPROOFING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN/INSTALLATION OF ALL WATER PROOFING.

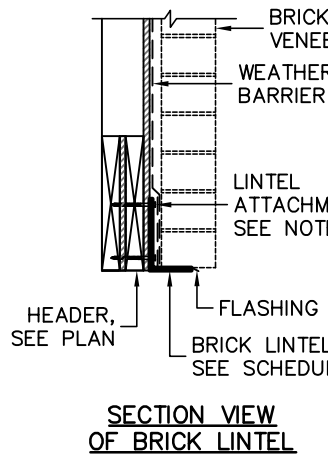
## WOOD FASTENING SCHEDULE

MEMBERS	CONNECTION TYPE	FASTENER
TOP PLATE TO TOP PLATE	FACE NAIL	2-GUN NAILS @ 12" STAG.
TOP PLATE, LAPS/INTERSECTION	FACE NAIL	(2-16d) 3-GUN NAILS
DBL. TOP PLATE TO STUD	FACE NAIL	(2-16d) 3-GUN NAILS
RIM JOIST TO TOP PLATE	TOE NAIL	(8d @ 6") GUN NAIL @ 6"
CEILING JOIST TO TOP PLATE	TOE NAIL	(3-8d) 5-GUN NAILS
CEILING JOIST, OVER PARTITIONS	FACE NAIL	(3-16d) 4-GUN NAILS
CEILING JOIST TO ROOF RAFTER	FACE NAIL	(6-16d) 8-GUN NAILS
JOIST/TRUSS TO PLATE	TOE NAIL	(2-16d) 3-GUN NAILS
RAFTER TO PLATE	TOE NAIL	(3-8d) 3-GUN NAILS
JACK RAFTER TO HIP	TOE NAIL	(3-10d) 4-GUN NAILS
ROOF RAFTER TO 2xw RIDGE BM.	TOE NAIL	(2-16d) 3-GUN NAILS
CONT. HEADER, TWO PIECES	FACE NAIL	16d @ 16" O.C. @ EDGE
CONT. HEADER TO STUD	TOE NAIL	(3-16d) 4-GUN NAILS
STUD TO SOLE PLATE	TOE NAIL	(3-16d) 4-GUN NAILS
SOLE PLATE TO JOIST/BLOCKING	FACE NAIL	(16d @ 16") GUN NAIL @ 8"

## BRICK NO. / LINTEL SCHD

LINTEL DIMENSION	MIN. BRG.	MAX. SPAN
L37"x31 1/2"x1 1/4"	4"	6'-0"
L4x31 1/2"x1 1/4"	6"	8'-0"
L5x31 1/2"x1 1/4"	6"	10'-0"
L6x31 1/2"x1 1/4"	6"	12'-0"
L7x31 1/2"x1 1/4"	6"	16'-0"

- STEEL LINTELS TO BE MINIMAL 36" LINTEL MUST HAVE CORROSION RESISTANT COATING OF EPOXY BASED PAINT.
- LINTEL MORE THAN 8'-0". SHOULD BE LATERALLY SUPPORTED NOT TO EXCEED 6 FT. O.C. W/ 2-1/2"x1/2" HD. SCREWS INTO HEADER PROVIDE A 1/2" VERTICAL SLOTTED HOLE FOR SCREW.
- BRICK VENEER ATTACHMENT: HORIZONTAL TIES @ 24" O.C. VERT. TIES @ 12" O.C. (FOR 10mhp WIND-ZONE VERT. TIES @ 16" O.C.) AT ALL OPENINGS SPACE TIES WITHIN 12" OF OPENINGS. PROVIDE 1/4" @ WEEP HOLES @ 33" O.C. IMMEDIATELY ABOVE FLASHING.

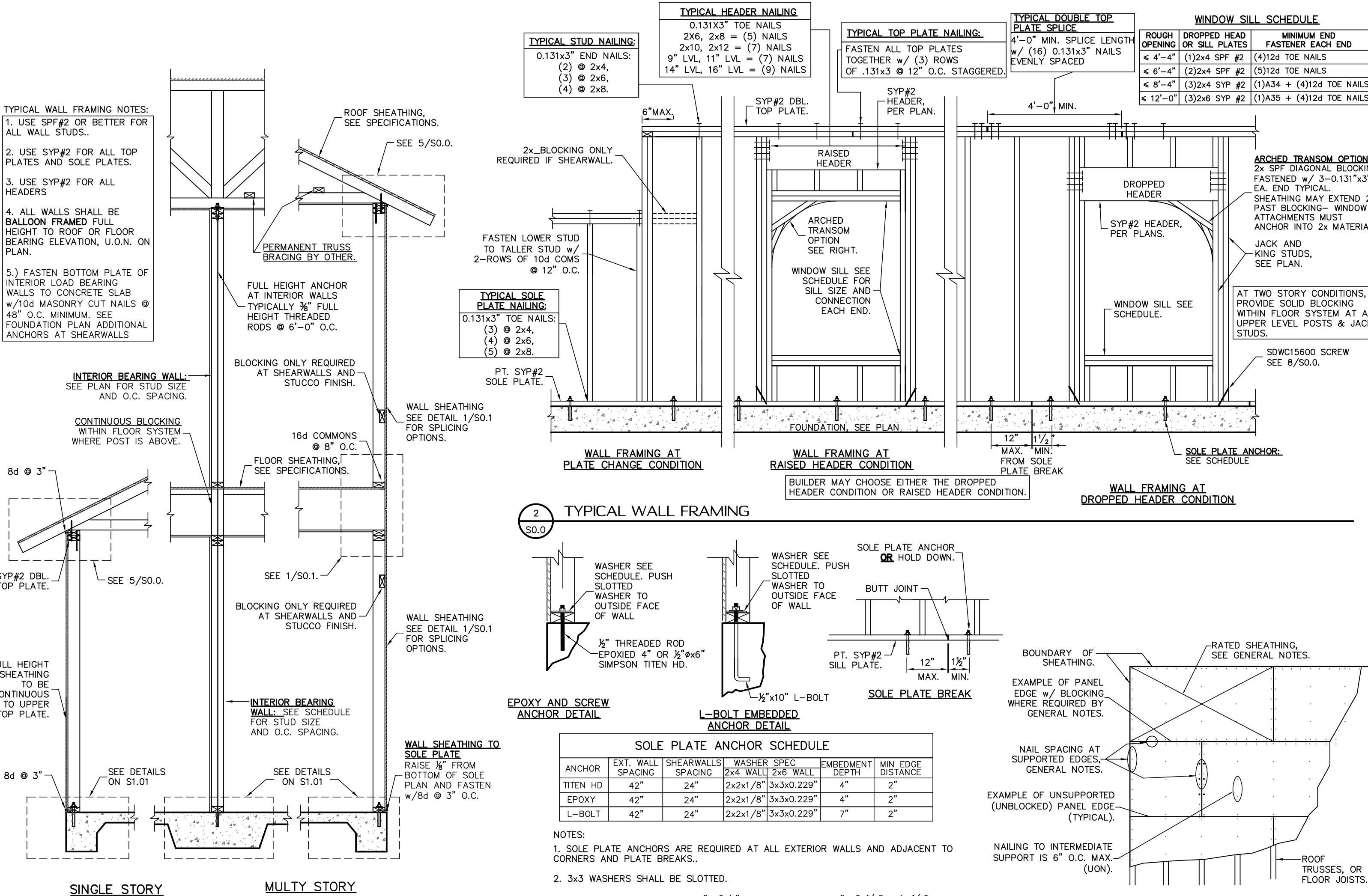


## USP CONNECTORS

CONNECTOR	UPLIFT		FASTENERS	FL# CODE
	SYP	SPF		
USP A35	450	450	(9)10d1 1/2"	
USP RT7	585	495	(5)8d EA. END	
USP RT8A	775	650	(5)10d1 1/2" EA. END	
USP MTW12	1195	860	(7)10d1 1/2" EA. END	
USP HTW20	1450	1245	(12)10d1 1/2" EA. END	
USP MSTA24	1640	1455	(9)10d EA. END	
USP MSTA36	2065	2065	(13)10d EA. END	
USP LTS20B	1105	1105	1/2" @ ROD TO FTG.	
USP JUS28	1305	1305	(6)10d TO HEADER	
USP HTT16	4290	4290	3/4" @ ROD TO FTG.	
USP HTT22	5370	5370	3/4" @ ROD TO FTG.	
USP PAU44	2535		3/4" @ ROD w/ (12)16d	
USP PAU66	2535		3/4" @ ROD w/ (12)16d	
USP MSTM24	1545	1455	(5)1/4"x2-1/4" TAPCONS	

## SIMPSON CONNECTORS

CONNECTOR	UPLIFT		FASTENERS	FL# CODE
	SYP	SPF		
A35	450	450	12-8d1 1/2"	10446.4
H2.5T	600	520	5-8d EA. END	11478.3
HTS16	1150	1085	16-10d EA. END	10456.6
MTS12	1000	860	7-10d1 1/2" EA. END	10456.3
HTS20	1450	1245	24-10d1 1/2" EA. END	13872.3
MSTA24	1765	1270	9-10d EA. END	13872.4
MSTA36	2050	1870	13-10d EA. END	13872.8
HTT4	3480	3080	18-16d TO TRUSS/BEAM	11496.2
HTT5	5250	4670	32-16d TO TRUSS/BEAM	11496.2
LU528	930	780	1-3/4" @ ROD TO FTG.	10655.113
HU410	905	785	4-10d TO JOIST	10531.36
ABU44	2200		3/4" @ ROD EPOXIED 6" MIN	10849.6
ABU66	2300		3/4" @ ROD EPOXIED 6" MIN	10849.6
SET	N/A	N/A	SIMPSON EPOXY-TIE	11506.4
LTT208	1675	1675	10-16d TO STUD/BEAM/POST	11496.3
LSTA12	805	695	1-1/2" @ ROD TO FTG.	13872.5
CS16	1705	1705	13-8d	10852.1



03.16.21  
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PLAN NAME  
BRYAN ZECHAR  
SSE No.  
21-0097

ISSUE	DATE
PERMIT	03.16.21
REVISIONS	DATE

STRUCTURAL ENGINEERING FOR  
THE FORBES RESIDENCE

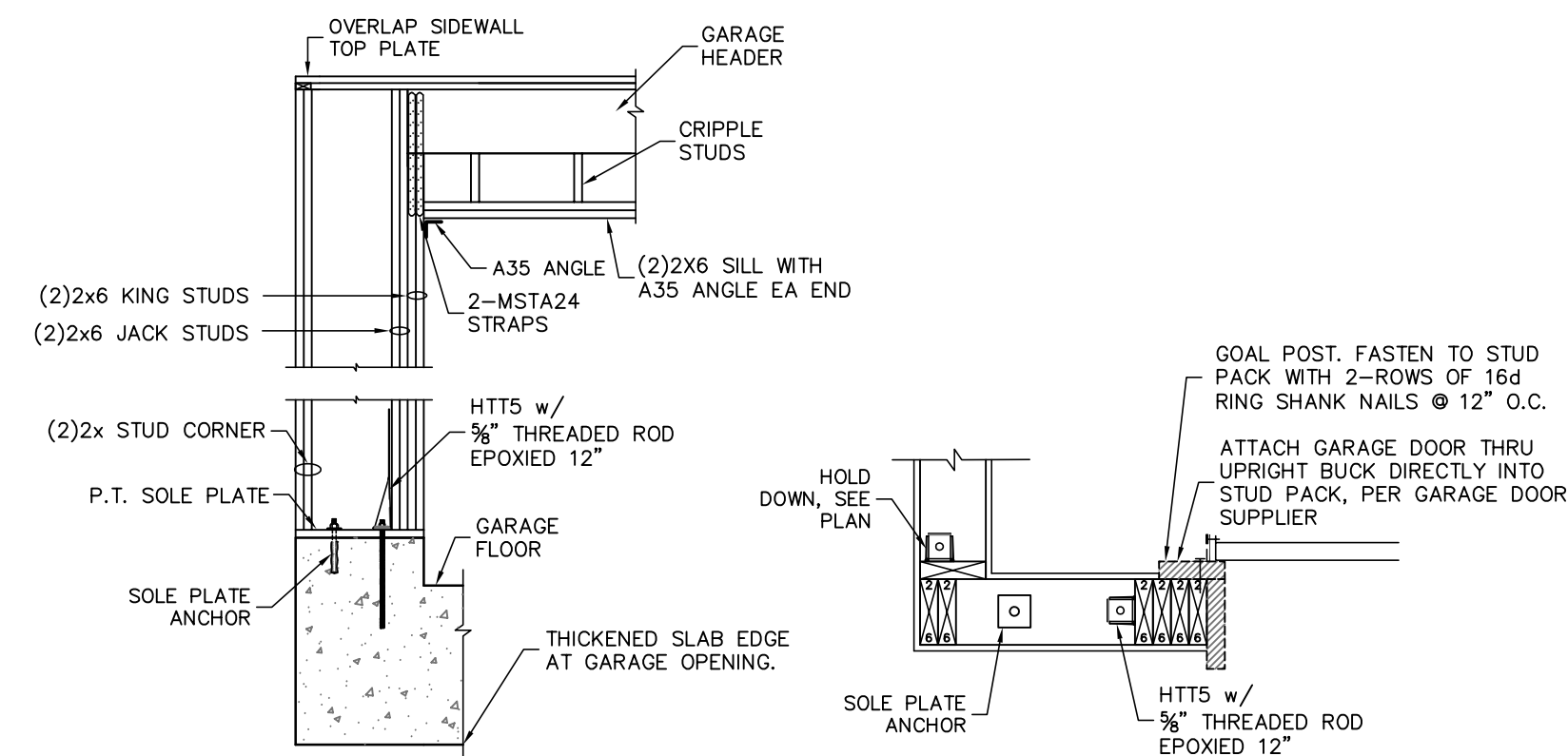
**FIELD ALTERATION**  
CONTRACTOR SHALL CONTACT SABO STRUCTURAL ENGINEERING PRIOR TO MAKING ANY STRUCTURAL FIELD MODIFICATIONS WHICH MAY VARY FROM THE INTENT OF THE ORIGINAL CONSTRUCTION DOCUMENTS. ANY FIELD ALTERATIONS MADE PRIOR TO BEING APPROVED BY CHRISTOPHER SABOURIN MAY RESULT IN ADDITIONAL ENGINEERING OR INTERFERE.

**SCALING**  
DO NOT SCALE DIMENSIONS FROM THESE DRAWINGS. IF A DIMENSION IS UNCLEAR REFERENCE TO THE ARCHITECTURAL DRAWINGS OR CONTACT THE E.O.R.

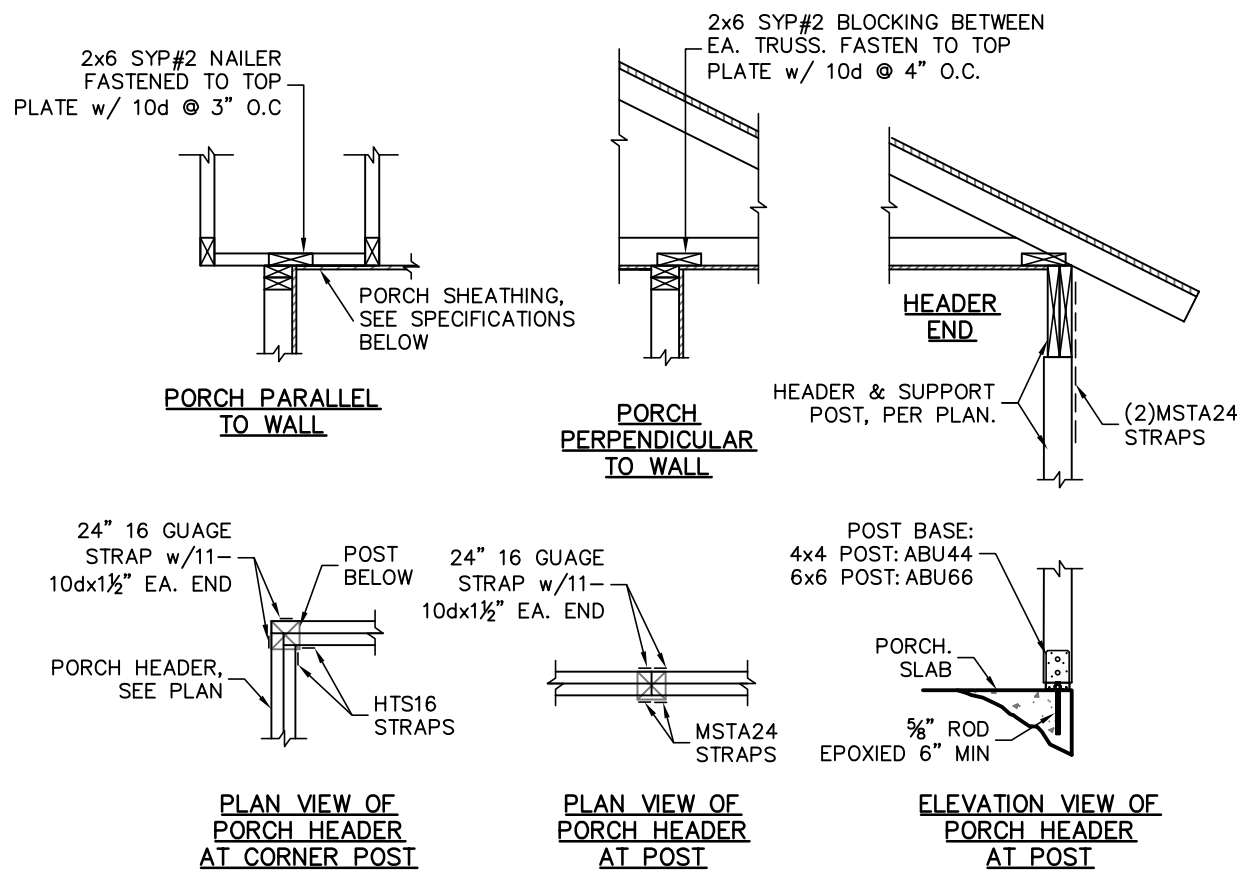
DESIGN  
CRITERIA  
AND  
GENERAL  
NOTES

SHEET  
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SHEET 1 OF 7

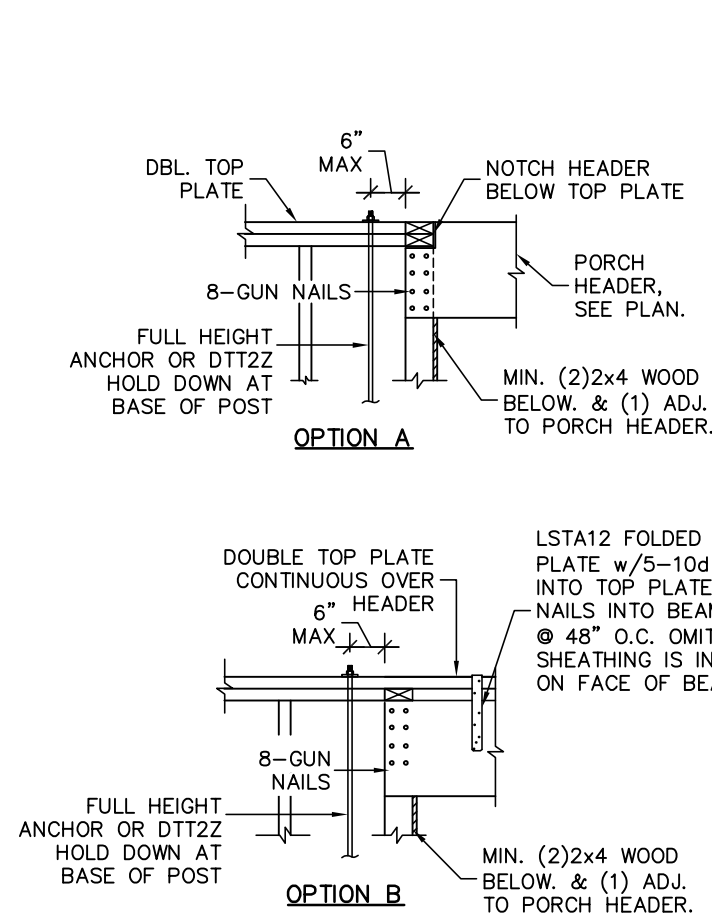




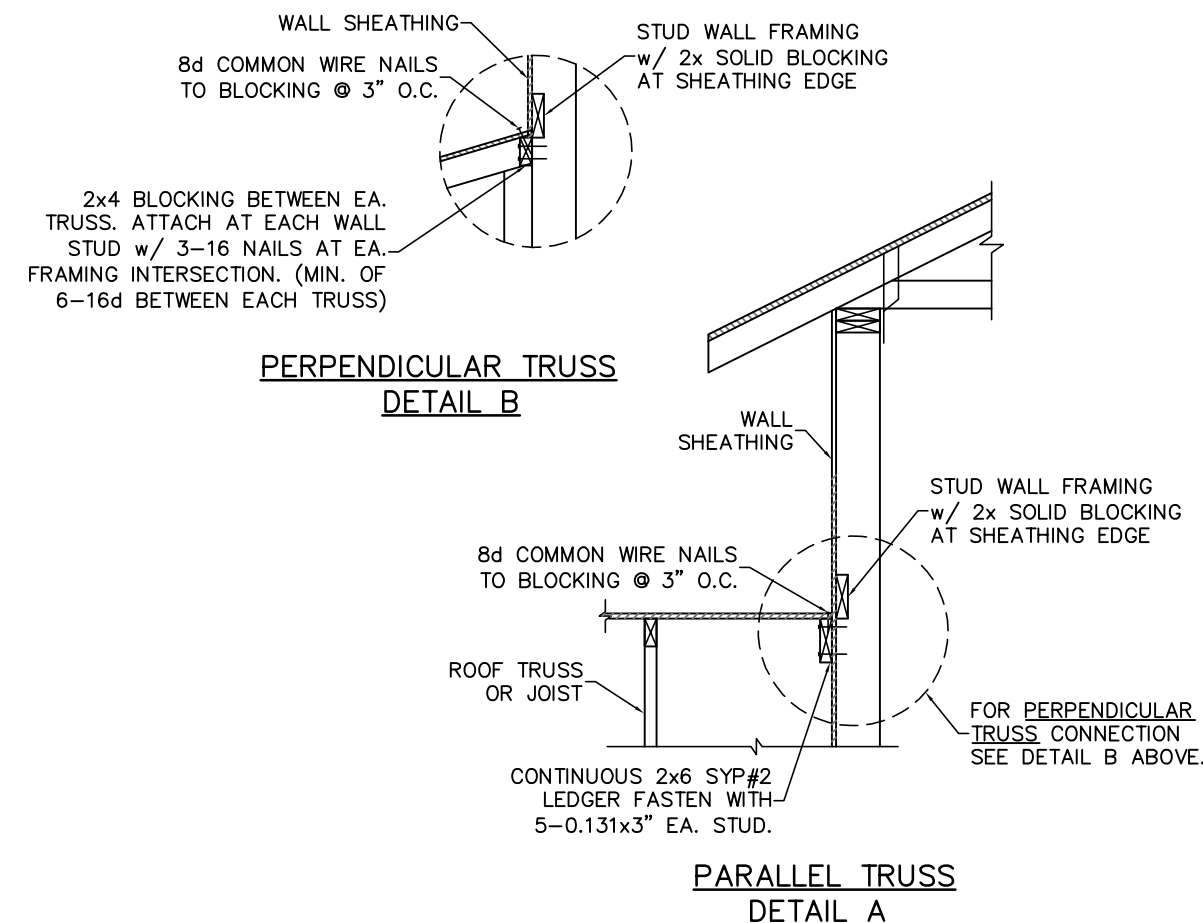
**1** **GARAGE HEADER FRAMING**  
SCALE: N.T.S.



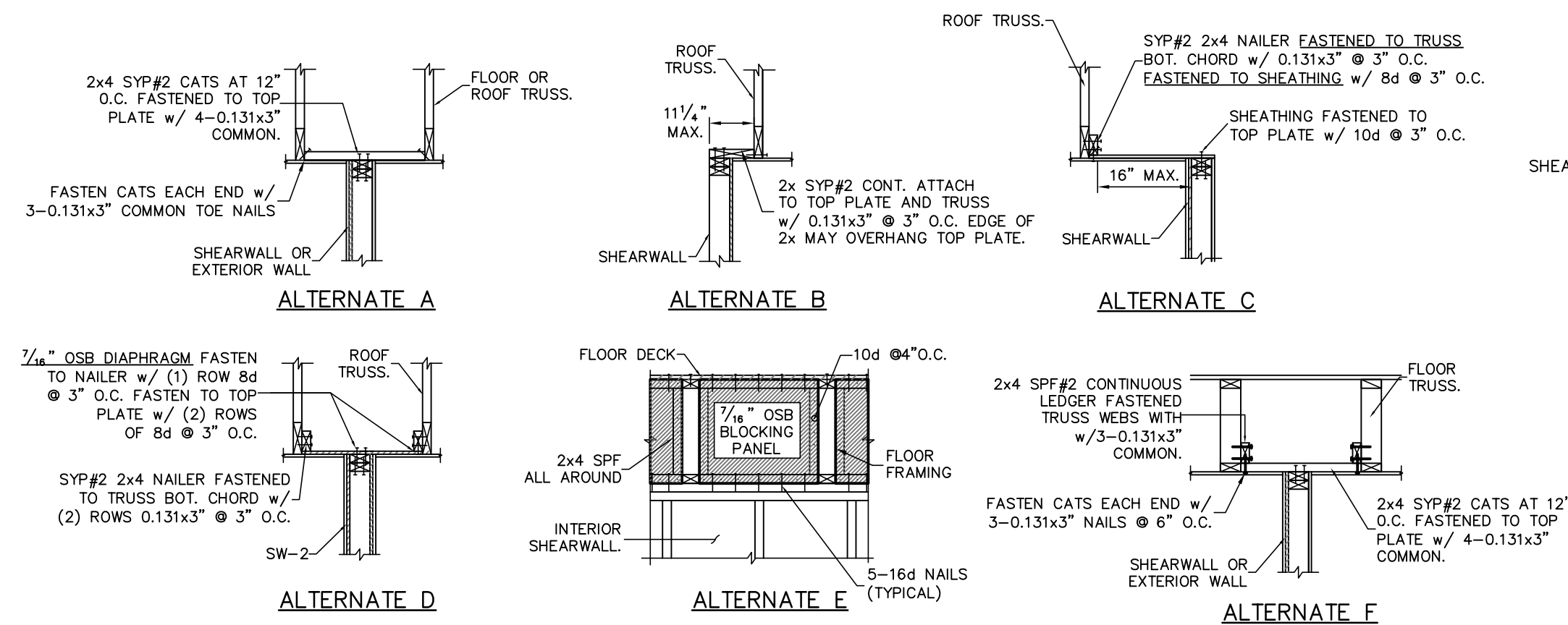
**2** **TYPICAL PORCH FRAMING DETAILS**  
SCALE: N.T.S.



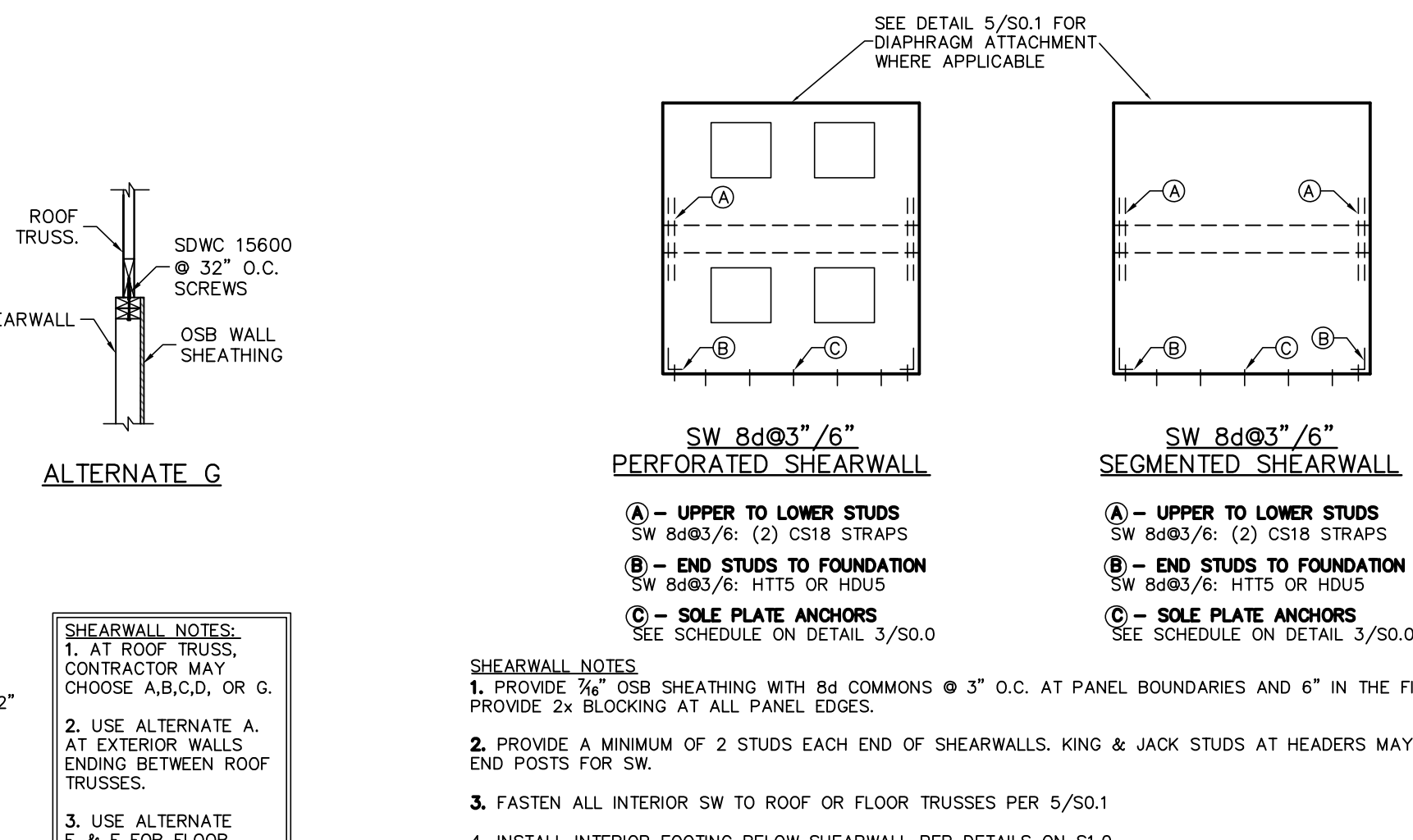
**3** **TYPICAL PORCH BEAM CONNECTION**  
SCALE: N.T.S.



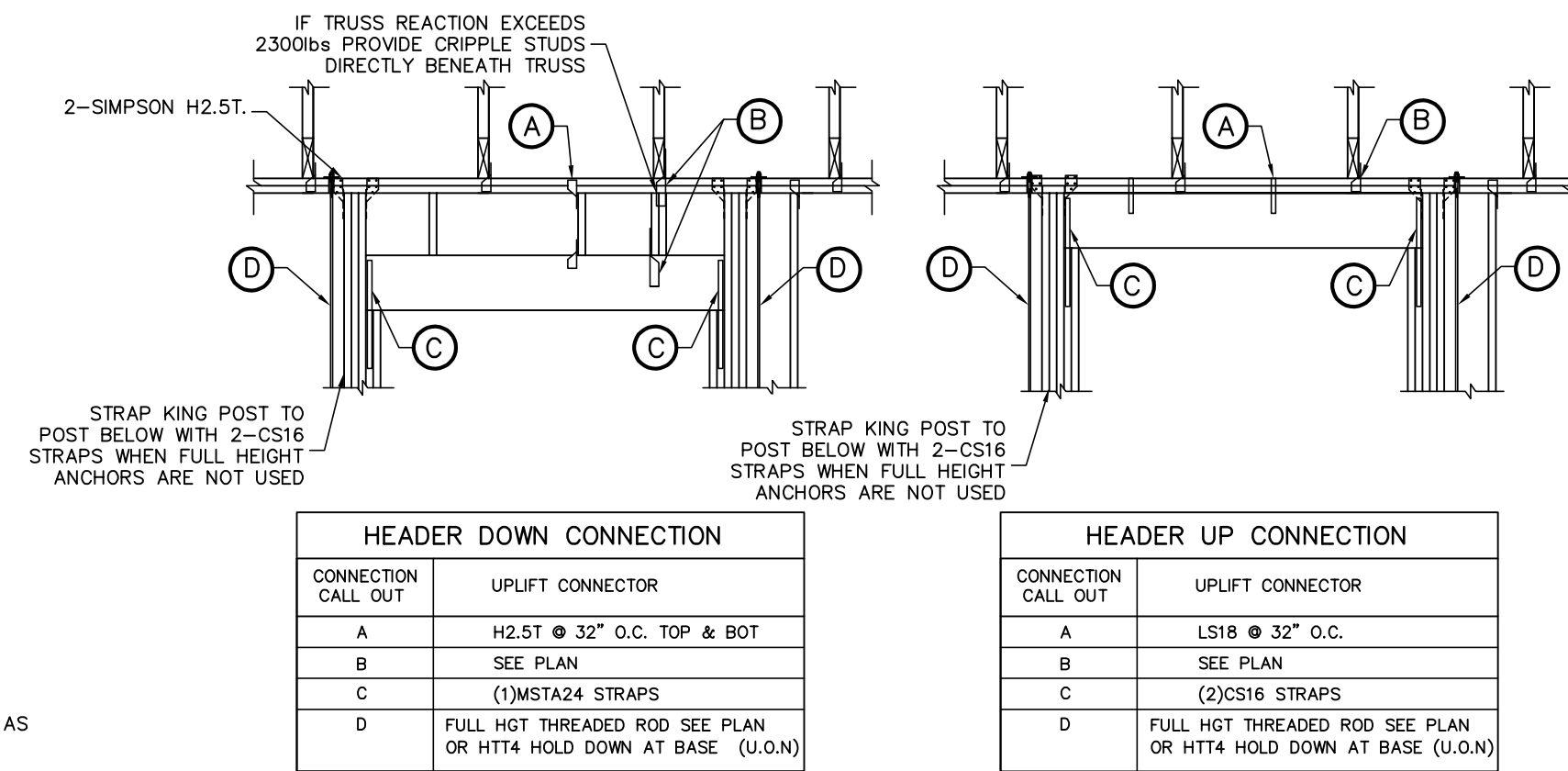
**4** **WALL ADJ. TO ROOF CONNECTION**  
SCALE: N.T.S.



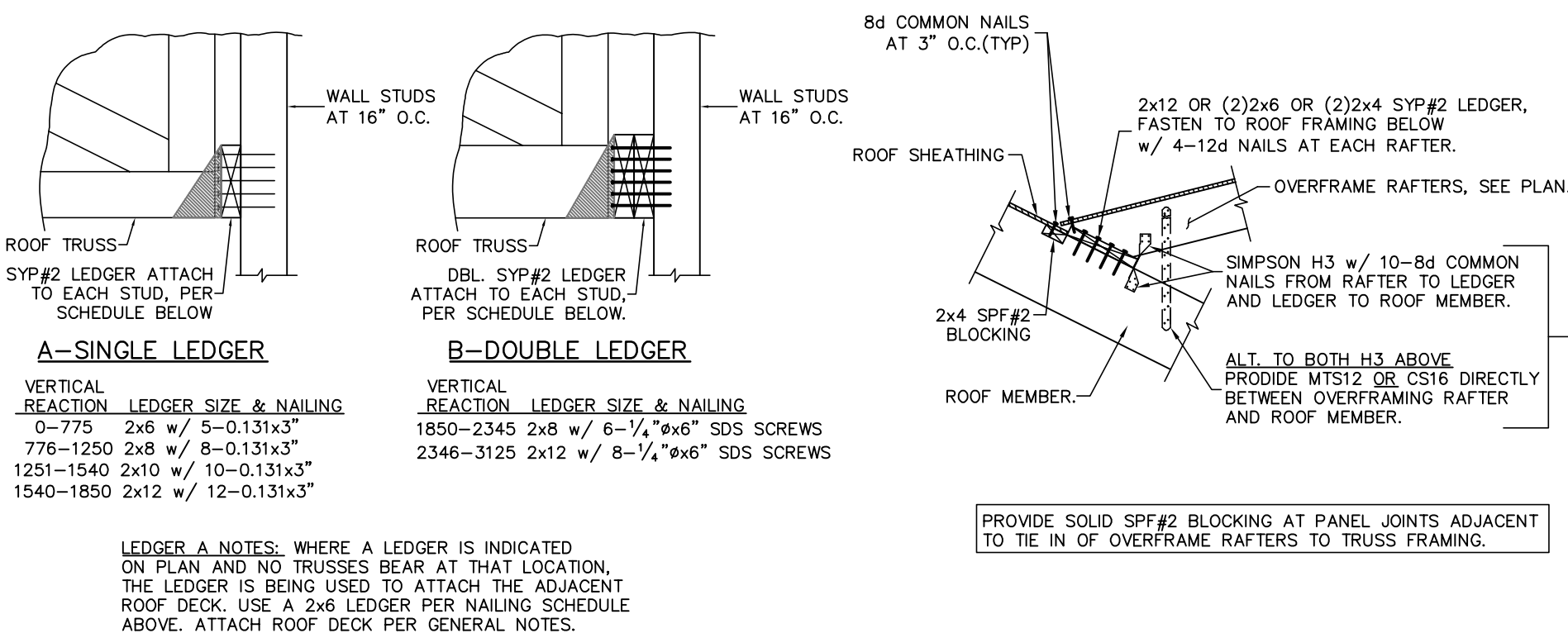
**5** **SHEARWALL ATTACHMENT AT ROOF & FLOOR**  
SCALE: N.T.S.



**6** **TYPICAL SHEARWALL ELEVATION**  
SCALE: N.T.S.

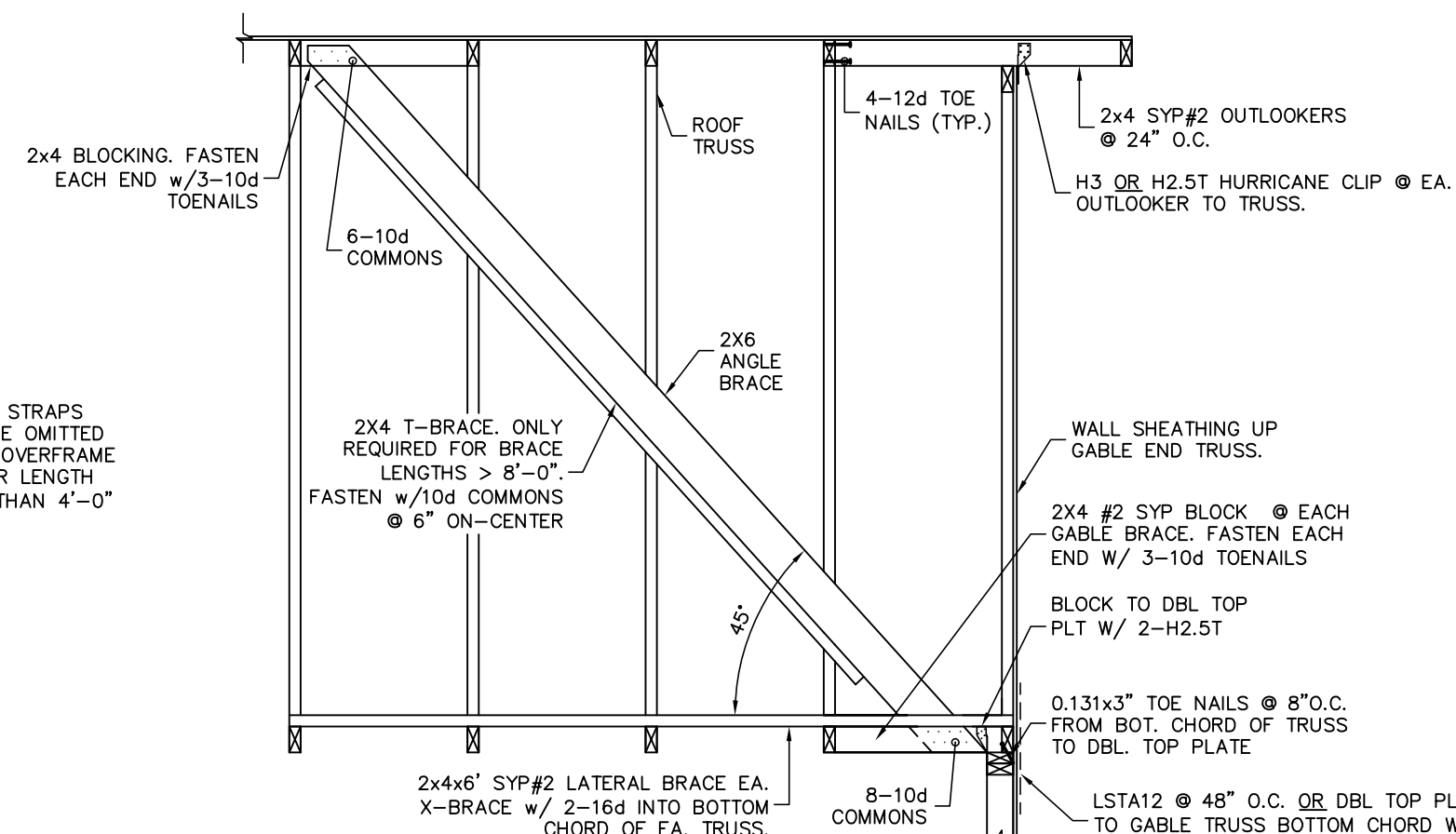


**7** **HEADER TIE DOWN**  
SCALE: N.T.S.

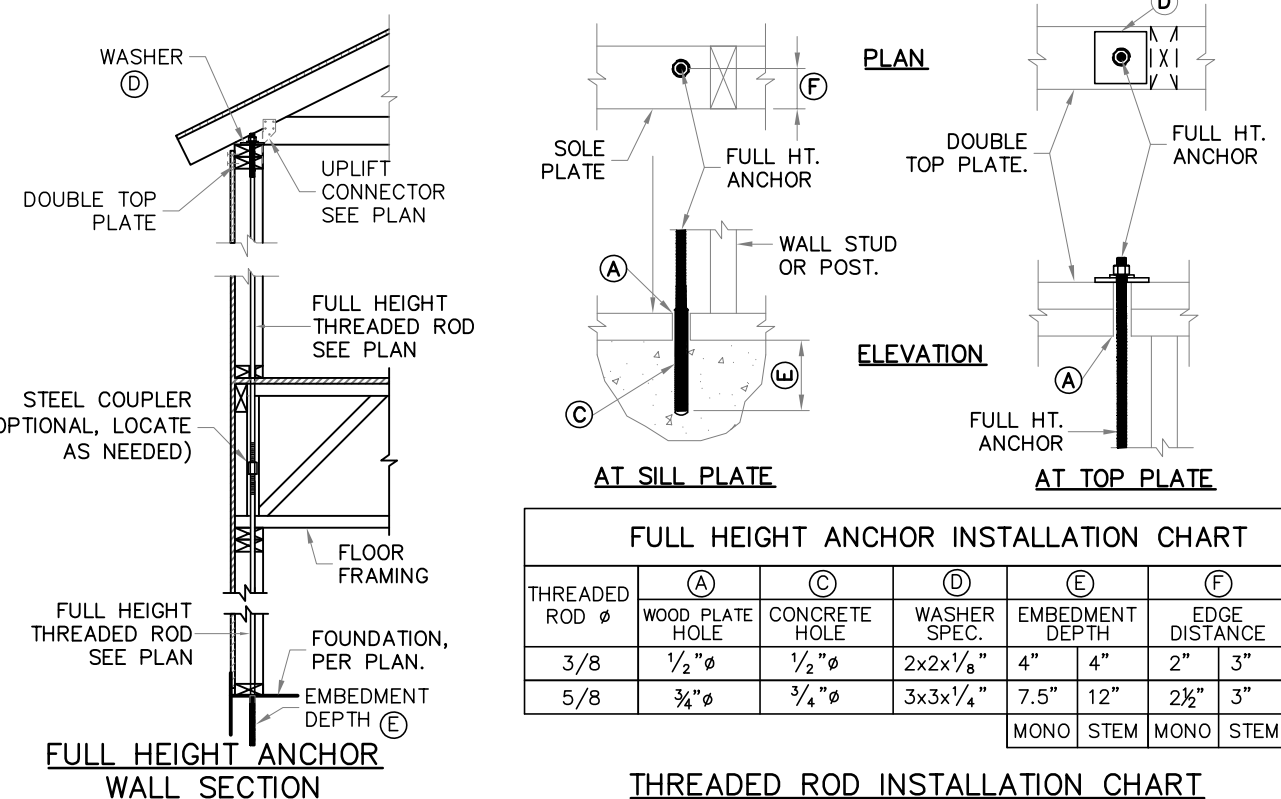


**8** **LEDGER CONNECTION**  
SCALE: N.T.S.

**9** **DECK LEDGER AT OVERFRAME RAFTERS**  
SCALE: N.T.S.

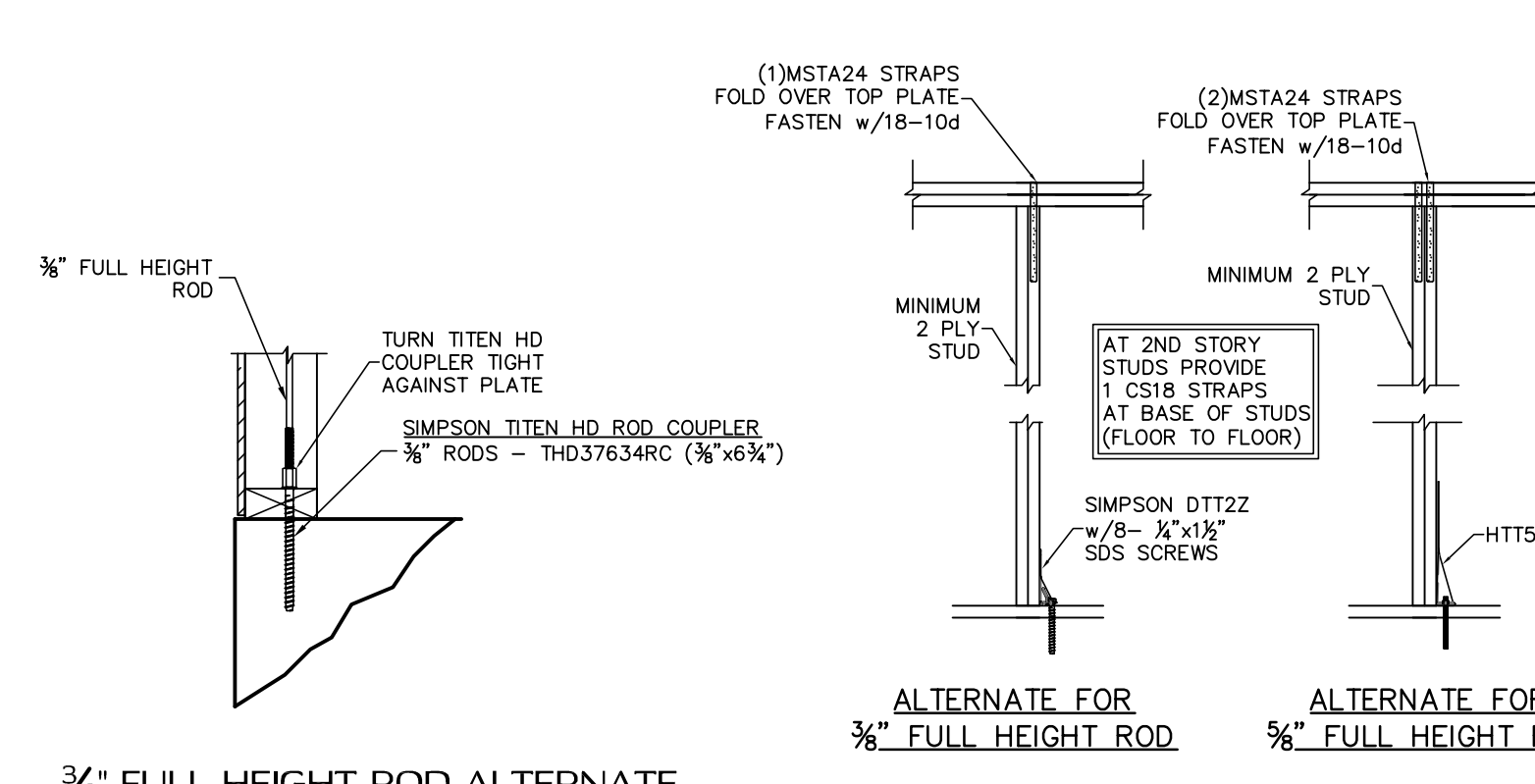


**10** **GABLE END BRACING**  
SCALE: N.T.S.

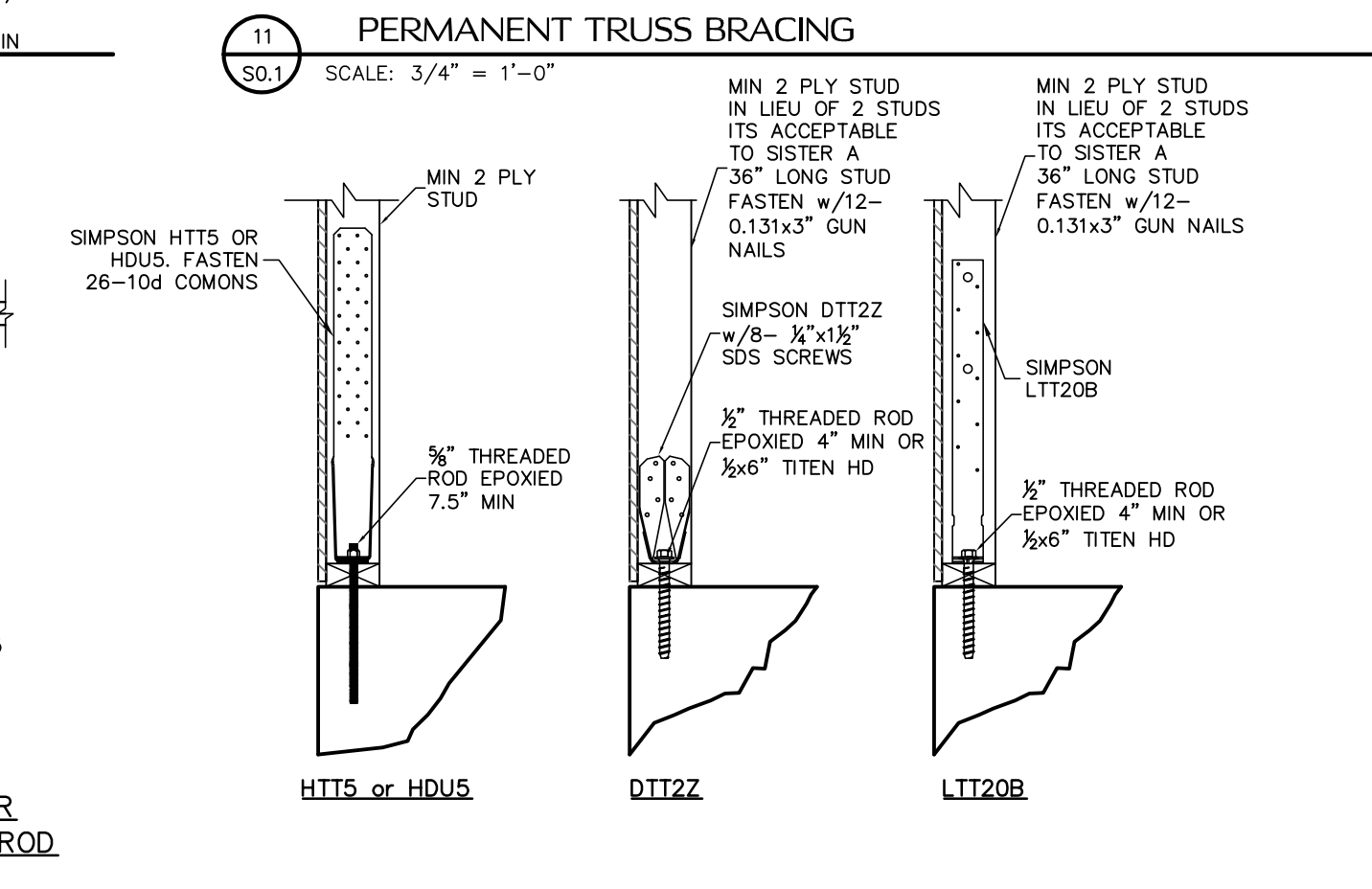


**12** **FULL HEIGHT WOOD FRAME WALL ANCHORING SYSTEM**  
SCALE: N.T.S.

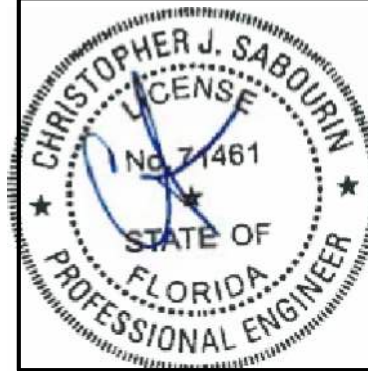
**13** **6" FULL HEIGHT ROD ALTERNATE ATTACHMENT**  
SCALE: N.T.S.



**14** **FULL HEIGHT THREADED ROD ALTERNATE**  
SCALE: N.T.S.



**16** **DOOR JAMB FASTENING**  
SCALE: N.T.S.



03.16.21  
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SSE No.  
21-0097

ISSUE	DATE
PERMIT	03.16.21
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STRUCTURAL ENGINEERING FOR  
THE FORBES RESIDENCE

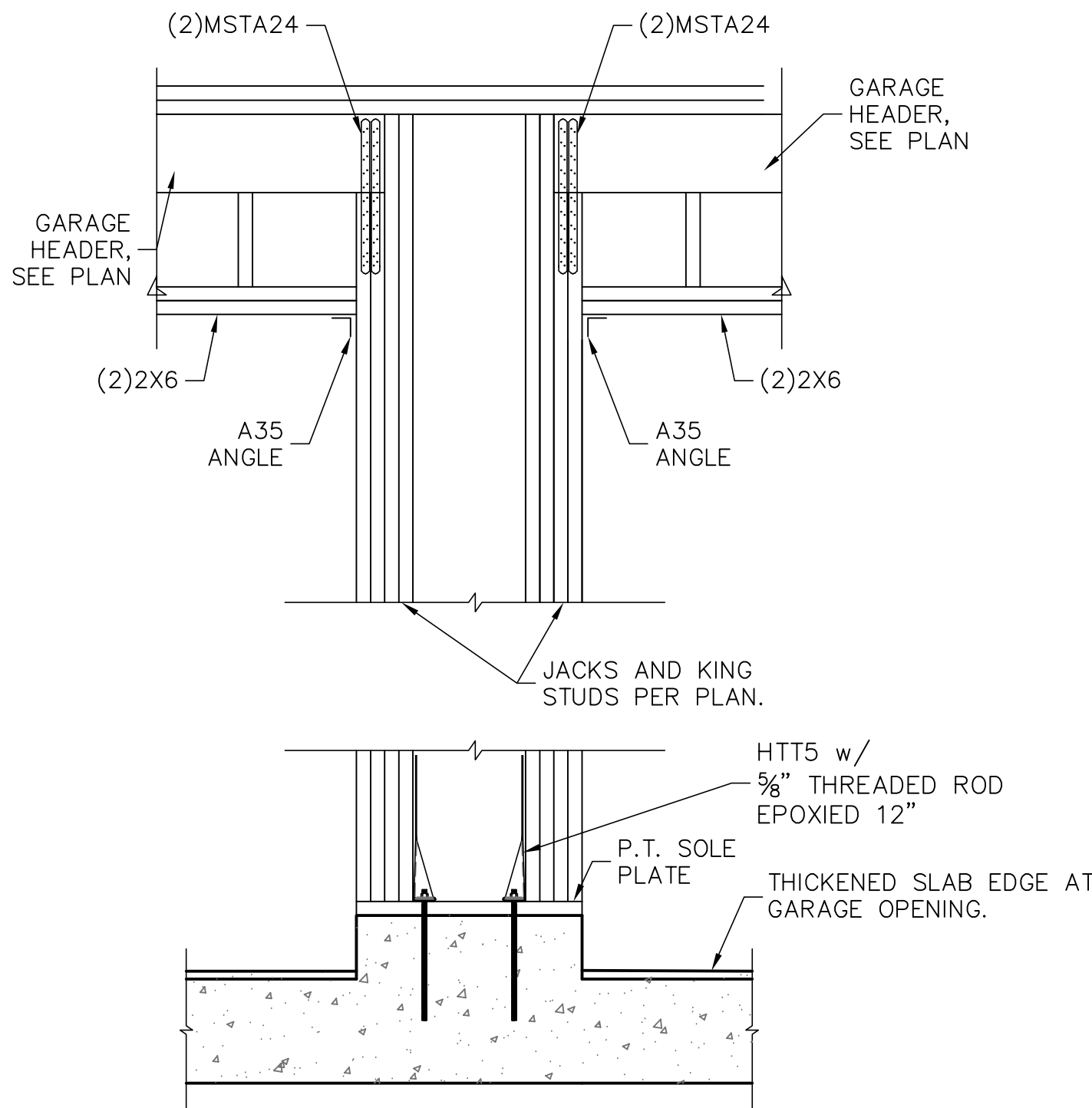
**FIELD ALTERATION**  
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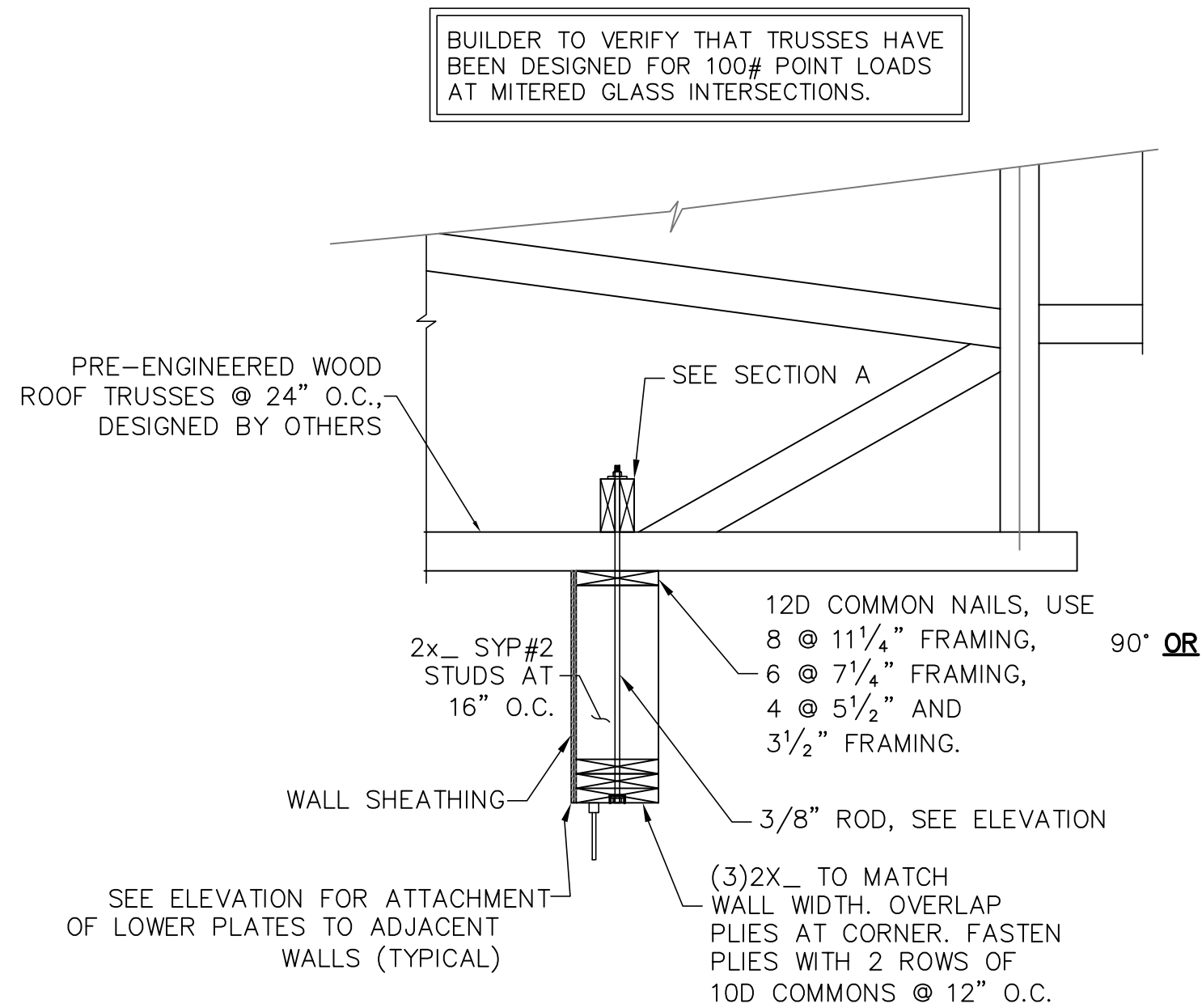
TYPICAL  
FRAMING  
DETAILS

SHEET  
**S0.1**  
SHEET 2 OF 7

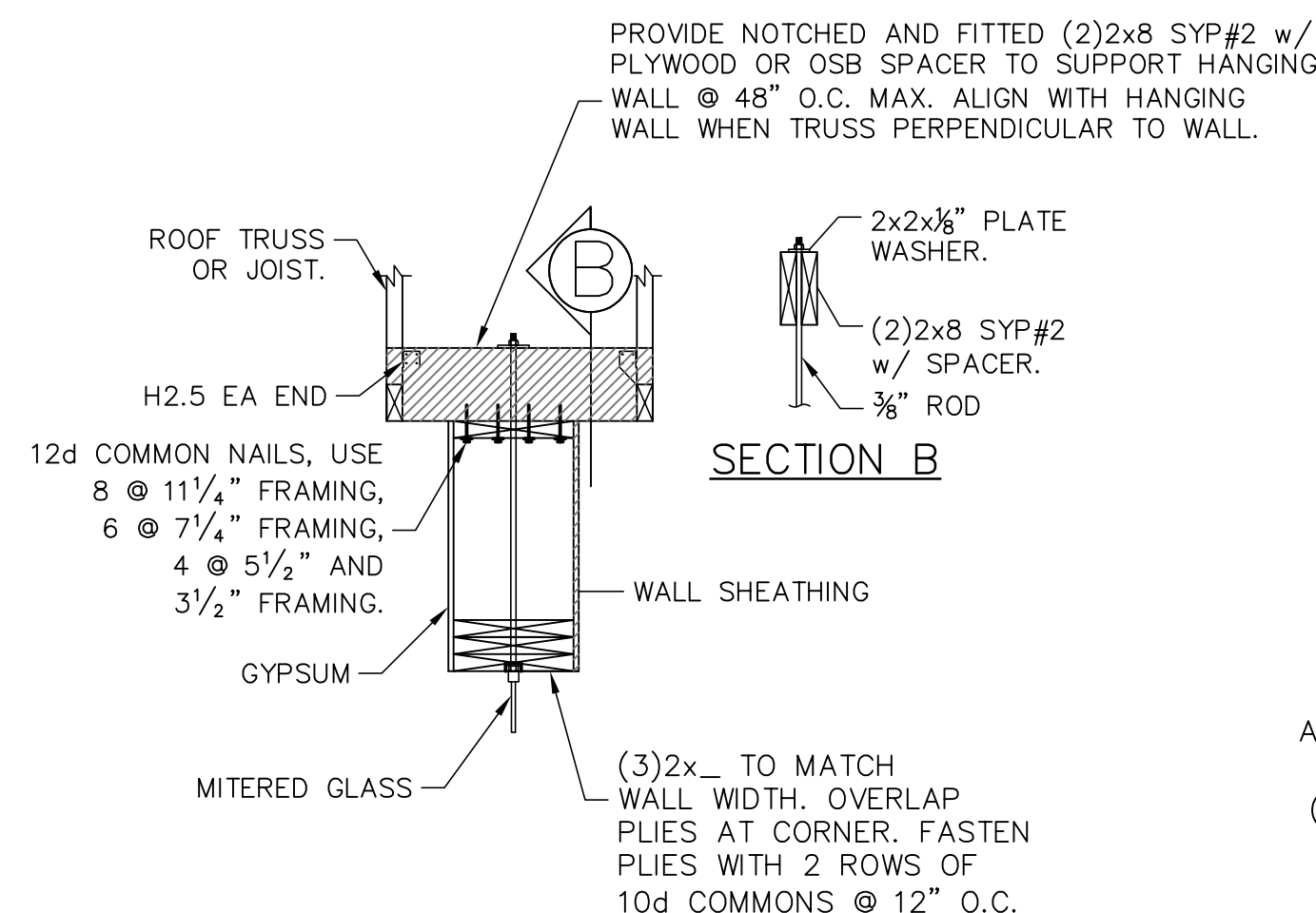




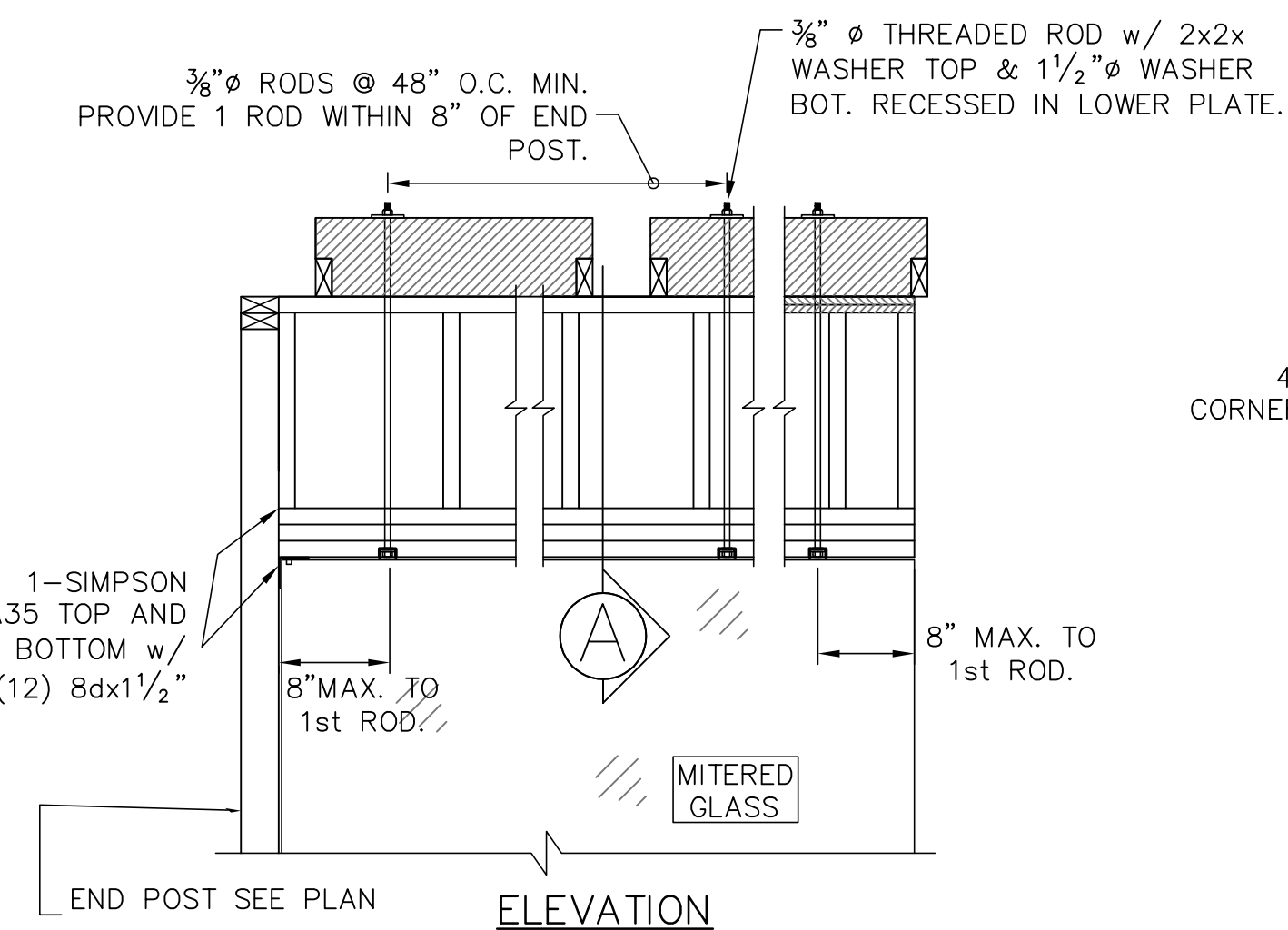
1 GARAGE CENTER WALL FRAMING  
S0.2 SCALE: 3/4" = 1'-0"



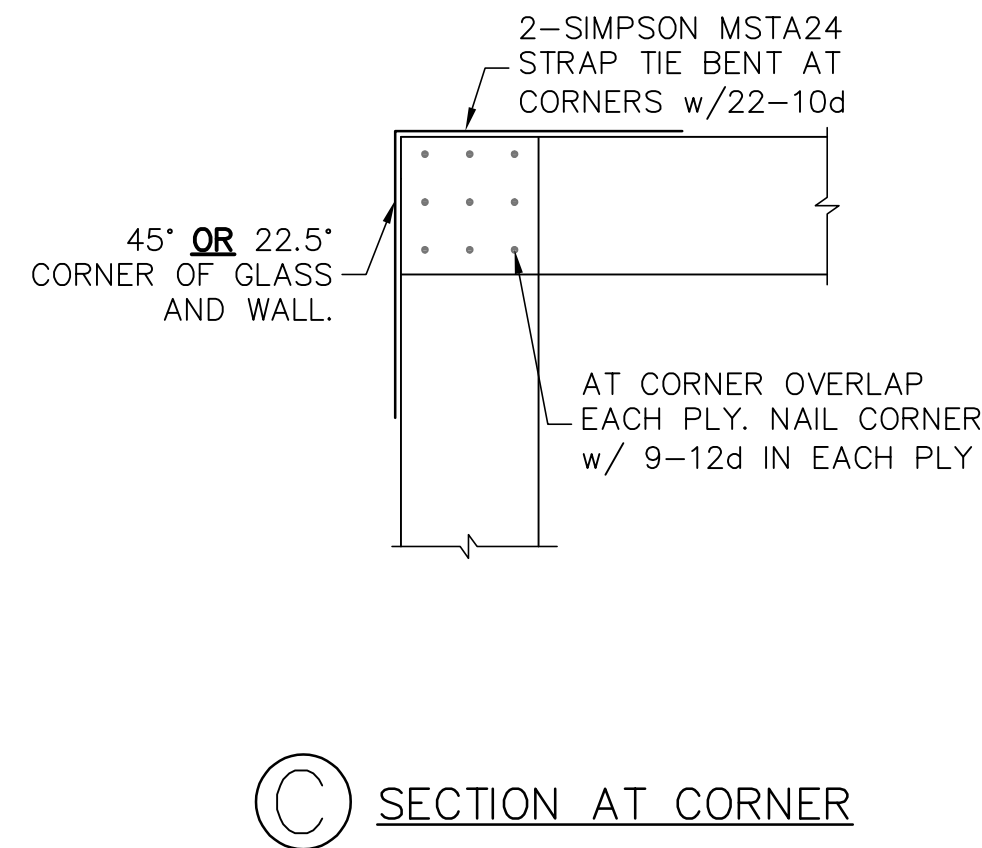
2 MITERED WINDOW HEAD FRAMING  
S0.2 SCALE: N.T.S.



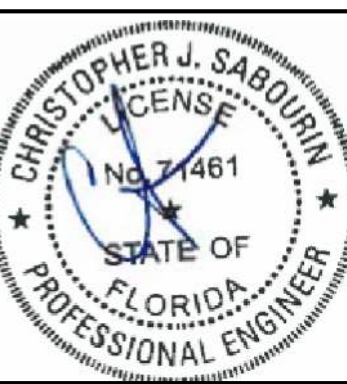
SECTION A



ELEVATION



SECTION AT CORNER



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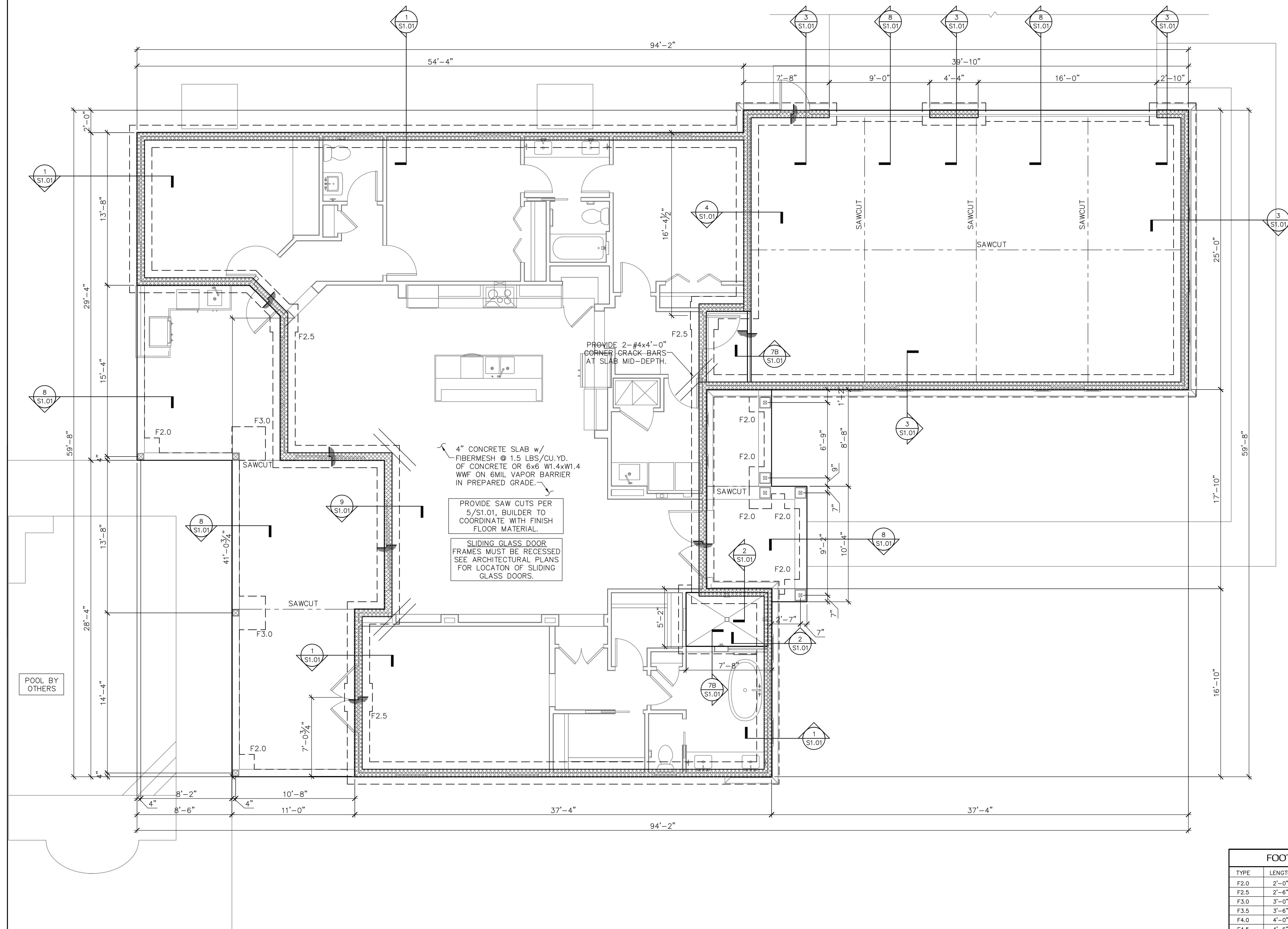
STRUCTURAL ENGINEERING FOR  
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
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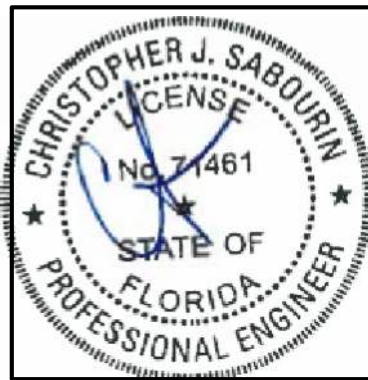
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MISC  
DETAILS

SHEET  
**S0.2**  
SHEET 3 OF 7



SYMBOLS LEGEND	
	DESIGNATES FOOTING LINE
	DESIGNATES SAWCUT LINE
	STEM WALL
	DESIGNATES SLAB RECESS



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## FOUNDATION PLAN

SHEET  
**S1.0**  
SHEET 4 OF 7

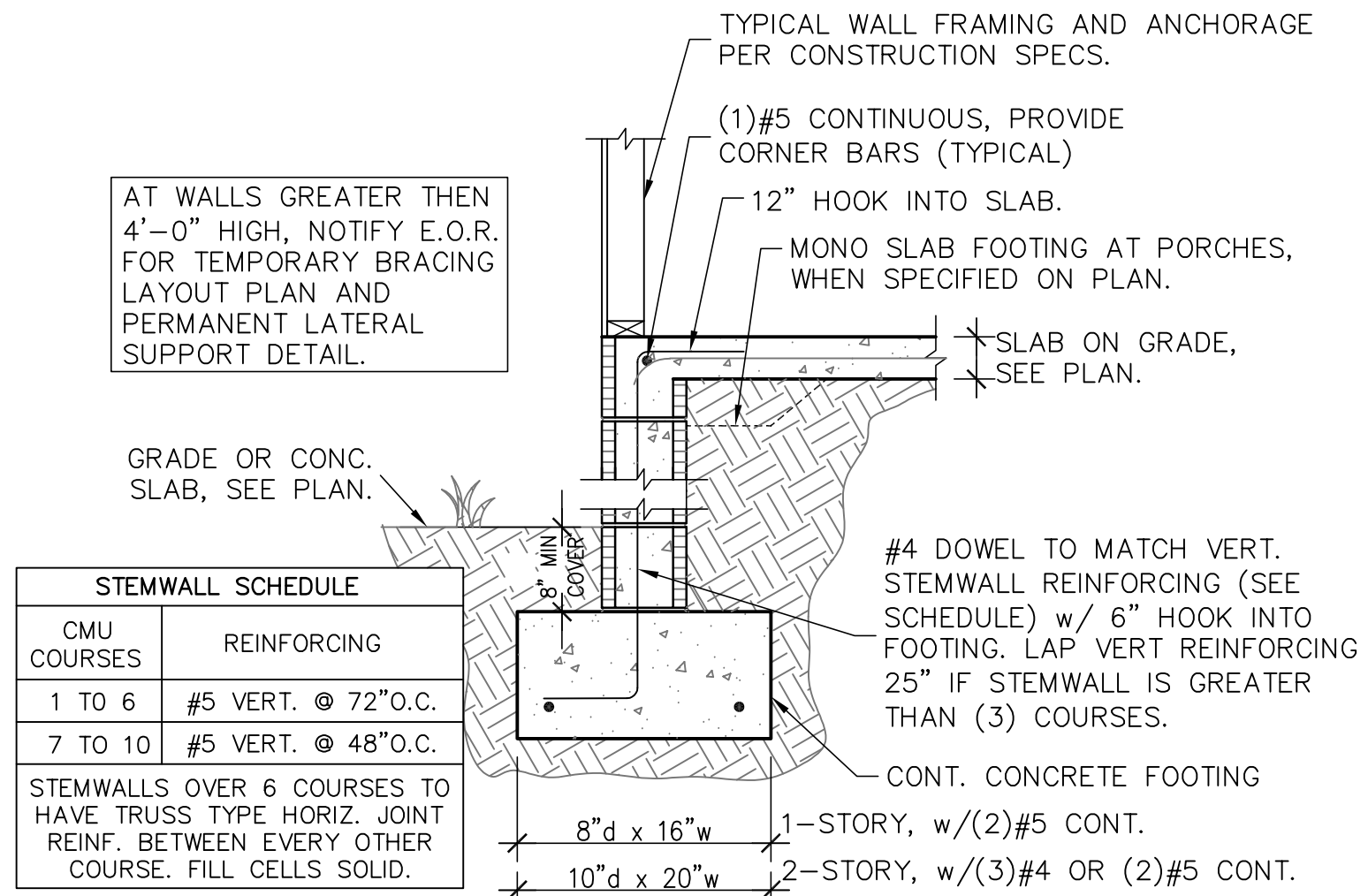
## FOUNDATION PLAN

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

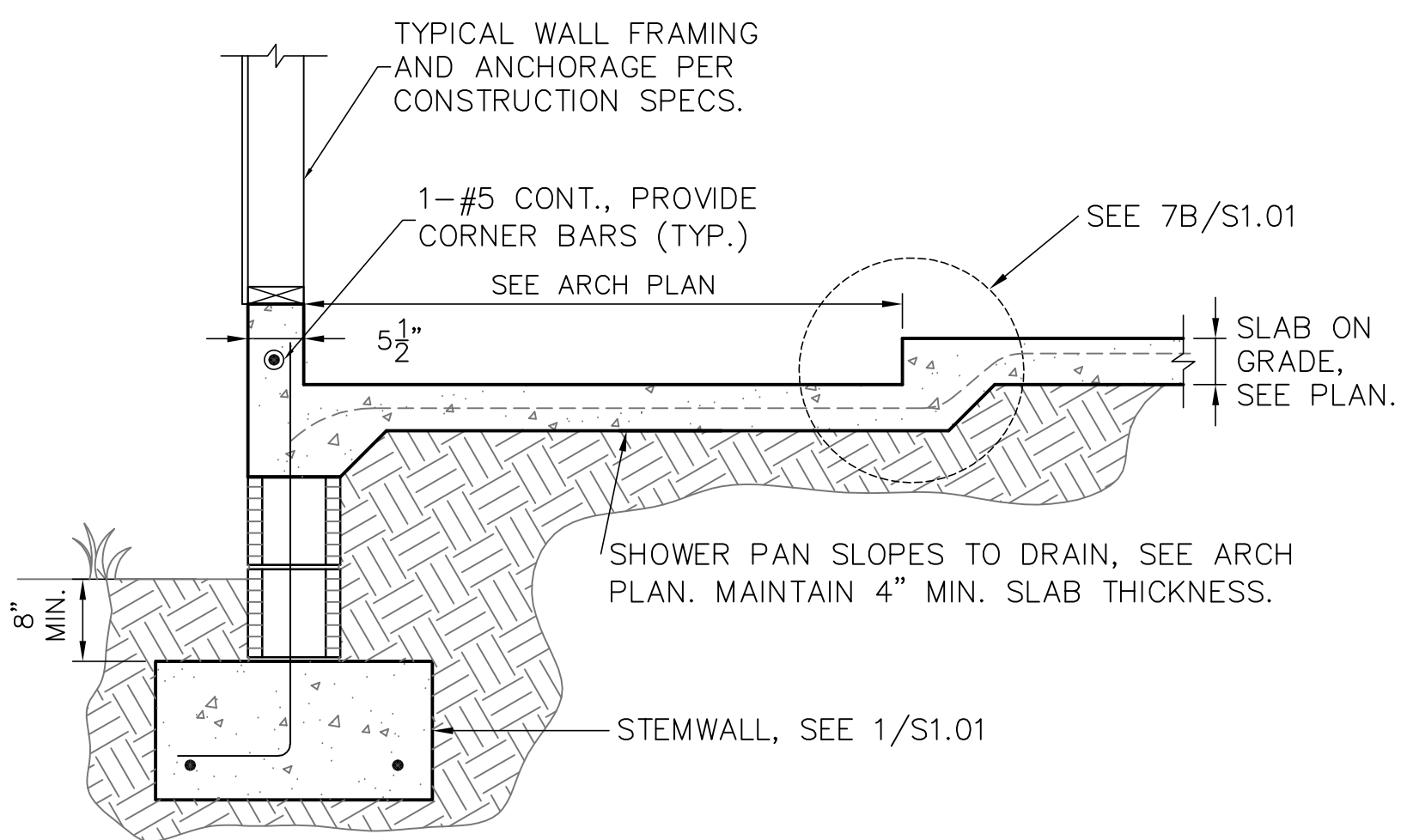
FOOTING SCHEDULE AND NOTES				
TYPE	LENGTH	WIDTH	DEPTH	BOTTOM BARS
F2.0	2'-0"	2'-0"	1'-0"	3-#5 EA. WAY BOT.
F2.5	2'-6"	2'-6"	1'-0"	3-#5 EA. WAY BOT.
F3.0	3'-0"	3'-0"	1'-0"	3-#5 EA. WAY BOT.
F3.5	3'-6"	3'-6"	1'-0"	4-#5 EA. WAY BOT.
F4.0	4'-0"	4'-0"	1'-0"	4-#5 EA. WAY BOT.
F4.5	4'-6"	4'-6"	1'-0"	4-#5 EA. WAY BOT.

1. THIS FOUNDATION PLAN ONLY CONVEYS STRUCTURAL INFO. RELATED TO THE FOUNDATION. FOR GENERAL FEATURES, DIMENSIONS, CONDUITS, ELECTRICAL EMBEDS, STEP HEIGHTS, ECT., SEE ARCH. PLAN. ARCHITECTURAL PLAN SHOWN HERE IN FOR REFERENCE ONLY.
2. FTGS. & FND. SHALL BE IN ACCORDANCE W/ LOCAL BUILDING CODES.
3. SOIL COMPACTION AND FILL SHALL BE COMPACTED TO A MIN. OF 95% MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D.1557.

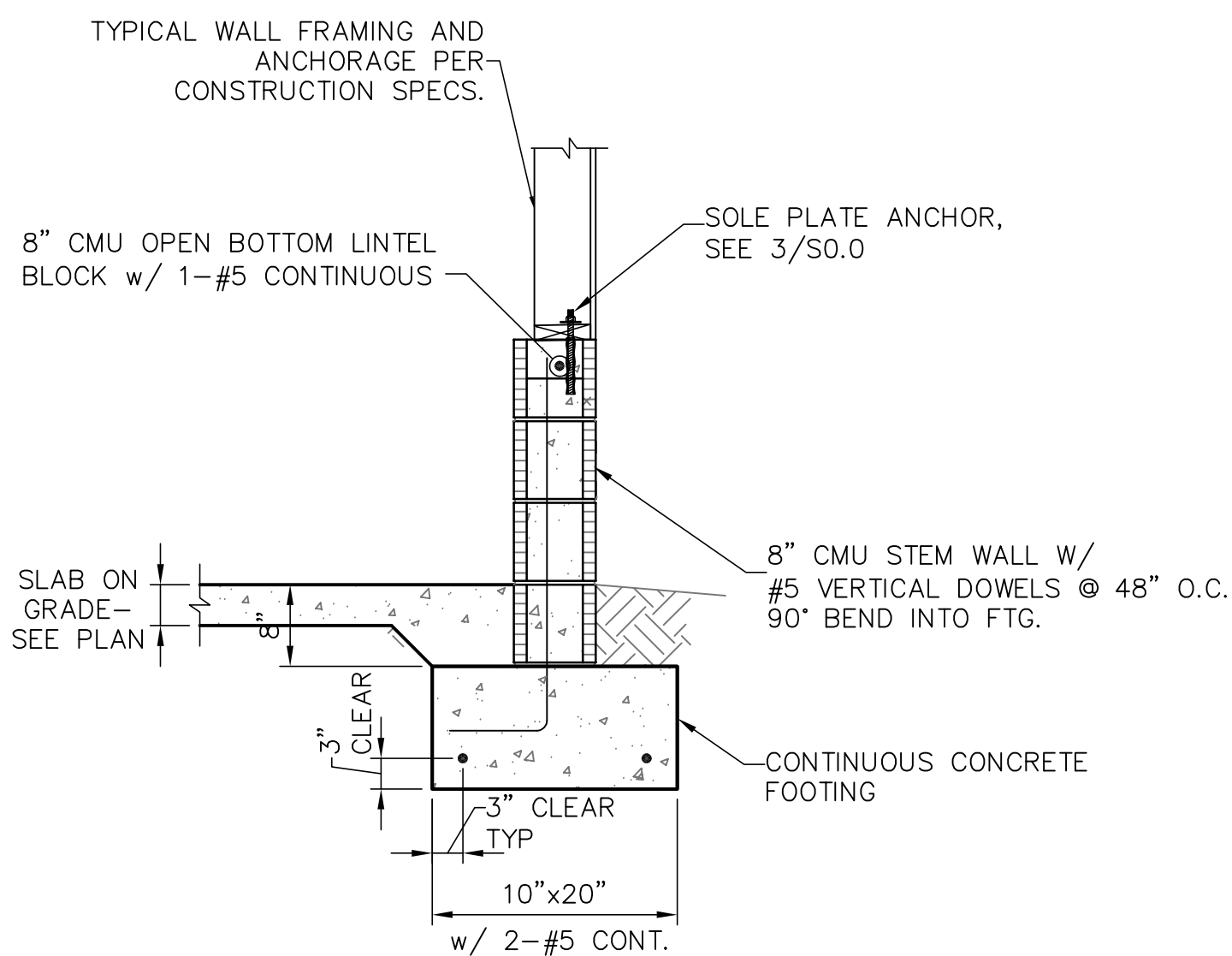




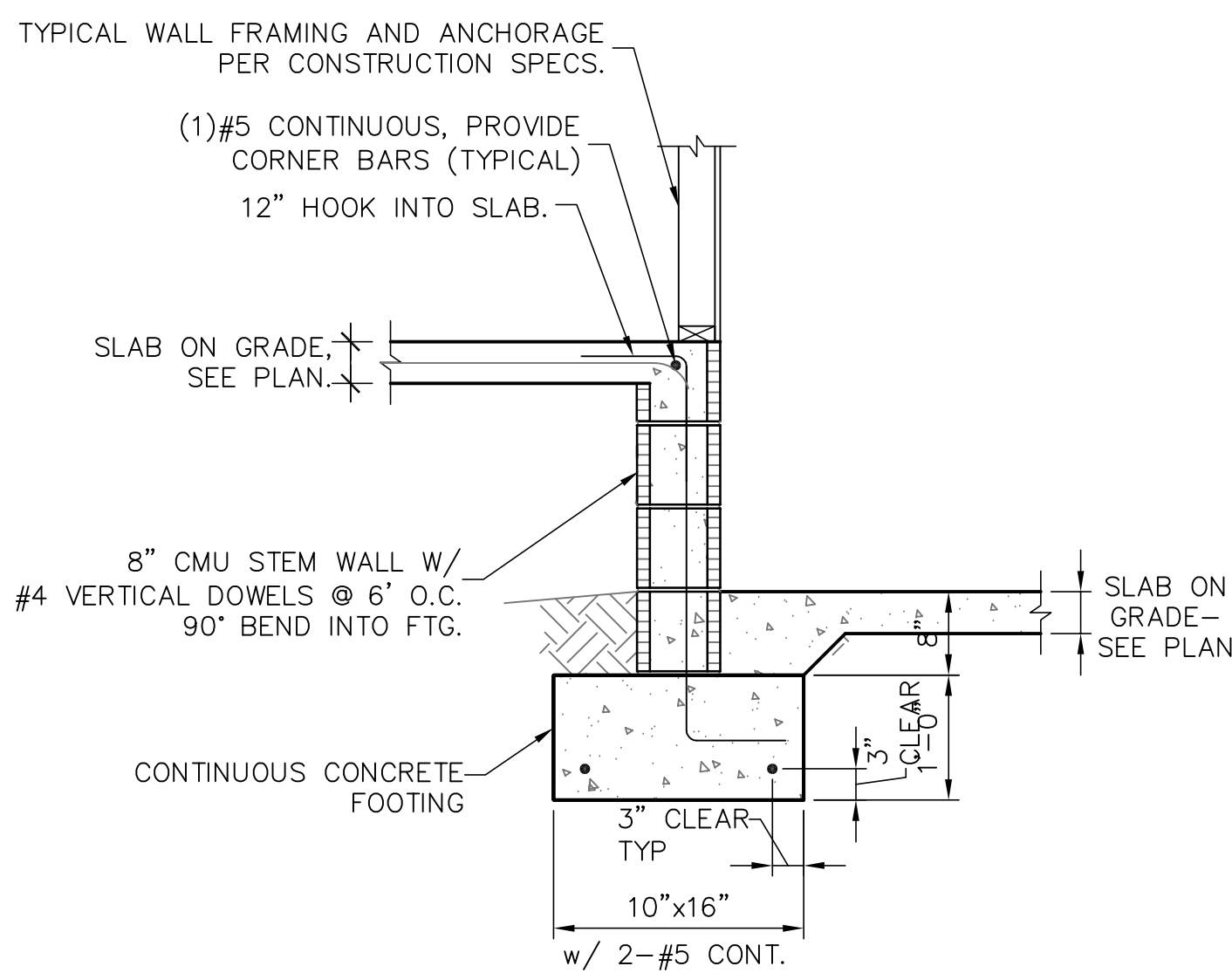
1 STEMWALL FOOTING  
S1.01 SCALE: 3/4" = 1'-0"



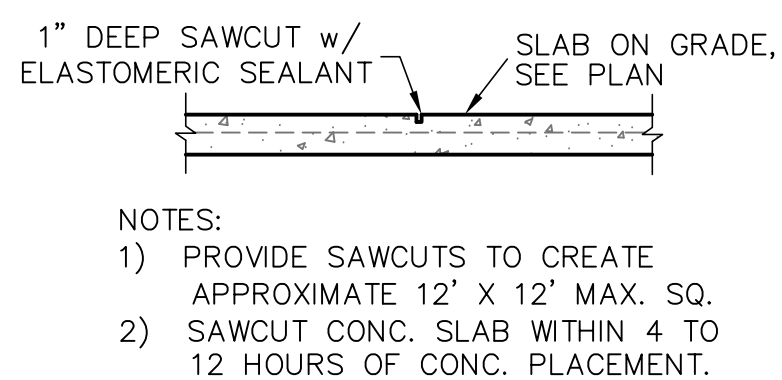
2 FOOTING W/ SHOWER RECESS  
S1.01 SCALE: 3/4" = 1'-0"



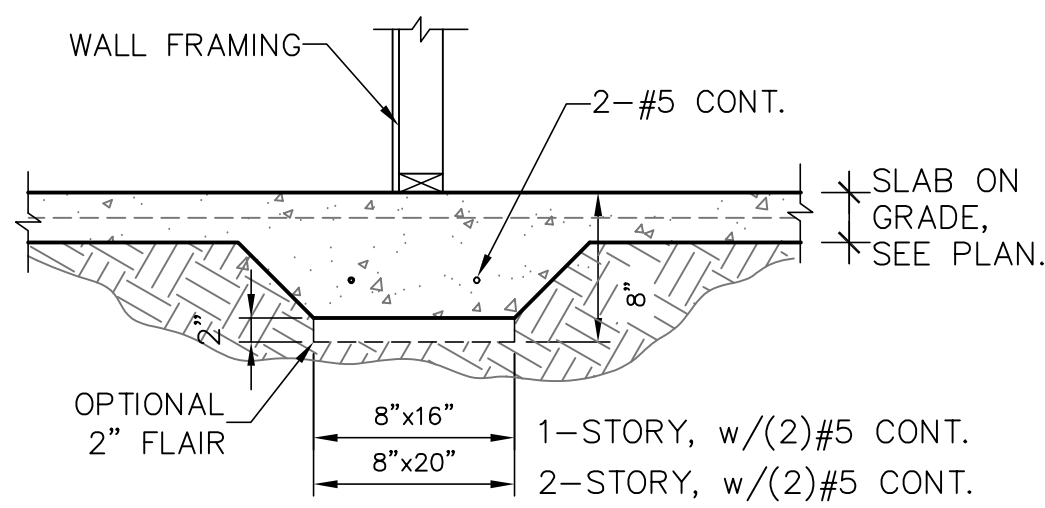
3 GARAGE STEM WALL  
S1.01 SCALE: 3/4" = 1'-0"



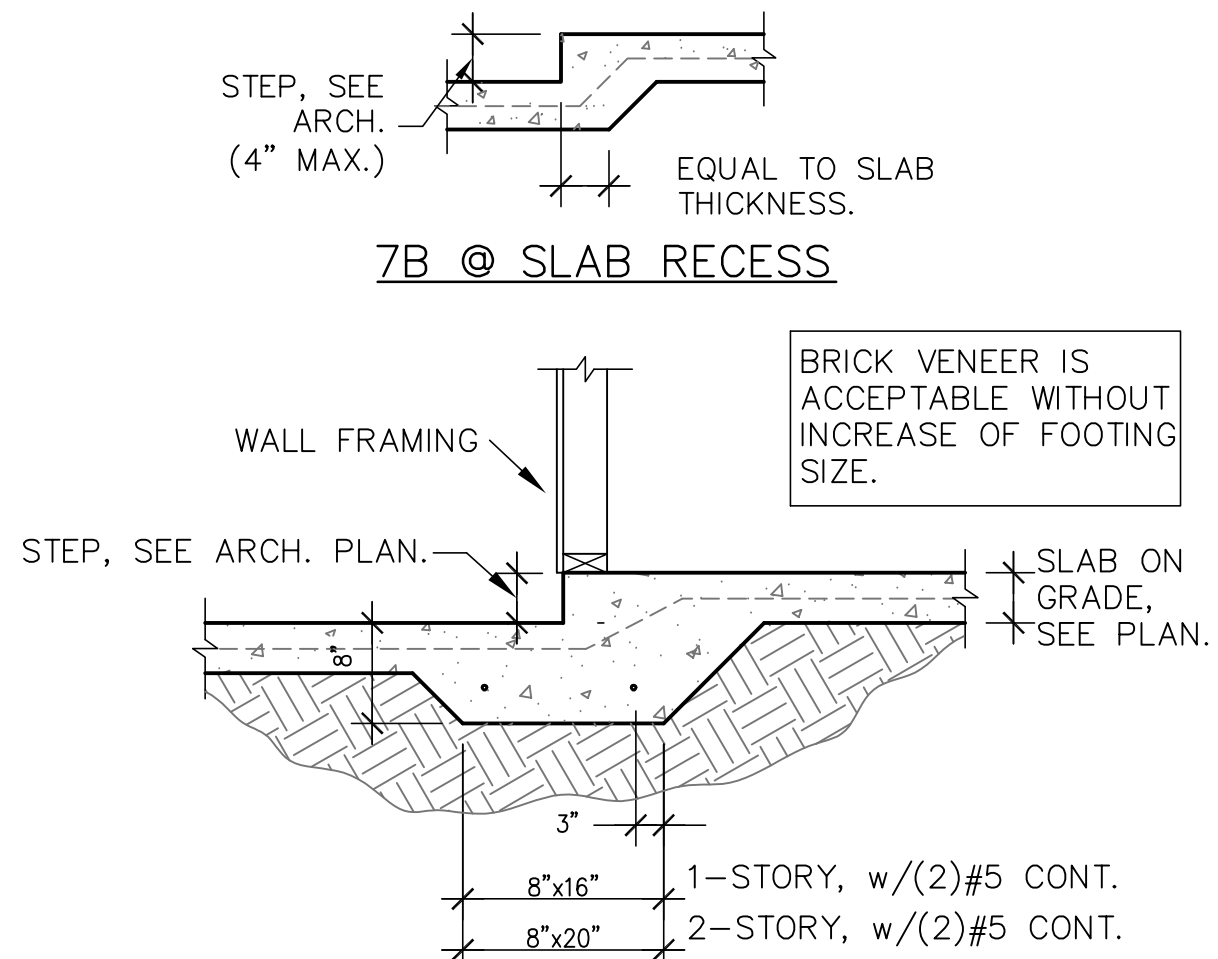
4 STEMWALL AT GARAGE  
S1.01 SCALE: 3/4" = 1'-0"



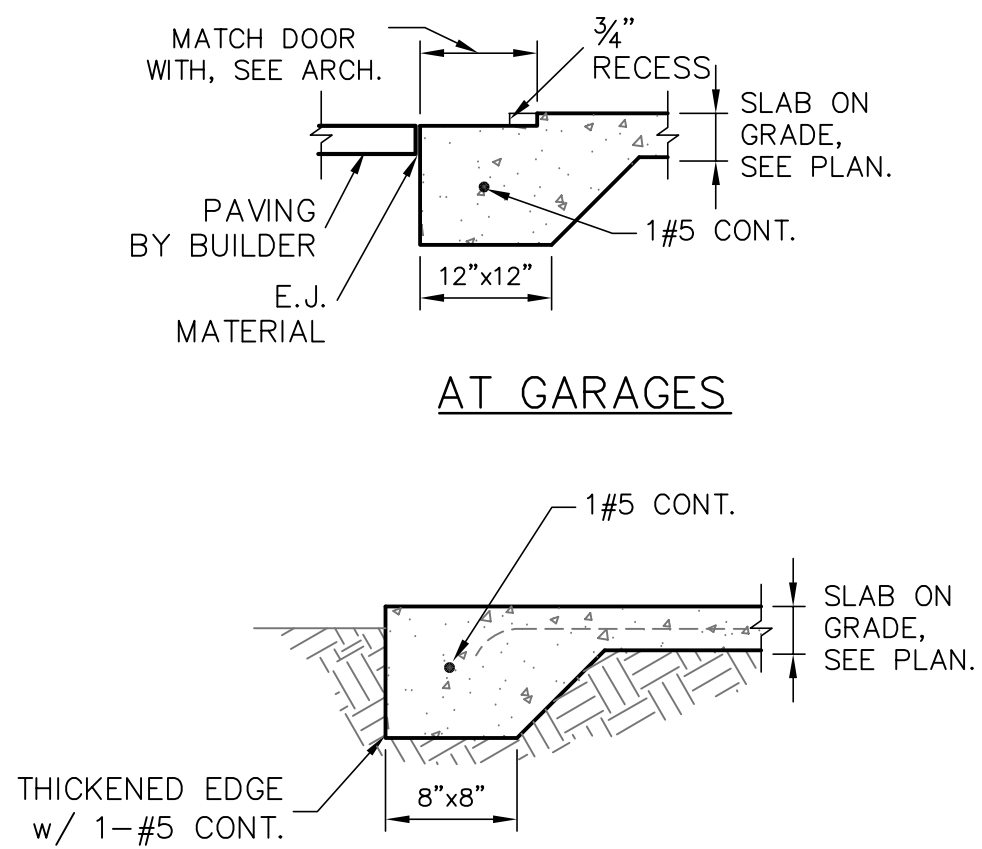
5 SAW CUT DETAIL  
S1.01 SCALE: 3/4" = 1'-0"



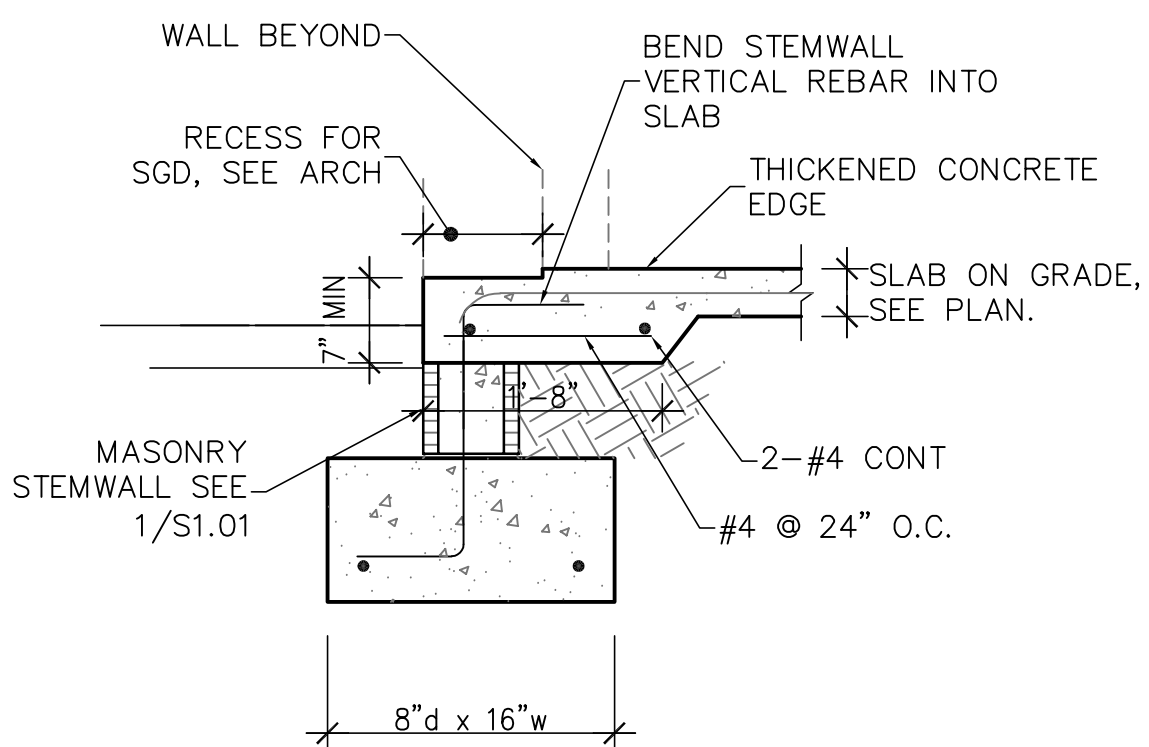
6 BEARING AT INTERIOR  
S1.01 SCALE: 3/4" = 1'-0"



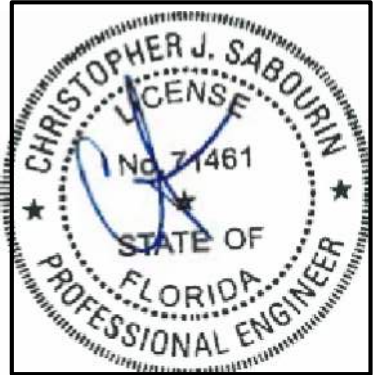
7 MONO. FOOTING AT STEP-DOWN  
S1.01 SCALE: 3/4" = 1'-0"



8 THICKENED SLAB  
S1.01 SCALE: 3/4" = 1'-0"



9 STEMWALL FOOTING AT SLIDER  
S1.01 SCALE: 3/4" = 1'-0"



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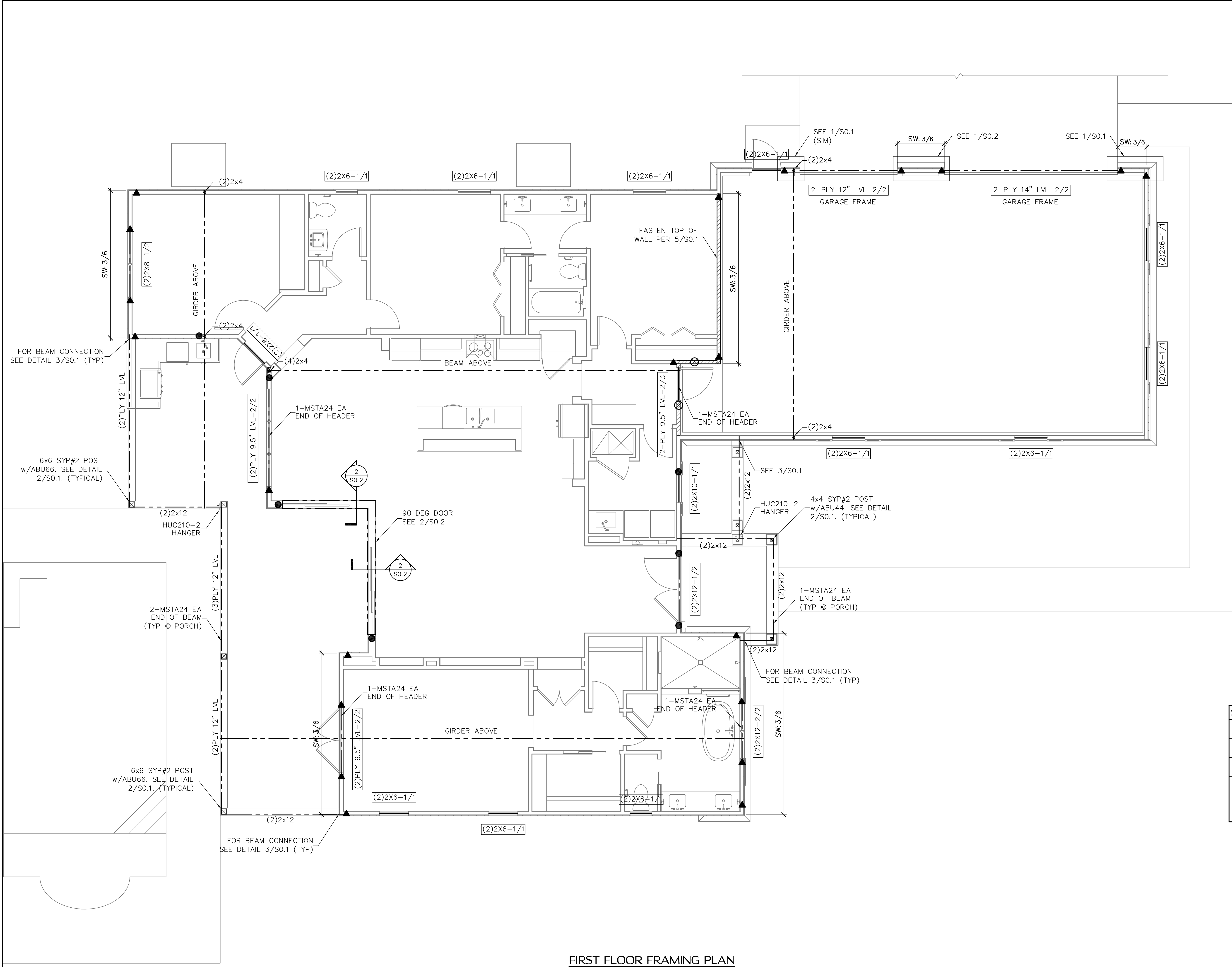
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FOUNDATION  
DETAILS





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

SYMBOLS LEGEND

	DESIGNATES OSB SHEARWALL. THE HIDDEN LINE DESIGNATES SIDE OF WALL. THE SHEARWALL SHEATHING TO BE APPLIED. 8d @ 8" DESIGNATES 8d COMMONS @ 3" O.C. EDGE & 8" O.C. "IN THE FIELD"
	DESIGNATES THE HEADER SIZE, NUMBER OF PLYS & JACK/KING STUDS NEEDED FOR SUPPORT HEADER.
	BEAM OR TRUSS, SEE PLAN

ANCHOR LEGEND

	3/8" A307 DIAMETER FULL HEIGHT THREADED ROD, SEE DETAIL 12/SO.1
	3/8" A307 DIAMETER FULL HEIGHT THREADED ROD, SEE DETAIL 12/SO.1
	3/8" A307 DIAMETER THREADED ROD TERMINATES AT FIRST FLOOR TOP PLATE, SEE DETAIL 12/SO.1
	3/8" A307 DIAMETER THREADED ROD TERMINATES AT FIRST FLOOR TOP PLATE, SEE DETAIL 12/SO.1
	SIMPSON HTTS SEE DETAIL 15/SO.1
	SIMPSON DT12Z SEE DETAIL 15/SO.1
	SIMPSON LT120B SEE DETAIL 15/SO.1

WALL STUD SCHEDULE

LOCATION	PLATE HEIGHT	STUD SIZE & SPACING
EXTERIOR	8'-1" MAX	2x4 SPF#2 @ 16" O.C.
EXTERIOR	10'-1" MAX	2x6 SPF#2 @ 16" O.C. OR 2x4 SPF#2 @ 12" O.C.
EXTERIOR	10'-1" TO 14'-0" MAX	2x6 SPF#2 @ 16" O.C.
INTERIOR	10'-0" MAX	2x4 SPF#2 @ 16" O.C.
INTERIOR	12'-0" MAX	2x6 SPF#2 @ 16" O.C. OR 2x4 SPF#2 @ 12" O.C.

STUD NOTES

- 1.) WALL STUDS SPECIFIED ON PLAN SUPERSEDE THIS TABLE
- 2.) MINIMUM STUD SIZE AND SPACING ARE SHOWN. CONTRACTOR MAY INCREASE STUD SIZE TO MEET ARCHITECTURAL REQUIREMENTS.
- 3.) SPF DENOTES SPRUCE PINE FIR. SYP DENOTES SOUTHERN YELLOW PINE.
- 4.) USE SYP#2 FOR ALL TOP PLATES AND SOLE PLATES.
- 5.) FASTEN BOTTOM PLATE OF INTERIOR LOAD BEARING WALLS TO CONCRETE SLAB w/16d MASONRY CUT NAILS @ 16" O.C. MINIMUM. SEE 3/SO.0 FOR ADDITIONAL ANCHORS AT SHEARWALLS.

COMBINED USE PANEL NOTES

1. EXTERIOR WALL SHEATHING SHALL BE CONTINUOUS FROM BOTTOM PLATE TO UPPER MOST TOP PLATE. SEE DETAIL 1/SO.1 FOR SHEATHING SPLICE LOCATIONS FOR MULTI STORY CONDITIONS
2. SEE SHEET S0.0 FOR WALL SHEATHING SPECIFICATIONS.
3. UPPER MOST TOP PLATE SUPPORTING ROOF MEMBERS SHALL BE STRAPPED AS SHOWN IN DETAIL 1/SO.0
4. INSTALL SOLE PLATE ANCHORS PER DETAIL 3/SO.0

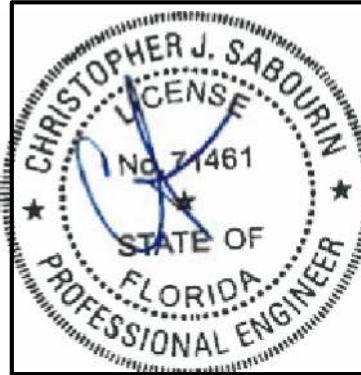
GENERAL NOTES

1. SEE DETAIL 2/SO.0 FOR WALL FRAMING DETAIL. SEE WALL STUD SCHEDULE THIS SHEET FOR STUD SIZES AND SPACING. AT GIRDERS AND BEAMS, PROVIDE STUDS BELOW TO MATCH BEAM/GIRDER PLIES.
2. SEE SHEET S0.0 FOR ROOF AND FLOOR SHEATHING SPECIFICATIONS.
3. WHERE FRAMING MEMBERS CONSIST OF MULTIPLE PLIES (BEAMS, HEADER, AND STUDS) FASTEN PLIES TOGETHER PER DETAIL 6/SO.0
4. INSTALL SOLE PLATE ANCHORS PER DETAIL 3/SO.0
5. AT SHEARWALLS, PROVIDE DIAPHRAGM ATTACHMENT PER DETAIL 5/SO.1
6. FOR ATTACHMENT OF EXTERIOR WALLS THAT TERMINATE BETWEEN TRUSSES, SEE 5A/SO.1
7. AT PORCHES, SEE DETAIL 2/SO.1 FOR FRAMING AND HOLD DOWNS

SOLE PLATE ANCHOR SPACING SCHD

ALL EXTERIOR WALL UNLESS OTHER NOTED	42" O.C.
SHEARWALLS (SW 8d@3"/6")	24" O.C.
SOLE PLT @ #	WHEN NOTED ON PLAN SEE NOTE 2

1. INSTALL SOLE PLATE ANCHORS PER DETAIL 3/SO.0
2. ANCHOR SPACING SHALL BE AS NOTED. FOR EXAMPLE - SOLE PLT @ 36" = 36" ON-CENTER SPACING



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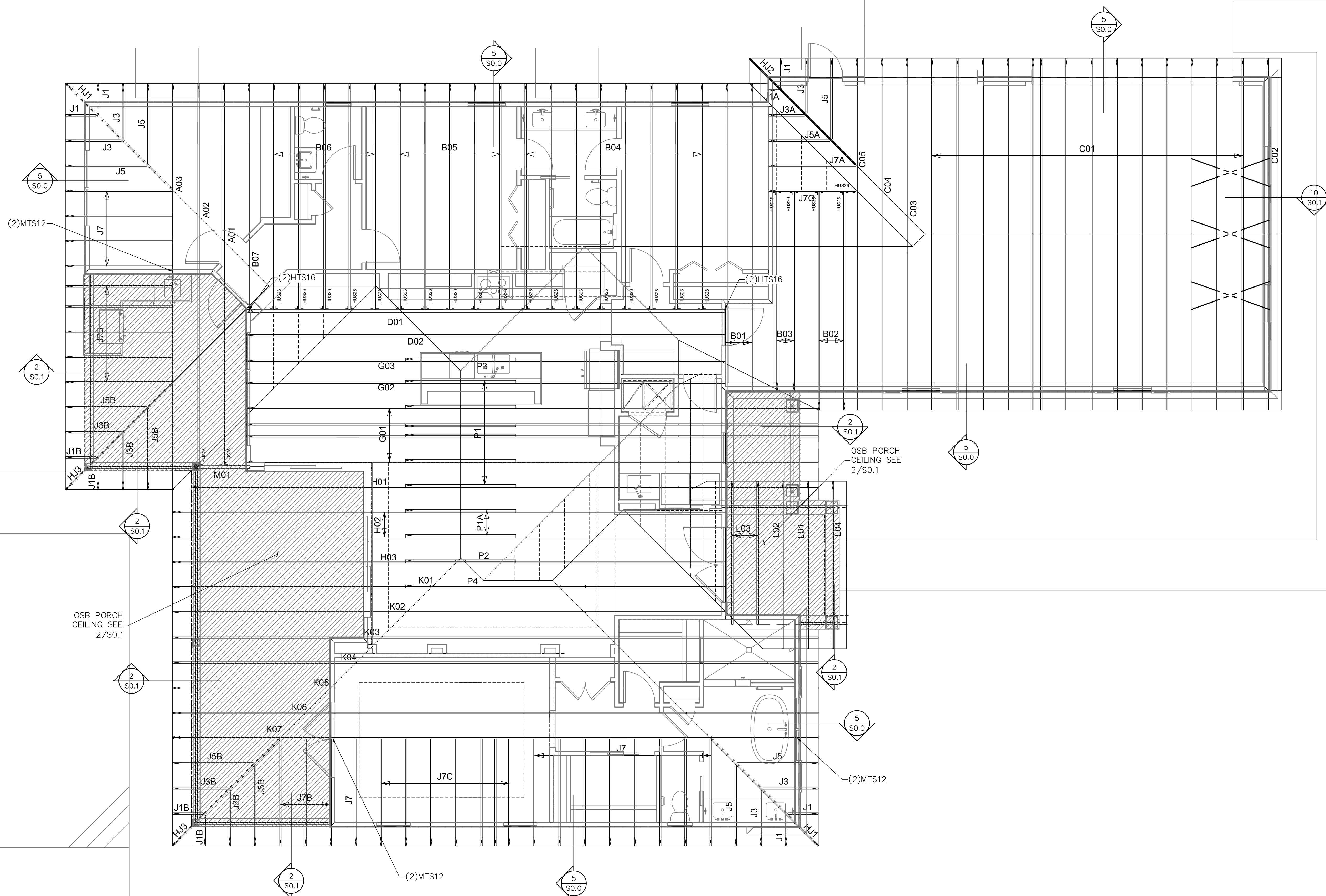
FIRST FLOOR  
FRAMING  
PLAN

SHEET

S1.1

SHEET 6 OF 7





TRUSS / ROOF RAFTER NOTES: STRAPPING NOTES

1. STRAP ROOF TRUSSES AND RAFTERS TO BEARING  
WITH 2-12D TOENAILS & 1-SIMPSON SDWC15600  
SCREW UNLESS OTHERWISE NOTED

## ROOF TRUSS PLACEMENT PLAN

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

## SYMBOLS LEGEND

HTS16	DESIGNATES UPLIFT CONNECTION.
-------	-------------------------------

**FRAMING PLAN NOTES:**

- FOR TYPICAL ROOF SHEATHING AND FRAMING, SEE SHEET S0.0.
- FOR SPECIFIC UPLIFT CONNECTORS, SEE PLAN, MIN. (1)SDWC CONNECTOR.
- FOR GENERAL DESIGN SPECIFICATIONS SEE SHEET S0.0.
- WHEN USING (2)½ ST CLIPS ON 1½" WIDE LUMBER, PLACE CLIPS DIAGONALLY ACROSS DOUBLE TOP PLATE FROM EACH OTHER.

## TRUSS FASTENING DETAILS

TOP PLATE TO STUD SDWC15600

SDWC15600

---

## TRUSS TIE DOWN WITH SIMPSON SDWC

Rafter to Top Plate shown  
Truss to Top Plate similar

Optimal 22½°

30° 10° 0°

½" Max

TOP PLATE TO STUD SDWC15600

SDWC15600

**Note:** 1. Sloped-roof rafters may be sloped up to and including a 12:12 pitch and must be "birds-mouth" cut.  
2. Reference detail 4 for installation instructions.

---

## SIMPSON SDWC INSTALLATION RANGE

SDWC15600

STUD NOT DIRECTLY BELOW TRUSS

**Note:** Reference detail 2a for installation angle limit

---

## SDWC INSTALLATION

Rafter to Top Plate shown  
(Truss to Top Plate similar)

1/2" max

Overhang

1 1/2" MIN  
2" MAX

Do not install SDWC in hatched area

SDWC15600

STUD NOT DIRECTLY BELOW TRUSS

---

## SDWC INSTALLATION RANGE

Rafter or Truss

X'' minimum edge distance for full values (with or without a plate splice)

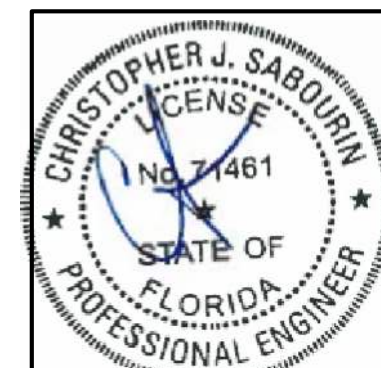
Splice may be in upper or lower plate

X' from top plate, splice Offset for full values

STUD NOT DIRECTLY BELOW TRUSS

---

## SDWC AT TOP PLATE SPLICE



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# ROOF TRUSS PLACEMENT PLAN

SHEET  
**S1.2**  
SHEET 7 OF 7