

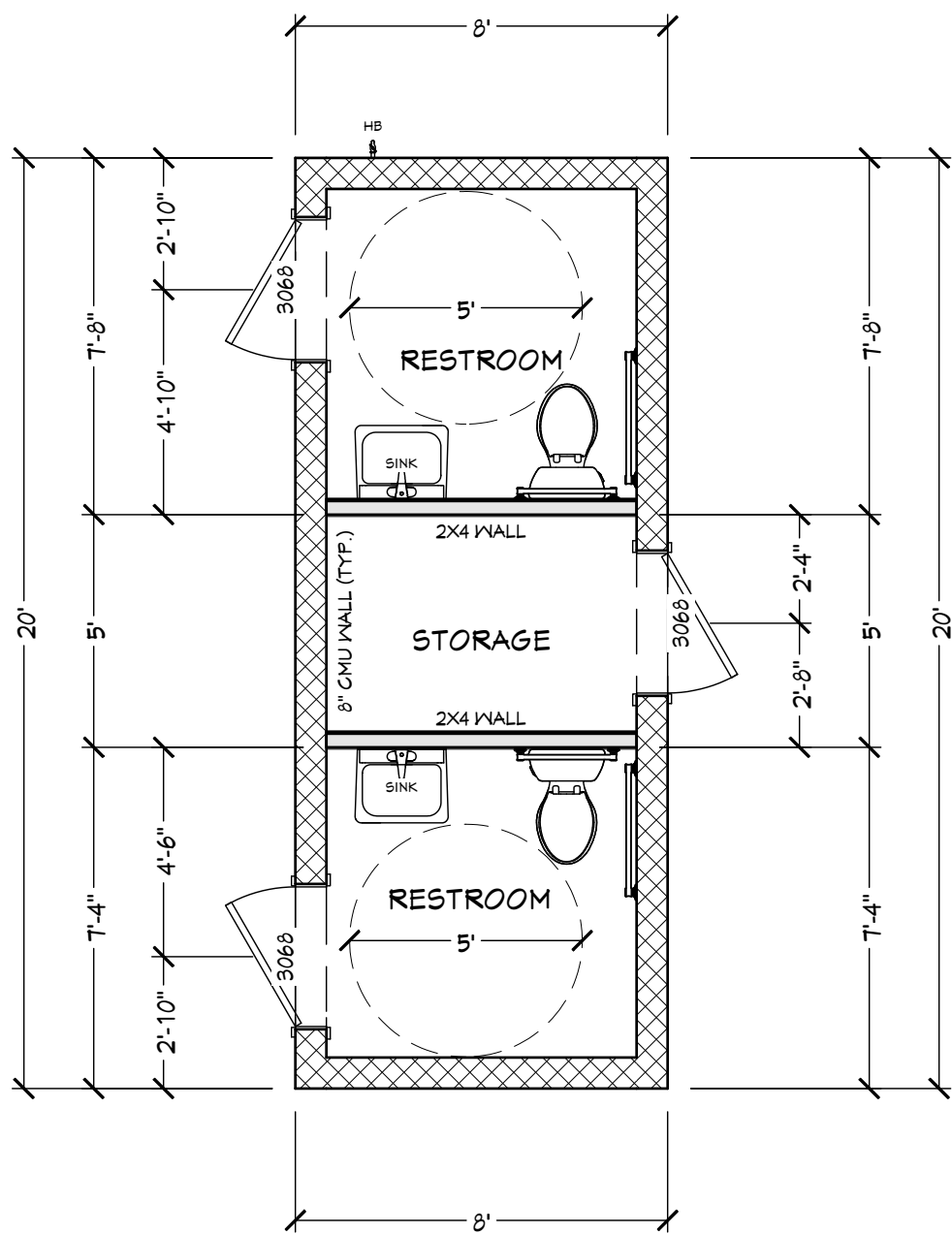
- General Information:
- While every attempt has been made in the preparation of these plans to avoid mistakes, the preparer cannot guarantee against human error. The contractor/owner shall check for accuracy before and during construction.
 - It is the responsibility of the contractor/owner to ensure the structure is built to strict compliance with these plans and all governing codes.
 - The approved plans shall be on site at the time of all inspections. The job site box must be posted at a height of 4 to 6 feet from the ground with the inspection card, all permits and notice of commencement inside.
 - Interior finishes are not addressed in these plans.

AREAS:

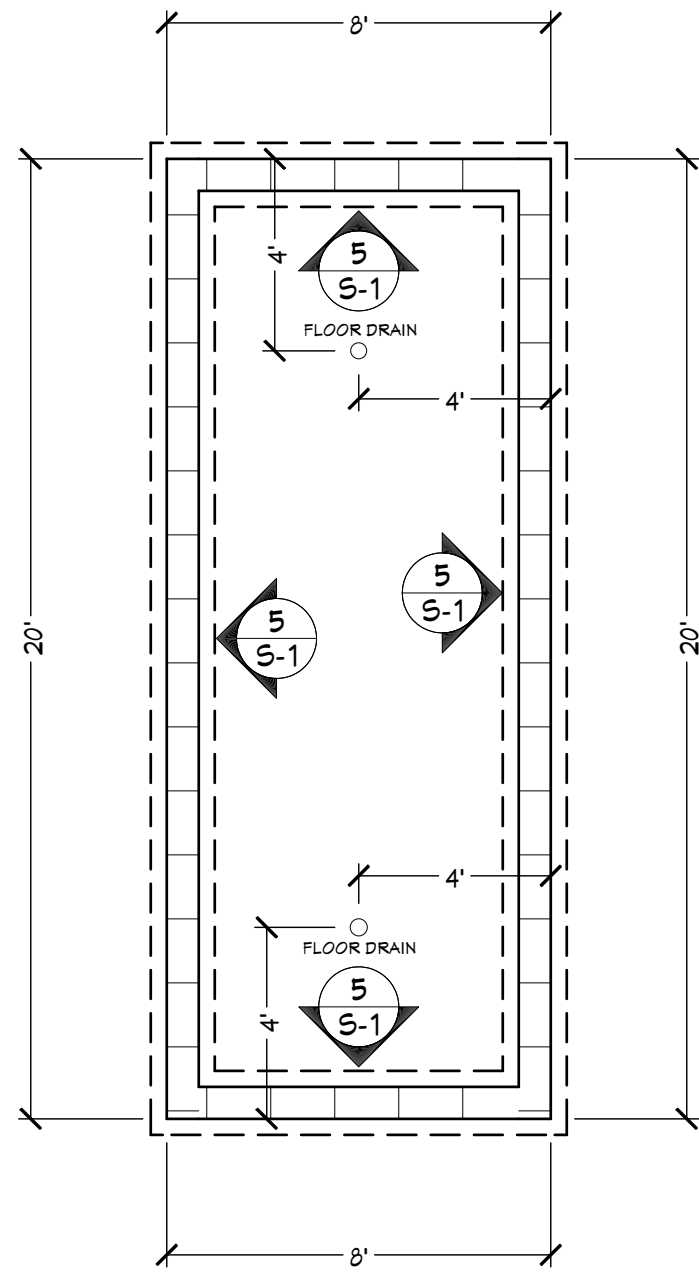
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SHEET INDEX

- GENERAL NOTES/ ELEVATIONS/ FLOOR PLAN/ ROOF PLAN/ CEILING PLAN/ FOUNDATION/ ELECTRICAL PLAN
- STRUCTURAL SHEET S-1
- STRUCTURAL SHEET S-2
- STRUCTURAL SHEET S-3

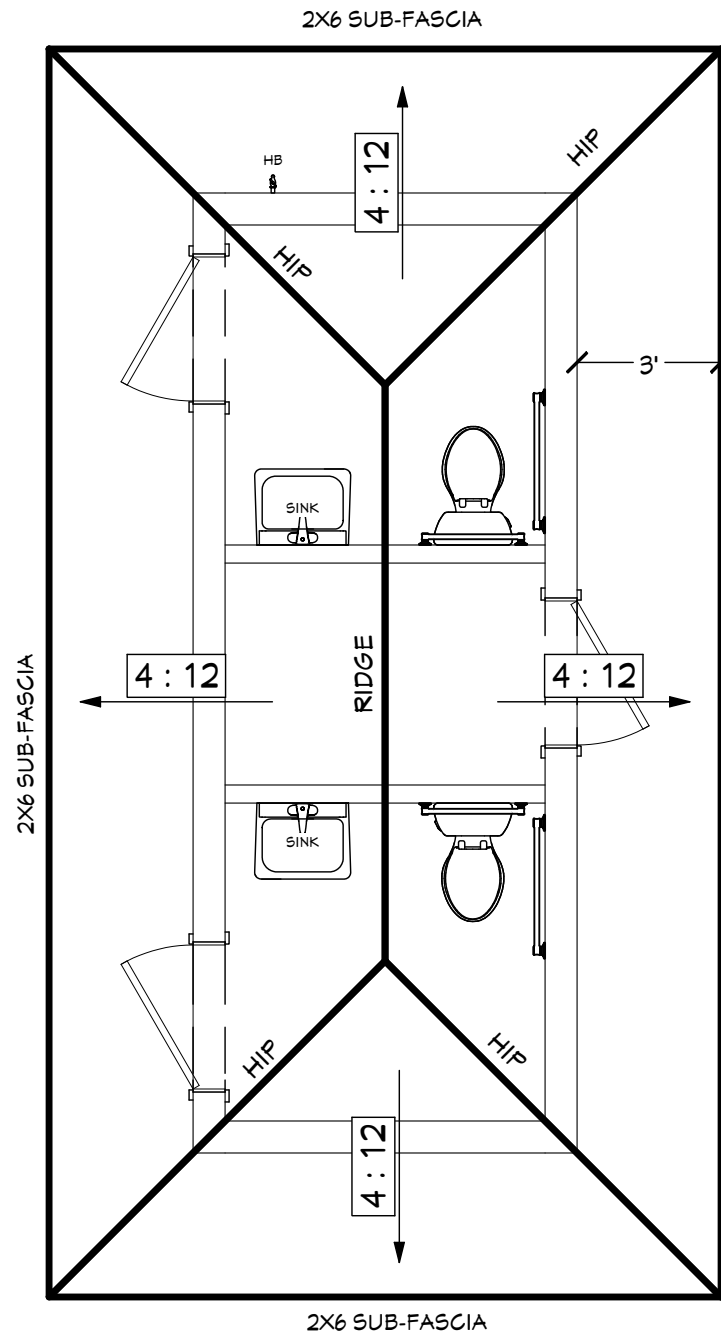


FLOOR PLAN
SCALE: 1/4"=1'



FOUNDATION PLAN
SCALE: 1/4" = 1'

FOR CONCRETE SPECIFICATIONS SEE SHEET 1
FOR SECTION DETAILS SEE SHEET S-1

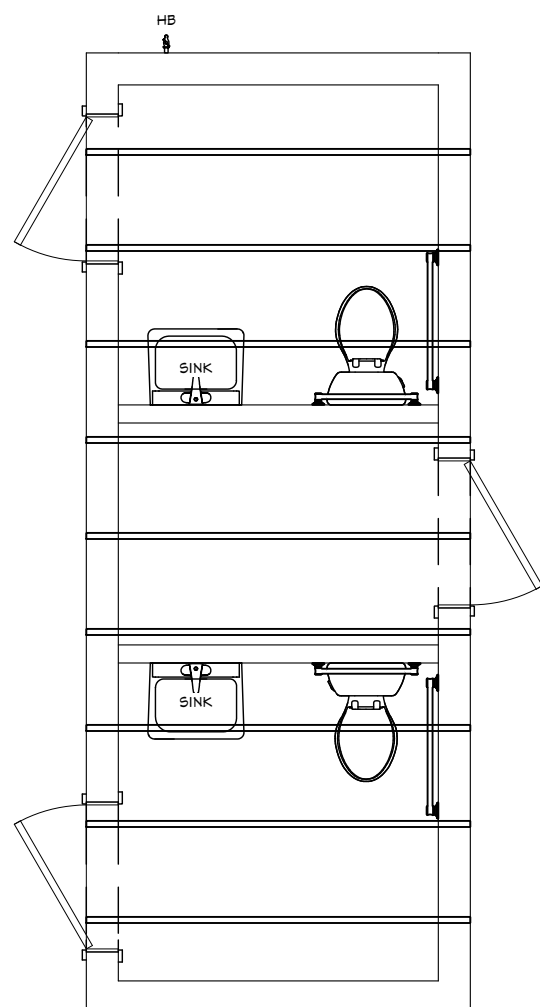
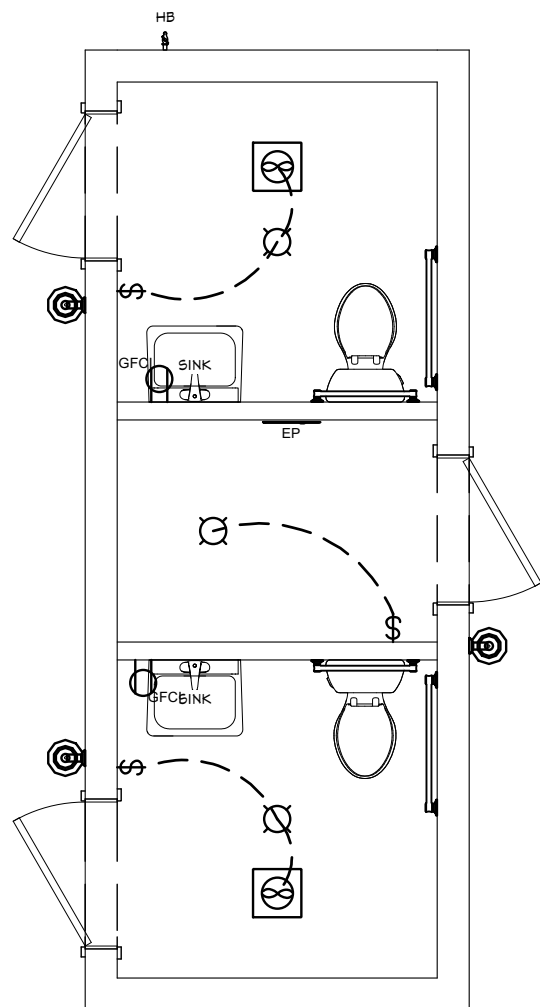


ROOF PLAN
SCALE: 1/4" = 1'

SPAN LIMITS				
RAFTERS:				
LL=20 PSF, DL= 15 PSF				
REPETITIVE MEMBER FACTOR 1.15				
LOAD DURATION FACTOR 1.25				
L/180 DEFELECTION				
SPACING	2X6	2X8	2X10	2X12
12"	14'-5"	18'-3"	21'-8"	25'-6"
16"	12'-6"	15'-10"	18'-9"	22'-1"
19.2"	11'-5"	14'-5"	17'-1"	20'-2"
24"	10'-2"	12'-11"	15'-4"	18'-0"

ELECTRICAL - DATA - AUDIO LEGEND	
SYMBOL	DESCRIPTION
	Ceiling Fan
	Ventilation Fans: Ceiling Mounted
	Ceiling Mounted Light Fixtures: Surface/Pendant, Recessed, Lou Voltage
	Wall Mounted Light Fixtures: Flush Mounted, Wall Sconce
	Fluorescent Light Fixture
	240V Receptacle
	110V Receptacles: Duplex, Weather Proof, GFCI
	Switches: Single Pole, Weather Proof, 3-Way, 4-Way
	Switches: Dimmer, Timer
	Speakers: Ceiling Mounted, Wall Mounted
	Wall Jacks: CAT5, CAT5 + TV, TV/Cable
	Telephone Jack
	Thermostat
	Door Chime, Door Bell Button
	Smoke Detector / Carbon Monoxide Combo
	Electrical Breaker Panel
	Puck Light

SUGGESTED ELECTRICAL PLAN
SCALE: 1/4" = 1'



SUGGESTED CEILING FRAMING PLAN
SCALE: 1/4" = 1'

SPAN LIMITS				
CEILING JOISTS:				
LL=20 PSF, DL= 10 PSF				
REPETITIVE MEMBER FACTOR 1.15				
LOAD DURATION FACTOR 1.0				
L/240 DEFELECTION				
SPACING	2X4	2X6	2X8	2X10
12"	9'-3"	13'-11"	17'-7"	20'-11"
16"	8'-0"	12'-0"	15'-3"	18'-1"
19.2"	7'-4"	11'-0"	13'-11"	16'-6"
24"	6'-7"	9'-10"	12'-6"	14'-9"



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GENERAL NOTES
ELEVATIONS

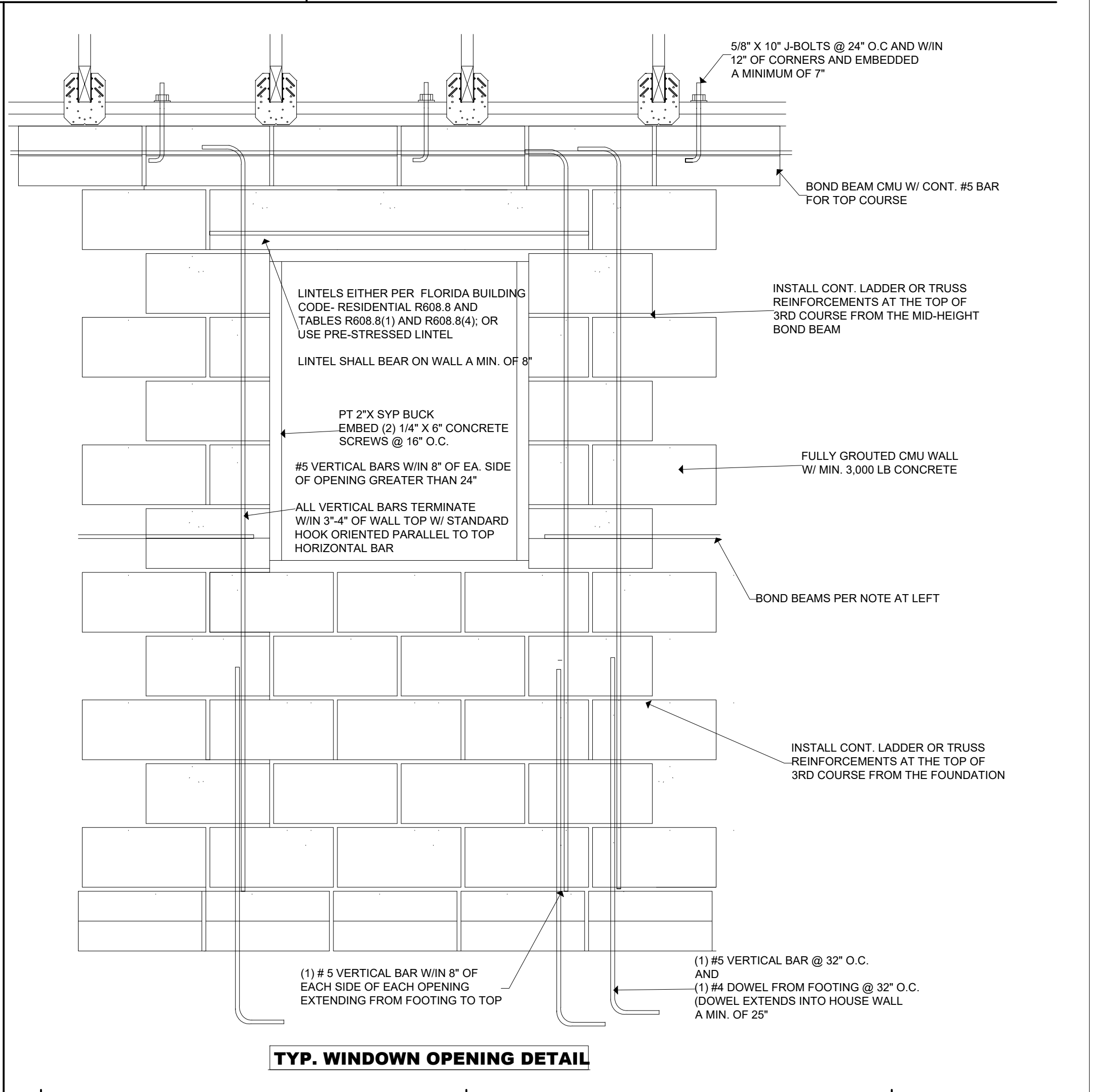
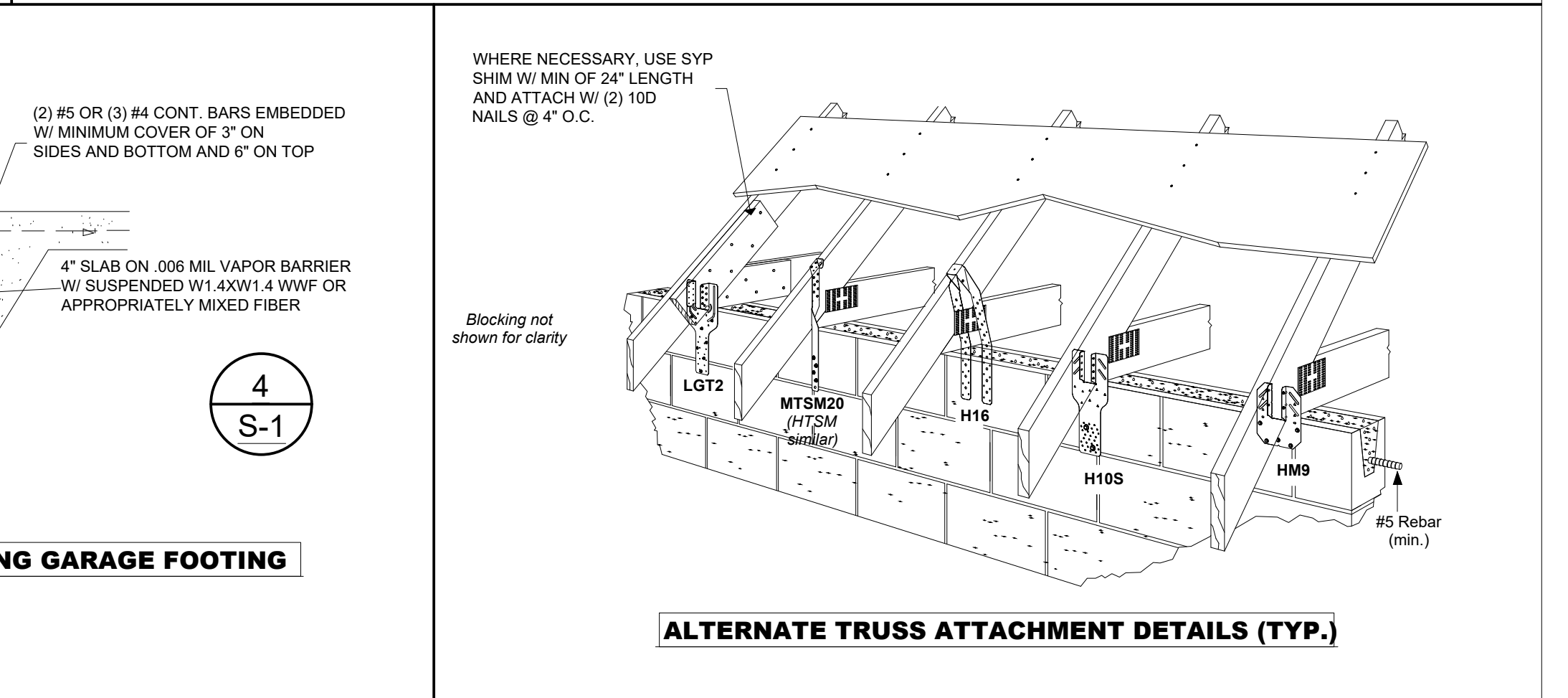
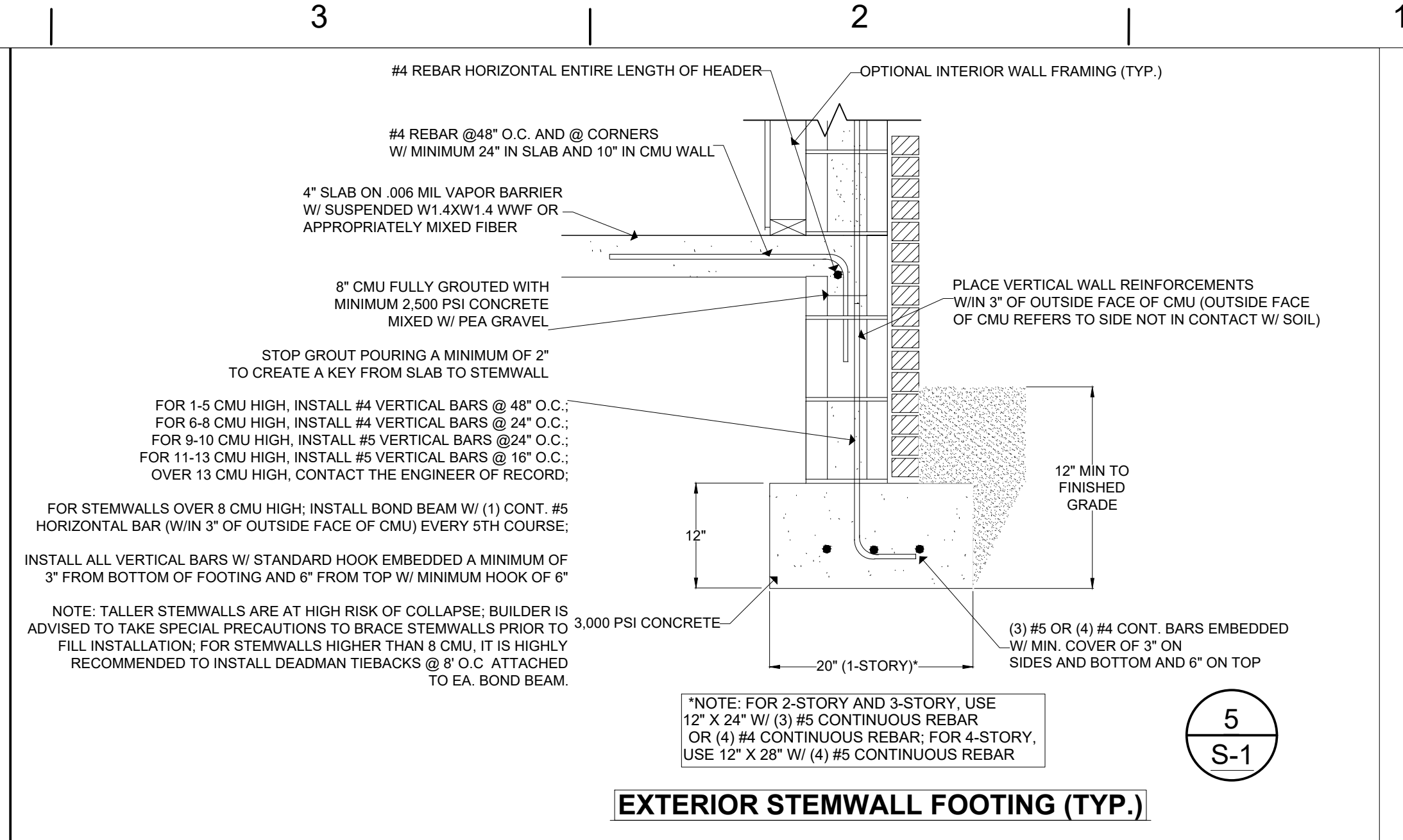
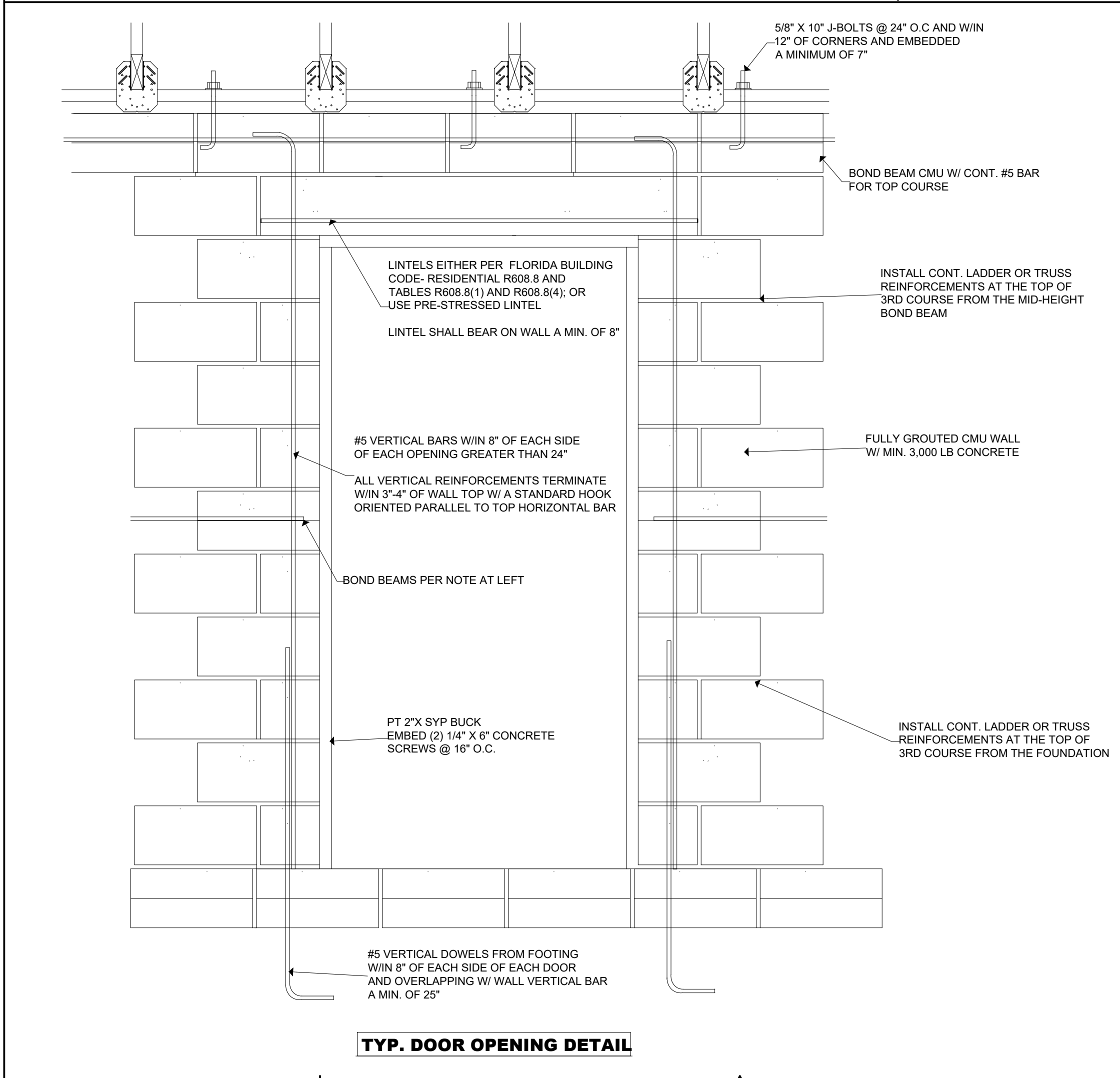
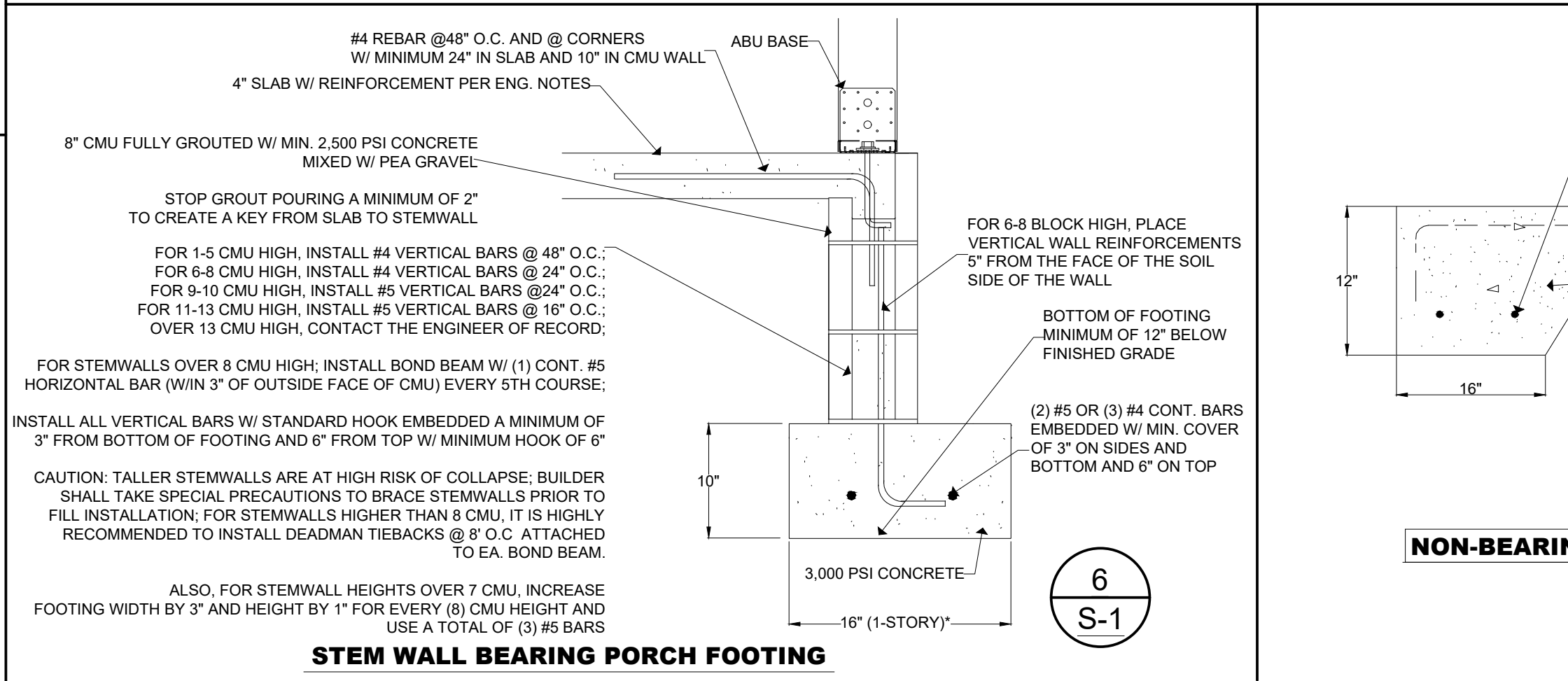
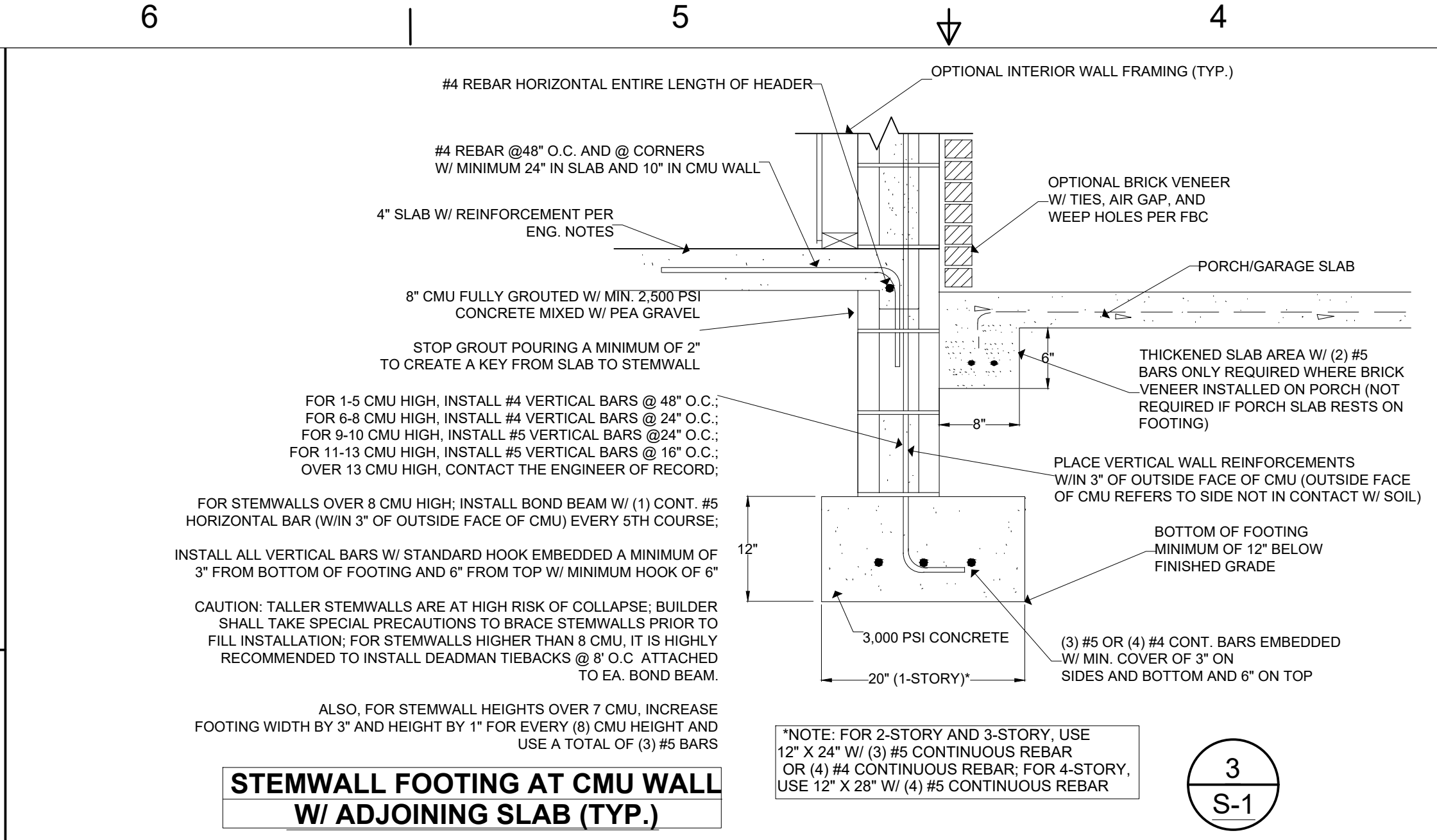
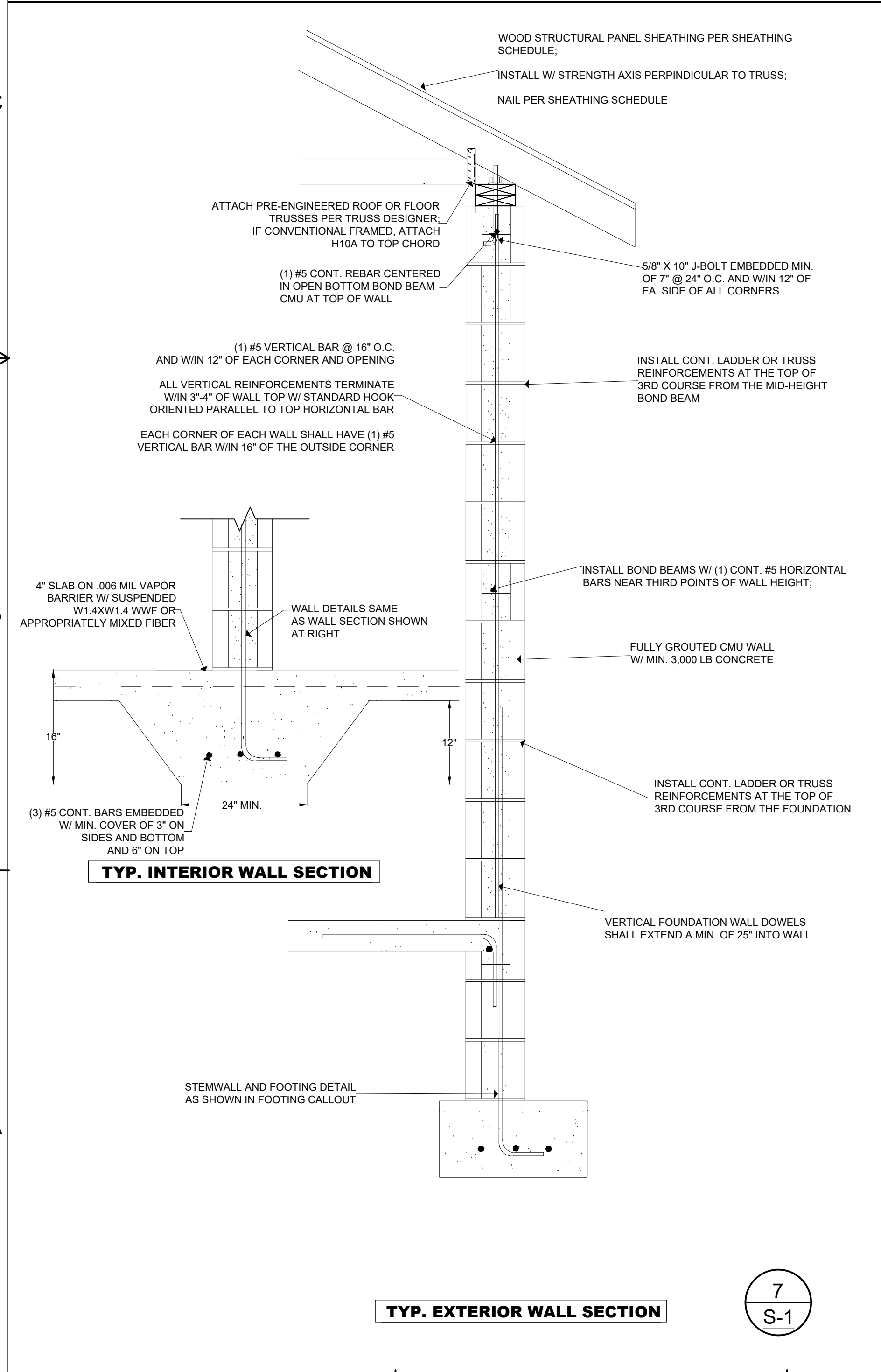
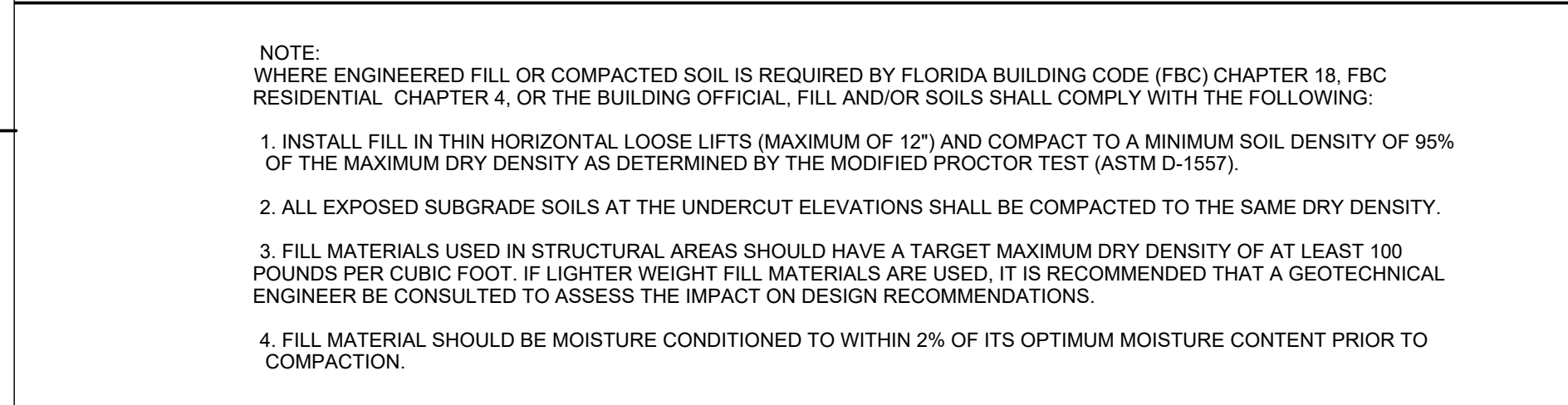
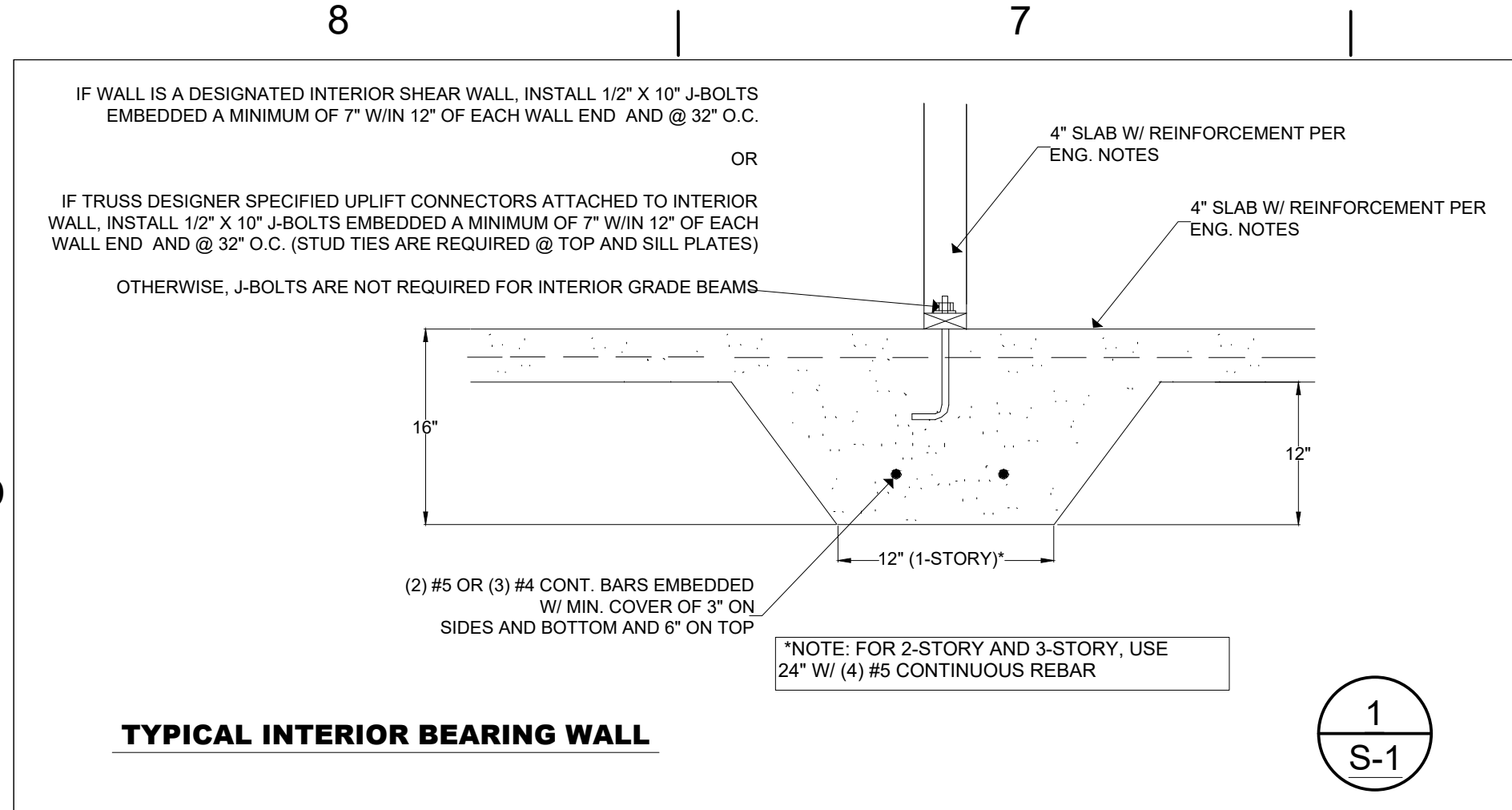
PREPARED FOR:
(3) PROJECT LOCATIONS,
CITY OF CRESTVIEW RESTROOM

Plan #

24175

Sheet #

1



BAYSIDE ENGINEERING & CONSULTING, LLC
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ENGINEER'S SPECIFICATIONS AND DETAILS

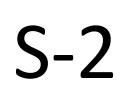
VALID ONLY WHEN DOCUMENT BEARS A VALID PE SEAL, DATE,
AND SIGNATURE CONSISTENT WITH F.A.O.R.S. BOARD OF
PROFESSIONAL ENGINEERS RULES

<u>DRAWN BY:</u> JDB
<u>DATE:</u> MAY 16, 2024
<u>SCALE:</u> NOT TO SCALE (NTS)
<u>NOTE:</u> ENGINEERING DETAILS TAKE PRECEDENCE OVER ALL OTHER.

**(3) PROJECT LOCATIONS,
CITY OF CRESTVIEW RESTROOM**

DRAWING NUMBER:

S-1



D

C

→

B

A

SECTION 1. – DESIGN CRITERIA

- A. CONSTRUCTION SHALL COMPLY WITH ALL THE FOLLOWING CODES AND GUIDANCE DOCUMENTS
- 2023 FLORIDA BUILDING CODE, RESIDENTIAL (FBC-R), 8TH EDITION
 - AWC: WOOD FRAME CONSTRUCTION MANUAL FOR ONE- AND TWO-FAMILY DWELLINGS, LATEST EDITION.
 - AWC: SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC (SDPWS), LATEST EDITION
 - AITC: TIMBER CONSTRUCTION MANUAL, LATEST EDITION
 - ACI: CODE REQUIREMENTS FOR RESIDENTIAL CONCRETE, LATEST EDITION (ACI 332)
 - ACI: BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES, LATEST EDITION (ACI 530)
 - ACI: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, LATEST EDITION (ACI 318)
 - CRSI: PLACING REINFORCING BARS, LATEST EDITION
- B. DESIGN LOADS

GENERAL		FLOOR TRUSS DESIGN LOADS		ROOF TRUSS DESIGN LOADS	
FLOOR	40 PSF	TCLL	40 PSF	TCLL	20 PSF
DECKS	40 PSF	TCOL	15 PSF	TCOL	15 PSF
BALCONIES	40 PSF	BCLL	0 PSF	BCLL	0 PSF (EXCEPTIONS AS REQUIRED PER FBC TABLE R301.5)
ROOF	20 PSF	BCOL	10 PSF	BCOL	10 PSF

NOTE: AS NOTED ON FLOOR PLANS, INTERIOR SHEAR WALLS BEARING ON FLOOR TRUSS SYSTEMS SHALL BEAR ON FULL LENGTH (3) 1-3/4"X 16" LVL'S

- C. MAIN WIND FORCE RESISTING SYSTEM (MWFRS) DESIGN ASSUMPTIONS

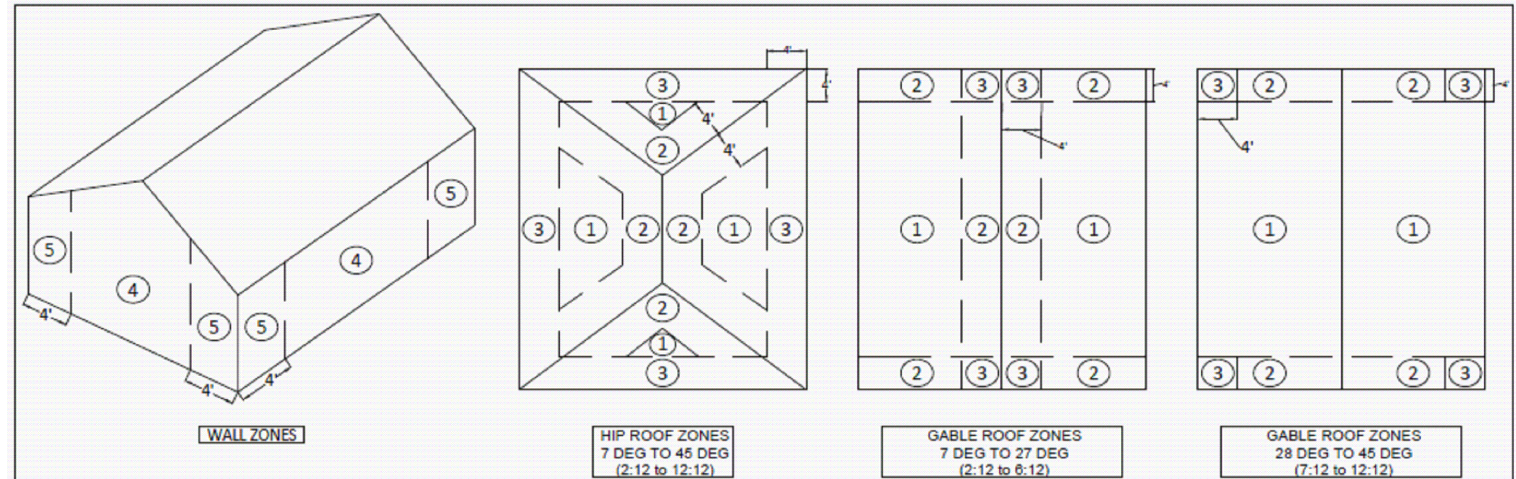
ULTIMATE DESIGN WIND SPEED, V_{ult}	150 (IF WALTON COUNTY, BY INTERPOLATION)
IMPORTANCE FACTOR	1
RISK CATEGORY	II
EXPOSURE CATEGORY	B
INTERNAL PRESSURE COEFFICIENT	-0.18 TO +0.18
BUILDING TYPE	ENCLOSED
MEAN ROOF HEIGHT	40'

- D. MAIN WIND FORCE RESISTING SYSTEM (MWFRS) DESIGN METHOD – DIRECTIONAL PROCEDURE:

ZONE	CONDITION	SIDE	PSF
WALL	WORST CASE: (GC _W), 3 rd STORY (WHERE APPLICABLE)	WINDWARD	30.05
WALL	WORST CASE: (GC _W), 2 nd STORY (WHERE APPLICABLE)	WINDWARD	27.64
WALL	WORST CASE: (GC _W), 1 st STORY	WINDWARD	25.42
ROOF	WORST CASE: NORMAL TO RIDGE	LEEWARD	-24.11
OVERHANG	WORST CASE: NORMAL TO RIDGE	LEEWARD	-41.58

- E. ALL COMPONENTS AND CLADDING SHALL COMPLY WITH THE FOLLOWING DESIGN PRESSURES CONSISTENT WITH FBC, RESIDENTIAL TABLE R301.2(2) AND FIGURE R301.2(7):

	ZONES PER FIGURE R301.2(7)	EFFECTIVE WIND AREA (SQ. FT)	LOADS (PSF)	
			(+)	(-)
GABLE ROOF > 7" TO 20" (INCL. 2:12 & 4:12)	1	ALL	17.5	-48.9
	2	ALL	17.5	-64.6
	3	ALL	17.5	-84.8
GABLE ROOF > 20" TO 27" (INCL. 5:12 & 6:12)	1	ALL	17.5	-37.7
	2	ALL	17.5	-60.2
	3	ALL	17.5	-71.3
GABLE ROOF > 27" TO 45" (INCL. 7:12 TO 12:12)	1	ALL	24.2	-44.5
	2	ALL	24.2	-48.9
	3	ALL	24.2	-60.2
HIP ROOF 7" TO 20" (INCL. 3:12 & 4:12)	1	ALL	19.7	-44.5
	2	ALL	19.7	-57.9
	3	ALL	19.7	-62.3
HIP ROOF > 20" TO 27" (INCL. 5:12 & 6:12)	1	ALL	19.7	-35.4
	2	ALL	19.7	-48.9
	3	ALL	19.7	-48.9
HIP ROOF > 27" TO 45" (INCL. 7:12 TO 12:12)	1	ALL	19.7	-37.7
	2	ALL	19.7	-44.5
	3	ALL	19.7	-57.9
	4	10	26.5	-28.7
	4	20	25.3	-27.5
	4	50	23.7	-25.9
	4	100	22.6	-24.7
	5	10	26.5	-35.4
	5	20	25.3	-33.0
WALLS	5	50	23.7	-29.9
	5	100	22.6	-27.5



- F. PRESUMPTIVE LOAD-BEARING CAPACITY OF SOIL. (DEVIATIONS REQUIRE ENGINEER APPROVAL).

- PURSUANT TO FBC R401.4.1, SOIL LOAD BEARING CAPACITY IS ASSUMED TO BE 2,000 PSF. FBC TABLE R401.4.1 ASSOCIATES 2,000 PSF SOIL BEARING CAPACITY WITH CLASS OF MATERIALS, "SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL AND CLAYEY GRAVEL".
- THE ENGINEER OF RECORD HAS NOT SUBSTANTIATED THE SOIL BEARING CAPACITY.
 - IF THE BUILDER OR OWNER BELIEVES THE CLASS OF MATERIALS IS DIFFERENT THAN LISTED ABOVE, HAS CONCERNS, OR WISHES TO SUBSTANTIATE PRESUMPTIVE SOIL LOAD-BEARING VALUES, A GEOTECHNICAL INVESTIGATION BY A REGISTERED DESIGN PROFESSIONAL PURSUANT TO FBC IS HIGHLY RECOMMENDED.

SECTION 2. – GENERAL CONSTRUCTION

- A. ENGINEERING DRAWINGS SHOWN ARE TYPICAL AND NOT TO SCALE (NTS).
- B. EVERY EFFORT HAS BEEN MADE TO AVOID ERRORS; IF A DISCREPANCY EXISTS, THE MORE RESTRICTIVE AND CONSERVATIVE INTERPRETATION CONTROLS THAT SPECIFICATION OR DETAIL UNLESS AND UNTIL THE ENGINEER OF RECORD PROVIDES WRITTEN CLARIFICATION STATING OTHERWISE.
- C. ALTHOUGH, A SURVEY AND/OR SITE PLAN MAY BE INCLUDED IN THE ENGINEERED SET FOR REFERENCE, THE ENGINEER HAS NOT REVIEWED EITHER AND MAKES ABSOLUTELY NO CLAIM WHATSOEVER AS TO IT/THEIR ACCURACY OR CORRECTNESS.

- D. GENERALLY, IF A DISCREPANCY EXISTS BETWEEN PLANS AND ENGINEERING DETAILS OR NOTES, ENGINEERING DETAILS AND NOTES TAKE PRECEDENCE; HOWEVER, UNTIL THE ENGINEER PROVIDES CLARIFICATION, THE MORE CONSERVATIVE INTERPRETATION CONTROLS.
- E. UNBALANCED STEM WALLS SHALL BE ADEQUATELY BRACED BEFORE INSTALLING FILL DIRT TO PREVENT DAMAGE DURING INSTALLATION. STEM WALL INTEGRITY RELIES ON LATERAL SUPPORT FROM SLAB AND IS VULNERABLE UNTIL CONNECTED TO SLAB.
- F. ALL CONNECTORS, FASTENERS, AND HARDWARE SHALL BEAR THE APPROPRIATE CORROSION RESISTANT RATING FOR GIVEN ENVIRONMENTAL CONDITIONS INCLUDING BUT NOT LIMITED TO HARDWARE USED IN DIRECT CONTACT WITH PRESSURE TREATED LUMBER CONTAINING COPPER SUCH AS ACQ, CCA, AND OTHERS.
- G. ALL COMPONENTS AND CLADDING AND ALL HARDWARE (HURRICANE STRAPS, ETC.) SHALL BE CONNECTED PER MANUFACTURER INSTRUCTIONS WITH CORRECT FASTENERS, FASTENER QUANTITIES, AND ATTACHMENT DETAILS SUCH AS CORRECT ANGLES.
 - WHERE MANUFACTURER INSTRUCTIONS ALLOW BOTH MINIMUM AND MAXIMUM QUANTITIES OF FASTENERS CORRESPONDING TO DIFFERENT UPLIFT VALUES, THE QUANTITY CORRESPONDING TO MAXIMUM UPLIFT VALUE SHALL BE USED.
 - MANUFACTURER INSTRUCTIONS ARE AVAILABLE HERE: [HTTPS://FLORIDABUILDING.ORG/PR/PR_APP_SRCH.ASPX](https://floridabuilding.org/pr/pr_app_srch.asp)
- H. ALTERNATE CONNECTORS MAY BE SUBSTITUTED FOR SIMPSON STRONGTIE IF THEIR LOAD CAPACITIES MEET OR EXCEED THOSE SPECIFIED. ALL CONNECTORS SHALL BE INSTALLED PURSUANT TO MANUFACTURER'S REQUIREMENTS FOR MAXIMUM CAPACITY.
- I. ALL HARDWARE SUCH AS THREADED RODS, NUTS, WASHERS, AND COUPLERS SHALL BE MINIMUM ASTM A36, A307 GRADE C MATERIAL PRODUCED FROM 1006-1010 STEEL AND ZINC OR GALVANIZED COATED IAW B633 OR ASTM A153 CLASS C RESPECTIVELY.
- J. EACH BEAM AND GIRDER SHALL BE INSTALLED WITH FULL END BEARING SURFACE RECOMMENDED BY THE MANUFACTURER OR THE SOUTHERN FOREST PRODUCTS ASSOCIATION (SEE [HTTPS://WWW.SOUTHERNPINE.COM/SPAN-TABLES](https://www.southernpine.com/span-tables)) FOR GIVEN SPAN WITH A DIRECT GRAVITY LOAD PATH FULLY BLOCKED ACROSS EACH FLOOR TRUSS/JOIST SPACE, TO THE FOUNDATION.
- K. EXTERIOR GLAZED OPENINGS LOCATED IN WIND-BORNE DEBRIS REGIONS SHALL HAVE PROTECTION PURSUANT TO FBC R301.2.1.2.

SECTION 3. – TIMBER SPECIFICATIONS

- A. STRUCTURAL TIMBER INCLUDING ALL ROOF MEMBERS SHALL BE VISUALLY GRADED #2 SOUTHERN YELLOW PINE (SYP) WITH MAX MOISTURE CONTENT 19% OR WHERE ALLOWED FOR WALL STUDS LODGE POLE (LP) WITH ALLOWABLE STRESSES AS FOLLOWS:

					NON-REPETITIVE MEMBERS DESIGN VALUES (PSI)		REPETITIVE MEMBERS DESIGN VALUES (PSI) (JOISTS, RAFTERS, STUDS, ETC.)	
	NOMINAL DIMENSION (INCHES)	SPECIFIC GRAVITY (G)	MODULUS OF ELASTICITY (E)	COMPRESSION PERPENDICULAR TO GRAIN (F _⊥)	COMPRESSION PARALLEL TO GRAIN (F)	NORMAL DURATION (C _r = 1.0)	REPETITIVE MEMBER NORMAL DURATION (BENDING F _c) (C _r = 1.15)	REPETITIVE MEMBER 7-DAY (CONSTRUCTION) LOADING DURATION (BENDING F _c) (C _r = 1.15 AND C _r = 1.25)
#2 SYP	2 X 4	0.55	1,400,000	565	1,450	1,100	1,265	1,580
	2 X 6				1,400	1,000	1,150	1,440
	2 X 8				1,350	925	1,065	1,330
	2 X 10				1,300	800	920	1,150
	2 X 12				1,250	750	865	1,080
LODGE POLE (LP)	ALL 2X	0.42	1,100,000	335	1,000	775	NOT ALLOWED FOR ROOFING MEMBERS	

- B. BENDING DESIGN VALUES SHALL BE ADJUSTED BY A FACTOR OF 0.85 WHEN TIMBER MOISTURE CONTENT CAN EXCEED 19%.
- C. STRUCTURAL LAMINATED TIMBER AND BEAMS SHALL COMPLY WITH THE FOLLOWING CRITERIA AND MINIMUM ALLOWABLE STRESSES:

DESIGN PROPERTY	GLUE LAMINATED TIMBER	LAMINATED VENEER LUMBER (LVL)
ADDITIONAL	VISUALLY GRADED SYP	N/A
BENDING STRESS	2,400 PSI	3,100 PSI
MODULUS OF ELASTICITY	1,800,000 PSI	2,100,000 PSI
HORIZONTAL SHEAR STRESS (F _v)	300 PSI	285 PSI

SECTION 4. – CONCRETE AND MASONRY REINFORCING STEEL

- A. FOOTING AND SLAB REINFORCING STEEL SHALL BE GRADE 60; ALL FOOTING STEEL SHALL BE CONTINUOUS WITH CORNER BARS AT ALL CORNERS AND END WALL INTERSECTIONS.
- B. ALL SPLICES SHALL BE CONTACT LAP SPLICES, STAGGERED A MINIMUM OF 0.3 TIMES THE LAP SPlice LENGTH, SHALL NOT BE SPLICED AT POINTS OF INFLECTION, AND MINIMUM LAPS SPlice LENGTHS SHALL BE AS FOLLOWS:
- | | TENSION LAP SPlice LENGTH | TENSION DEVELOPMENT LENGTH | TENSION DEVELOPMENT LENGTH FOR STANDARD HOOK W/ AT LEAST 2-1/2" OF SIDE COVER PERPENDICULAR TO PLANE OF HOOK |
|--------|---------------------------|----------------------------|--|
| #4 BAR | 30" | 23" | 9" |
| #5 BAR | 38" | 28" | 11" |
- C. DOWEL HOOKS SHALL HAVE A MINIMUM HOOK LENGTH OF 6" AND BE EMBEDDED IN THE FOOTING A MINIMUM OF 3" ON THE BOTTOM AND SIDES AND 6" ON THE TOP.
- D. VERTICAL FOOTING DOWELS SHALL LAP VERTICAL WALL REINFORCEMENTS A MINIMUM OF 25".

SECTION 5. – CONCRETE – FOOTINGS AND SLAB

- A. FOOTINGS SHALL BEAR ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL (SEE FBC 1804.6).
- B. EXTERIOR FOOTINGS SHALL BE NOT LESS THAN 12" BELOW FINISHED GRADE; EXTERIOR WALLS SHALL BEAR ON CONTINUOUS FOOTINGS.
- C. ALL HORIZONTAL FOOTING BARS SHALL BE CONTINUOUS AND BE SUSPENDED WITH A MINIMUM OF COVER OF 3".
- D. CONCRETE FOR FOOTINGS AND SLABS SHALL BE HAVE MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
- E. EARTH SUPPORT SLAB SHALL BE A MINIMUM OF 4" THICK AND REINFORCED BY EITHER METHOD BELOW:
 - WWF 6 X 6 W1.4 X W1.4 SUSPENDED IN THE MIDDLE 1/3 OF THE SLAB; WWF SHALL CONFORM TO ASTM A1064/A1064 M AND BE SUPPORTED WITH APPROVED MATERIALS OR SUPPORTS AT A SPACING OF 3' OR LESS.
 - SYNTHETIC REINFORCING FIBERS COMPLIANT WITH ASTM C1116, 1/2" TO 2.25" IN LENGTH, AND MIXED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS BUT AT LEAST 1.0 POUND PER CUBIC YARD.
- F. UNLESS OTHERWISE REQUIRED BY HARDWARE ATTACHMENT DETAILS, ALL J-BOLTS SHALL BE A MINIMUM OF 5/8" X 10"; EMBEDDED A MINIMUM OF 7"; AND SPACED A MAXIMUM OF 24" O.C. IN EXTERIOR WALLS; ONE ANCHOR BOLT SHALL BE LOCATED WITHIN 6" TO 12" OF EACH END OF EACH SILL PLATE BOARD.
- IF A J-BOLT IS NOT INSTALLED IN THE CONCRETE AT A REQUIRED LOCATION, A 5/8" STRONG-BOLT* 2 OR TITEN HD* EMBEDDED A MINIMUM OF 5-1/2" MAY BE SUBSTITUTED. HOLES SHALL BE DRILLED WITH CORRECTLY SIZED BITS AND ANCHORS TORQUED PER MANUFACTURER'S INSTRUCTIONS.

SECTION 6. – MASONRY

- A. CMU'S SHALL CONFORM TO ASTM C-90; HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI ON THE NET AREA; AND BE LAID IN A RUNNING BOND.
- B. MORTAR FOR CMU STRUCTURES SHALL CONFORM AT A MINIMUM TO ASTM C-270, TYPE M OR TYPE S.
- C. STEM WALL CMU CELLS SHALL BE FULLY GROUTED TO A MAXIMUM HEIGHT OF 2" BELOW THE TOP CELL OPENING TO CREATE A KEY. GROUT SHALL CONFORM TO ASTM C-476 AND HAVE A MINIMUM STRENGTH OF 3,000 PSI AT 28 DAYS. CELLS SHALL BE FILLED AT A MAXIMUM LIFT HEIGHT OF 4' AND MECHANICALLY VIBRATED TO PREVENT VOIDS.
- D. CMU STEM WALLS (5) BLOCKS HIGH OR LESS SHALL HAVE #4 VERTICAL DOWELS AT 48" O.C. WITH A STANDARD HOOK SUSPENDED A MINIMUM OF 3" IN FOOTINGS.
 - STEM WALLS (6)-(8) BLOCKS HIGH SHALL HAVE #4 VERTICAL DOWELS AT 24" O.C.
- E. CMU STEM WALLS SHALL HAVE A CONTINUOUS #4 HORIZONTAL BAR IN THE HEADER BLOCK.
- F. CMU WALLS:
 - ALL CMU SHALL BE LAID IN A RUNNING BOND.
 - VERTICAL REINFORCEMENTS:
 - ALL VERTICAL WALL REINFORCEMENTS SHALL BE CENTERED IN THE WALL CAVITY AND BE CONTINUOUS FROM THE BOTTOM OF THE WALL AND TERMINATE WITHIN 3'-4" OF WALL TOP WITH A STANDARD HOOK ORIENTED PARALLEL TO THE TOP HORIZONTAL BAR.
 - ALL WALLS SHALL HAVE (1) #5 VERTICAL BAR AT 32" O.C.
 - EACH CORNER OF EACH WALL SHALL HAVE (1) #5 VERTICAL BAR WITHIN 16" OF THE OUTSIDE CORNER.

- HORIZONTAL REINFORCEMENTS:
 - ALL CMU WALLS SHALL HAVE BOND BEAMS WITH (1) CONTINUOUS #5 HORIZONTAL BARS EACH.
 - ADDITIONALLY, ALL WALLS SHALL HAVE CONTINUOUS LADDER OR TRUSS REINFORCEMENTS AT THE TOP OF THE 3RD COURSE AND AT THE TOP OF THE 9TH COURSE.
- OPENINGS:
 - ALL WINDOWS AND DOORS SHALL HAVE (1) #5 VERTICAL BAR WITHIN 8" OF EACH SIDE OF ALL OPENINGS.
 - LINTELS SHALL CONFORM TO FBC R608.8.

SECTION 7. – FRAMING

- A. ALL WALL FRAMING SHALL AT A MINIMUM BE (IF REQUIRED HEIGHT NOT LISTED, CONTACT ENGINEER OF RECORD):

EXTERIOR, LOADBEARING, AND SHEAR WALL					INTERIOR NON-BEARING			
WALL HEIGHT	PLATES	STUD (#2 GRADE)			STUD (#2 GRADE)			
		SIZE	MAX. SPACING	SIZE	MAX. SPACING			
8' – 9'	SYP	SYP, LP	2X4	16" O.C.	SYP, LP	2X4	16" O.C.	
10'	SYP	SYP, LP	2X4 (SUPPORTS ROOF ONLY) 2X6 (MULTI-LEVEL)	16" O.C.	SYP, LP	2X4	16" O.C.	
11'	SYP	SYP	2X6	16" O.C.	SYP, LP	2X4	16" O.C.	
12'	SYP	SYP	2X6	SYP: 16" O.C. LP: 12" O.C.	SYP, LP	2X4	16" O.C.	

- B. STUDS IN EXTERIOR AND SHEAR WALLS SHALL BE FACE NAILED THROUGH SILL AND TOP PLATES.
- C. DOUBLE TOP PLATE SHALL BE CONTINUOUS AND CONSIST OF (2) 2X SYP NAILED TOGETHER WITH (2) 12D COMMON NAILS AT 12" O.C. AND SHALL OVERLAP AT CORNERS AND WALL INTERSECTIONS.
- D. WOOD-TO-WOOD FRAMED CONNECTIONS SHALL BE MADE WITH ADEQUATE BOLTS OR JOIST HANGERS. HANGER HEIGHT SHALL EQUAL 62% OF JOIST HEIGHT.
- E. THE MINIMUM NUMBER OF OPENING KING AND JACK STUDS SHALL COMPLY WITH THIS TABLE: **OR** THE MINIMUM NUMBER OF KING STUDS AT EACH END OF EXTERIOR AND LOADBEARING WALLS SHALL BE NOT LESS THAN 1/2 THE TOTAL NUMBER OF STUDS DISPLACED, AND THE MINIMUM NUMBER OF JACK STUDS SHALL BE EQUAL TO THE BEAM MANUFACTURER'S LISTED MINIMUM END BEARING DISTANCE FOR THE GIVEN SPAN AND PLY DIVIDED BY 1.5":

HEADER SPAN	SUPPORTS ROOF ONLY		SUPPORTS FLOOR AND ROOF	
	FULL HEIGHT KING STUDS	HEADER SUPPORT JACK STUDS	FULL HEIGHT KING STUDS	HEADER SUPPORT JACK STUDS
< 4'-0"	1	1	1	2
4'-1" TO 6'-0"	2	2	2	2
6'-1" TO 10'-0"	3	2	3	3
10'-1" TO 14'-0"	3	2	4	4
14'-1" TO 18'-0"	3	3	4	4

- F. FLOOR JOISTS SHALL CONSIST OF SYP VISUALLY GRADED #2 BY QUALIFIED VISUAL GRADERS SIZED AS FOLLOWS:

FLOOR JOISTS: LL = 40 PSF, DL = 20 PSF, REPETITIVE MEMBER FACTOR 1.15, LOAD DURATION FACTOR 1.0, L/360 LL DEFLECTION, (WHERE JOISTS BEAR A PARALLEL WALL, INSTALL DOUBLE JOISTS), SPAN LIMITS IN FEET-INCHES				
SPACING	2 × 6	2 × 8	2 × 10	2 × 12
12"	9-10	12-6	14-9	17-5
16"	8-6	10-10	12-10	15-1
19.2"	7-9	9-10	11-8	13-9
24"	6-11	8-10	10-5	12-4

- G. SHEATHING
- ALL WALL SHEATHING PANELS SHALL BE INSTALLED WITH ALL JOINTS OCCURRING OVER SINGLE 2"X FRAMING MEMBERS.
 - WALL SHEATHING SHALL EXTEND FROM THE BOTTOM OF THE BOTTOM PLATE TO THE TOP OF THE TOP PLATE.
 - ALL WOOD STRUCTURAL PANELS SHALL BE RATED STRUCTURAL, BEAR THE APPROPRIATE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION (APA), AND CONFORM TO THE REQUIREMENTS FOR ITS TYPE IN DOC PS 1 OR PS 2, WITH THE FOLLOWING MINIMUMS:

WHERE	THICKNESS, (IN.) (PANEL SPAN RATING)		FASTENERS (IN.)	FASTENER SPACING (IN.)
FLOORS	23/32 (48/24)		FULL HEAD, 10D RING-SHANK OR SCREWS	6 O.C. EDGES; 6 O.C. FIELD
WALLS	7/16 (24/16)		FULL HEAD, 8D COMMON	4 O.C. EDGES* (NAIL BOTH TOP PLATES); 6 O.C. FIELD
PORCH CEILINGS	7/16 (24/16)		FULL HEAD, 8D COMMON	6 O.C. EDGES; 6 O.C. FIELD
ROOF	$V_{ult} \leq 149$ MPH, EXPOSURE B ONLY	7/16 (24/16)	FULL HEAD, 2-3/8 X 0.113 RING-SHANK	6 O.C. EDGES; 6 O.C. FIELD
	150 MPH $\leq V_{ult} \leq 159$ MPH, EXPOSURE B ONLY	15/32 (32/16)		
	$V_{ult} \geq 160$ MPH OR EXPOSURES C OR D	19/32 (40/20)		

* IF FULL HEIGHT SHEATHING ALLOWED AND USED IN LIEU OF STUD TIES (SEE WALL UPLIFT SECTION), NAIL BOTTOM PLATE WITH (2) ROWS STAGGERED AT 4" O.C., 1/2" APART AND 1/2" FROM PLATE EDGES.

- SHEATHING NAILS SHALL NOT BE OVER-DRIVEN.
- NAILS IN A SINGLE ROW SHALL NOT BE SPACED CLOSER THAN 3" ON CENTER.
- ROOF SHEATHING SHALL BE INSTALLED WITH STRENGTH AXIS PERPENDICULAR TO RAFTERS.

SECTION 8. – PRE-ENGINEERED TRUSSES AND GENERAL WIND LOAD CONNECTIONS

- A. ALL TRUSS LOADS SHALL BEAR ON FOOTINGS, PILES, OR PIERS VIA WALLS, COLUMNS, OR OTHER STRUCTURAL MEMBERS.
 - INTERIOR FOOTINGS SHOWN ON DRAWINGS INDICATE EXPECTED LOAD BEARING AREAS.
 - BUILDER SHALL VERIFY WITH THE TRUSS DESIGNER ALL INTERIOR TRUSS LOAD-BEARING POINTS AND ADD INTERIOR BEARING FOOTINGS PER SHEET S-1 TO ACCOMMODATE ALL TRUSS BEARING POINTS.
- B. PRE-ENGINEERED WOOD TRUSSES SHALL BE DESIGNED TO MEET APPLICABLE STRUCTURAL DESIGN CRITERIA, INCLUDING THE WIND AND GRAVITY LOAD CRITERIA SPECIFIED ON THIS SHEET; TRUSS DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.
- C. UNLESS THIS PLAN INCLUDES A FLOOR FRAMING PLAN (IF APPLICABLE), CEILING JOIST LAYOUT, AND FOUNDATION PLAN W/ GRADE BEAMS FOR CEILING JOIST BEARING POINTS, THIS PLAN IS ONLY VALID FOR CONSTRUCTION W/ PRE-ENGINEERED TRUSSES.

SECTION 9. – ROOF CONNECTIONS NOT STIPULATED BY PE TRUSS DESIGNER

- A. IF ANY RAFTER OR TRUSS TOP CHORD CONDITION IS NOT COVERED ELSEWHERE, THAT RAFTER OR TRUSS TOP CHORD SHALL BE ATTACHED AT EACH BEARING POINT WITH H10A, H10A-2, OR MTS12/16 HURRICANE TIES.
- B. RAFTERS BEARING ON STRUCTURAL MEMBERS SUCH AS BEAMS OR DOUBLE TOP PLATES SHALL BE CONNECTED TO SAID MEMBER(S) WITH H10A, H10A-2, OR MTS12/16 (FOR DOUBLE TOP PLATES, WRAP TAILS OVER RAFTER TOP AND UNDER LOWER TOP PLATE).
- C. RAFTERS BEARING ON MEMBERS SUCH AS A LEDGER BOARDS, SHALL BE CONNECTED WITH H2.5A OR MTS12/16.
- D. RAFTERS BEARING ON CORNERS SHALL BE CONNECTED WITH HCP PLATES OR MTS TWIST STRAPS WRAPPED OVER THE RAFTER.
- E. RAFTERS SHALL BEAR DIRECTLY ON BEAMS, GIRDERS, LEDGERS, OR LOADBEARING WALLS OR BE SUPPORTED BY HANGERS.
- F. RIDGE BOARD (NON-STRUCTURAL) AND RIDGE BEAM (STRUCTURAL) CONNECTIONS (REFER TO WFCM SECTION 2.5.1.4):
 - RIERGE BOARDS SHALL BE AT LEAST 2" X 6" AND NOT LESS IN DEPTH THAN RAFTER CUT ENDS.
 - OPPOSING RAFTERS SHALL BE CONNECTED ACROSS RIDGE BOARDS WITH EITHER:
 - LSTA21 TIES PASSING OVER THE RIDGE BOARD OR BEAM; **OR**
 - COLLAR TIES LOCATED IN THE UPPER THIRD OF TRUSS AND AT LEAST 1" X 6" SYP ATTACHED WITH (5) 10D NAILS AT EACH END **OR** 2"X LUMBER ATTACHED WITH (5) 16D NAILS AT EACH END.
 - IF STRUCTURAL RIDGE BEAMS ARE TO BE USED, CONTACT THE ENGINEER OF RECORD FOR RIDGE BEAM SIZING; RAFTERS SHALL BEAR DIRECTLY ON RIDGE BEAMS OR BE ATTACHED WITH CORRECTLY SIZED LRU HANGERS.

- G. RAFTERS AND CEILING JOISTS SHALL CONSIST OF #2 SYP GRADED BY QUALIFIED VISUAL GRADERS; RAFTERS AND ROOF LOADS SHALL BEAR ON AND BE BRACED WITHIN 12" OF LOAD-BEARING WALLS OR OTHER STRUCTURAL MEMBERS; CEILING JOISTS ARE NOT CONSIDERED STRUCTURAL MEMBERS AND NOT INTENDED TO SUPPORT RAFTER OR ROOF LOADS; AND SPANS SHALL BE AS FOLLOWS:

SPACING	SPAN LIMITS IN FEET-INCHES				CEILING JOISTS:			
	2 × 6	2 × 8	2 × 10	2 × 12	2 × 4	2 × 6	2 × 8	2 × 10
12"	14-5	18-3	21-8	25-6	9-3	13-11	17-7	20-11
16"	12-6	15-10	18-9	22-1	8-0	12-0	15-3	18-1
19.2"	11-5	14-5	17-1	20-2	7-4	11-0	13-11	16-6
24"	10-2	12-11	15-4	18-0	6-7	9-10	12-6	14-9

- H. GABLE END CONNECTIONS:

- ROOF LEVEL: THE FIRST (2) TRUSS OR RAFTER SPACES FROM ENDWALL SHALL HAVE 2"X BLOCKING AT ALL SHEATHING JOINTS.
 - CEILING LEVEL: GABLE ENDWALLS SHALL HAVE CONTINUOUS LATERAL 2"X4" BRACING AT 6' O.C. W/ LSTA24 WRAPPED OVER OUTSIDE WALL.
 - ALL GABLE OUTLOOKERS SHALL REST ON DROPPED RAFTERS OR TOP PLATES AND BE BLOCKED WITH FULL-WIDTH 2"X BLOCKING.
 - ALL OUTLOOKERS SHALL EXTEND TO INTERIOR RAFTERS AND BE ANCHORED TO THE TOP CHORD OF DROPPED TRUSSES OR TOP PLATES OF THE GABLE ENDWALL WITH H10A OR (2) H2.5A TIES.
- I. HIP CONNECTIONS:



