FLORIDA POWERBOX8 SPECIFICATION NOTES (3000 PSI)

1) PRODUCT NAME (PATENT NO. 6367209):

PREFORMED POWERS STEEL LINTEL SHALL BE GALVANIZED COIL STEEL AS MANUFACTURED BY POWERS STEEL AND WIRE PRODUCTS, INC. STEEL GRADE SHALL BE ASTM A570 GRADE C (FY= 40 ksi).

NOTE: DEFORMATIONS DO NOT EFFECT STRUCTURAL CAPACITY. FOR SPANS LESS THAN 16'-0" BOX LINTELS TO BE 20 GA. FOR SPANS GREATER THAN OR EQUAL TO 16'-0" BOX LINTELS TO BE 16 GA.

2) SHORE LINTELS AS REQUIRED TO COMPENSATE FOR DEAD LOAD DEFLECTION ON NON-CURED MASONRY GROUT. ALL LINTELS GREATER THAN 18'-0" ARE BUILT WITH 1/2" CAMBER.

3) LINTEL TO BE USED WITH BRICK OR CONCRETE MASONRY UNITS HAVING MINIMUM f'm AS SHOWN.

4) STEEL SURFACES IN CONTACT WITH GROUT AND/OR MORTAR SHALL BE UNPAINTED AND FREE OF MATERIAL THAT MIGHT INHIBIT BOND.

5) DESIGN BEARING OF POWERS STEEL LINTELS IS 8" FOR ALL LINTELS GREATER THAN 18'-0" IN SPAN OR GREATER THAN 32" IN DEPTH. ALL OTHER LINTELS REQUIRE A MINIMUM OF 4" BEARING PER THE STANDARD AND FLORIDA BUILDING CODES.

6) f'm = 1500 psi. MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N.

7) GROUT = 3,000 psi. SLUMP RANGE: 8" TO 11". ROD OR VIBRATE GROUT ADEQUATELY TO ENSURE CONSOLIDATION OF GROUT (NO AIR POCKETS). GROUT SHALL COMPLY WITH ASTM C476-83 AND BE EITHER COARSE OR FINE GROUT.

8) MORTAR: TYPE "S" OR TYPE "M" 1800 psi.

9) TOP REINFORCING OR TOP OF WALL REINFORCING, IS REQUIRED BY CODES TO PROVIDE A CONTINUOUS TIE AROUND A STRUCTURE AND TO PROVIDE FOR UPLIFT RESISTANCE AT LINTELS.

10) ATTACHMENTS TO TOP OF WALL PER ARCHITECTURAL AND/OR ENGINEERING DRAWINGS.

11) LIMITATIONS:

THE LINTELS SHALL NOT EXCEED THE ALLOWABLE DESIGN LOADS AND SPANS SHOWN IN THIS REPORT.

THE LINTELS SHALL NOT BE USED IN A FIRE RESISTANCE RATED ASSEMBLY UNLESS A TEST REPORT DOCUMENTING FIRE RESISTANCE IS SUBMITTED TO THE BUILDING OFFICIAL.

A PROPER BARRIER IS REQUIRED WHEN USING CORROSIVE LUMBER PRODUCTS IN CONTACT WITH THE STEEL LINTELS. A PROPER BARRIER WOULD BE A POLYETHYLENE BARRIER WITH A 10 MIL THICKNESS OR TO MAINTAIN A MIN. 1/4" SPACING BETWEEN THE CORROSIVE LUMBER AND STEEL LINTEL.

12) DEFLECTION LIMITS ARE SET TO L/600 FOR ALL LOADS SHOWN ABOVE THE DARKENED SOLID LINE. DEFLECTION LIMITS ARE SET TO L/360 [LIVE LOAD] AND L/240 [DEAD + LIVE LOAD] FOR ALL LOADS SHOWN BELOW DARKENED SOLID LINE.

13) ALL LOADS SHOWN IN TABLES ARE SUPERIMPOSED LOADS. TABLES ARE DATED 10/2017 AND CLEARLY INDICATE SUPERIMPOSED LOADS.

14) #5 REINFORCING BAR(S) GRADE 40 ARE TO SET APPROX. 1-1/2" FROM TOP OF ALL LINTEL DESIGNS AND IN SOME CASES THE BOTTOM OF LINTEL AS SHOWN ON LOAD TABLES. TOP HORIZONTAL REINFORCEMENT IS TO BE A CONTINUOUS TIE AS NOTED IN NOTE #9. IN THE CASE THAT THE LINTEL IS NOT WITHIN A COMPOSITE BOND BEAM SYSTEM, TOP HORIZONTAL REINFORCEMENT IS TO EXTEND 2'-0" PAST INSIDE OF JAMBS.

15) MANUFACTURER:
POWERS STEEL
4118 E. ELWOOD PHOENIX, AZ 85040
PH# (602) 437-1160 FAX# (602) 437-5409

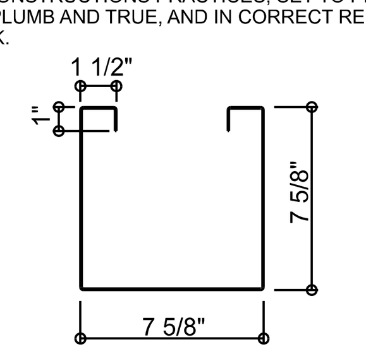
16) TECHNICAL DATA AND ENGINEERING POWERS LINTELS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING:
+ FLORIDA BUILDING CODE
+ NASPEC / AISI LIGHT GAGE COLD FORMED STEEL DESIGN - 2012
+ ACI 530-13/ASCE 5-13/TMS 402-13

TECHNICAL ASSISTANCE IS AVAILABLE FROM THE MANUFACTURER ON SPECIAL DESIGN CONCERNS OR LINTEL DEPTHS DIFFERENT THAN THOSE SHOWN IN THE LOAD TABLES.

STRUCTURAL ENGINEER FOR THESE LINTELS IS:
S.E. CONSULTANTS, INC.
5800 E. THOMAS RD. SUITE 104 SCOTTSDALE, AZ 85251
PHONE (480) 946-2010 FAX (480) 946-1909

IF AN INSPECTOR, CONTRACTOR, SUBCONTRACTOR, OR PLANS EXAMINER HAS ANY TECHNICAL QUESTIONS PLEASE CALL.

17) INSTALLATION:
POWERS LINTELS ARE TO BE INSTALLED IN ACCORDANCE WITH STANDARD CONSTRUCTIONS PRACTICES, SET TO PROPER LINE AND LEVEL, PLUMB AND TRUE, AND IN CORRECT RELATION TO OTHER WORK.



PowerBox8 STEEL LINTELS
NOTE: NO SCALE
16 GAGE IS .060 INCHES THICK.
20 GAGE IS .039 INCHES THICK.

PowerBOX8 // Lintels // 8" block width
LINTEL LOAD TABLE (IN POUNDS PER LINEAL FOOT)
GRAVITY LOAD TABLE (3000 psi grout)
ALL LOADS ARE SUPERIMPOSED
20ga. < 16'-0" span // 16ga. >= 16'-0" span

SPAN (ft)	PSbox8-8" #5 top	PSbox8-8" #5 top&bot	PSbox8-12" #5 top	PSbox8-12" #5 top&bot	PSbox8-16" #5 top	PSbox8-16" #5 top&bot	PSbox8-24" #5 top	PSbox8-24" #5 top&bot
1'-6"	5568	5568	7369	7369	9170	9170	12772	12772
2'-2"	3836	3836	5074	5074	6313	6313	8789	8789
2'-8"	3106	3106	4107	4107	5107	5107	7109	7109
3'-2"	2606	2606	3444	3444	4283	4283	5960	5960
4'-0"	2051	2051	2709	2709	3366	3366	4682	4682
4'-6"	1816	1816	2398	2398	2980	2980	4143	4143
5'-2"	1574	1574	2077	2077	2580	2580	3586	3586
6'-2"	1291	1309	1726	1726	2143	2143	2977	2977
7'-0"	989	1146	1510	1510	1874	1874	2602	2602
8'-0"	743	996	1311	1311	1625	1625	2255	2255
9'-2"	552	760	1133	1133	1404	1404	1946	1946
10'-0"	454	629	977	1031	1277	1277	1770	1770
11'-2"	352	492	766	887	1132	1132	1567	1567
12'-0"	297	418	652	756	1045	1045	1446	1446
12'-8"	261	369	576	670	984	984	1361	1361
13'-4"	229	328	511	596	893	929	1285	1285
14'-0"	203	292	456	532	799	879	1215	1215
16'-0"	215	284	386	530	688	775	1524	1524
18'-0"	157	211	286	400	519	588	1201	1336
18'-8"	142	192	260	365	474	539	1104	1282
20'-8"	104	145	195	281	365	518	869	1037
22'-8"	76	110	147	219	284	327	693	832
24'-0"							625	918
26'-0"							507	757

NOTE: All lintels grater than 22'-8" in length will require (2) #5 bars top or (2) #5 bars top & bottom
TABLE IS PARTIAL TABLE PER POWER STEEL & WIRE - FLORDA LOAD TABLES date: 10/2017

PowerBOX8 // Lintels // 8" block width
LINTEL LOAD TABLE (IN POUNDS PER LINEAL FOOT)
LATERAL LOAD TABLE (3000 psi grout)
ALL LOADS ARE SUPERIMPOSED
20ga. < 16'-0" span // 16ga. >= 16'-0" span

SPAN (ft)	PSbox8-8" #5 top	PSbox8-8" #5 top&bot	PSbox8-12" #5 top	PSbox8-12" #5 top&bot	PSbox8-16" #5 top	PSbox8-16" #5 top&bot	PSbox8-24" #5 top	PSbox8-24" #5 top&bot
1'-6"	3256	3256	4097	4097	4960	4960	6732	6732
2'-2"	2254	2254	2836	2836	3434	3434	4661	4661
2'-8"	1832	1832	2304	2304	2790	2790	3787	3787
3'-2"	1543	1543	1941	1941	2349	2349	3189	3189
4'-0"	1221	1221	1536	1536	1860	1860	2524	2524
4'-6"	1085	1085	1366	1366	1653	1653	2244	2244
5'-2"	945	945	1189	1189	1440	1440	1954	1954
6'-2"	792	792	996	996	1206	1206	1637	1637
7'-0"	698	698	878	878	1063	1063	1272	1306
8'-0"	611	611	738	749	822	838	974	1000
9'-2"	492	496	562	570	626	638	742	762
10'-0"	413	417	472	479	526	536	623	640
11'-2"	331	334	379	384	422	430	500	513
12'-0"	287	289	328	333	366	373	433	444
12'-8"	257	260	294	299	328	334	388	399
13'-4"	232	234	266	270	296	302	351	360
14'-0"	211	213	241	244	269	274	318	326
16'-0"	271	272	296	298	319	322	361	366
18'-0"	214	215	234	235	252	254	285	289
18'-8"	199	200	218	219	235	236	265	269
20'-8"	162	163	177	178	191	193	216	219
22'-8"	135	135	148	148	159	160	180	182
24'-0"							163	166
26'-0"							138	141

NOTE: Above loads include 1/3 increase for wind
All lintels grater than 22'-8" in length will require (2) #5 bars top or (2) #5 bars top & bottom
TABLE IS PARTIAL TABLE PER POWER STEEL & WIRE - FLORDA LOAD TABLES date: 10/2017

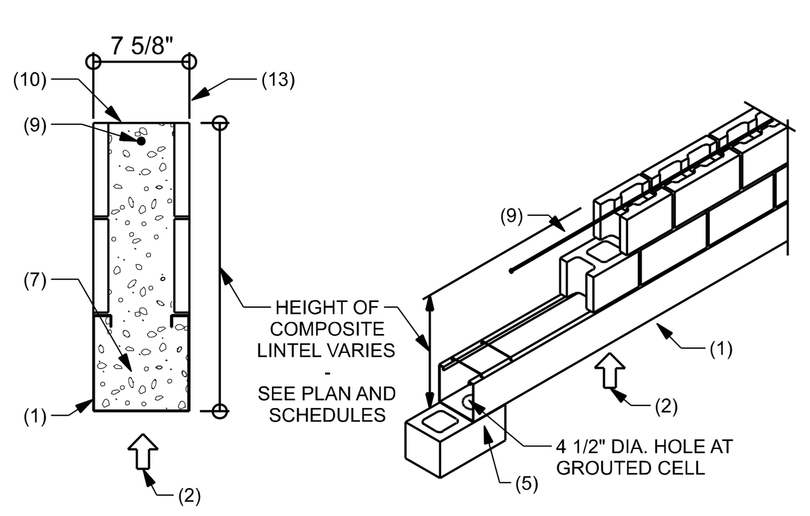
PowerBOX8 // Lintels // 8" block width
LINTEL LOAD TABLE (IN POUNDS PER LINEAL FOOT)
UPLIFT LOAD TABLE (3000 psi grout)
ALL LOADS ARE SUPERIMPOSED
20ga. < 16'-0" span // 16ga. >= 16'-0" span

SPAN (ft)	PSbox8-8" #5 top	PSbox8-8" #5 top&bot	PSbox8-12" #5 top	PSbox8-12" #5 top&bot	PSbox8-16" #5 top	PSbox8-16" #5 top&bot	PSbox8-24" #5 top	PSbox8-24" #5 top&bot
1'-6"	5637	5637	7586	7585	9561	9561		
2'-2"	3914	3914	5267	5267	6640	6640	9420	9420
2'-8"	3187	3187	4289	4289	5408	5408	7673	7673
3'-2"	2689	2689	3620	3620	4565	4565	6478	6478
4'-0"	2136	2136	2877	2877	3629	3629	5150	5150
4'-6"	1903	1903	2563	2563	3233	3233	4589	4589
5'-2"	1662	1662	2239	2239	2825	2825	4010	4010
6'-2"	1398	1398	1885	1885	2378	2378	3376	3376
7'-0"	1236	1236	1667	1667	2103	2103	2987	2987
8'-0"	956	956	1365	1365	1703	1703	2387	2387
9'-2"	739	739	1052	1052	1313	1313	1843	1843
10'-0"	626	626	892	892	1115	1115	1565	1565
11'-2"	509	509	726	726	908	908	1275	1275
12'-0"	446	446	636	636	795	795	1118	1118
12'-8"	404	404	576	576	721	721	1014	1014
13'-4"	368	368	525	525	657	657	925	925
14'-0"	337	337	481	481	603	603	849	849
16'-0"	347	347	461	461	558	558	754	754
18'-0"	282	282	376	376	456	456	618	618
18'-8"	265	265	353	353	429	429	582	582
20'-8"	223	223	298	298	363	363	494	494
22'-8"	191	191	257	257	313	313	428	428
24'-0"							577	577
26'-0"							507	507

NOTE: Above loads include 1/3 increase for wind
All lintels grater than 22'-8" in length will require (2) #5 bars top or (2) #5 bars top & bottom
TABLE IS PARTIAL TABLE PER POWER STEEL & WIRE - FLORDA LOAD TABLES date: 10/2017

Powers Steel Product Lintel

DETAIL PER POWER BOX TECH SUPPORT



POWERBOX8 LENTEL DETAILS

FLORIDA PRODUCT APPROVAL NUMBER
FL11383 - POWER BOX

PSBox8-8" #5top
- LINTEL DESCRIPTION (PowerBOX8)
- INDICATES MIN. HEIGHT OF GROUT
- INDICATES MIN. REINFORCING & LOCATIONS
  top = TOP REINFORCING OR TOP OF WALL REINFORCING
  bot = BOTTOM REINFORCING

Powers Steel Product Lintel - Callout

POWERBOX LINTEL INSTALLATION INSTRUCTIONS

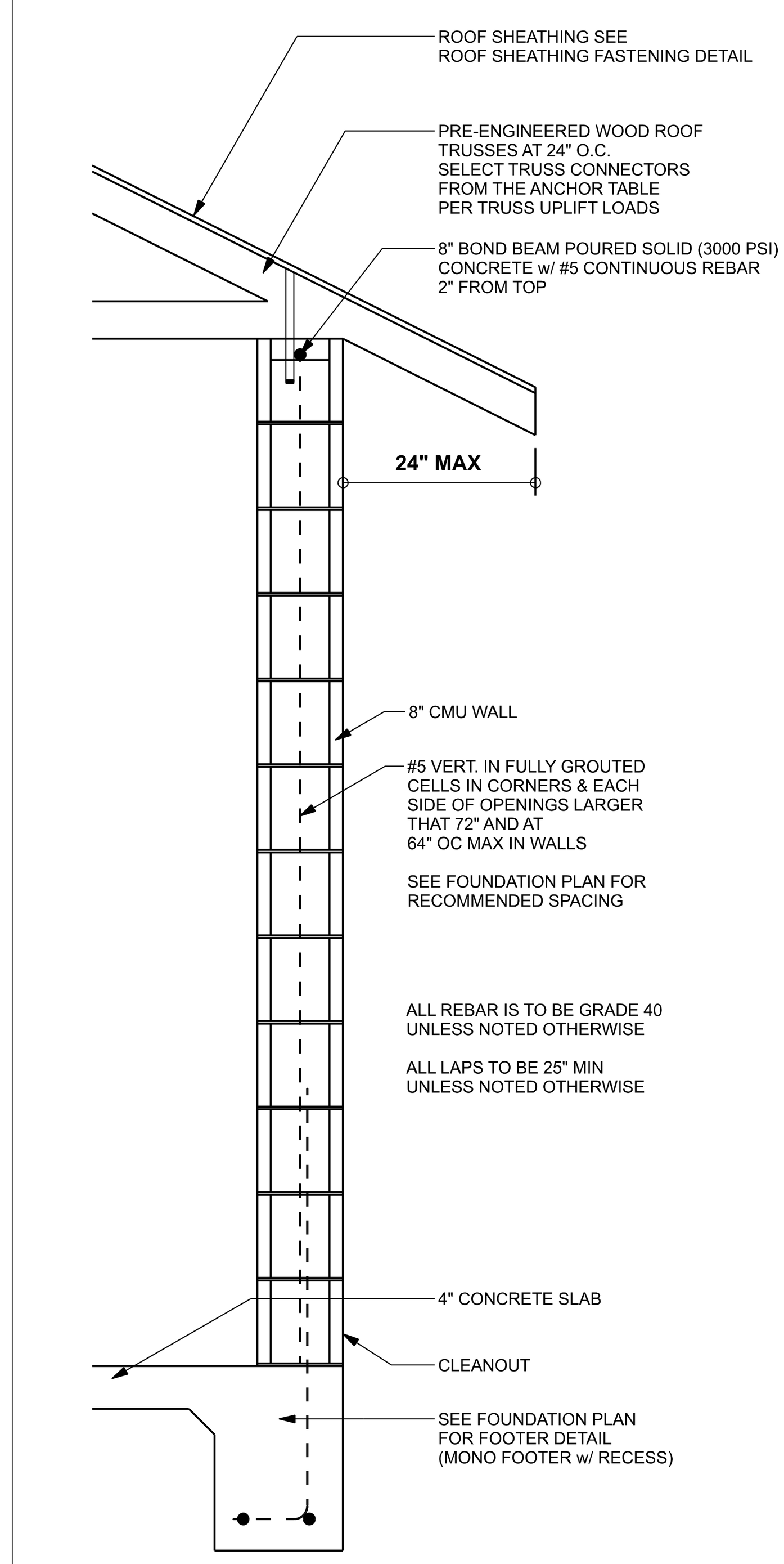
1. Lay wall to required height and opening.
2. Set Lintel on block with 8" of bearing each end, minimum 4" - see specification note #5.
3. Apply bed joint on front and back of block. Apply head joint on end of block.
4. Place Lintel on block level and square. Proceed as needed with the next course of block.
5. Shore Lintel as required to compensate for dead load deflection on non cured masonry and grout.
6. Shore lintel prior to laying block and grouting.
7. It is recommended to shore lintel in the middle of spans greater than 8'-0" and less than 15'-0". On spans greater than 16'-0" use 2 shores spaced equal distance apart at approximately 5'-4" spacing. On spans greater than 16'-0" place shoring at 8'-0" centers. Make sure shoring is square to Lintel and secure. Make sure shoring supports the entire width of the bottom of the Lintel. (see manufacturer's shoring details)
8. Rod grout adequately to ensure consolidation of grout (no air pockets)
9. Place top #5 rebar grade 40 Set 1.5" from top of all Lintel designs and in some cases in the bottom of the Lintel as shown on Load Tables. (see manufacturer's rebar details)

GRADE & SPECIES TABLE			
		Fb	E
2x8	SP #2	925	1.4
2x10	SP #2	800	1.4
2x12	SP #2	750	1.4
GLB	24F-V3 SP	2600	1.9
LSL	TIMBERSTRAND	1700	1.7
LVL	MICROLAM	2950	2.0
PSL	PARALAM	2900	2.0

EXTERIOR WALL STUD TABLE FOR SPF #2 STUDS:

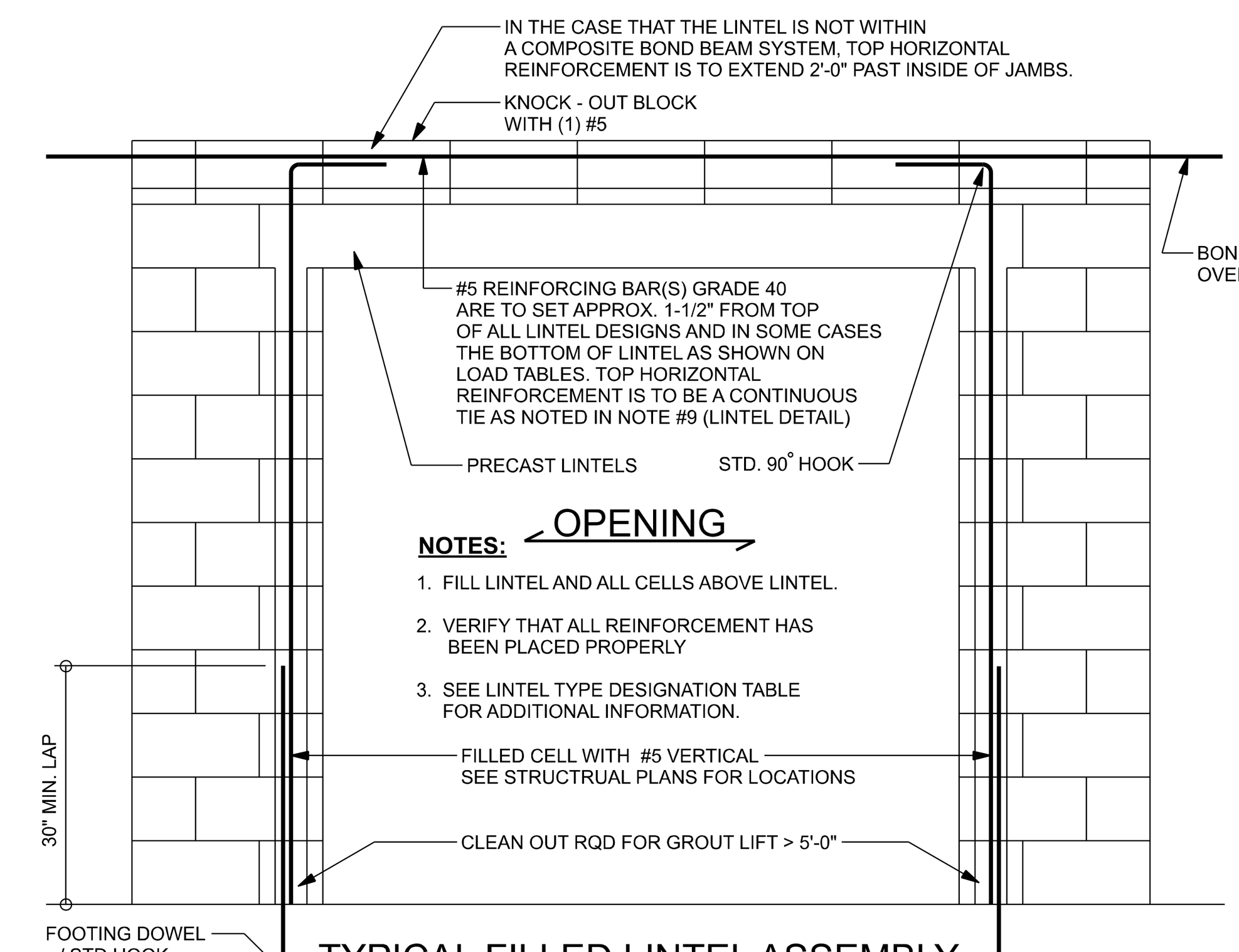
THIS STUD HEIGHT TABLE IS PER 2012 WFCM, TABLE 3.20, EXTERIOR LOAD BEARING & NON LOAD BEARING STUD LENGTHS FOR WALLS WITH OSB EXTERIOR AND 1/2" GYP INTERIOR RESISTING INTERIOR ZONE WINDLOADS, 140 MPH, EXPOSURE C, STUD DEFLECTION LIMIT H/240 (NOT OK FOR BRITTLE FINISH). STUD SPACINGS SHALL BE MULTIPLIED BY 0.8 FOR FRAMING LOCATED WITHIN 4 FEET OF CORNERS FOR END ZONE LOADING. (END ZONE EXAMPLE 16" O.C. x 0.8 = 12.8" O.C.)

(1) 2x4 @ 16" OC	TO 9'-7" STUD HEIGHT
(1) 2x4 @ 12" OC	TO 10'-7" STUD HEIGHT
(1) 2x6 @ 16" OC	TO 14'-10" STUD HEIGHT
(1) 2x6 @ 12" OC	TO 16'-4" STUD HEIGHT



TYPICAL EXTERIOR WALL

(BASED ON FBC R606)
SCALE: 3/4" = 1'-0"



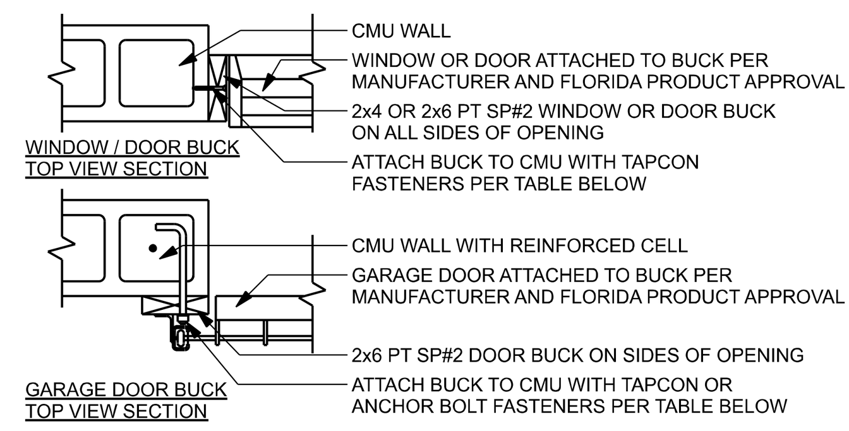
TYPICAL FILLED LINTEL ASSEMBLY

CMU WALL
SCALE: 1/2" = 1'-0"

ROOF SHEATHING FASTENING TABLE (RAFTER / TRUSS SG = 0.49)

Wind Speed	Sheathing Thickness Plywood Or OSB	Required Nail	Nail spacing along panel edges	Nail spacing along intermediate supports in the panel field
120 mph Exp. B	7/16"	ASTM F1667 RSRS-01 (2 3/8" × 0.113")	6" oc	12" oc
120 mph Exp. C	7/16"	ASTM F1667 RSRS-01 (2 3/8" × 0.113")	6" oc	6" oc
120 mph Exp. D	19/32"	ASTM F1667 RSRS-03 (2 1/2" × 0.131") or ASTM F1667 RSRS-04 (3" × 0.120")	6" oc	6" oc
130 mph Exp. B	7/16"	ASTM F1667 RSRS-01 (2 3/8" × 0.113")	6" oc	6" oc
130 mph Exp. C	15/32"	ASTM F1667 RSRS-01 (2 3/8" × 0.113")	6" oc	6" oc
130 mph Exp. D	19/32"	ASTM F1667 RSRS-03 (2 1/2" × 0.131") or ASTM F1667 RSRS-04 (3" × 0.120")	6" oc	6" oc
140 mph Exp. B	7/16"	ASTM F1667 RSRS-01 (2 3/8" × 0.113")	6" oc	6" oc
140 mph Exp. C	19/32"	ASTM F1667 RSRS-03 (2 1/2" × 0.131") or ASTM F1667 RSRS-04 (3" × 0.120")	6" oc	6" oc
140 mph Exp. D	19/32"	ASTM F1667 RSRS-03 (2 1/2" × 0.131") or ASTM F1667 RSRS-04 (3" × 0.120")	6" oc	6" oc

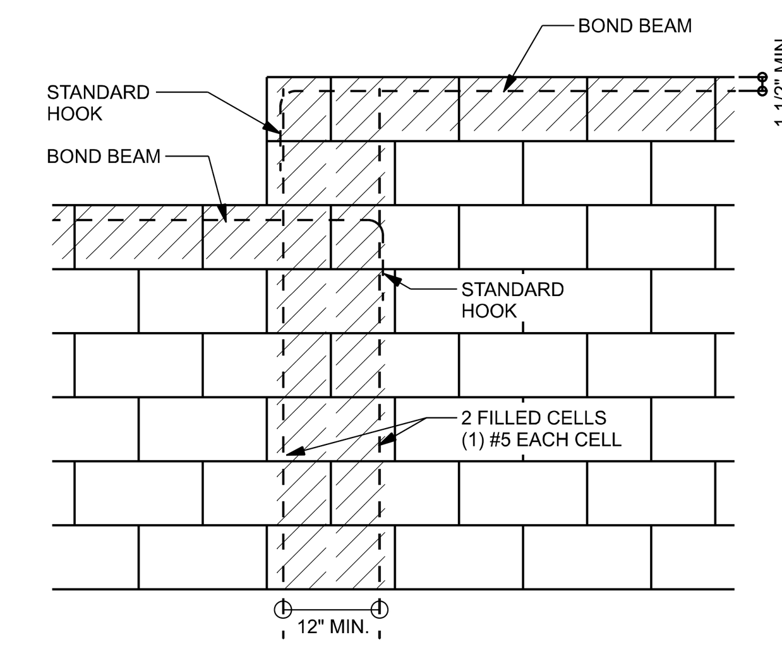
Note:
For sheathing located a minimum of 4 feet from the perimeter edge of the roof, including 4 feet on each side of ridges and hips, nail spacing is permitted to be 6 inches on center along panel edges and 6 inches on center along intermediate supports in the panel field.
Note:
This table specifies the code minimum thickness of roof sheathing. The thickness of the sheathing may need to be increased based in the type of roofing material being used. See manufacturer Florida product approval.



OPENING SIZE / TYPE:	3/16" TAPCON MAX SPACING	1/4" TAPCON MAX SPACING	1/2" ANCHOR BOLTS INTO FILLED CELL
WINDOWS & DOORS UP TO 4' W	14" OC	22" OC	N/A
WINDOWS & DOORS UP TO 6' W	10" OC	16" OC	N/A
WINDOWS & DOORS UP TO 10' W	9" OC	14" OC	N/A
SLIDING DOORS UP TO 8' TALL	9" OC	15" OC	N/A
GARAGE DOOR UP TO 10' WIDE	9" OC	14" OC	(4) 1/2" x 8" ANCHOR BOLTS PER BUCK EVENLY SPACED
GARAGE DOOR UP TO 18' WIDE	4" OC	7" OC	(4) 1/2" x 8" ANCHOR BOLTS PER BUCK EVENLY SPACED

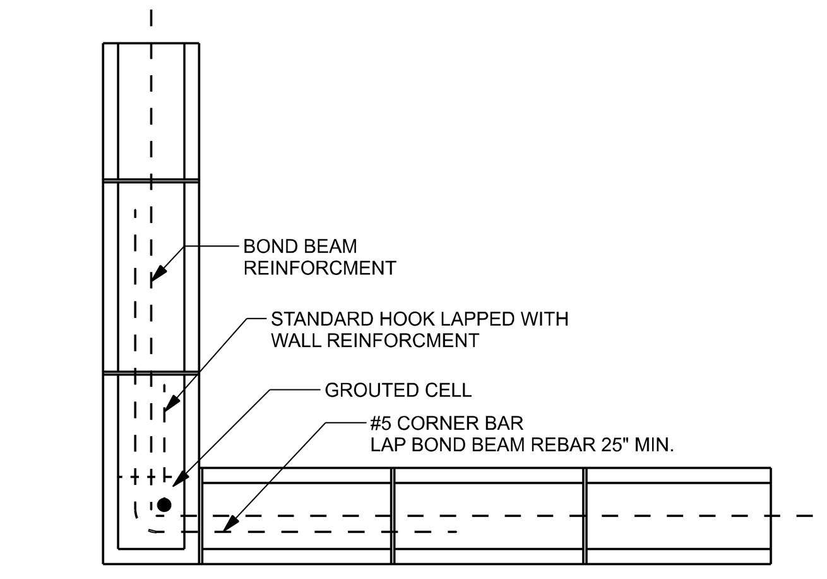
- TAPCON IN FACE OF CMU: 2 1/2" MIN. EDGE DISTANCE 1 1/4" MIN. EMBEDMENT, 3" MIN. SPACING
- WINDOWS AND DOORS MAY BE ATTACHED DIRECTLY TO CMU PER MANUFACTURER AND FLORIDA PRODUCT APPROVAL.
- A 1x_ PT "SPACER" BUCK MAY BE USED IF WINDOW / DOOR IS ATTACHED TO CMU PER FLORIDA PRODUCT APPROVAL.

DOOR & WINDOW BUCK ATTACHMENT



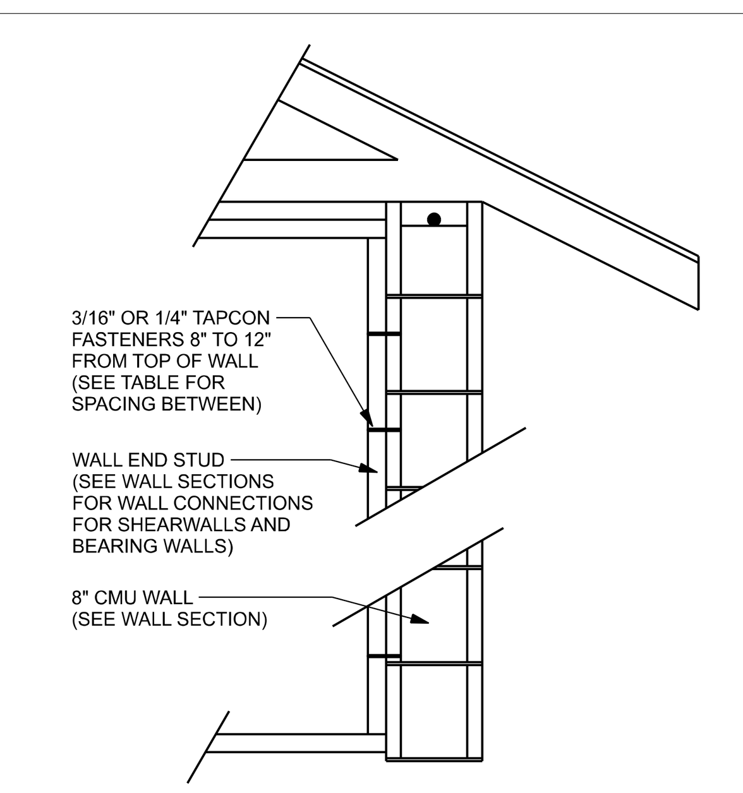
CHANGES IN BOND BEAM HEIGHT

(BASED ON FBC FIG. R609.2.5)
SCALE: 1/2" = 1'-0"



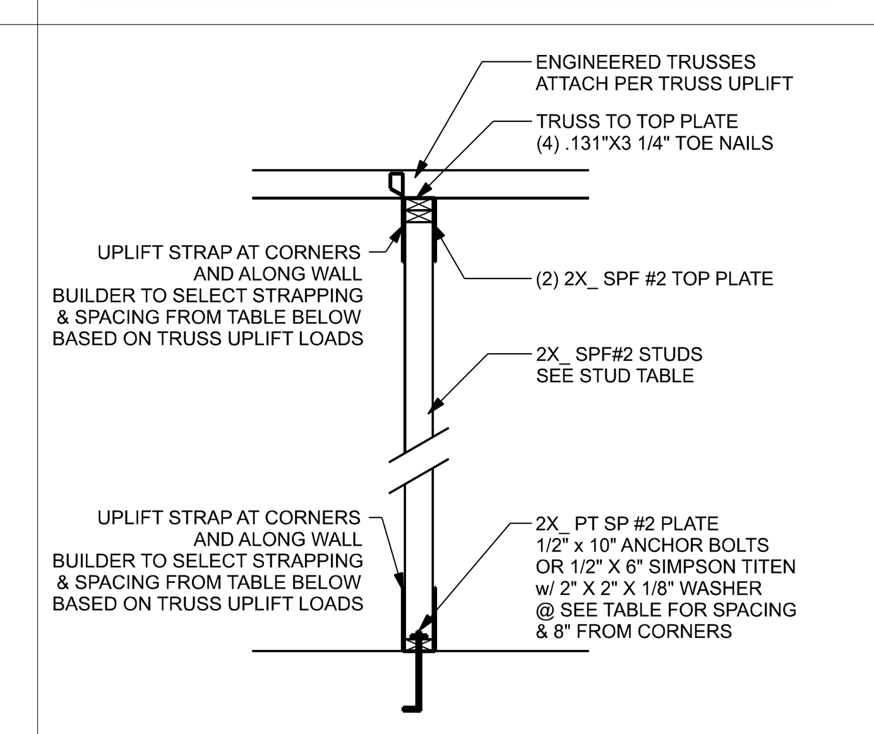
CORNER CONTINUITY OF BOND BEAM AND WALL REINFORCEMENT

(BASED ON FBC FIG. R609.2.4)
SCALE: 3/4" = 1'-0"



WALL TYPE:	3/16" TAPCON MAX SPACING	1/4" TAPCON MAX SPACING
INTERIOR SHEAR WALL	6" OC	8" OC
INTERIOR BEARING WALL	16" OC	16" OC
INTERIOR NON-BEARING WALL	48" OC	48" OC

INT. FRAME WALL TO CMU CONNECTION



INTERIOR BEARING WALL UPLIFT STRAP TABLE

TAG	Uplift on wall	Top Connection	Bottom Connection	Anchor Spacing
IBW1	227 plf	SP2 @ 32" OC	SP1 @ 32" OC	48" OC
IBW2	454 plf	SP2 @ 16" OC	SP1 @ 16" OC	32" OC
IBW3	309 plf	LSTA24, 14-10d @ 48" OC Wrap Under Plate	LSTA24, 14-10d @ 48" OC Wrap Over Plate	48" OC
IBW4	465 plf	LSTA24, 14-10d @ 32" OC Wrap Under Plate	LSTA24, 14-10d @ 32" OC Wrap Over Plate	32" OC

(TYP.) INTERIOR BEARING WALL

ONE STORY WOOD FRAME w/ STRAPS & ANCHORS

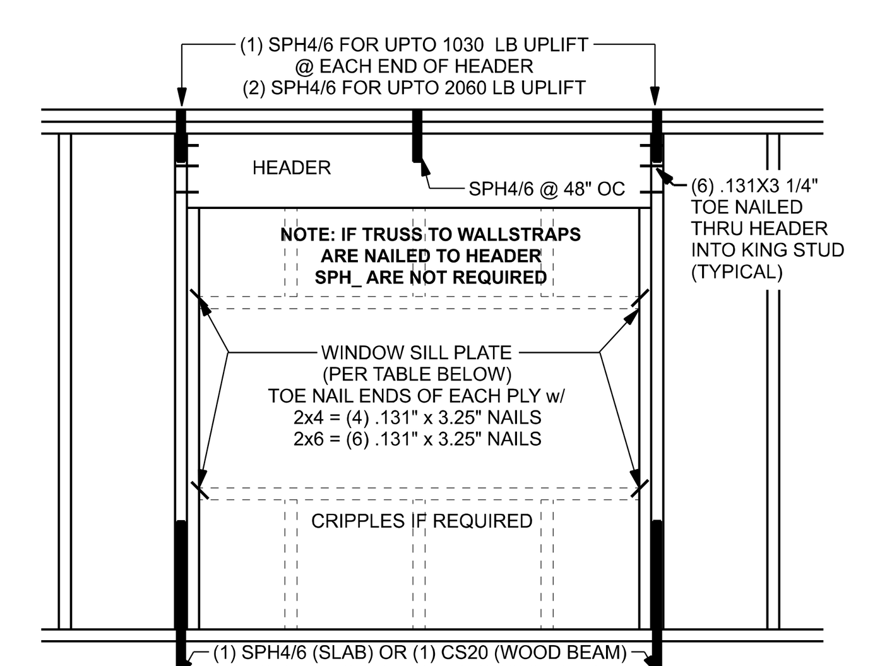
CONNECTOR TABLE

Uplift SP	Uplift SPF	Truss Connector	To Plate	To Truss/Rafter
615	485	SDWC15600	-	-
415	290	H3	4-8dx1 1/2"	4-8dx1 1/2"
575	495	H2.5A	5-8dx1 1/2"	5-8dx1 1/2"
1340	1015	H10A	9-10d1 1/2"	9-10d1 1/2"
720	620	LTS12-20	6-10d1 1/2"	6-10d1 1/2"
1000	860	MTS12-30	7-10d1 1/2"	7-10d1 1/2"
1450	1245	HTS20-30	12-10d1 1/2"	12-10d1 1/2"
Uplift SP	**Uplift SPF**	**Strap Ties**	**To One Member**	**To Other Member**
1235	1235	LSTA21	8-10d	8-10d
1640	1455	MSTA24	9-10d	9-10d
1030	1030	CS20	7-10d	7-10d
Uplift SP	**Uplift SPF**	**Stud Plate Ties**	**To Stud**	**To Plate**
585	535	SP1	6-10d	4-10d
1065	605	SP2	6-10d	6-10d
771	771	LSTA24	10-10d	wrap under or over plate
1235	1235	LSTA24	14-10d	wrap under or over plate
Uplift SP	**Uplift SPF**	**Holdowns @ Stemwall**	**To Stud / Post**	**Anchor**
1825	1800	DTT2Z	8-SDS 1/4"x1 1/2"	1/2"x12" Titen HD
4235	3640	HTT4	18-16dx2 1/2"	1/2"x12" Titen HD
Uplift SP	**Uplift SPF**	**Holdowns @ Mono**	**To Stud / Post**	**Anchor**
1825	1800	DTT2Z	8-SDS 1/4"x1 1/2"	1/2"x6" Titen HD
4235	3640	HTT4	18-16dx2 1/2"	1/2"x12" Titen HD
Uplift SP	**Uplift SPF**	**Post Bases @ Stemwall**	**To Post**	**Anchor**
1900		ABU44	12-16d	5/8"x12" Drill & Epoxy
2450		ABU66	12-16d	5/8"x12" Drill & Epoxy
Uplift SP	**Uplift SPF**	**Post Bases @ Mono**	**To Post**	**Anchor**
1900		ABU44	12-16d	5/8"x7" Drill & Epoxy
2450		ABU66	12-16d	5/8"x7" Drill & Epoxy

MASONRY TRUSS ANCHOR TABLE

OBTAIN UPLIFT REQUIREMENTS FROM TRUSS MANUFACTURER'S ENGINEERING

UPLIFT LBS.	TRUSS CONNECTOR MASONRY *	
< 1205	TA22	10-10d x 1 1/2"
< 1605	TA22	11-10d
< 860	MTSM20	4 - 1/4"x2 1/4" TITEN IN BLOCK 7 - 10d IN TRUSS
< 1175	HTSM20	4 - 1/4"x2 1/4" TITEN IN BLOCK 10 - 10d IN TRUSS
< 1040	META20	7-10d, 1 1/2"
< 1490	META20	10-10d, 1 1/2"
< 1780	HETA20	7-16d
< 1780	LGT2	7 - 1/4"x2 1/4" TITEN IN BLOCK 14 - 16d SINKER IN GIRDER
< 2130	HHETA20	17-10d, 1 1/2"
< 2310	HHETA24	21-10d, 1 1/2"
< 3965	MGT	22-10d TO TRUSS 5/8 AB TO WALL 15" EMBEDMENT
< 10980	HGT-2	16-10d TO TRUSS (2) 3/4 AB TO WALL 15" EMBEDMENT
< 10530	HGT-3	16-10d TO TRUSS (2) 3/4 AB TO WALL 15" EMBEDMENT



SILL PLATE SPANS FOR 10'-0" WALL HEIGHT					
	MAX. SPANS FOR SPF #2				BASED ON WFCM TABLE A-3.23B
	(1) 2x4	(2) 2x4	(1) 2x6	(2) 2x6	FOR OTHER WALL HEIGHTS (H) SILL SPAN SHALL BE DIVIDED BY (H/10)
	5'-7"	8'-3"	8'-4"	12'-2"	

TYP. FRAME OPENING DETAILS

STRAPS ON WD FLOOR OR SLAB N.T.S.

GENERAL NOTES:

TRUSSES: TRUSSES SHALL BE DESIGNED BY A FLORIDA LICENSED ENGINEER IN ACCORDANCE WITH THE FBCR. TRUSS ENGINEERING SHALL INCLUDE TRUSS DESIGN, PLACEMENT PLANS, TEMPORARY AND PERMANENT BRACING DETAILS, TRUSS-TO-TRUSS CONNECTIONS, AND UPLIFT AND REACTION LOADS FOR ALL BEARING LOCATIONS. TRUSS ENGINEERING IS THE RESPONSIBILITY OF THE TRUSS MANUFACTURER AND SHALL BE SIGNED & SEALED BY THE MANUFACTURER'S DESIGN ENGINEER. IT IS THE BUILDER'S RESPONSIBILITY VERIFY THE TRUSS DESIGNER FULLY SATISFIED ALL THE ABOVE REQUIREMENTS AND TO SELECT UPLIFT CONNECTIONS BASED ON TRUSS ENGINEERING UPLIFT AND PROVIDE FOOTINGS FOR INTERIOR BEARING WALLS. BUILDER IS TO FURNISH TRUSS ENGINEERING TO WIND LOAD ENGINEER FOR REVIEW OF TRUSS REACTIONS ON THE BUILDING STRUCTURE. STRAP 2X6 RAFTERS WITH MIN. UPLIFT CONNECTION 415LB EACH END; 2X8 RAFTERS 700 LB EACH END.

SITE PREPARATION: SITE ANALYSIS AND PREPARATION IS NOT PART OF THIS PLAN

FOUNDATION: CONFIRM THAT THE FOUNDATION DESIGN & SITE CONDITIONS MEET GRAVITY LOAD REQUIREMENTS (ASSUME 1500 PSF BEARING CAPACITY UNLESS VISUAL OBSERVATION OR SOILS TEST PROVES OTHERWISE)

CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS, F'c = 2500 PSI.

WELDED WIRE REINFORCED SLAB: 6" x 6" W1.4 x W1.4, FB = 85KSI, WELDED WIRE REINFORCEMENT FABRIC (W.W.M.) CONFORMING TO ASTM A185; LOCATED IN MIDDLE OF THE SLAB; SUPPORTED WITH APPROVED MATERIALS OR SUPPORTS AT SPACINGS NOT TO EXCEED 3'.

FIBER CONCRETE SLAB: CONCRETE SLABS ON GROUND CONTAINING SYNTHETIC FIBER REINFORCEMENT. FIBER LENGTH 1/2 INCH TO 2 INCHES. DOSAGE AMOUNTS FROM 0.75 TO 1.5 POUNDS PER CUBIC YARD PER THE MANUFACTURER'S RECOMMENDATIONS. FIBERS TO COMPLY WITH ASTM C 1116. SUPPLIER TO PROVIDE ASTM C 1116 CERTIFICATION OF COMPLIANCE WHEN REQUESTED BY BUILDING OFFICIAL.

CONTROL JOINTS: WHERE SPECIFIED, SAWN CONTROL JOINTS IN SLAB-ON-GRADE SHALL BE CUT IN ACCORDANCE WITH ACI 302. JOINTS SHALL BE CUT WITHIN 12 HOURS OF SLAB PLACEMENT. THE LENGTH / WIDTH RATIOS OF SLAB AREAS SHALL NOT EXCEED 1.5 AND TYPICAL SPACING OF CUTS TO BE 12FT. DO NOT CUT WWM OR REINFORCING STEEL. (RECOMMENDED LOCATION OF CONTROL JOINTS IS SUBJECT TO OWNER AND CONTRACTOR'S APPROVAL. THE CONTROL JOINTS ARE NOT INTENDED TO PREVENT CRACKS BUT RATHER TO ENCOURAGE THE SLAB TO CRACK ON A GIVEN LINE.)

REBAR: ASTM A 615, GRADE 60, DEFORMED BARS, FY = 60 KSI. ALL LAP SPLICES 48 * DB (30" FOR #5 BARS); UNO. ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315-96, U.N.O.

ROOF SHEATHING: ALL ROOFS ARE HORIZONTAL DIAPHRAGMS; 1/2" CDX PLYWOOD SHEATHING, UNBLOCKED, APPLIED PERPENDICULAR TO FRAMING, OVER A MINIMUM OF 3 FRAMING MEMBERS, WITH PANEL EDGES STAGGERED, FASTENED WITH .113" X 2 3/8" RING SHANK NAILS @ 6" OC ON EDGES & INTERMEDIATE SUPPORTS 4" OC ON GABLES

STRUCTURAL CONNECTORS: MANUFACTURERS & PRODUCT NUMBER FOR CONNECTORS, ANCHORS, AND REINFORCEMENT ARE LISTED FOR EXAMPLE NOT ENDORSEMENT. AN EQUIVALENT DEVICE OF THE SAME OR OTHER MANUFACTURER CAN BE SUBSTITUTED FOR ANY DEVICES LISTED IN THE EXAMPLE TABLES AS LONG AS IT MEETS THE REQUIRED LOAD CAPACITIES. MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE FOLLOWED TO ACHIEVE RATED LOADS.

ANCHOR BOLTS: A-307 ANCHOR BOLTS WITH MINIMUM EMBEDMENT AS SPECIFIED IN DRAWINGS BUT NO LESS THAN 7" IN CONCRETE OR REINFORCED BOND BEAM OR 15" IN GROUTED CMU.

BUILDER'S RESPONSIBILITY:
THE BUILDER AND OWNER ARE RESPONSIBLE FOR THE FOLLOWING, WHICH ARE SPECIFICALLY NOT PART OF THE WIND LOAD ENGINEER'S SCOPE OF WORK.
CONFIRM SITE CONDITIONS, FOUNDATION BEARING CAPACITY, GRADE AND BACKFILL HEIGHT, WIND SPEED AND DEBRIS ZONE, AND FLOOD ZONE.
PROVIDE MATERIALS AND CONSTRUCTION TECHNIQUES, WHICH COMPLY WITH FBCR REQUIREMENTS FOR THE STATED WIND VELOCITY AND DESIGN PRESSURES.
PROVIDE A CONTINUOUS LOAD PATH FROM TRUSSES TO FOUNDATION. IF YOU BELIEVE THE PLAN OMITS A CONTINUOUS LOAD PATH CONNECTION, CALL THE WIND LOAD ENGINEER IMMEDIATELY.
VERIFY THE TRUSS MANUFACTURER'S SEALED ENGINEERING INCLUDES TRUSS DESIGN, PLACEMENT PLANS, TEMPORARY AND PERMANENT BRACING DETAILS, TRUSS-TO-TRUSS CONNECTIONS, AND UPLIFT AND REACTION LOADS FOR ALL BEARING LOCATIONS.

ROOF SYSTEM DESIGN:

THE SEAL ON THESE PLANS FOR COMPLIANCE WITH FBCR, IS BASED ON REACTIONS, UPLIFTS, AND BEARING LOCATIONS IN TRUSS ENGINEERING SUBMITTED TO THE WIND LOAD ENGINEER. IT IS THE RESPONSIBILITY OF THE BUILDER TO CHECK ALL DETAILS OF THE COMPLETE ROOF SYSTEM DESIGN SUBMITTED BY THE TRUSS MANUFACTURER AND HAVE IT SIGNED, AND SEALED BY A DESIGN PROFESSIONAL FOR CORRECT APPLICATION OF FBCR REQUIRED LOADS AND ANY SPECIAL LOADS. THE BUILDER IS RESPONSIBLE TO REVIEW EACH INDIVIDUAL TRUSS MEMBER AND THE TRUSS ROOF SYSTEM AS A WHOLE AND TO PROVIDE RESTRAINT FOR ANY LATERAL BRACING. THE BUILDER SHOULD USE CARE CHECKING THE ROOF DESIGN BECAUSE THE WIND LOAD ENGINEER IS SPECIFICALLY NOT RESPONSIBLE FOR THE TRUSS LAYOUT WHICH WAS CREATED BY THE TRUSS MANUFACTURER AND THE TRUSS DESIGNER ALSO DENIES RESPONSIBILITY FOR THE LAYOUT PER NOTES ON THEIR SEALED TRUSS SHEETS.

MASONRY NOTE:
MASONRY CONSTRUCTION AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATION FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TMS 602). THE CONTRACTOR AND MASON MUST IMMEDIATELY, BEFORE PROCEEDING, NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN ACI 530.1-02 AND THESE DESIGN DRAWINGS. ANY EXCEPTIONS TO ACI 530.1-02 MUST BE APPROVED BY THE ENGINEER IN WRITING.

	ACI530.1-02 Section	Specific Requirements
1.4A	Compressive strength	8" block bearing walls F'm = 1500 psi
2.1	Mortar	ASTM C 270, Type N, UNO
2.2	Grout	ASTM C 476, admixtures require approval
2.3	CMU standard	ASTM C 90-02, Normal weight, Hollow, medium surface finish, 8"x8"x16" running bond and 12"x12" or 16"x16" column block
2.3	Clay brick standard	ASTM C 216-02, Grade SW, Type FBS, 5.5"x2.75"x11.5"
2.4	Reinforcing bars, #3 - #11	ASTM 615, Grade 40, Fy = 40 ksi, Lap splices min 40 bar dia. (25" for #5)
2.4F	Coating for corrosion protection	Anchors, sheet metal ties completely embedded in mortar or grout, ASTM A525, Class G60, 0.60 oz/ft2 or 304SS
2.4F	Coating for corrosion protection	Joint reinforcement in walls exposed to moisture or wire ties, anchors, sheet metal ties not completely embedded in mortar or grout, ASTM A153, Class B2, 1.50 oz/ft2 or 304SS
3.3.E.2	Pipes, conduits, and accessories	Any not shown on the project drawings require engineering approval.
3.3.E.7	Movement joints	Contractor assumes responsibility for type and location of movement joints if not detailed on project drawings.

DESIGN CRITERIA & LOADS:	
BUILDING CODE	7TH EDITION FLORIDA BUILDING CODE RESIDENTIAL (2020)
CODE FOR DESIGN LOADS	ASCE 7-16
WINDLOADS	
BASIC WIND SPEED (ASCE 7-10, 3S GUST)	130 MPH
WIND EXPOSURE (BUILDER MUST FIELD VERIFY EXPOSURE PER SITE BEFORE STARTING CONSTRUCTION)	C (Surface Roughness Categories: Open terrain with scattered obstructions having heights generally less than 30'. This category includes flat open country and grasslands.)
TOPOGRAPHIC FACTOR (BUILDER MUST FIELD VERIFY)	I
RISK CATEGORY	II
ENCLOSURE CLASSIFICATION	ENCLOSED
INTERNAL PRESSURE COEFFICIENT	0.18
ROOF ANGLE	7-45 DEGREES
MEAN ROOF HEIGHT	30 FT
C&C DESIGN PRESSURES	FBC R301.2(2) & TABLE R301.2(4) SEE TABLE BELOW
FLOOR LOADING	
ROOMS OTHER THAN SLEEPING ROOM	40 PSF LIVE LOAD
SLEEPING ROOMS	30 PSF LIVE LOAD
ROOF LOADING	
FLAT OR < 4:12	20 PSF LIVE LOAD
4:12 TO < 12:12	16 PSF LIVE LOAD
SOIL BEARING CAPACITY	1500 PSF
FLOOD ZONE	THIS BUILDING IS NOT IN THE FLOOD ZONE

COMPONENT & CLADING DESIGN PRESSURES 130 MPH (EXP C)		
EFFECTIVE WIND AREA (FT2)	**ZONE 4 (walls) INTERIOR**	**ZONE 5 (walls) END 4' FROM ALL OUTSIDE CORNER**
0 - 20	Vult = +43 / -47 Vasd = +26 / -28	Vult = +43 / -57 Vasd = +26 / -35

Bryan Zecher Construction

Daniel Jackson Res.

PROJECT ADDRESS:
SW Tustenuggee Ave
Lake City, Florida

Columbia County Building Department
Plans Reviewed for Code Compliance
State of Florida

Mark Disosway FL PE 53915

This item has been digitally signed and sealed by Mark Disosway PE on digital signature date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

MARK D DISOSWAY LICENSE No 53915 Mark Disosway Digital Signature STATE OF FLORIDA PROFESSIONAL ENGINEER
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2023-08-23 16:03:21

DIMENSIONS:
Stated dimensions supercede scaled dimensions. Refer all questions to Mark Disosway, P.E. for resolution. Do not proceed without clarification.

CERTIFICATION: I hereby certify that I have examined this plan, and that the applicable portions of the plan, relating to wind engineering comply with the 7th Edition Florida Building Code Residential (2020) to the best of my knowledge.

LIMITATION: This design is valid for one building, at specified location.

Mark Disosway P.E.
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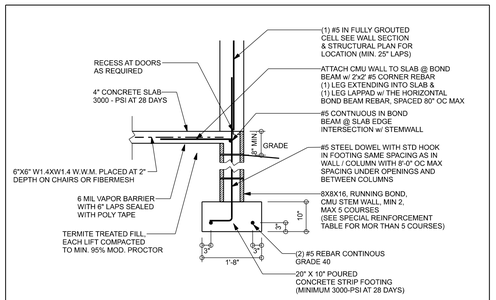
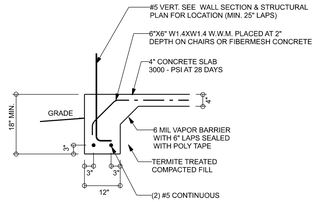
JOB NUMBER:
231049

S-1



F1 S-2 ALT. STEM WALL FOOTING

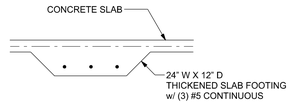
SCALE: 1/2" = 1'-0"



F1 S-2 MONOLITHIC FOOTING

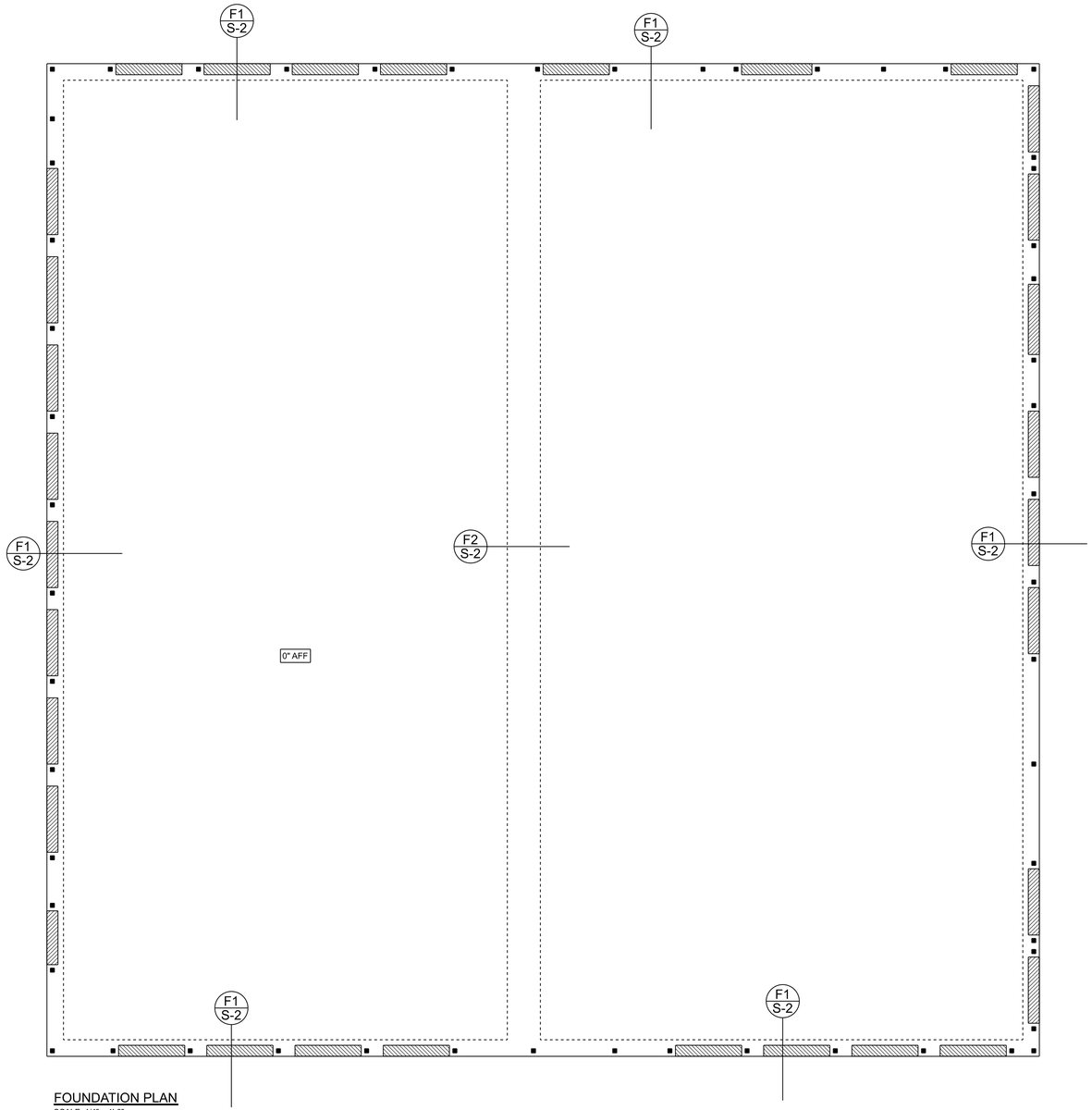
SCALE: 1/2" = 1'-0"

BOTTOM OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 12" BELOW UNDISTURBED SOIL OR ENGINEERED FILL PER FBC 2017-RES. SEC. R403.1.4



F2 S-2 INTERIOR BEARING FOOTING

SCALE: 1/2" = 1'-0"



FOUNDATION PLAN

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

FOUNDATION NOTES	
FN - 1	DIMENSIONS ON FOUNDATION & STRUCTURAL SHEETS ARE NOT EXACT. REFER TO ARCHITECTURAL PLANS FOR ACTUAL DIMENSIONS, RECESSES IN SLAB, STEP DOWNS, ETC. DISOSWAY DESIGN GROUP OR MARK DISOSWAY, PE IS NOT RESPONSIBLE FOR DIMENSION ERRORS ON THIS PLAN.
FN - 2	CONTRACTOR SHALL VERIFY NEED FOR INTERIOR BEARING IN ALL AREAS BY REVIEWINGTHE ROOF TRUSS PLAN (BY THE SUPPLIER) BEFORE FINALIZING FOUNDATION PLAN
FN - 3	THE SLAB SHALL BE: 4" CONCRETE SLAB REINFORCED w/ 6X6-1.4/1.4 WELDED WIRE MESH PLACED ON CHAIRS @ 1 1/2" DEPTH OR FIBER MESH CONCRETE, 6-MIL POLY VAPOR BARRIER w/ 6" LAPS SEALED w/ POLY TAPE OVER TERMITE-TREATED & COMPACTED FILL

TALL STEM WALL TABLE:
The table assumes 60 ksi reinforcing bars with 6" hook in the footing and bent 24" into the reinforced slab at the top. The vertical steel is to be placed toward the tension side of the CMU wall (away from the soil pressure, within 2" of the exterior side of the wall). If the wall is over 8' high, add Durowall ladder reinforcement at 16"OC vertically or a horizontal bond beam with 1#5 continuous at mid height. For higher parts of the wall 12" CMU may be used with reinforcement as shown in the table below.

STEMWALL HEIGHT (FEET)	UNBALANCED BACKFILL HEIGHT	VERTICAL REINFORCEMENT FOR 8" CMU STEMWALL (INCHES O.C.)			VERTICAL REINFORCEMENT FOR 12" CMU STEMWALL (INCHES O.C.)		
		#5	#7	#8	#5	#7	#8
3.3	3.0	96	96	96	96	96	96
4.0	3.7	96	96	96	96	96	96
4.7	4.3	88	96	96	96	96	96
5.3	5.0	56	96	96	96	96	96
6.0	5.7	40	80	96	80	96	96
6.7	6.3	32	56	80	56	96	96
7.3	7.0	24	40	56	40	80	96
8.0	7.7	16	32	48	32	64	80
8.7	8.3	8	24	32	24	48	64
9.3	9.0	8	16	24	16	40	48

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Bryan Zecher Construction

Daniel Jackson Res.

PROJECT ADDRESS:
SW Tustenuggee Ave
Lake City, Florida

Mark Disosway FL PE 53915
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LIMITATION: This design is valid for one building, at specified location.

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JOB NUMBER:
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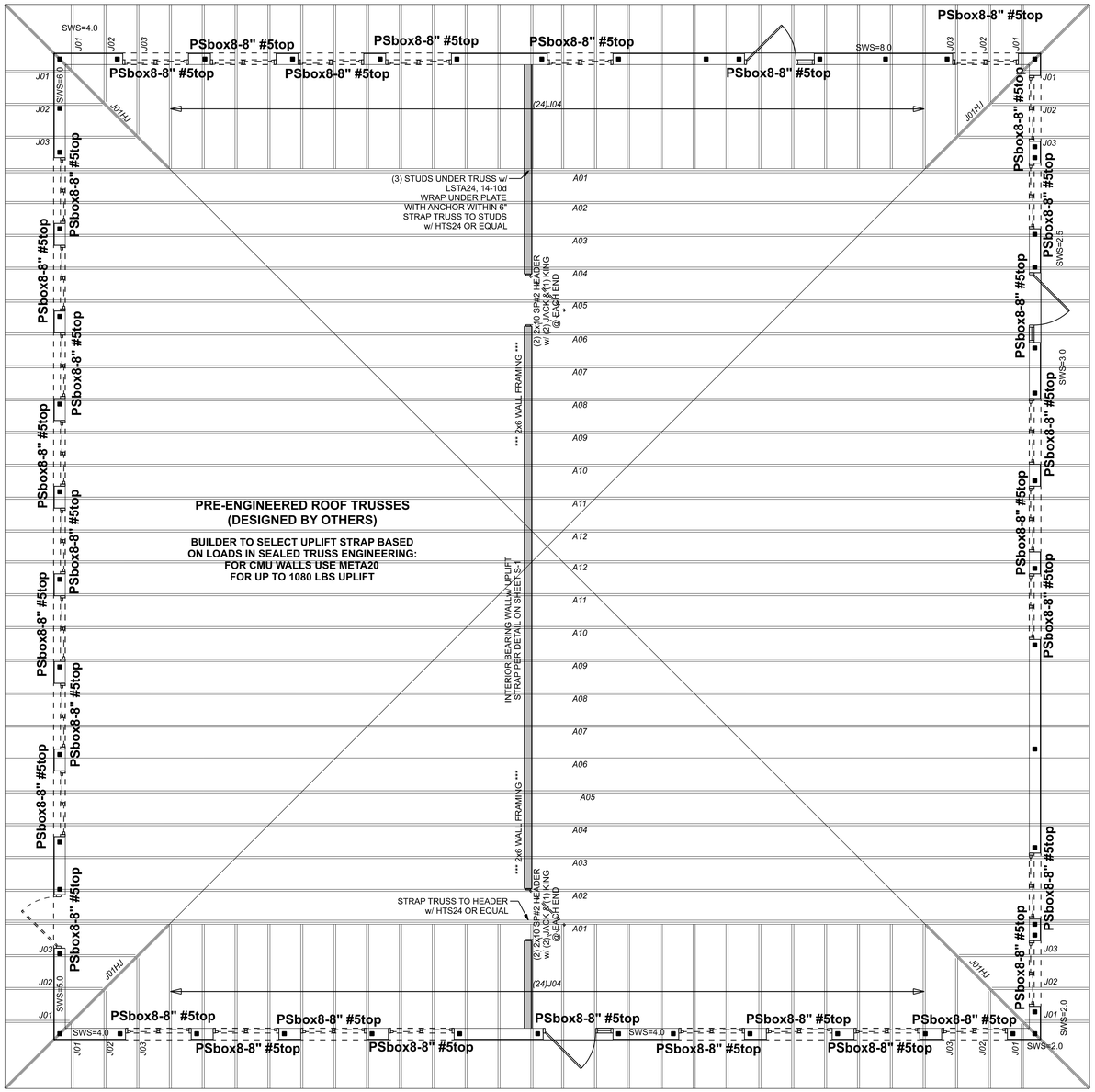
S-2
OF 3 SHEETS



STRUCTURAL LAYOUT

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

1ST FLOOR TOTAL SHEAR WALL SEGMENTS

	REQUIRED	ACTUAL
TRANSVERSE	13.3'	18.5'
LONGITUDINAL	12.7'	22.0'

CONNECTIONS, WALL, & HEADER DESIGN IS BASED ON REACTIONS & UPLIFTS FROM TRUSS ENGINEERING FURNISHED BY BUILDER. W. B. HOWLAND COMPANY, INC. JOB# 20-4958B

STRUCTURAL PLAN NOTES

Unless noted otherwise on structural plan

SN-1 ALL LINTELS TO BE: PSbox8-8" #5top (U.N.O.)

SN-2 ALL LOAD BEARING FRAME WALL & PORCH HEADERS SHALL BE A MINIMUM OF (2) 2X6 SYP #2 (U.N.O.)

SN-3 ALL LOAD BEARING FRAME WALL HEADERS SHALL HAVE (1) JACK STUD & (1) KING STUD EACH SIDE (U.N.O.)

SN-4 DIMENSIONS ON STRUCTURAL SHEETS ARE NOT EXACT. REFER TO ARCHITECTURAL FLOOR PLAN FOR ACTUAL DIMENSIONS

PERMANENT TRUSS BRACING IS TO BE INSTALLED AT LOCATIONS AS SHOWN ON THE SEALED TRUSS DRAWINGS.

SN-5 LATERAL BRACING IS TO BE RESTRAINED PER BCSI1-03, BCSI-B1, BCSI-B2, & BCSI-B3. BCSI-B1, BCSI-B2, & BCSI-B3 ARE FURNISHED BY THE TRUSS SUPPLIER, WITH THE SEALED TRUSS PACKAGE

WALL LEGEND

	EXTERIOR WALL (CMU)
	EXTERIOR WALL (WOOD FRAME)
	INTERIOR NON-LOAD BEARING WALL
	INTERIOR LOAD BEARING WALL w/ NO UPLIFT
	INTERIOR LOAD BEARING WALL w/ UPLIFT

Bryan Zecher Construction

Daniel Jackson Res.

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Lake City, Florida

Mark Disosway FL PE 53915
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JOB NUMBER:
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S-3
OF 3 SHEETS