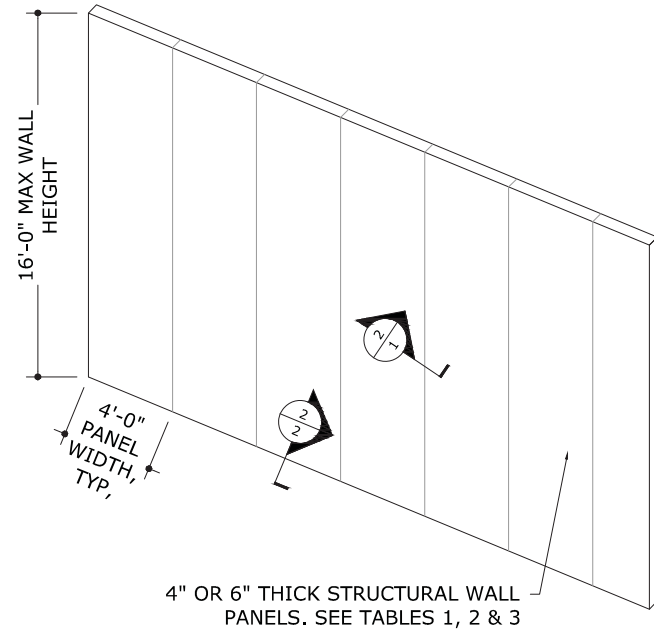
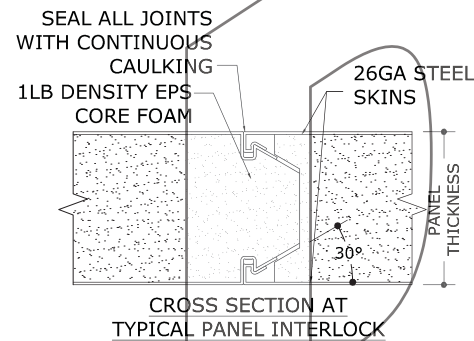


STRUCTALL BUILDING SYSTEMS

STRUCTURAL EPS FOAM CORE WALL PANELS (STEEL SKIN)



1 STRUCTURAL PANEL ISOMETRIC
1 N.T.S. (NOT INTENDED TO DEPICT A COMPLETE STRUCTURE)



2 PANEL INTERLOCK DETAIL
1 N.T.S.

DIRECTIVE FOR USE:

1. DETERMINE TYPE OF ENCLOSURE TO BE COVERED (OPEN, SCREENED WALLS, OR FULLY ENCLOSED).
2. DETERMINE THE SITE SPECIFIC REQUIRED DESIGN WIND PRESSURE PROVIDED BY SEPARATE ENGINEERING, BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, IN ACCORDANCE WITH THE FLORIDA BUILDING CODE FIFTH EDITION (2014).
3. FIND ALLOWABLE COMPOSITE PANEL CLEAR SPAN IN TABLES FOR APPROPRIATE PANEL DEPTH, FACING THICKNESS, AND EPS CORE DENSITY SELECTED.
4. **////** INDICATES VALUES NOT VALID FOR USE.
5. (+) INDICATES PRESSURES FOR ROOF PANELS ONLY

DEFLECTION NOTES:

1. USE L/120 FOR ALL EXTERIOR WALLS AND INTERIOR PARTITIONS WITH FLEXIBLE FINISHES.
2. USE L/180 FOR ALL VERTICAL MEMBERS NOT REQUIRED TO SUPPORT MATERIAL THAT HARDENS IN PLACE, IS BRITTLE OR LACKS RESISTANCE TO CRACKING CAUSED BY BENDING STRAINS. (HVHZ ONLY).
3. USE L/240 FOR ALL EXTERIOR WALLS AND INTERIOR PARTITIONS WITH BRITTLE FINISHES.
3. USE L/80 FOR GROUP R-3 OCCUPANCIES ONLY, WITH WALL PANELS OF CARPORTS, CANOPIES, PATIO COVERS, UTILITY SHEDS AND SIMILAR MINOR STRUCTURES THAT ARE NOT CONSIDERED LIVING AREAS, WHERE THE ROOF PROJECTION IS 12 FEET OR LESS IN THE DIRECTION OF THE SPAN AND FOR MEMBERS SUPPORTING SCREENS ONLY. (HVHZ ONLY).
4. (*) INDICATES ROWS FOR USE WITHIN THE HIGH VELOCITY HURRICANE ZONE ONLY. (i.e. MIAMI-DADE OR BROWARD COUNTY. ALL OTHER VALUES LISTED HEREIN SHALL BE USED OUTSIDE THE HVHZ UNLESS NOTED OTHERWISE.
FOR ROOF PANELS: L/90 FOR SPANS <= 12'-0"
L/80 FOR SPANS > 12'-0"
5. SPAN VALUES GENERATED BASED ON A FACTOR OF SAFETY OF 2.0

TABLE 1 NOTES:

1. ALLOWABLE LOAD VALUES ARE BASED ON SIMPLY SUPPORTED SPANS WITH LOADS UNIFORMLY DISTRIBUTED. WHERE NON-UNIFORM LOADS ARE APPLIED TO THE PANEL, AN EQUIVALENT UNIFORM LOAD MUST BE DETERMINED FOR COMPARISON WITH THE VALUES WITHIN THIS TABLE.
2. DEFLECTION LIMITATIONS ARE BASED ON TABLE 1604.3 OF THE FLORIDA BUILDING CODE FIFTH EDITION (2014)
3. ALLOWABLE LOADS ARE BASED ON PANEL STRENGTH. PANELS MUST BE INSTALLED WITH A CONTINUOUS WIDTH SUPPORT OF 1 INCH AT EACH END OF THE PANEL SPAN. CAPACITY OF END CONDITIONS MUST BE EVALUATED ON A SITE SPECIFIC BASIS.
4. PANELS WITH THERMAL BARRIERS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

TABLE 1: ALLOWABLE CLEAR SPAN TRANSVERSE LOADS FOR 4" AND 6" THICK STRUCTURAL WALL PANELS

Max Allowable Wall Load	Deflection Limit (L/...)	4" Panels	6" Panels
		26ga Steel Skin 1-LB EPS	26ga Steel Skin 1-LB EPS
+/- 10 psf	120	16'-0"	16'-0"
+/- 10 psf	180 *	16'-0"	16'-0"
+/- 10 psf	240	16'-0"	16'-0"
+/- 15 psf	120	16'-0"	16'-0"
+/- 15 psf	180 *	16'-0"	16'-0"
+/- 15 psf	240	14'-8"	16'-0"
+/- 20 psf	120	14'-4"	16'-0"
+/- 20 psf	180 *	14'-4"	16'-0"
+/- 20 psf	240	13'-4"	16'-0"
+/- 25 psf	120	12'-10"	15'-10"
+/- 25 psf	180 *	12'-10"	15'-10"
+/- 25 psf	240	12'-5"	15'-3"
+/- 30 psf	120	11'-8"	14'-5"
+/- 30 psf	180 *	11'-8"	14'-5"
+/- 30 psf	240	11'-8"	14'-5"
+/- 35 psf	120	10'-10"	13'-4"
+/- 35 psf	180 *	10'-10"	13'-4"
+/- 35 psf	240	10'-10"	13'-4"
+/- 39 psf	120	10'-3"	12'-8"
+/- 39 psf	180 *	10'-3"	12'-8"
+/- 39 psf	240	10'-3"	12'-8"
+/- 45 psf	120	9'-6"	11'-9"
+/- 45 psf	180 *	9'-6"	11'-9"
+/- 45 psf	240	9'-6"	11'-9"
+/- 50 psf	120	9'-1"	11'-2"
+/- 50 psf	180 *	9'-1"	11'-2"
+/- 50 psf	240	9'-1"	11'-2"
+/- 55 psf	120	8'-7"	10'-8"
+/- 55 psf	180 *	8'-7"	10'-8"
+/- 55 psf	240	8'-7"	10'-8"
+/- 60 psf	120	8'-3"	10'-2"
+/- 60 psf	180 *	8'-3"	10'-2"
+/- 60 psf	240	8'-3"	10'-2"
+/- 65 psf	120	7'-11"	9'-10"
+/- 65 psf	180 *	7'-11"	9'-10"
+/- 65 psf	240	7'-11"	9'-10"
+/- 70 psf	120	7'-8"	9'-5"
+/- 70 psf	180 *	7'-8"	9'-5"
+/- 70 psf	240	7'-8"	9'-5"
+/- 78 psf	120	7'-3"	8'-11"
+/- 78 psf	180 *	7'-3"	8'-11"
+/- 78 psf	240	7'-3"	8'-11"
+/- 80 psf	120	////	8'-10"
+/- 80 psf	180 *	////	8'-10"
+/- 80 psf	240	////	8'-10"
+/- 85 psf	120	////	8'-7"
+/- 85 psf	180 *	////	8'-7"
+/- 85 psf	240	////	8'-7"
+/- 90 psf	120	////	8'-4"
+/- 90 psf	180 *	////	8'-4"
+/- 90 psf	240	////	8'-4"
+/- 95 psf	120	////	8'-1"
+/- 95 psf	180 *	////	8'-1"
+/- 95 psf	240	////	8'-1"
(+) +/- 20 psf	(80,180)*	14'-4"	16'-0"
(+) +/- 30 psf	(80,180)*	11'-8"	16'-0"

MAXIMUM ALLOWABLE DESIGN PRESSURES:

AS NOTED IN CLEAR SPAN (TABLE 1)

DESIGN NOTES:

POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE-SPECIFIC LOAD REQUIREMENTS FOR WIND LOAD, SNOW LOAD OR ANY LOAD COMBINATION SHALL BE DETERMINED IN ACCORDANCE WITH ASCE 7 AND THE FLORIDA BUILDING CODE FIFTH EDITION (2014) (AS APPLICABLE) BY SEPARATE ENGINEERING CERTIFICATION AND SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

ALLOWABLE LOAD VALUES ARE DERIVED FROM THE TEST REPORTS OUTLINED HEREIN AS WELL AS IGC REPORT #ESR-3152

GENERAL NOTES:

1. THIS SPECIFICATION HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE FIFTH EDITION (2014) FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE (HVHZ). CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY. DESIGN CRITERIA BEYOND AS STATED HEREIN MAY REQUIRE ADDITIONAL SITE-SPECIFIC SEALED ENGINEERING. SEISMIC DESIGN HAS NOT BEEN CONSIDERED.
2. COMPOSITE PANELS SHALL COMPLY WITH CHAPTER 7 SECTION 720 (2014 FBC), CHAPTER 8 SECTION 803, CLASS A INTERIOR FINISH, AND CHAPTER 26 SECTION 2603 OF THE 2014 FBC.
3. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
4. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
5. SEPARATE 'SITE-SPECIFIC' SEALED ENGINEERING SHALL BE REQUIRED IN ORDER TO DEVIATE FROM LOADS, DEFLECTIONS, OR SPANS CONTAINED HEREIN. LINEAR INTERPOLATION OF THE ALLOWABLE SPAN TABLES LISTED HEREIN SHALL NOT BE PERMITTED. CONTACT THIS ENGINEER FOR ALTERNATE SPAN CALCULATIONS AS MAY BE REQUIRED.
6. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
7. THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. THIS ADDITIONAL LOAD CRITERIA SHALL BE PROPERLY ANALYZED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT.
8. EPS CORE COMPOSITE PANELS SHALL BE CONSTRUCTED USING TYPE ASTM A653, CS, TYPE B HOT DIP GALVANIZED G90 COATED STEEL FACINGS. EXPANDED POLYSTYRENE FOAM SHALL HAVE TYPICAL DENSITY OF 1.0 PCF. THE EPS FOAM SHALL BE ADHERED TO THE STEEL FACING WITH MORAD M640 SERIES ADHESIVE (BY ROHM AND HAAS COMPANY). FABRICATION SHALL BE IN ACCORDANCE WITH APPROVED FABRICATION METHODS BY MANUFACTURER FOR ALL PANELS.
9. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
10. ENGINEER SEAL AFFIXED HERE TO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
11. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
12. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.

TABLE VALUE DERIVATIONS:

- PANEL PROPERTIES:
1. PANEL STRUCTURAL PROPERTIES DERIVED FROM CERTIFIED TEST REPORTS TT509014A, TT509014B & TT506010 BY TERRAPIN TESTING; TEST REPORT #STRL-001-02-02 BY PRI CONSTRUCTION MATERIALS TECHNOLOGIES; TEST REPORTS TT-506027B, 506027C, 506027D, 509014A, 509014B BY TERRAPIN TESTING, ESP012351P-1, ESP012351P-2, ESP012351P-3, ESP012351P-3A, ESP012351P-4, ESP012351P-5, ESP012351P-6, EXP012351P-6A, ESP012351P-7, ESP012351P-8, ESP012351P-9, ESP012351P-9A BY ELEMENT MATERIALS TECHNOLOGY.
 2. PANEL DEAD LOADS HAVE NOT BEEN FACTORED INTO CALCULATIONS FOR WALL PANEL PROPERTIES.
 3. PANEL DEAD LOADS HAVE BEEN FACTORED INTO CALCULATIONS FOR ROOF PANEL PROPERTIES.

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04/18/2016

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STRUCTALL WALL PANELS
FLORIDA PRODUCT APPROVAL HVHZ
FLORIDA BUILDING CODE FIFTH EDITION (2014) FL# 19974.1

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NOTES:

- ALL TOP AND BOTTOM CHANNEL SCREWS SHALL BE PLACED ON BOTH SIDES OF THE WALL

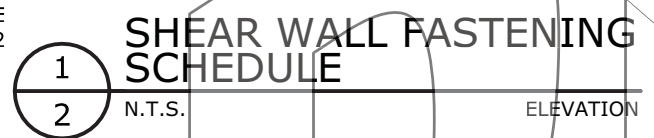
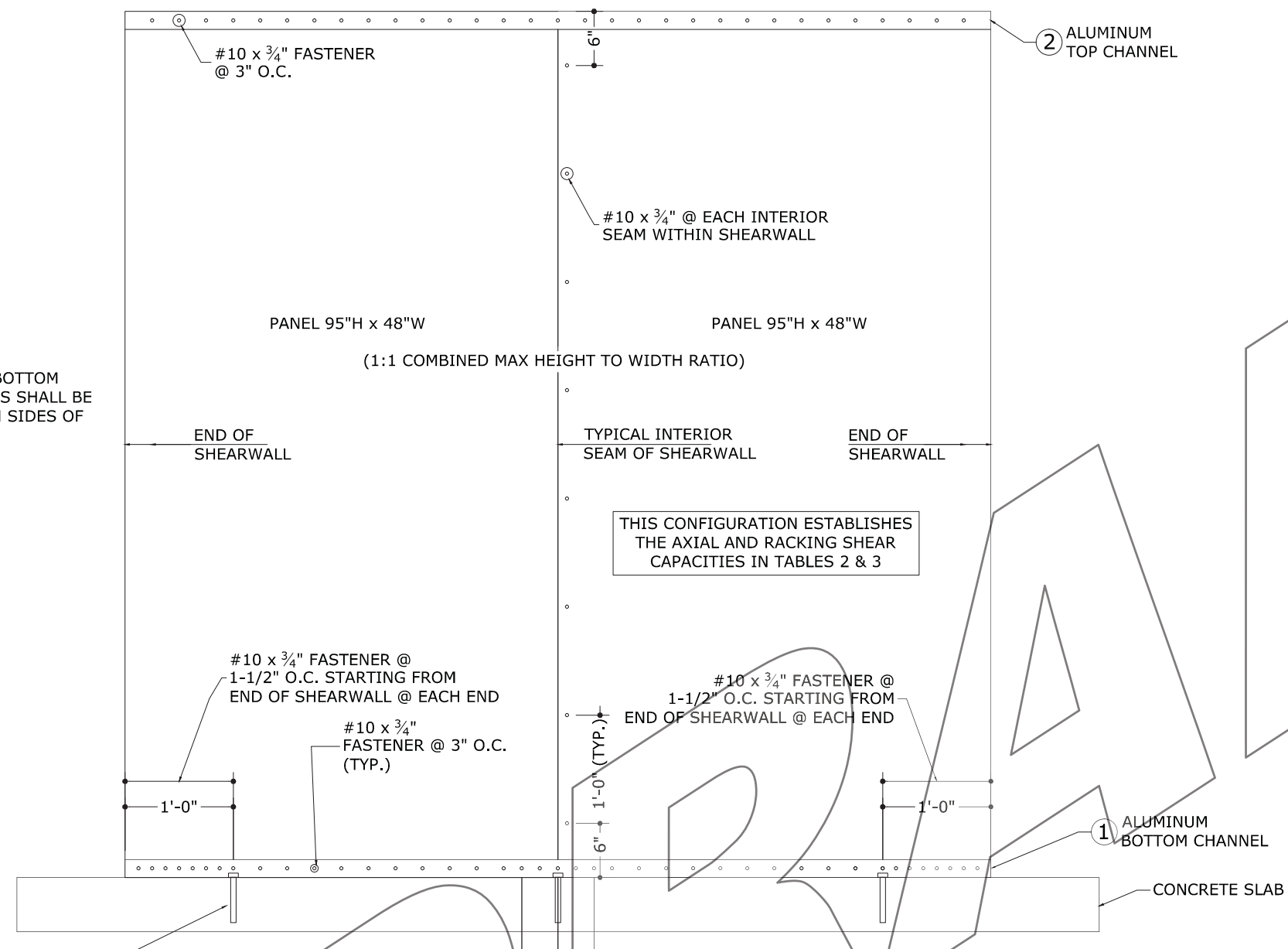


TABLE 2: ALLOWABLE UNIFORM AXIAL LOADS FOR 4\"/>

MAXIMUM UNSUPPORTED PANEL HEIGHT (ft)	ALLOWABLE AXIAL LOAD (plf)
16	614

TABLE 2 NOTES:

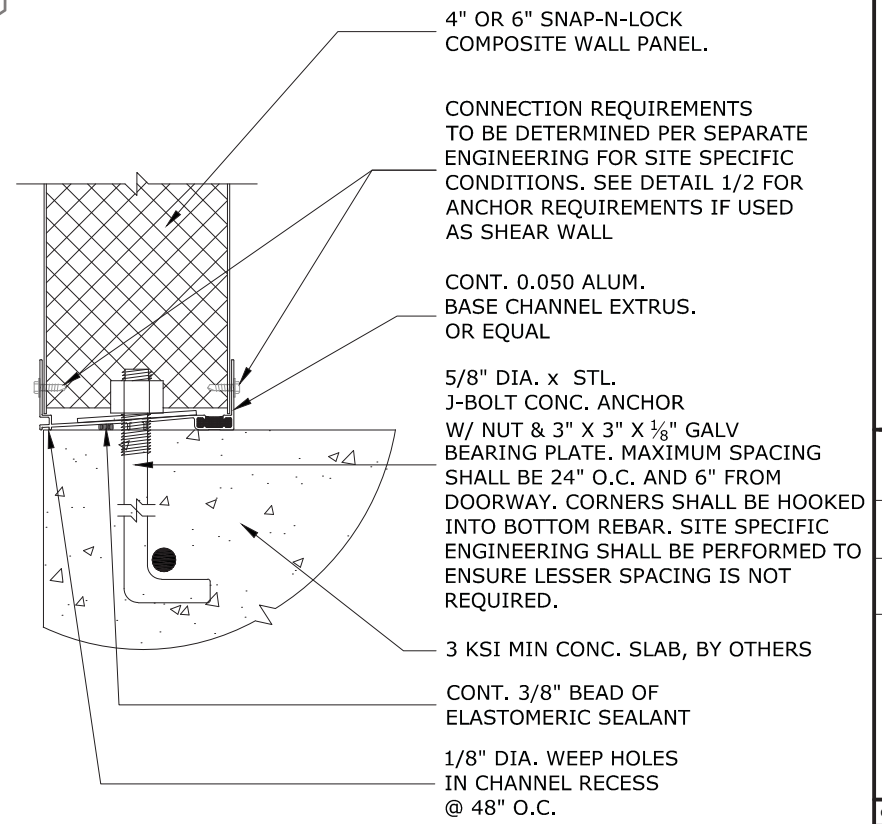
- BASE CHANNEL AS SHOWN IN DETAIL 3/2 SHALL BE INSTALLED FULLY SUPPORTED ON A RIGID FOUNDATION. THE WALL CAP SHOWN IN DETAIL 2/2 SHALL BE USED FOR CONNECTION OF ROOF PANEL TO WALL PANEL.
- THE ALLOWABLE AXIAL LOAD LISTED IN THIS TABLE IS ASSUMED TO BE UNIFORMLY DISTRIBUTED AT THE TOP OF THE WALL PANEL CENTERED ON THE PANEL THICKNESS.

TABLE 3: ALLOWABLE RACKING SHEAR LOADS FOR 4\"/>

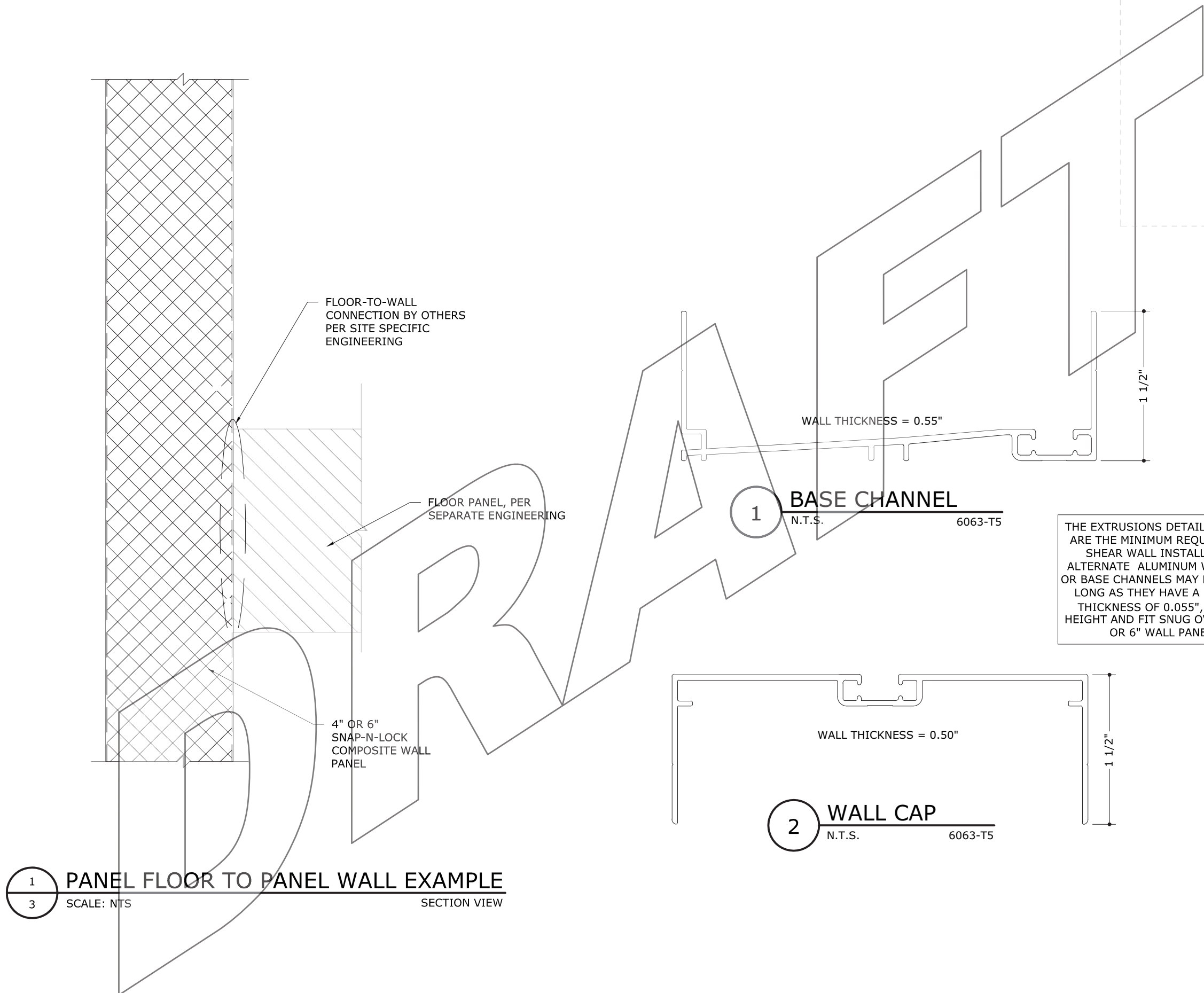
PANEL DIMENSIONS (ft)	ALLOWABLE SHEAR LOAD (plf)
8 x 8	173

TABLE 3 NOTES:

- BASE CHANNEL AS SHOWN IN DETAIL 3/2 SHALL BE INSTALLED FULLY SUPPORTED ON A RIGID FOUNDATION.
- THE MAXIMUM SHEARWALL HEIGHT-TO-WIDTH RATIO IS 1:1.



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1 **PANEL FLOOR TO PANEL WALL EXAMPLE**
 3 SCALE: N.T.S. SECTION VIEW

1 **BASE CHANNEL**
 N.T.S. 6063-T5

2 **WALL CAP**
 N.T.S. 6063-T5

THE EXTRUSIONS DETAILED HEREIN ARE THE MINIMUM REQUIRED FOR SHEAR WALL INSTALLATION. ALTERNATE ALUMINUM WALL CAPS OR BASE CHANNELS MAY BE USED AS LONG AS THEY HAVE A MINIMUM THICKNESS OF 0.055", 1 1/2" MIN HEIGHT AND FIT SNUG OVER THE 4" OR 6" WALL PANELS

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