STRUCTALL BUILDING SYSTEMS, INC.

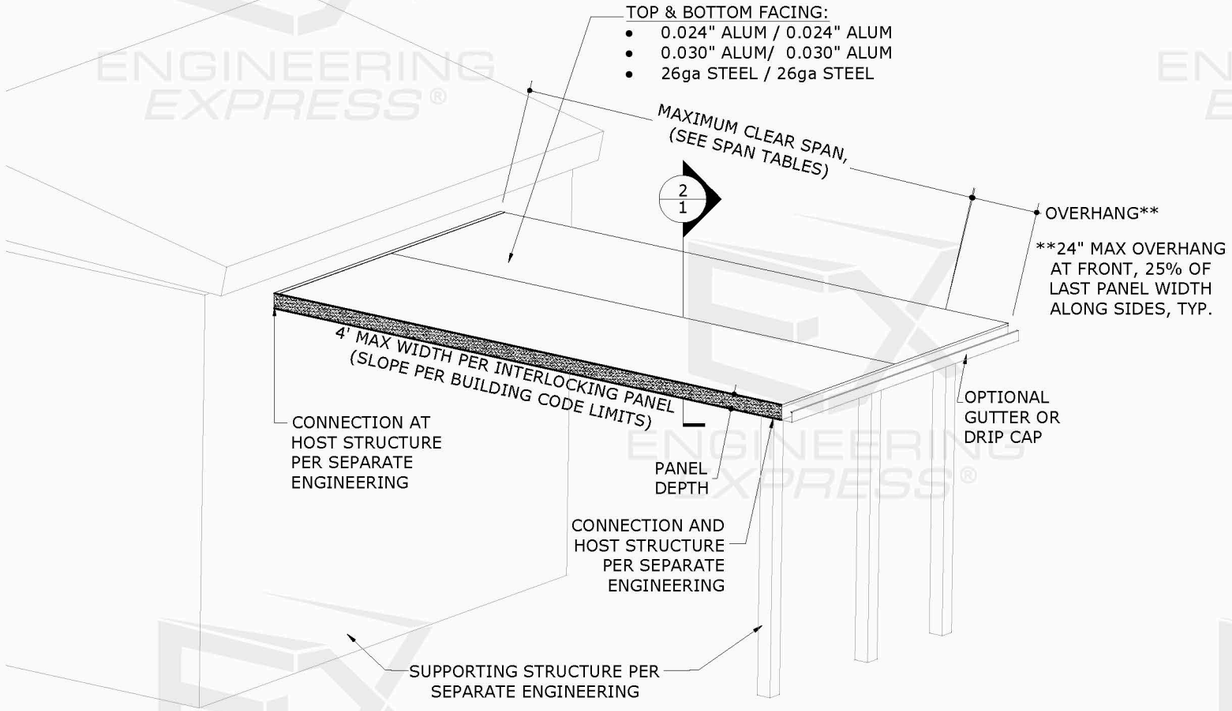
EPS FOAM CORE COMPOSITE PANEL 3", 4" & 6" WITH ALUMINUM OR STEEL SKINS
NOT RATED FOR IMPACT RESISTANCE
VALID FOR USE INSIDE AND OUTSIDE THE HVHZ (SEE LIMITATIONS HEREIN)

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

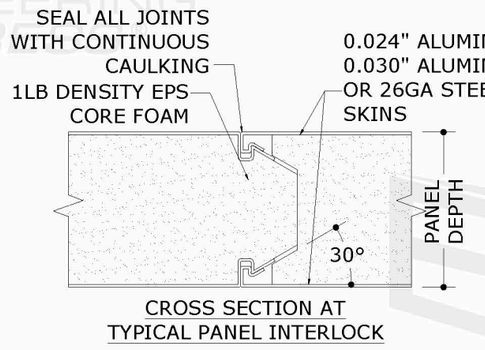
FRANK BENNARDO, P.E.
PE# 0046549 CA# 9885

AUGUST 10, 2023

Digitally signed by Frank Bennardo
Date: 2023.08.21 10:19:41 -04'00'



1/1 CLEAR SPAN ISOMETRIC
N.T.S. TYPICAL USE EXAMPLE, MAY VARY



CROSS SECTION AT TYPICAL PANEL INTERLOCK

2/1 SNAP-N-LOCK PANEL INTERLOCK DETAIL
N.T.S. DETAIL

PAGE INDEX:

DESCRIPTION	PAGE #
COVER PAGE	1
DESIGN & GENERAL NOTES	2
SPAN TABLE	3

TERMINOLOGY:

THE FOLLOWING ABBREVIATIONS APPEAR IN THIS APPROVAL: "ALUM" FOR "ALUMINUM, "ASD" FOR "ALLOWABLE STRESS DESIGN", "ASTM" FOR "AMERICAN SOCIETY FOR TESTING AND MATERIALS", "CS" FOR "CARBON STEEL", "EPS" FOR "EXPANDED POLYSTYRENE", "GA" FOR "GAUGE", "HVHZ" FOR "HIGH-VELOCITY HURRICANE ZONE", "L" FOR "LENGTH, "LB" FOR "POUND", "MAX" FOR "MAXIMUM, "N.T.S." FOR "NOT TO SCALE", "PSF" FOR "POUNDS PER SQUARE FOOT (lb/ft²)", "SPECS" FOR "SPECIFICATIONS", "&" FOR "AND". CONTACT ENGINEERING EXPRESS FOR ADDITIONAL ABBREVIATION/TERMINOLOGY CLARIFICATIONS.

NOTE REGARDING USE OF THIS DOCUMENT & USE OUTSIDE FLORIDA:

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VISIT ECALC.IO/STRUCTALL
FOR SITE-SPECIFIC DEVIATIONS & MORE INFORMATION ABOUT THIS DOCUMENT OR SCAN THIS QR CODE
VISIT ENGINEERINGEXPRESS.COM/STORE FOR ADDITIONAL PLANS, REPORTS & RESOURCES

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23-60049

SCALE: NTS UNLESS NOTED

1 OF 3

FRANK BENNARDO, P.E.
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AUGUST 10, 2023

FRANK L. BENNARDO LICENSE No. PE0046549 STATE OF FLORIDA PROFESSIONAL ENGINEER
08/21/2023

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MAXIMUM (ASD) ALLOWABLE DESIGN PRESSURES:	VARIES AS NOTED IN CLEAR SPAN TABLES

DESIGN NOTES:

1. 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 STRUCTURAL REQUIREMENTS OF THE 8TH EDITION FLORIDA BUILDING CODE (2023) AS WELL AS CURRENT VERSIONS OF THE FLORIDA RESIDENTIAL CODE, INTERNATIONAL BUILDING CODE AND THE INTERNATIONAL RESIDENTIAL CODE. PRESSURE VALUES ON THIS APPROVAL ARE (ASD) ALLOWABLE DESIGN PRESSURES.
2. 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 FIRM FOR ALTERNATE SPAN CALCULATIONS AS MAY BE REQUIRED OR VISIT THE EMAIL/QR CODE HEREIN.
3. EPS CORE COMPOSITE PANELS SHALL BE CONSTRUCTED USING TYPE 3105-H254 ALUMINUM FACINGS OR 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 ALUMINUM 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. REFER TO MANUFACTURER SPECS FOR MORE INFORMATION.
4. IF APPLICABLE, COMPOSITE ROOF PANELS SHALL COMPLY WITH CHAPTER 7 SECTION 720, CHAPTER 8 SECTION 803, CLASS A INTERIOR FINISH, AND CHAPTER 26 SECTION 2603 OF THE FBC.
5. EPS PANEL PERFORMANCE CHARACTERISTICS FOR SELF IGNITION, FLAME SPREAD AND SMOKE DENSITY HAVE BEEN QUALIFIED THROUGH APPLICABLE ASTM TEST STANDARDS AND SHALL BE PROVIDED BY THE MANUFACTURER AS REQUIRED.
6. DESIGN PRESSURES AS NOTED HEREIN ARE BASED ON A MAXIMUM TESTED PRESSURE DIVIDED BY A 2.0 FACTOR OF SAFETY. FOR ALTERNATE SAFETY FACTORS, SPANS SHALL BE ADJUSTED ACCORDINGLY.

GENERAL NOTES:

1. THIS SPECIFICATION HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 8TH EDITION FLORIDA BUILDING CODE (2023).
2. FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
3. 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.
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. 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. THIS DOCUMENT ALONE IS NOT INTENDED FOR PERMIT.
6. THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS ON ROOF, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. THIS ADDITIONAL ROOF LOAD CRITERIA SHALL BE PROPERLY ANALYZED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT.
7. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
8. 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.
9. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
10. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.

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-	-	-	-
-	-	-	-

23-60049

SCALE: NTS UNLESS NOTED

2 OF 3

MAXIMUM ALLOWABLE CLEAR SPAN TABLE:

Total Load*	Deflection Limit (L/...)	3" Panels		4" Panels			6" Panels		
		0.024" Alum Skin 1-LB EPS	0.030" Alum Skin 1-LB EPS	0.024" Alum Skin 1-LB EPS	0.030" Alum Skin 1-LB EPS	26ga Steel Skin 1-LB EPS	0.024" Alum Skin 1-LB EPS	0.030" Alum Skin 1-LB EPS	26ga Steel Skin 1-LB EPS
+/- 10 PSF	80	16'-11"	16'-0"	20'-0"	20'-0"	20'-2"	22'-1"	24'-0"	23'-0"
	120	14'-10"	16'-0"	17'-6"	19'-9"	20'-2"	21'-9"	24'-0"	23'-0"
	180	12'-11"	16'-0"	15'-3"	17'-3"	18'-5"	19'-0"	21'-4"	22'-9"
	240	11'-9"	15'-8"	13'-11"	15'-8"	16'-9"	17'-3"	19'-5"	20'-8"
+/- 15 PSF	80	14'-2"	16'-0"	16'-5"	17'-7"	16'-6"	18'-0"	20'-2"	20'-4"
	120	12'-11"	16'-0"	15'-3"	17'-3"	16'-6"	18'-0"	20'-2"	20'-4"
	180	11'-3"	15'-1"	13'-4"	15'-1"	16'-1"	16'-7"	18'-8"	19'-11"
	240	10'-3"	13'-8"	12'-1"	13'-8"	14'-8"	15'-1"	16'-11"	18'-1"
+/- 20 PSF	80	12'-3"	13'-10"	14'-3"	15'-3"	14'-3"	15'-7"	17'-5"	17'-8"
	120	11'-9"	13'-10"	13'-11"	15'-3"	14'-3"	15'-7"	17'-5"	17'-8"
	180	10'-3"	13'-8"	12'-1"	13'-8"	14'-3"	15'-1"	16'-11"	17'-8"
	240	9'-4"	12'-5"	11'-0"	12'-5"	13'-3"	13'-8"	15'-4"	16'-5"
+/- 25 PSF	80	10'-11"	12'-5"	12'-9"	13'-8"	12'-9"	14'-0"	15'-7"	15'-9"
	120	10'-11"	12'-5"	12'-9"	13'-8"	12'-9"	14'-0"	15'-7"	15'-9"
	180	9'-6"	12'-5"	11'-3"	12'-8"	12'-9"	14'-0"	15'-7"	15'-9"
	240	8'-8"	11'-6"	10'-3"	11'-6"	12'-4"	12'-8"	14'-3"	15'-3"
+/- 30 PSF	80	10'-0"	11'-4"	11'-7"	12'-5"	11'-8"	12'-9"	14'-3"	14'-5"
	120	10'-0"	11'-4"	11'-7"	12'-5"	11'-8"	12'-9"	14'-3"	14'-5"
	180	8'-11"	11'-4"	10'-7"	11'-11"	11'-8"	12'-9"	14'-3"	14'-5"
	240	8'-2"	10'-10"	9'-7"	10'-10"	11'-7"	11'-11"	13'-5"	14'-4"
+/- 35 PSF	80	9'-3"	10'-5"	10'-9"	11'-6"	10'-9"	11'-9"	13'-2"	13'-4"
	120	9'-3"	10'-5"	10'-9"	11'-6"	10'-9"	11'-9"	13'-2"	13'-4"
	180	8'-6"	10'-5"	10'-1"	11'-4"	10'-9"	11'-9"	13'-2"	13'-4"
	240	7'-9"	10'-4"	9'-2"	10'-4"	10'-9"	11'-4"	12'-9"	13'-4"
+/- 40 PSF	80	8'-8"	9'-9"	10'-1"	10'-9"	10'-1"	11'-0"	12'-4"	12'-5"
	120	8'-8"	9'-9"	10'-1"	10'-9"	10'-1"	11'-0"	12'-4"	12'-5"
	180	8'-2"	9'-9"	9'-7"	10'-9"	10'-1"	11'-0"	12'-4"	12'-5"
	240	7'-5"	9'-9"	8'-9"	9'-10"	10'-1"	10'-10"	12'-2"	12'-5"
+/- 45 PSF	80	8'-2"	9'-3"	9'-6"	10'-2"	9'-6"	10'-5"	11'-7"	11'-9"
	120	8'-2"	9'-3"	9'-6"	10'-2"	9'-6"	10'-5"	11'-7"	11'-9"
	180	7'-10"	9'-3"	9'-3"	10'-2"	9'-6"	10'-5"	11'-7"	11'-9"
	240	7'-1"	9'-3"	8'-5"	9'-6"	9'-6"	10'-5"	11'-7"	11'-9"
+/- 50 PSF	80			9'-0"	9'-7"	9'-0"	9'-10"	11'-0"	11'-2"
	120			9'-0"	9'-0"	9'-0"	9'-10"	11'-0"	11'-2"
	180			8'-11"	8'-11"	9'-0"	9'-10"	11'-0"	11'-2"
	240			8'-1"	8'-1"	9'-0"	9'-10"	11'-0"	11'-2"
+/- 55 PSF	80			8'-7"	8'-7"	8'-7"	9'-5"	10'-6"	10'-7"
	120			8'-7"	8'-7"	8'-7"	9'-5"	10'-6"	10'-7"
	180			8'-7"	8'-7"	8'-7"	9'-5"	10'-6"	10'-7"
	240			7'-10"	8'-10"	8'-7"	9'-5"	10'-6"	10'-7"
+/- 60 PSF	80			8'-2"	8'-9"	8'-3"	9'-0"	10'-1"	10'-2"
	120			8'-2"	8'-9"	8'-3"	9'-0"	10'-1"	10'-2"
	180			8'-2"	8'-9"	8'-3"	9'-0"	10'-1"	10'-2"
	240			7'-7"	8'-7"	8'-3"	9'-0"	10'-1"	10'-2"
+/- 65 PSF	80			7'-9"	7'-9"	7'-11"	8'-8"	9'-8"	9'-9"
	120			7'-9"	7'-9"	7'-11"	8'-8"	9'-8"	9'-9"
	180			7'-9"	7'-9"	7'-11"	8'-8"	9'-8"	9'-9"
	240			7'-5"	7'-5"	7'-11"	8'-8"	9'-8"	9'-9"
+/- 70 PSF	80			7'-3"	7'-3"	7'-7"	8'-4"	9'-4"	9'-5"
	120			7'-3"	7'-3"	7'-7"	8'-4"	9'-4"	9'-5"
	180			7'-3"	7'-3"	7'-7"	8'-4"	9'-4"	9'-5"
	240			7'-3"	7'-3"	7'-7"	8'-4"	9'-4"	9'-5"
+/- 75 PSF	80					7'-4"	8'-0"	9'-0"	9'-1"
	120					7'-4"	8'-0"	9'-0"	9'-1"
	180					7'-4"	8'-0"	9'-0"	9'-1"
	240					7'-4"	8'-0"	9'-0"	9'-1"
+/- 80 PSF	80							8'-8"	8'-10"
	120							8'-8"	8'-10"
	180							8'-8"	8'-10"
	240							8'-8"	8'-10"

CLEAR SPAN TABLE USE INSTRUCTIONS:

1. DETERMINE TYPE OF ENCLOSURE TO BE COVERED (ENCLOSED, SCREENED WALLS, OR OPEN STRUCTURE). USE QR CODE/WEB ADDRESS ON PAGE 1 FOR HELP.
2. DETERMINE THE SITE SPECIFIC REQUIRED DESIGN PRESSURE PROVIDED BY SEPARATE ENGINEERING BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE.
3. (SEE LINK HEREIN FOR ADDITIONAL RESOURCES)
4. FIND ALLOWABLE COMPOSITE PANEL CLEAR SPAN IN TABLES FOR APPROPRIATE PANEL DEPTH, FACING THICKNESS SELECTED.
5. A 2PSF PANEL DEAD LOAD HAS BEEN CONSIDERED IN THESE TABLES.
6. ▨ INDICATES VALUES NOT VALID FOR USE.

VALUES ARE UNIFORMLY DISTRIBUTED LOAD. FOR NON-LINEAR LOADS SUCH AS SNOW DRIFT, SITE SPECIFIC RESULTS SHALL BE CONVERTED TO AN EQUIVALENT UNIFORM LOAD FOR TABLE COMPARISON.

*TOTAL LOAD = SUM OF ALL LOADS (WIND, SNOW, LIVE, DEAD, ETC.) ACTING IN THE WORST CASE LOAD COMBINATION AS DETERMINED PER SEPARATE ENGINEERING.

PANELS WITH FAN BEAMS SHALL BE CONSIDERED EQUIVALENT TO SIMILAR PANELS WITHOUT FAN BEAMS. DESIGN PROFESSIONALS MAY INCLUDE THE STRENGTH OF THE FAN BEAM TO EXCEED SHOWN FIGURES AS PART OF SITE-SPECIFIC ENGINEERING. FAN BEAM SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS

FRANK BENNARDO, P.E.
PE# 0046549 CA# 9885

AUGUST 10, 2023

FRANK L. BENNARDO LICENSE No PE0046549 STATE OF FLORIDA PROFESSIONAL ENGINEER
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