

**EVALUATION REPORT OF
IPANEL STRUCTURAL INSULATED PANELS**

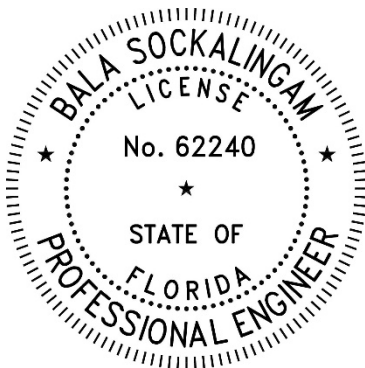
**FLORIDA BUILDING CODE 8TH EDITION (2023)
FLORIDA PRODUCT APPROVAL
FL 22396.1-R3
STRUCTURAL COMPONENTS
STRUCTURAL WALL**

**Prepared For:
Outdoor Venture Corporation
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**Prepared By:
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**This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (1 Page)**

**Report No. C2706-2
Date: 7.31.2023**



This item has been digitally signed and sealed by Bala Sockalingam, PE, on the date indicated.

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Manufacturer:	Outdoor Venture Corporation
Product Name:	iPanel structural insulated panels
Panel Description:	IPanels are factory-assembled, metal faced, sandwich panels with a chemically bonded dense polyurethane core. Maximum 24" coverage. Panel thickness: 4"
Panel Core:	The foam core was BASF ELASTOPOR® P 19080R Resin and ELASTOPOR® P 1001U Isocyanate which was two component polymeric MDI based system utilizing water and HFC245fa as blowing agents. Nominal core density is 2.25 pcf with flame spread and smoke-developed index less than 20 and 450, respectively, when tested in accordance with ASTM E84-15.
Exterior Skin:	Min. 26 ga., 33 ksi galvanized coated steel (ASTM A653), galvalume AZ50 or AZ55 coated steel (ASTM A792) flat profiles with embossed or smooth finish. Minimum base metal thickness is 0.018" as per FBC 2023 Section 1405.2.
Interior Skin:	Min. 26 ga., 33 ksi galvanized coated steel (ASTM A653), galvalume AZ50 or AZ55 coated steel (ASTM A792) flat profiles with a 4" wide, 2.5" deep groove and with embossed or smooth finish. Minimum base metal thickness is 0.018" as per FBC 2023 Section 1405.2.
Support Description:	Min. 16 ga., 50 ksi steel section (Must be designed by others)
Design Pressure:	Inward and outward loads are shown in the allowable load span table in the installation drawing. The allowable loads for panel strength, connection and deflection limit of L/180 were developed from test data. Maximum panel span is 12'.
Panel Attachment:	Panel ends capped with minimum 16 ga., 4" x 2" channel or H-channel and fastened with 3/16" diameter stainless steel pop rivets spaced at 12" o.c. on both flanges of the channel. The channel fastening to supports must be designed by others to carry load imposed on panels. Fasteners are corrosion resistant as per FBC 2023 Section 1405.17.
Test Standards:	Wall assembly tested in accordance with ASTM E1592-05(2012) 'Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference' and ASTM E72-98 "Standard Test Methods of Conducting Strength Tests of Panels for Building Construction" as outlined in Acceptance Criteria for Sandwich Panels AC04.

Test Equivalency: Foam core used in iPanels was tested in accordance with ASTM E84-15 as reported in QAI report TJ4754-4-R1. ASTM E84-15 procedures utilized in these test reports comply with test procedures prescribed in ASTM E84-18b.

The test procedure in ASTM E72-98 standard complies with the testing requirements of ASTM E330-14 “Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference”.

The test procedure in ASTM E1592-05(2012) complies with test procedure prescribed in ASTM E1592-05(2017).

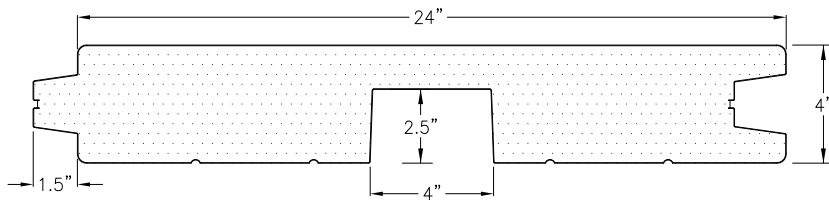
Code Compliance: The product described herein has demonstrated compliance with FBC 2023 Section 1404.5 and 2603.3.

Product Limitations: Design wind loads shall be determined for each project in accordance with FBC 2023 Section 1609 or ASCE 7-22 using allowable stress design. The maximum panel span listed herein shall not be exceeded. The design pressure for reduced panel span may be computed using rational analysis prepared by a Florida Professional Engineer or Outdoor’s load span table. This evaluation report is not applicable in High Velocity Hurricane Zone.

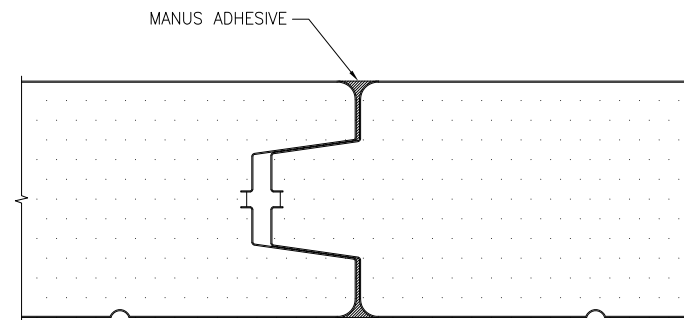
Supporting Documents: ASTM E1592 Test Reports
ENCON Technology Inc.
C2141-1, Reporting Date 6/7/2017

ASTM E84 Test Report
QAI Laboratories
TJ4754-4-R1, Reporting Date 5/17/2017

ASTM E72 Test Report
RADCO A Twining Company
RAD-2811, Reporting Date 3/21/2002

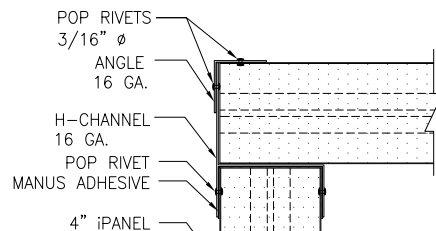


iPANEL SECTION
(26-26 GA., 4" THICK FOAM)

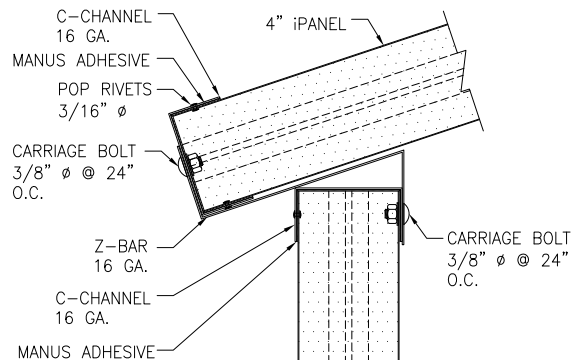


PANEL SIDELAP

ROOF CONDITION
FLAT ROOF

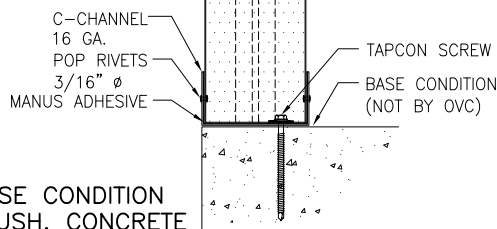


ROOF CONDITION
PITCHED ROOF

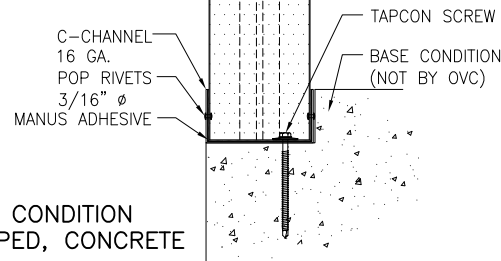


MAX 12' O.C.
(SEE LOAD SPAN TABLE
FOR ALLOWABLE LOADS
AND SPANS)

BASE CONDITION
FLUSH, CONCRETE



BASE CONDITION
STEPPED, CONCRETE



ALLOWABLE LOADS

SPAN (FT)	6	7	8	9	10	11	12
INWARD & OUTWARD LOAD (PSF)	100.0	85.7	75.0	66.7	60.0	54.5	50.0

GENERAL NOTES:

1. THIS STRUCTURAL WALL PANEL SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH FLORIDA BUILDING CODE (FBC). THE DESIGN PRESSURES AS DETERMINED FROM SECTION 1609 AND ASCE 7-22 MUST BE MULTIPLIED BY 0.6.
2. PANELS ARE MAX 24" WIDE, CONSIST OF MIN. 26 GA. ($t = 0.018"$ MIN.) EXTERIOR OR INTERIOR STEEL SKINS ($F_y = \text{MIN. } 33 \text{ KSI}$) AND ARE SANDWICHED WITH FOAMED-IN-PLACE NON-CFC 2.25 LB/CU. FT. DENSITY POLYURETHANE.
3. PANELS SHALL BE INSTALLED OVER WALL SUPPORT AS SPECIFIED ON THIS DRAWING.
4. THE SEAMS ARE FLASHED & PROPERLY SEALED PER OVC SPECIFICATIONS AND EACH PANEL END IS SECURED PER THIS DRAWING.
5. REQUIRED DESIGN WIND LOADS SHALL BE DETERMINED FOR EACH PROJECT. THIS PANEL SYSTEM MAY NOT BE INSTALLED WHEN THE REQUIRED DESIGN WIND LOADS ARE GREATER THAN THE ALLOWABLE WIND LOADS SPECIFIED ON LOAD SPAN TABLE.
6. ALL FASTENERS SHALL BE CORROSION RESISTANT FASTENERS.
7. THE SUPPORTING STRUCTURE, OVER WHICH THE PANELS ARE TO BE INSTALLED, MUST BE MINIMUM 16 GAGE (MIN. 0.059") STEEL WITH MIN. $F_y = 50 \text{ KSI}$.

DRAWN BY: B.S.		CHECKED BY: M.P.	
PLOT:		DATE: 6/7/17	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE iPANEL STRUCTURAL INSULATED PANELS			
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DRAWING NO. C2706-2		REV.	
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