

**EVALUATION REPORT OF
STEEL AND METAL SYSTEMS, INC.
'PBR PANEL'**

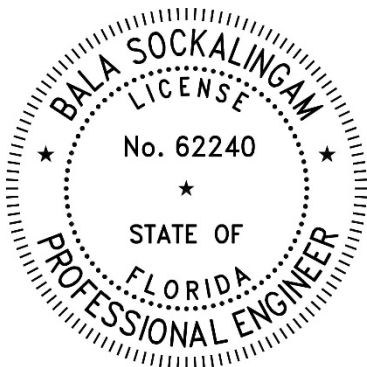
**FLORIDA BUILDING CODE 8TH EDITION (2023)
FLORIDA PRODUCT APPROVAL
FL 39083.3-R1
STRUCTURAL COMPONENTS
ROOF DECK**

Prepared For:
Steel and Metal Systems, Inc.
505 Main St
Blackshear, GA 31516
Telephone: 912 449 9352
Fax: 912 449 1905

Prepared By:
Bala Sockalingam, Ph.D., P.E.
Florida Professional Engineer #62240
1216 N Lansing Ave., Suite C
Tulsa, OK 74106
Telephone: (918) 492-5992

This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (1 Page)

Report No. C2703-3
Date: 7.28.2023



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

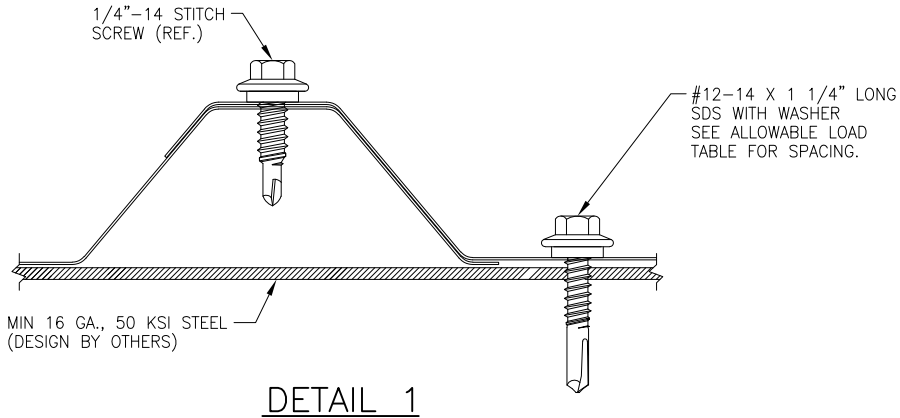
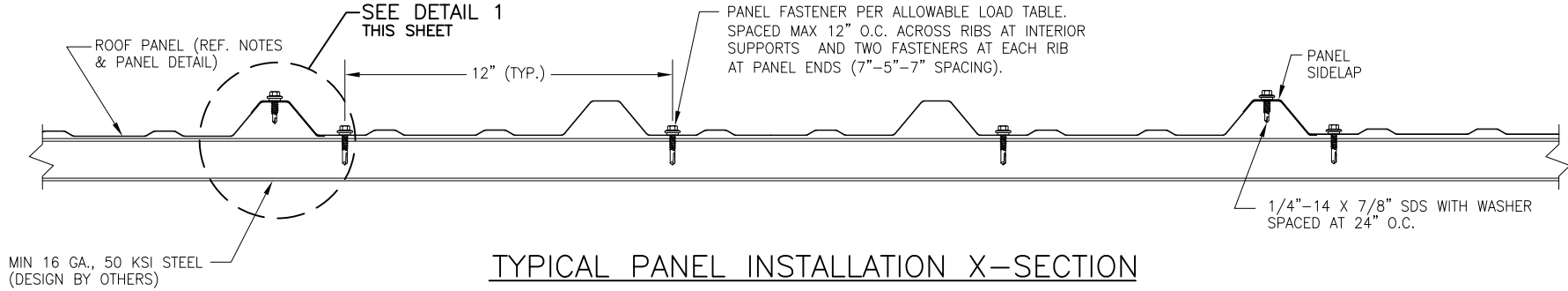
Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

2023.07.28
14:12:22 -05'00'

Manufacturer:	Steel and Metal Systems, Inc.
Product Name:	PBR Panel
Panel Description:	36" wide coverage with (4) 1-1/4" high ribs
Materials:	Min. 26 ga., 80 ksi steel or min. 24 ga., 50 ksi steel. Galvanized coated steel (ASTM A653) or Galvalume coated steel (ASTM A792) or painted steel (ASTM A755). Corrosion resistant as per FBC 2023 Section 1507.4.3.
Support Description:	Min. 16 ga., 50 ksi steel section. (Must be designed by others)
Slope:	1/2:12 or greater in accordance with FBC 2023 Section 1507.4.2. Requires applied lap sealant for roof slopes less than 3:12.
Design Uplift Pressure: (Factor of Safety = 2)	46.9 psf at fastener spacing of 60 o.c. (3 or more spans) 124.5 psf at fastener spacing of 24 o.c. (3 or more spans)
Panel Attachment:	#12-14 x 1.25" long self-drilling screws with washer. Fasteners are corrosion resistant as per FBC 2023 Section 1507.4.4.
At panel ends	7"-5"-7" o.c. across panel width
At interior supports	12" o.c. across panel width
Sidelap Attachment:	¼"-14 x 7/8" long self-drilling screws with washer at 24" o.c. Fasteners are corrosion resistant as per FBC 2023 Section 1507.4.4.
Test Standards:	Roof assembly tested in accordance with ASTM E1592-05(2017). 'Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference' and FM 4470 (2016) Section 4.6 'Resistance to Foot Traffic'.
Code Compliance:	The product described herein has demonstrated compliance with FBC 2023 Section 1507.4.
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 fastener spacing listed herein shall not be exceeded. The design uplift pressure for reduced fastener spacing may be computed using rational analysis prepared by a Florida Professional Engineer or Steel and Metal Systems load span table. This evaluation report is not applicable in High Velocity Hurricane Zone. Fire classification is not within the scope of this Evaluation Report. Refer to FBC 2023 Section 1505 and current approved roofing materials directory or ASTM E108/UL790 report from an accredited laboratory for fire ratings of this product.

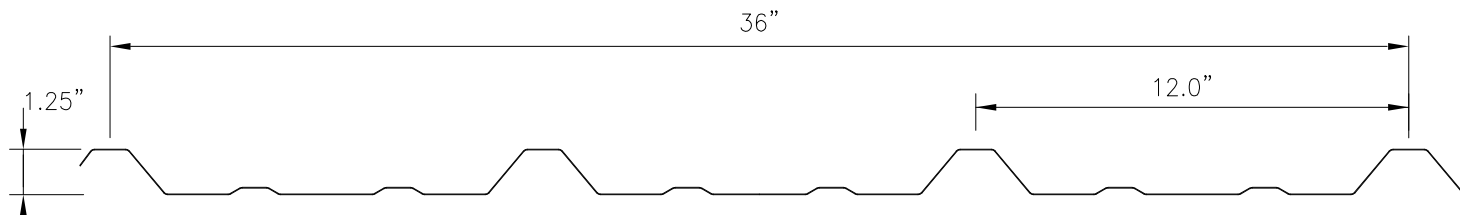
Supporting Documents: ASTM E1592 Test Reports
ENCON Technology Inc.
Project No. C2489-1, Reporting Date 7/23/2021

FM 4470 Test Report
ENCON Technology Inc.
Project No. C2489-4, Reporting Date 7/21/2021



GENERAL NOTES:

1. STRUCTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. PANELS SHALL BE MIN. 26 GA. ($t = 0.0175$). EFFECTIVE COVERING WIDTH OF PANEL = 36".
3. ROOF PANELS SHALL BE INSTALLED OVER STRUCTURE AS SPECIFIED ON THIS DRAWING.
4. 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 THIS DRAWING.
5. ALL FASTENERS MUST BE IN ACCORDANCE WITH THIS DRAWING & THE FLORIDA BUILDING CODE. IF A DIFFERENCE OCCURS BETWEEN THE MINIMUM REQUIREMENTS OF THIS DRAWING & THE CODE, THE CODE SHALL CONTROL.
6. PURLINS/JOISTS/TRUSSES MUST BE DESIGNED TO WITHSTAND WIND LOADS AS REQUIRED FOR EACH APPLICATION AND ARE THE RESPONSIBILITY OF OTHERS.
7. REQUIRES APPLIED LAP SEALANT FOR ROOF SLOPE < 3:12.



PANEL SECTION
(MIN 26 GA.)

DRAWN BY: B.S.	CHECKED BY: S.D.
PLOT:	DATE: 7/23/2021
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE PBR ROOF PANEL	
CONSULTANTS BALA SOCKKALINGAM, PH.D., P.E. 1216 N LANSING AVE., SUITE C TULSA, OK 74106 PHONE: 918-492-5992 FAX: 866-366-1543	
MANUFACTURER STEEL AND METAL SYSTEMS, INC. 505 Main St Blackshear, GA 31516 912 449 9352	
DRAWING NO.	REV.
2703-3	
PAGE NO.	
1	1

STEEL & METAL SYSTEMS, INC.**PBR Panel
Allowable Uplift Loads
(Min 26 ga.)**

Description	Fastener Spacing along panel length (in)	Allowable Uplift Load (psf)
Coverage width: 36"	24	124.5
	27	110.7
Panel Fasteners #12-14 x 1.25" long hex head screws with sealed washer	30	99.6
	33	90.5
	36	83.0
	39	76.6
	42	71.1
Panel fasteners spaced at 12" o.c. across panel width	45	66.4
	48	62.3
	51	58.6
	54	55.3
Sidelap fasteners spaced at 24" o.c.	57	52.0
	60	46.9

Notes:

1. The bold numbers indicate design loads calculated from test data with safety factor of 2.
2. Panels must be installed as per Evaluation Report FL 39083.3 and Steel and Metal Systems current installation procedure.
3. Three or more spans condition.