

**EVALUATION REPORT OF  
METAL SALES MANUFACTURING CORPORATION  
'MAGNA-LOC PANEL'**

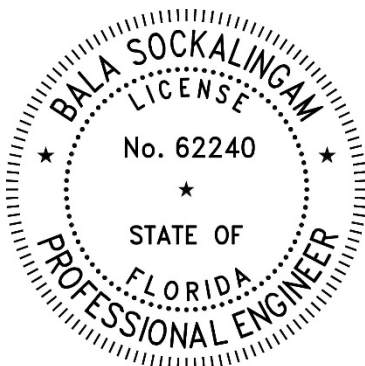
**FLORIDA BUILDING CODE 8TH EDITION (2023)  
FLORIDA PRODUCT APPROVAL  
FL 10999.5-R5  
STRUCTURAL COMPONENTS  
ROOF DECK**

**Prepared For:  
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**This report consists of  
Evaluation Report (3 Pages including cover)  
Installation Details (1 Page)  
Load Span Table (1 Page)**

**Report No. C2670-5  
Date: 7.21.2023**



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.

Manufacturer: Metal Sales Manufacturing Corporation

Product Name: Magna-Loc

Panel Description: Standing seam panel with max. 16" wide coverage and 2" high ribs

Materials: 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: 1/4:12 or greater in accordance with FBC 2023 Section 1507.4.2.

Underlayment: Not Required

Design Uplift Pressure: 51.0 psf at clip spacing of 60" o.c. with 24 ga. panel  
146.7 psf at clip spacing of 12" o.c. with min. 24 ga. panel  
73.7 psf at clip spacing of 60" o.c. with 22 ga. panel

Panel Attachment: MC 1203 clip with (2) 1/4"-14 x 1-1/2" long self-drilling screws per clip. Clips and fasteners are corrosion resistant as per FBC 2023 Section 1506.7 and 1507.4.4, respectively.

Test Standards: Roof 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 FM 4470 Section 5.5 'Resistance to Foot Traffic'.

Test Equivalency: The test procedure in ASTM E1592-01(2012) complies with test procedure prescribed in ASTM E1592-05(2017).  
The test procedure in FM 4470 (1992) complies with test procedure prescribed in FM 4470 (2016) Section 4.6 'Resistance to Foot Traffic'.

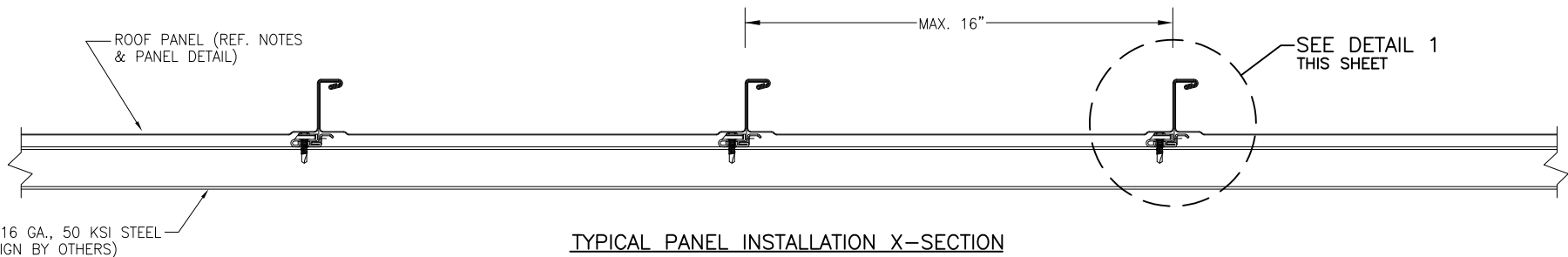
Code Compliance: The product described herein has demonstrated compliance with FBC 2023 Section 1507.4.

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 clip spacing listed herein shall not be exceeded. The design pressure for reduced clip spacing may be computed using rational analysis prepared by a Florida Professional Engineer or based on Metal Sales 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

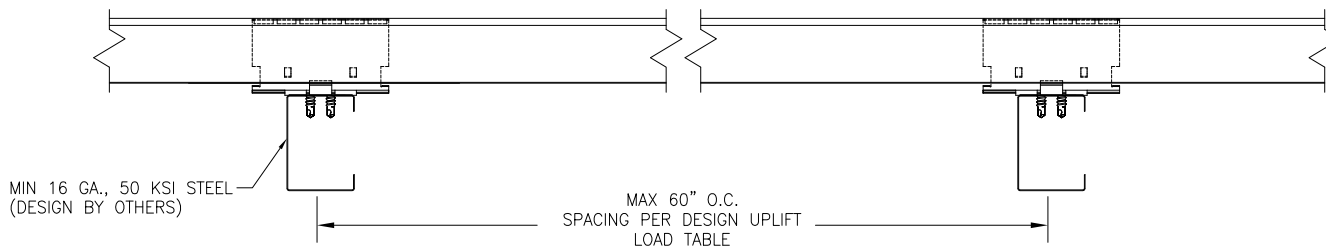
directory or ASTM E108/UL790 report from an accredited laboratory for fire ratings of this product.

Supporting Documents: ASTM E1592 Test Reports  
ENCON Technology Inc.  
C1665-1 & 2, Reporting Date 11/6/2009

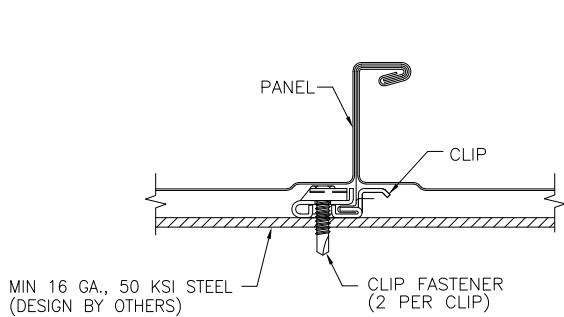
FM 4470 Test Report  
ENCON Technology Inc.  
C1587-4, Reporting Date 6/30/2008



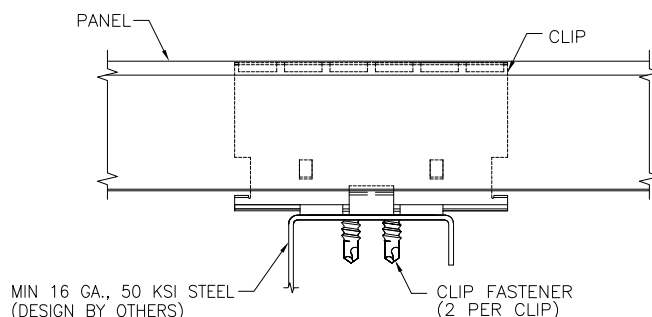
TYPICAL PANEL INSTALLATION X-SECTION



TYPICAL SIDE VIEW

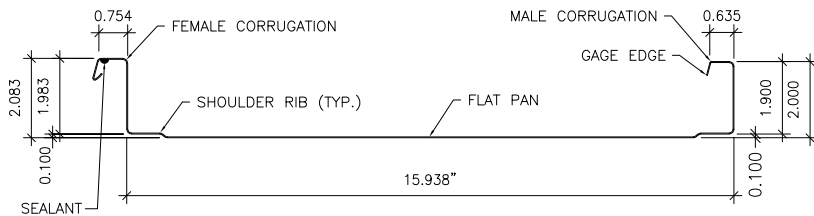


CLIP SECTION VIEW



CLIP SIDE VIEW

DETAIL 1



PANEL SECTION

(MIN 24 GA.)

**GENERAL NOTES:**

1. STRUCTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS SHALL BE 24 GA. ( $t = 0.022$ " ) OR 22 GA. ( $t = 0.028$ " ). EFFECTIVE COVERING WIDTH OF PANEL = 16".
3. THE 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. CLIPS AND FASTENERS MUST BE IN ACCORDANCE WITH THIS DRAWING & 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.

NO.	REVISION DESCRIPTION	BY	DATE

DRAWING TITLE		MAGNA-LOC STANDING SEAM ROOF PANEL	
CONSULTANTS	MANUFACTURER	METAL SALES MANUFACTURING CORP.	
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DRAWING NO.	REV.
2670-5	
PAGE NO.	
1	OF 1

DRAWN BY: B.S. CHECKED BY: D.S.  
 PLOT: DATE: 7/14/2023

**METAL SALES MANUFACTURING CORPORATION**  
**Magna-Loc Panel with Standard Clip**  
**Design Uplift Loads**

Clip spacing along length (in)	Design Uplift Loads (psf)	
	24 ga.	22 ga.
<b>12</b>	<b>146.7</b>	146.7
18	134.7	137.6
24	122.8	128.5
30	102.0	119.3
36	85.0	110.2
42	72.9	101.1
48	63.8	92.0
54	56.7	81.9
<b>60</b>	<b>51.0</b>	<b>73.7</b>

**Notes:**

1. The bold numbers indicate design loads calculated from test data with safety factor of 2.
2. The design load for 22 ga. panel at 12" clip spacing was based on 24 ga. test data.
3. The panels are fastened to support with standard MC clips with (2) 1/4"-14 SDS.
4. Panels must be installed as per Evaluation Report FL 10999.5 and Metal Sales current installation procedure.
5. Three or more spans condition.