

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

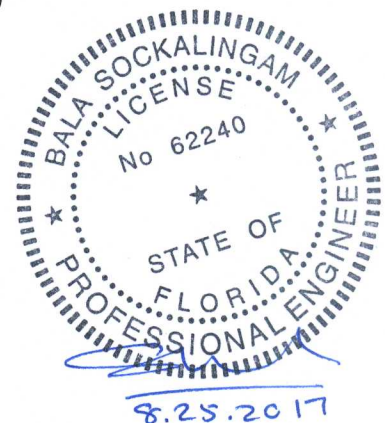
**FLORIDA BUILDING CODE 6TH EDITION (2017)  
FLORIDA PRODUCT APPROVAL  
FL 10999.2-R3  
STRUCTURAL COMPONENTS  
ROOF DECK**

**Prepared For:  
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**This report consists of  
Evaluation Report (3 Pages including cover)  
Installation Details (2 Pages)  
Load Span Table (1 Page)**

**Report No. C2180-2  
Date: 8.25.2017**



Manufacturer: Metal Sales Manufacturing Corporation

Product Name: Aluminum Magna-Loc

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

Materials: 0.032" or 0.040" thick 3003-H14 or 3105-H24 Alloy

Support Description: Min 22 ga., 50 ksi steel section or deck. The support or deck and their connections must be designed by other to carry the panel loads.

Insulation: Max. 4" thick rigid board insulation in accordance with FBC 2017 Section 1508.2. Used with steel decks.

Slope: 1/4:12 or greater in accordance with FBC 2017 Section 1507.4.2.

Design Uplift Pressure: 30.0 psf @ clip spacing of 60" o.c. for 0.032" thick panel  
87.5 psf @ clip spacing of 12" o.c. for 0.032" thick panel  
41.0 psf @ clip spacing of 60" o.c. for 0.040" thick panel  
105.0 psf @ clip spacing of 12" o.c. for 0.040" thick panel

Panel Attachment: MC 1203 clip with stainless steel clip tab. For supports equal to or greater than 16 ga., the clips are fastened with (2) 1/4"-14 SDS. For supports equal to or less than 18 ga., the clips are fastened with (2) Trufast HD #14 roofing fasteners. For steel decks, the clips are fastened with (2) Trufast HD #14 roofing fasteners through 4" x 5" x 20 ga. bearing plate and rigid insulation into deck. Fastener shall be of sufficient length to penetrate through the deck a minimum of 3/8".

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 FM 4470 (1992) comply with test procedure prescribed in FM 4470 (2012).

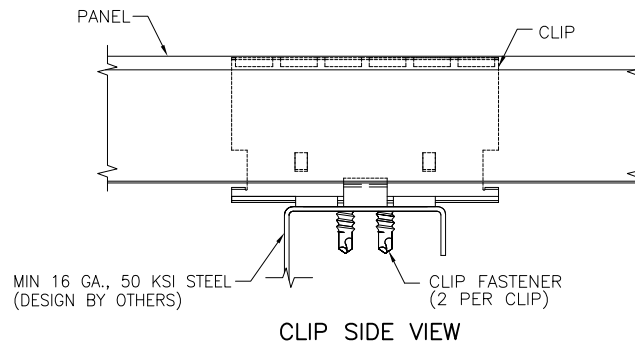
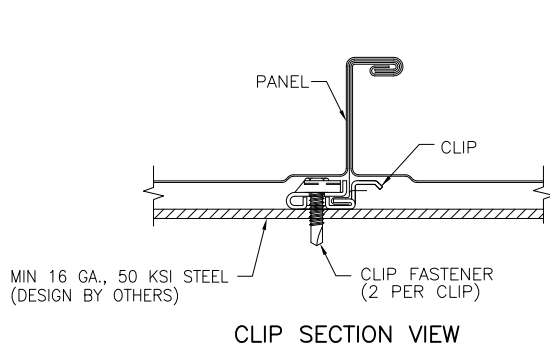
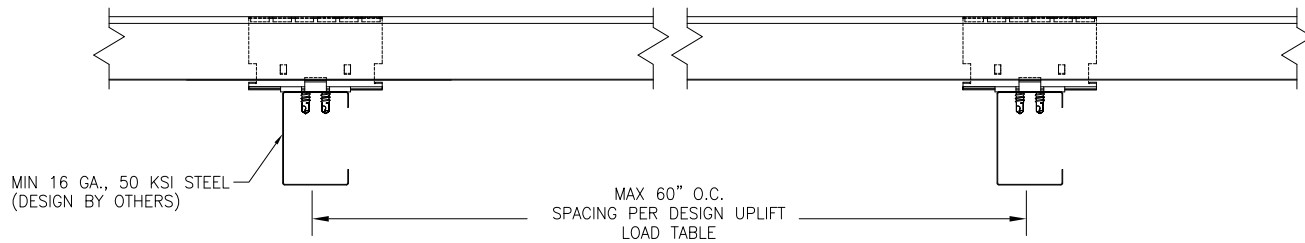
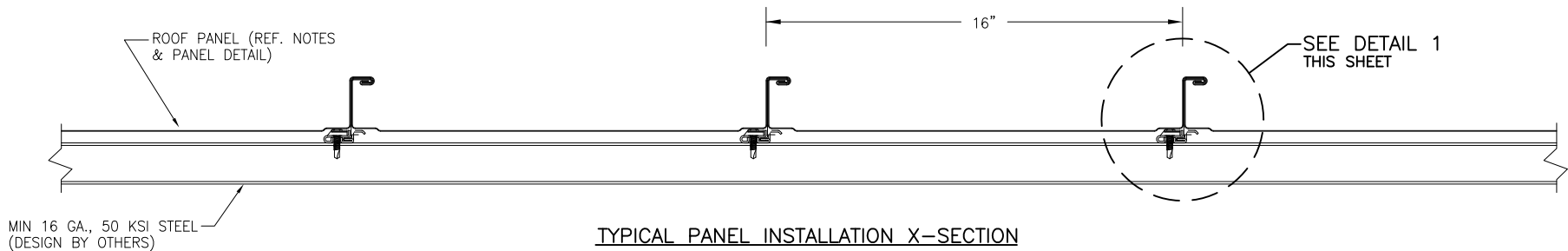
Code Compliance: The product described herein has demonstrated compliance with FBC 2017 Section 1507.4.

Product Limitations: Design wind loads shall be determined for each project in accordance with FBC 2017 Section 1609 or ASCE 7-10 using allowable stress design. The maximum support 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

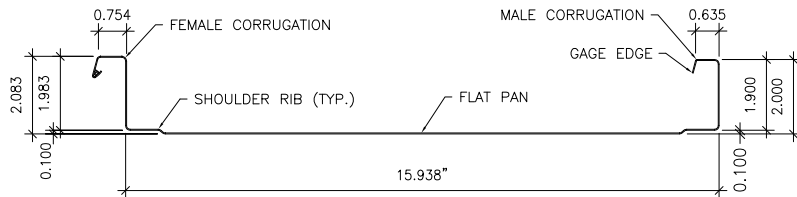
report is not applicable in High Velocity Hurricane Zone. Fire classification is not within scope of this Evaluation Report. Refer to FBC 2017 Section 1505 and current approved roofing materials directory or ASTM E108/UL790 report from an accredited laboratory for fire ratings of this product.

Supporting Documents: ASTM E1592 Test Reports  
ENCON Technology Inc.  
C1718-1, Reporting Date 6/30/10

FM 4470 Test Report  
ENCON Technology Inc  
C1587-4, Reporting Date 6/30/08



DETAIL 1



(MIN 0.032" THICK ALUMINUM)

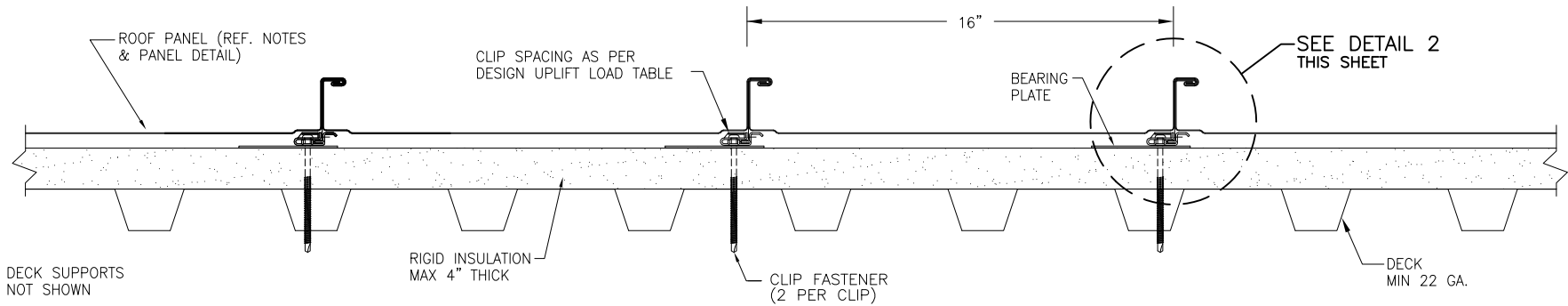
**GENERAL NOTES:**

1. STRUCTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS SHALL BE 0.032" OR 0.040" THICK ALUMINUM (3003-H14 OR 3105-H24). EFFECTIVE COVERING WIDTH OF PANEL = 16".
3. THE ROOF PANELS SHALL BE INSTALLED OVER STRUCTURE AS SPECIFIED ON THESE DRAWINGS.
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 THESE DRAWINGS.
5. CLIPS AND FASTENERS MUST BE IN ACCORDANCE WITH THIS DRAWING & FLORIDA BUILDING CODE. IF A DIFFERENCE OCCURS BETWEEN THE MINIMUM REQUIREMENTS OF THESE DRAWINGS & 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.

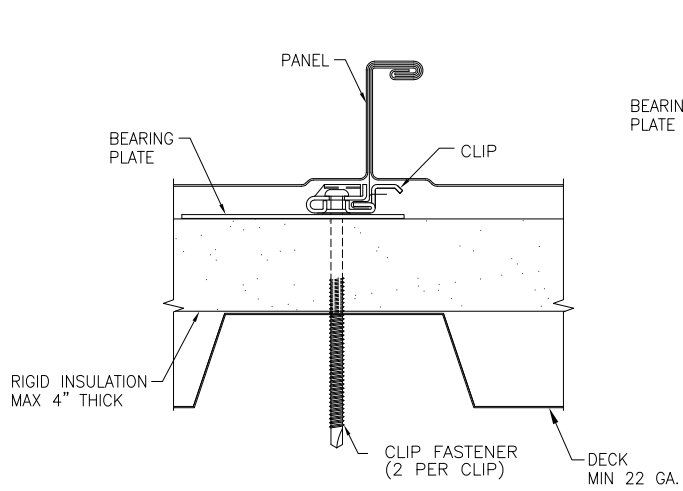
DRAWN BY: B.S.	CHECKED BY: D.S.
DATE: 3/20/15	
NO.	REVISION DESCRIPTION
BY	DATE
DRAWING TITLE <b>ALUMINUM MAGNA-LOC STANDING SEAM ROOF PANEL</b>	
CONSULTANTS <b>BALA SOCKALINGAM, PH.D., P.E.</b>	
MANUFACTURER <b>METAL SALES MANUFACTURING CORP.</b>	
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DRAWING NO. <b>2180-2A</b>	REV.
PAGE NO. <b>1</b>	OF <b>2</b>

DRAWN BY: B.S. CHECKED BY: D.S.  
 PLOT: DATE: 3/20/15

NO.	REVISION DESCRIPTION	DATE

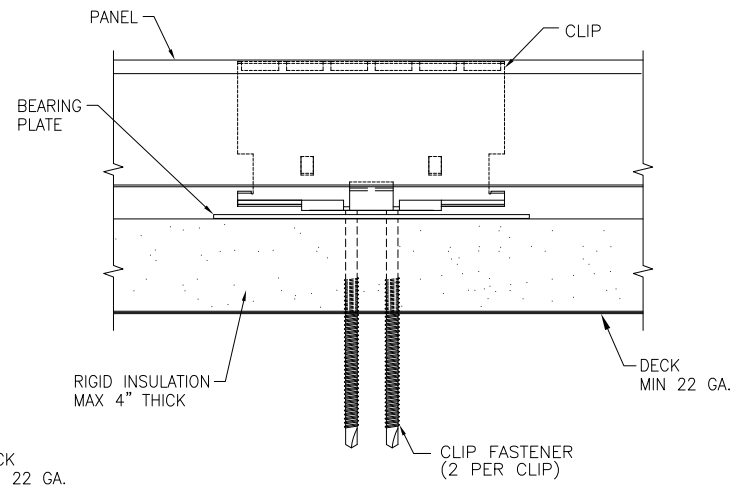


TYPICAL PANEL INSTALLATION X-SECTION



CLIP SECTION VIEW

DETAIL 2



CLIP SIDE VIEW

DRAWING TITLE: ALUMINUM MAGNA-LOC STANDING SEAM ROOF PANEL

CONSULTANTS: **BALA SOCKALINGAM, PH.D., P.E.**  
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**METAL SALES MANUFACTURING CORPORATION**  
**Aluminum Magna-Loc Panel with Standard Clip**  
**Design Uplift Loads**

Clip spacing along length (in)	Design Uplift Loads (psf)	
	0.032" thick	0.040" thick
<b>12</b>	<b>87.5</b>	<b>105.0</b>
18	80.3	97.0
24	73.1	89.0
30	60.0	81.0
36	50.0	68.3
42	42.9	58.6
48	37.5	51.3
54	33.3	45.6
<b>60</b>	<b>30.0</b>	<b>41.0</b>

**Notes:**

1. The bold numbers are based on testing on 0.032" and 0.04" thick aluminum (3003-H14 or 3105-H24) panels.
2. The panels are fastened to support with standard MC clips with stainless steel clips tabs.
3. For supports equal to or less than 18 ga., the clips are fastened with (2) Trufast #14 screws.
4. For supports equal to or greater than 16 ga., the clips are fastened with (2) 1/4"-14 SDS.
5. Panels must be installed as per Evaluation Report FL 10999.2 and Metal Sales current installation procedure.
6. Three or more spans condition.



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