

**EVALUATION REPORT OF  
METAL SALES MANUFACTURING CORPORATION  
'NOM 0.032" THICK ALUMINUM IMAGE II PANEL'**

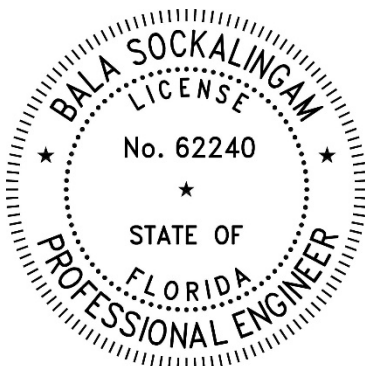
**FLORIDA BUILDING CODE 8TH EDITION (2023)  
FLORIDA PRODUCT APPROVAL  
FL 11560.2-R5  
ROOFING  
METAL ROOFING**

**Prepared For:  
Metal Sales Manufacturing Corporation  
7800 Highway 60  
Sellersburg, IN 47172  
Telephone: (502) 855-4300  
Fax: (502) 855-4200**

**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)  
Load Span Table (1 Page)**

**Report No. C2672-2  
Date: 8.3.2023**

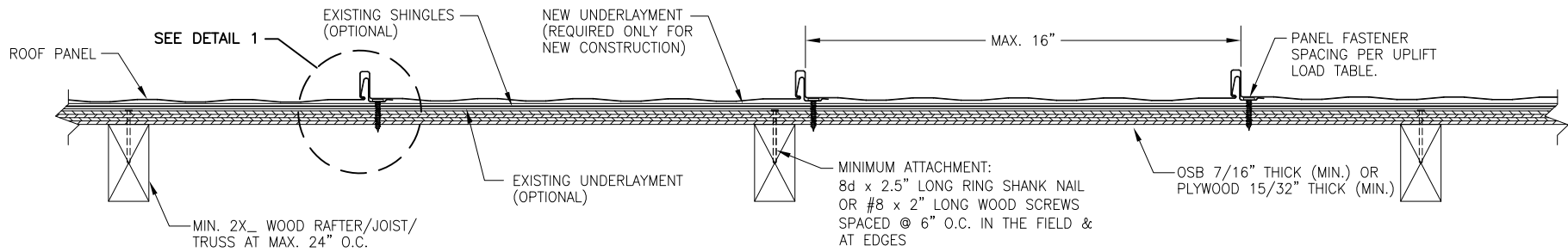


This item has been digitally signed and sealed by Bala Sockalingam, PE, on the date indicated.

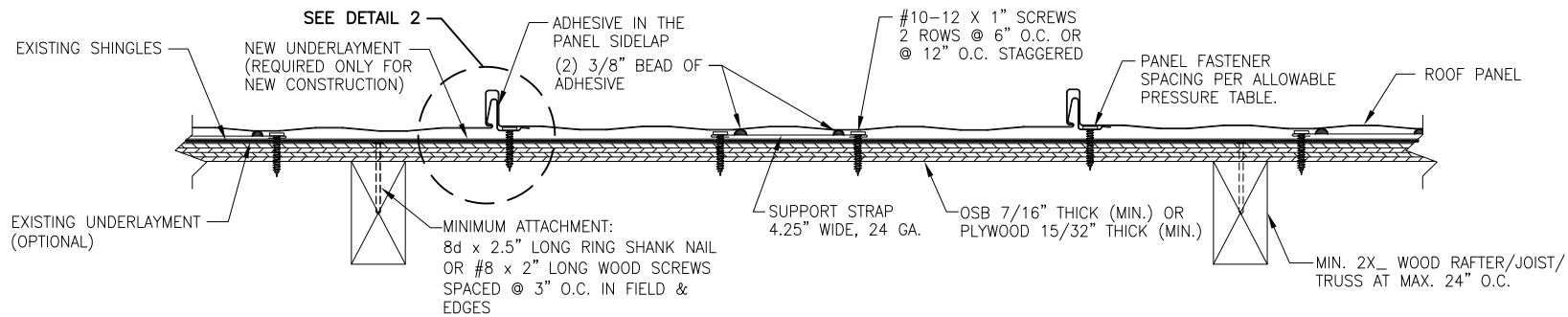
Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

Manufacturer:	Metal Sales Manufacturing Corporation
Product Name:	Aluminum Image II
Panel Description:	Max. 16" wide coverage with 1" high ribs
Materials:	Min. nominal 0.032" thick 3004-H14 or 3105-H24 Alloy (ASTM B209) as per FBC 2023 Section 1507.4.3. Pre-painted panels are required for use with adhesive and support strap.
Deck Description:	Min. 7/16" thick OSB, min. 15/32" thick Plywood or min. 3/4" thick wood plank (min SG of 0.42) for new and existing constructions. Designed by others and installed as per FBC 2023.
Deck Attachment:	8d x 2.5" long ring shank nails or #8 x 2" long wood screws at 6" o.c. in the plywood field and edges (Minimum). Deck fastener spacing at 3" o.c. in the field and edges for roof zones installed with support strap. Designed as per FBC 2023.
New Underlayment:	Minimum underlayment as per FBC 2023 Section 1507.4.5.1. Required for new construction and optional for reroofing construction.
Existing Underlayment: (Optional)	One layer of asphalt shingles over one layer of #30 felt. For reroofing construction only.
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)	22.5 psf at fastener spacing of 24" o.c. 107.4 psf at fastener spacing of 6" o.c. 168.5 psf at fastener spacing of 6" o.c. with support strap and adhesive and 3/8" bead adhesive in panel sidelap. The support strap fastened to plywood with screws spaced at staggered 12" o.c. 206.0 psf at fastener spacing of 6" o.c. with support strap and adhesive and 3/8" bead adhesive in panel sidelap. The support strap fastened to plywood with screws spaced at 6" o.c.
Fastener Pattern:	#10-12 pancake head screws along panel seam. Fastener shall be of sufficient length to penetrate through the deck a minimum of 1/4". Fasteners are corrosion resistant as per FBC 2023 Section 1507.4.4.
Support Strap:	4.25" wide, 24 ga., 50 ksi pre-painted strap fastened to deck with 2 rows of #10-12 x 1" long pancake head screws at 6" o.c. spacing or staggered 12" o.c. spacing. The strap is continuous over the entire corner or edge roof zones. Prior to the panel installation, two rows of 3/8" bead of adhesive are field applied along the length of the strap.

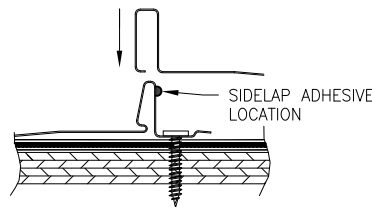
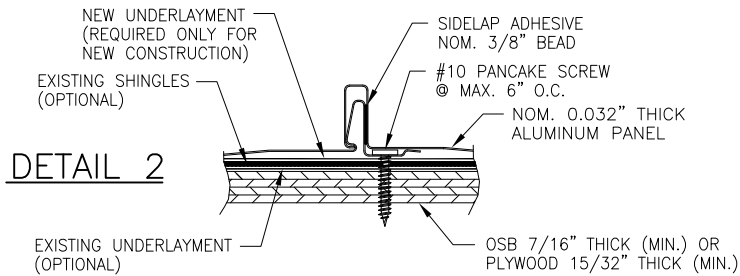
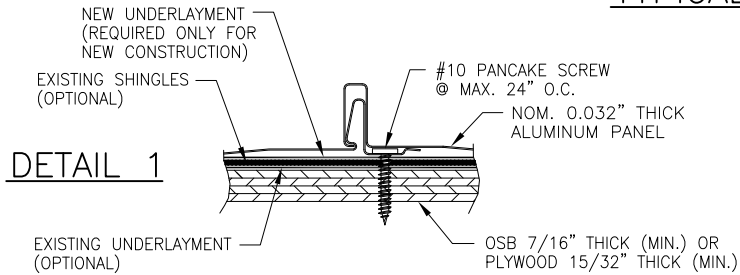
Support Strap & Panel Sidelap Adhesive:	Geocel 4600™ Structural Adhesive Sealant. Applied in accordance with manufacturer's suggested installation procedures.
Test Standards:	Roof assembly tested in accordance with UL 580-94 and 580-06 'Uplift Resistance of Roof Assemblies' and UL 1897-98 and 1897-12 'Uplift Tests for Roof Covering Systems'.
Test Equivalency:	The test procedures in UL 580-94 comply with test procedures prescribed in UL 580-06. The test procedures in UL 1897-98 and 1897-12 comply with test procedures prescribed in UL 1897-15.
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 pressure for reduced fastener 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:	UL580 & UL1897 Test Reports Farabaugh Engineering and Testing Inc. Project No. T209-11, Reporting Date 5/27/2011 Project No. T161-23, Reporting Date 4/14/2023 Project No. T216-23, Reporting Date 7/5/2023



**FASTENING PATTERN 1**



**FASTENING PATTERN 2 OR 3  
TYPICAL PANEL INSTALLATION X-SECTION**



**GENERAL NOTES:**

1. ARCHITECTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS ARE SHALL BE MIN. NOMINAL 0.032" THICK ALUMINUM. MAX. EFFECTIVE COVERING WIDTH OF PANEL = 16".
3. THE ROOF PANELS SHALL BE INSTALLED OVER SHEATHING & 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. RAFTERS/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.

DRAWN BY: B.S.		CHECKED BY: D.S.	
PLOT:		DATE: 7/31/2023	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE <b>ALUMINUM IMAGE II ROOF PANEL</b>			
MANUFACTURER <b>METAL SALES MANUFACTURING CORP.</b>			
CONSULTANTS <b>BALA SOCKALINGAM, PH.D., P.E.</b>			
1216 N. LANSING AVE., SUITE C TULSA, OKLA. 74106 PHONE: 918-492-5992 FAX: 918-493-3568			
7800 HIGHWAY 60 SELLERSBURG, IN 47172 502-855-4300			
DRAWING NO. <b>2672-2</b>		REV. 	
PAGE NO. 1 OF 1			

**METAL SALES MANUFACTURING CORPORATION**

**Aluminum Image II Uplift Loads**

**(Min. Nominal 0.032" thick)**

Description	Fastener Spacing along Panel Length (in)	Allowable Uplift Load (psf)
Coverage width: 16"  Panel Fastener: #10-12 pancake head screws	<b>6</b>	<b>107.4</b>
	8	80.5
	10	64.4
	12	53.7
	14	46.0
	16	40.3
	18	35.8
	20	32.2
	22	26.8
	<b>24</b>	<b>22.5</b>
With Support Strap & Adhesives & Sidelap Adhesive. Strap fastened at staggered 12" o.c.	<b>6</b>	<b>168.5</b>
With Support Strap & Adhesives & Sidelap Adhesive. Strap fastened at 6" o.c.	<b>6</b>	<b>206.0</b>

**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 11560.2 and Metal Sales current installation procedure.
3. Three or more spans condition.