

**EVALUATION REPORT OF  
METAL SALES MANUFACTURING CORPORATION  
'29 GA. CLASSIC RIB PANEL'**

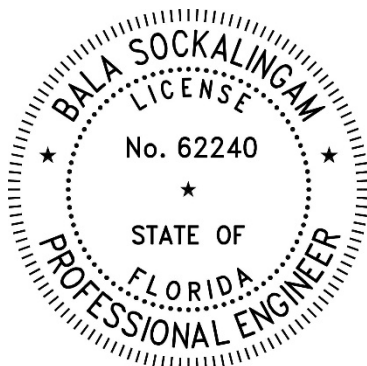
**FLORIDA BUILDING CODE 8TH EDITION (2023)  
FLORIDA PRODUCT APPROVAL  
FL 14645.8-R5  
ROOFING  
METAL ROOFING**

**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. C2673-8  
Date: 8.3.2023**



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

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Manufacturer: Metal Sales Manufacturing Corporation

Product Name: Classic Rib

Panel Description: 36" wide coverage with (5) 3/4" high ribs

Materials: Min. 29 ga., 80 ksi steel or min. 26 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.

Deck Description: Min. 7/16" thick OSB 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. (Minimum) in the field and edges. 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: One layer of asphalt shingles over one layer of #30 felt. For reroofing (Optional) construction only.

Substrate (optional): Min 1" x 4" No. 2 SYP wood purlins over one layer of asphalt shingles/felt (optional) and min. 7/16" thick OSB deck fastened to supports at maximum 24" o.c. Wood purlins shall be fastened to wood rafters with minimum (2) #9 x 3" long wood screws. The wood purlins will be spaced same as panel fastener spacing along panel length. The wood purlin, purlin to the rafter connection and rafters must be designed by others to carry the load imposed on the panels and installed as per FBC 2023.

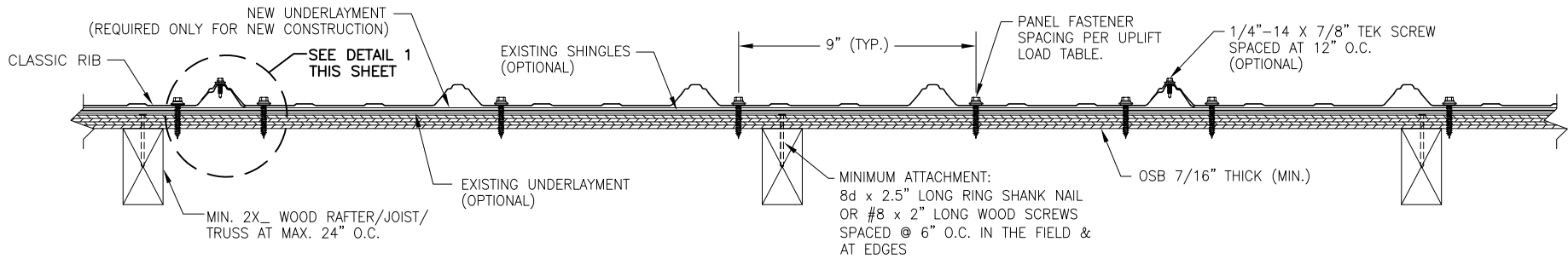
Slope: 1/2:12 or greater in accordance with FBC 2023 Section 1507.4.2. Requires applied lap sealant for roof slopes less than 3:12.

Design Uplift Pressure: 45.0 psf at fastener spacing of 24" o.c. (Factor of Safety = 2) 135.0 psf at fastener spacing of 6" o.c.

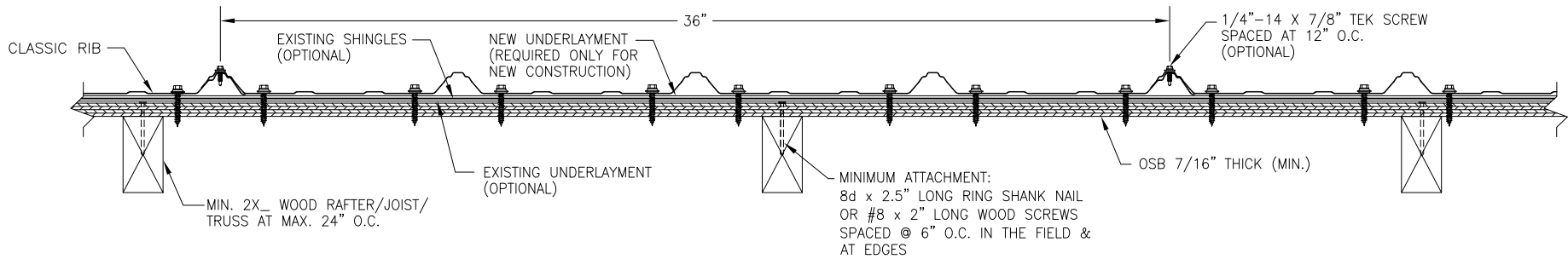
Fastener Pattern:  
Type: #9-16 or #10-14 hex head wood screws with sealed washer. Fastener shall be of sufficient length to penetrate through the deck a minimum of 3/8". Fasteners are corrosion resistant as per FBC 2023 Section 1507.4.4.

At panel ends at 5.5"-3.5"-5.5" o.c. across panel width  
At intermediate at 9" o.c. across panel width with two fasteners at each sidelap.

- Sidelap Attachment:  
(Optional)      ¼"-14 x 7/8" long SDS with washer at 12" o.c. Recommended for roof slope less than 3:12. Fasteners are corrosion resistant as per FBC 2023 Section 1507.4.4.
- Test Standards:      Roof assembly tested in accordance with UL580-94 (Rev 98) 'Uplift Resistance of Roof Assemblies' & UL1897-98 'Uplift Tests for Roof Covering Systems' and FM 4470 Section 5.5 'Resistance to Foot Traffic'.
- 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 comply with test procedures prescribed in UL 1897-15.  
The test procedure in FM 4470 (1992) comply 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 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  
PRI Construction Materials Technologies  
MSMC-009-02-01.02, Reporting Date 1/20/2011, Revised Date 1/21/2011
- FM 4470 Test Report  
ENCON Technology Inc.  
C1587-2, Reporting Date 5/17/2008

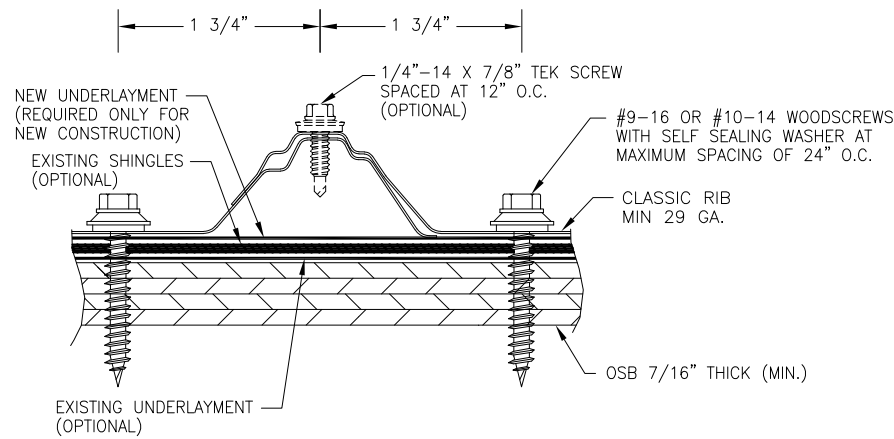


**FASTENER PATTERN AT INTERMEDIATE LOCATIONS**



**FASTENER PATTERN AT PANEL ENDS**

**TYPICAL PANEL INSTALLATION X-SECTION**



**DETAIL 1**

**GENERAL NOTES:**

1. ARCHITECTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS ARE SHALL BE MIN 29 GA. (t = 0.013"). EFFECTIVE COVERING WIDTH OF PANEL = 36".
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: 7/19/2023	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE <b>CLASSIC RIB PANEL</b>			
CONSULTANTS <b>BALA SÖCKALINGAM, PH.D., P.E.</b>		MANUFACTURER <b>METAL SALES MANUFACTURING CORP.</b>	
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DRAWING NO. <b>2673-8</b>		REV. 	
PAGE NO. <b>1</b>		OF <b>1</b>	

**METAL SALES MANUFACTURING CORPORATION**  
**Classic Rib Panel Uplift Loads**  
**(Min 29 ga.)**

Description	Fastener Spacing along panel length (in)	Allowable Uplift Load (psf)
Coverage width: 36"	<b>6</b>	<b>135.0</b>
	8	125.0
Panel Fasteners #9-16 or #10-14 hex head wood screws with sealed washer	10	108.0
	12	90.0
	14	77.1
	16	67.5
	18	60.0
Panel fasteners spaced at 9" o.c. across panel width	20	54.0
	22	49.1
	<b>24</b>	<b>45.0</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 14645.8 and Metal Sales current installation procedure.
3. Three or more spans condition.
4. Optional wood purlins must be spaced same as panel fastener spacing along the panel length.