

## Evaluation Report

**“Rib”**

### Metal Roof Assembly

**Manufacturer:**

**Metal Roof Factory, Inc.**

599 Gus Hipp Blvd.

Rockledge, FL 32955

321.632.8300

*for*

**Florida Product Approval**

**# FL 43871.7**

**Florida Building Code 8th Edition (2023)**

**Method: 1 - D**

**Category: Roofing**

**Sub - Category: Metal Roofing**

**Product: “Rib” Roof Panel**

**Material: Steel**

**Panel Thickness: 26 ga.**

**Panel Width: 36”**

**Panel Seam: Lapped**

**Support: Wood Deck**

**Prepared by:**

James L. Buckner, P.E., SECB

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

Project Manager: Diana Galloway

Report No. 23-623-Rib-S6W-ER(*New*)

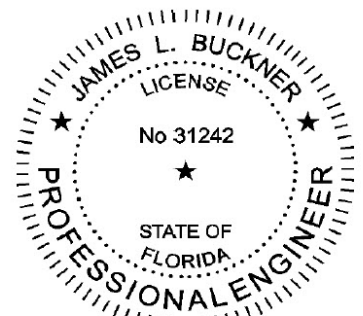
Date: 10/17/2023

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This item has been digitally signed and sealed by James L. Buckner, P.E., on this date below. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



James L. Buckner, P.E.

FL31242

Date: 2023.10.17

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**CBUCK, Inc. dba CBUCK Engineering**

Phone: (561) 491-9927 · Email: [cbuck@cbuckinc.net](mailto:cbuck@cbuckinc.net) · Website: [www.cbuckinc.net](http://www.cbuckinc.net)

Business: 1374 Community Dr., Jupiter, FL 33458

<b>Manufacturer:</b>	<b>Metal Roof Factory, Inc.</b> 599 Gus Hipp Blvd. Rockledge, FL 32955 321.632.8300 <a href="http://www.MetalRoofFactory.com">http://www.MetalRoofFactory.com</a>
<b>Product Name:</b>	<b>“Rib”</b>
<b>Product Category:</b>	Roofing
<b>Product Sub-Category</b>	Metal Roofing
<b>Compliance Method:</b>	State Product Approval Rule 61G20-3.005 (1) (d)
<b>Product/System Description:</b>	“Rib” Roof Panel 26 ga. Steel roof panel mechanically attached to Plywood Deck with screws.
<b>Product Assembly as Evaluated:</b>	Refer to Page 4 of this report for product assembly components/materials & standards: <ol style="list-style-type: none"><li>1. Roof Panel</li><li>2. Fasteners</li><li>3. Underlayment</li><li>4. Insulation (Optional)</li></ol>
<b>Support:</b>	<b>Type:</b> Plywood Deck (Design of support system is outside the scope of this evaluation.) <b>Description:</b> <ul style="list-style-type: none"><li>• 15/32” or greater plywood,</li><li>• or Wood plank (min. specific gravity of 0.42)</li></ul>
<b>Slope:</b>	In compliance with FBC 1507.4.2 In compliance with FBC Chapter 15 based on the type of roof covering, applicable code sections and in accordance with manufacturer’s recommendations.
<b>Performance:</b>	Wind Uplift Resistance: <ul style="list-style-type: none"><li>• Design Uplift Pressure: <b>Refer to Table A</b> (Refer to “Table A” attachment details herein)</li></ul>

**Performance Standards:**

The product described herein has demonstrated compliance with:

- UL580-06 – *Test for Uplift Resistance of Roof Assemblies*
- UL 1897-15 - Uplift test for roof covering systems
- TAS 125-03 – *Standard Requirements for Metal Roofing Systems*

**Standards Equivalency:**

The UL 1897-12 standard version used to test the evaluated product assembly is equivalent with the prescribed standards in UL 1897-15 adopted by the Florida Building Code 8th Edition (2023) for use as evaluated in this report.

**Code Compliance:**

The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the: Florida Building Code 8th Edition (2023).

**Evaluation Report Scope:**

This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.

**Limitations and Conditions of Use:**

- Scope of “Limitations and Conditions of Use” for this evaluation:  
This evaluation report for “Optional Statewide Approval” contains technical documentation, specifications and installation method(s) which include “Limitations and Conditions of Use” throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under “Optional Statewide Approval”.
- All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC, including but not limited to Sections 1504.3.2, 1506.6 and 1507.4.4.
- Deck shall be in compliance with applicable building code.
- Fire Classification is outside the scope of Rule 61G20-3 and is therefore not included in this evaluation.
- All panels shall be permanently labeled with the manufacturer’s name and/or logo.
- This evaluation report does not approve the product assembly as described in this report for use in the High Velocity Hurricane Zone (HVHZ) code section. (Dade & Broward Counties)
- Option for application outside “Limitations and Conditions of Use”  
Rule 61G20-3.005(1)(e) allows engineering analysis for “project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code”. Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.

**Quality Assurance:**

The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.0005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through Keystone Certifications, Inc. (FBC Organization ID# QUA 1824).

**Components/Materials  
(by Manufacturer):**

**Roof Panel:**

Material: Steel  
Thickness: 26 ga. (min.)  
Panel Widths: 36" (max.) Coverage  
Rib Height: 3/4"  
Yield Strength: 40 ksi min.  
Corrosion Resistance: Per FBC Section 1507.4.3

**Rib**

Steel  
26 ga. (min.)  
36" (max.) Coverage  
3/4"  
40 ksi min.

**Fastener:**

Type: Hex-Washer-Head WoodGrip Screw with WSW  
Size: #9-15 x penetrate thru support deck 3/16" Minimum  
Corrosion Resistance: Per FBC 1506.6 & 1507.4.4  
Standard: Per ANSI/ASME B18.6.1

**Underlayment:**

One of the following per FBC 8th Edition (2023), Section 1507.1.1.  
ASTM D226, D1970, D4869, D6757, D8257  
Installation shall comply with FBC including Sections 1507.1.1.1, 1507.1.1.2 where applicable and in accordance with roof manufacturer's recommendations.

**Components &  
Materials:  
(by Others)**

**Insulation (Optional):**

Type: Rigid Insulation Board  
Thickness: 3" (max.)  
Compressive Strength: 20 psi min.

Insulation shall comply with FBC Section 1508. When insulation is incorporated, fastener length shall penetrate thru bottom of support a minimum of 3/16".

**Installation:**

**Installation Method:**

(Refer to “**TABLE A**” below and drawings at the end of this evaluation report.)

- **Fastener Spacing: Refer to “TABLE A” Below**  
(Attached through the panel ribs across the width of the panel.)
- **Row Spacing: Refer to “TABLE A” Below**  
(along the length of the panel)
- Minimum fastener penetration thru bottom of support, 3/16”.
- For panel construction at the end of panels, refer to manufacturer’s instructions and any site specific design.

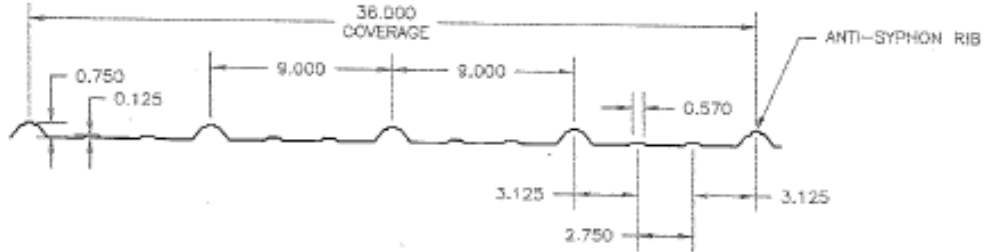
<b>TABLE “A” ALLOWABLE LOADS</b>						
<b>“Rib” (26 ga. Steel) Roof Panel attached to Wood Deck</b>						
<b>#</b>	<b>Panel Width (max.)</b>	<b>Deck Thickness (min.)</b>	<b>Fastener Spacing (max.)</b>	<b>Row Spacing (max.)</b>	<b>Panel Seam</b>	<b>Design Pressure (ASD)</b>
<b>1</b>	36”	15/32”	9”,9”,9”,9”	24”	Panel Lap Seam	<b>- 69.25 PSF</b>
<b>2</b>	36”	15/32”	6.5”, 2.5”,6.5”,2.5”, 6.5”,2.5”,6.5”	12”	Panel Lap Seam	<b>- 146 PSF</b>
Note: Allowable design pressure(s) for allowable stress design (ASD).						

Install the “Rib” roof panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 8th Edition (2023). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer’s installation instructions as a supplemental guide for attachment.

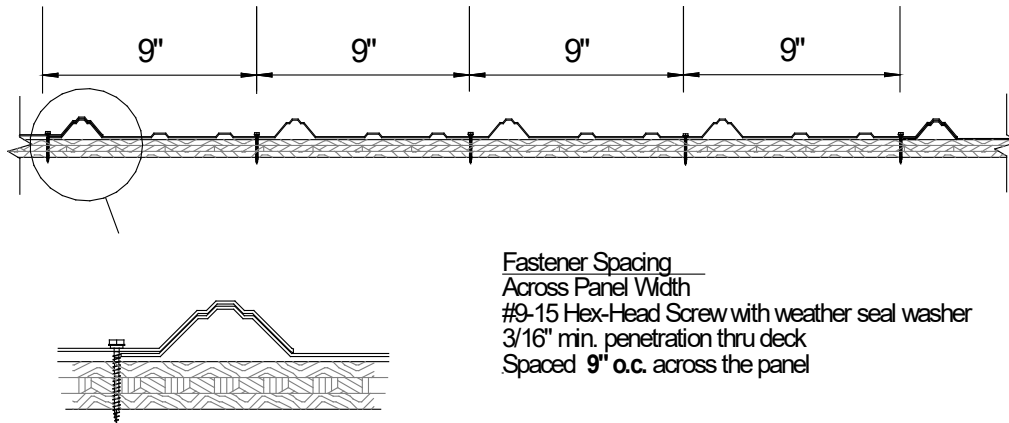
**Referenced Data:**

1. UL580-94/98 Rev and UL 1897-98 Uplift Test  
By Force Engineering & Testing (FBC Organization ID# TST 5328)  
Report No. 48-0509T-08A, Date: 4/3/12
2. UL580-94/98 Rev and UL 1897-98 Uplift Test  
By Force Engineering & Testing (FBC Organization ID# TST 5328)  
Report No. 148-0509T-08B, Date: 4/3/12
3. Quality Assurance  
Keystone Certifications, Inc. (FBC Organization ID# QUA 1824)  
Metal Roof Factory Licensee #343
4. Certification of Independence  
By James L. Buckner, P.E. @ CBUCK Engineering  
(FBC Organization # ANE 1916)

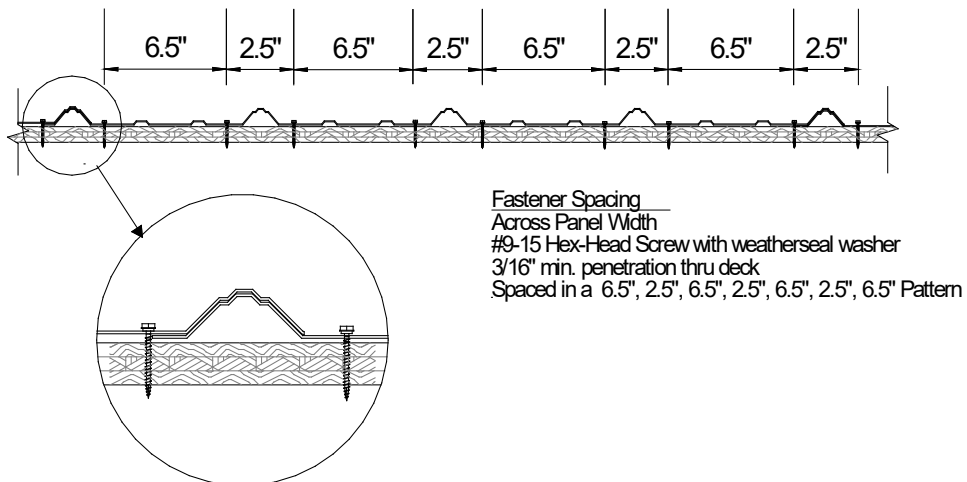
## Installation Method Metal Roof Factory, Inc. "Rib" (26 ga. Steel) Roof Panel attached to Plywood Deck



**Typical Panel Profile  
(36" max. width)**

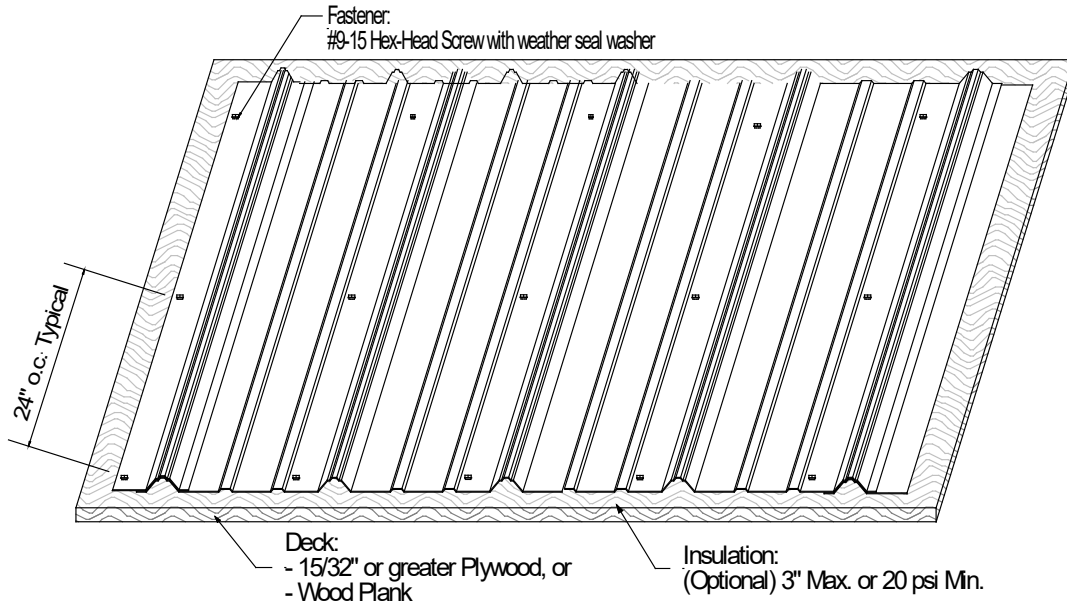


**Typical Panel Assembly View  
(Fastener Pattern: 9", 9", 9", 9")**

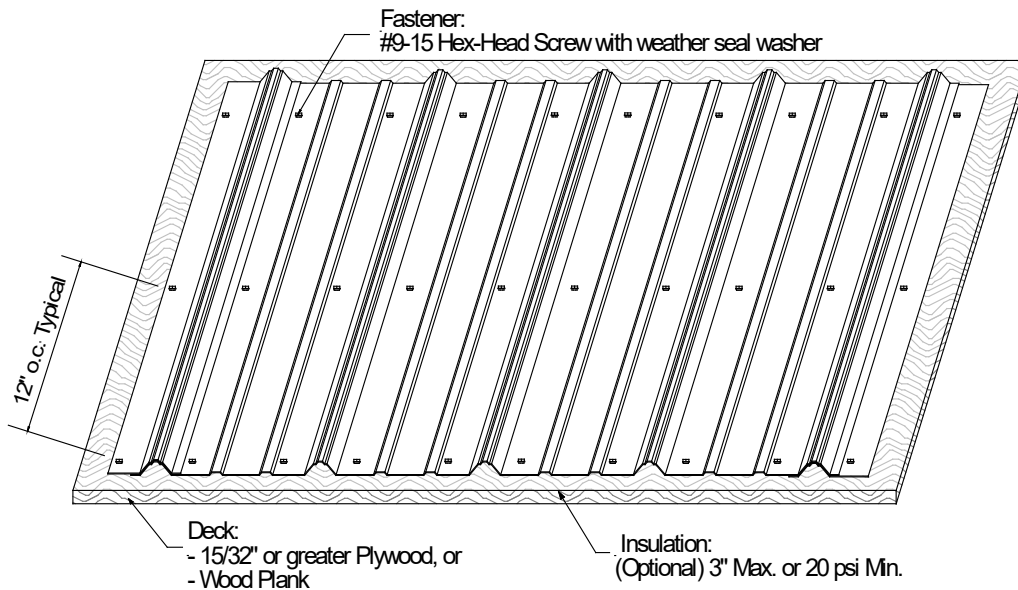


**Typical Panel Assembly View  
(Fastener Pattern: 6.5", 2.5", 6.5", 2.5", 6.5", 2.5", 6.5")**

## Installation Method Metal Roof Factory, Inc. "Rib" (26 ga. Steel) Roof Panel attached to Plywood Deck



**Typical Panel Isometric View**  
(Fastener Pattern: 9", 9", 9", 9" Row Spacing: 24" o.c.)



**Typical Panel Isometric View**  
(Fastener Pattern: 6.5", 2.5", 6.5", 2.5", 6.5", 2.5", 6.5" Row Spacing: 12" o.c.)