

C-BUCK Engineering

Specialty Structural Engineering

Certificate of Authorization # 8064

Evaluation Report

of

Millennium Metals, Inc.

“Millennium Rib”

Metal Roof Assembly

for

Florida Product Approval

FL 5211.2

Florida Building Code 2004

Method: 1 - D

Category: Roofing

Sub - Category: Non-Structural Metal Roofing

Product: *Millennium Rib*

Material: *Steel*

Panel Thickness: *29 Gauge Minimum*

Panel Width: *36” Maximum (Net Coverage)*

Support Type: *Wood Deck*

Prepared for:

Millennium Metals, Inc.

1333 Haines Street Expressway

Jacksonville, FL 32202

Prepared by:

James L. Buckner, P.E.

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

Engineer Assistant: Gil Samson

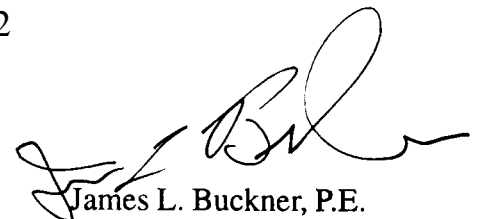
Report No. 05-226-MR-36-S9W

Date: 8 / 11 / 05

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James L. Buckner, P.E.

Florida P.E. # 31242

8/30/05

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Manufacturer: Millennium Metals, Inc.

Product Name: Millennium Rib

Panel Type: Steel, minimum 29 gauge, minimum yield strength 80 ksi

Panel Material Standards: Material shall comply with Table 1507.4.3

Panel Width(s): 36" Maximum (Net Coverage Width)

Support Type: Wood Deck
(Design of support system is not included in this evaluation)

Support Description: Plywood – 19/32" or greater, or wood plank, per Section 2308.10.8

Slope Range: 3 : 12 or greater

Design Uplift Pressure: 71 psf (Safety Factor of 2 : 1)

Attachment To Supports: Panels shall be attached to the deck with **minimum #10 x minimum penetration through deck 3/16", hex-head, self-tapping, corrosion resistant, wood screws, per ANSI/ASME B18.6.4.**

Underlayment: Minimum underlayment shall be per Section 1507.4.5

Fire Classification: Fire Classification is outside the scope of Rule 9B-72, and is therefore not included in this evaluation. Additional approved substrates may be added for Fire Classification purposes.

Installation: Install the "Millennium Rib" to the deck with **screw rows through-fastened to the deck 3" from all ends and maximum 16" o.c. thereafter, along the length of the panel. Within rows, screws shall be spaced 9" o.c. across the width of the panel, on one side of every major corrugation.** Install system in compliance with the attached installation method.



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Performance Standards: Roof assembly tested in accordance with **UL580-94, Rev. 1998** Uplift Resistance Standard.

Code Compliance: The product described herein has demonstrated compliance with the **Florida Building Code 2004, Section 1507.4.**

Evaluation Report Scope: This product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code, as related to Rule 9B-72.

System Limitations: The required design wind loads shall be determined for each project. The maximum fastener spacing listed herein shall not be exceeded. All rational analysis computations shall be prepared by a qualified design professional, as required by Florida Building Code, Section 105. This product is not approved for use in the High Velocity Hurricane Zone.

Referenced Data:

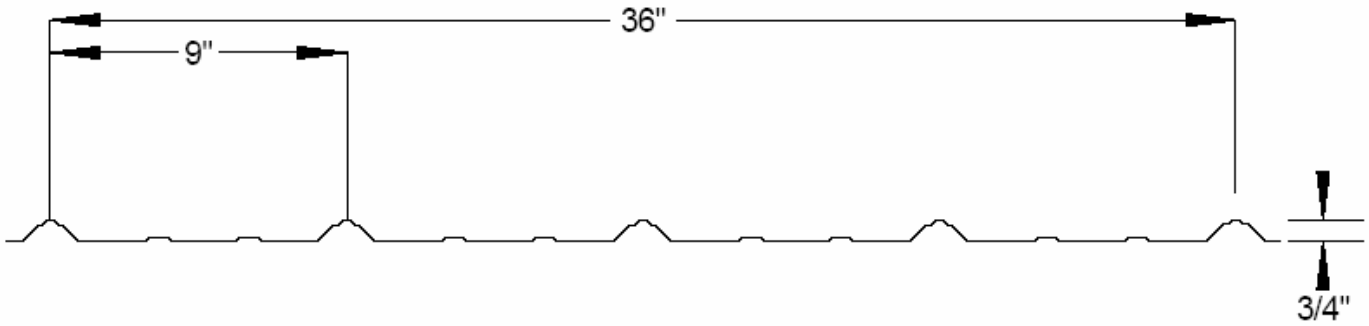
1. Certification of Independence
2. Quality Assurance
Underwriters Laboratories, Inc. – Q.A. System ID: 1743
3. UL580 Test
Hurricane Test Laboratory, LLC
Report #: 0232-0321-03 #1 & 2,
Report # 0232-0510-03 #2
Date: 8/27/03

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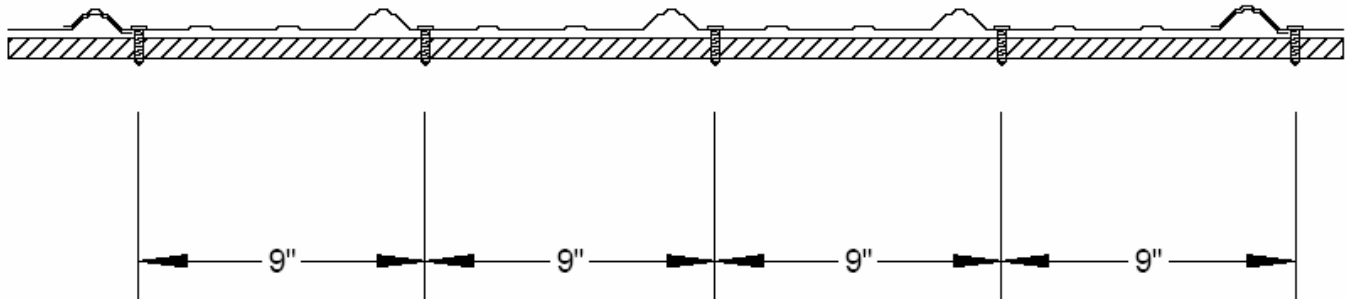
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Installation Method Millennium Metals, Inc. "Millennium Rib" Attached to Wood Deck



Panel Profile



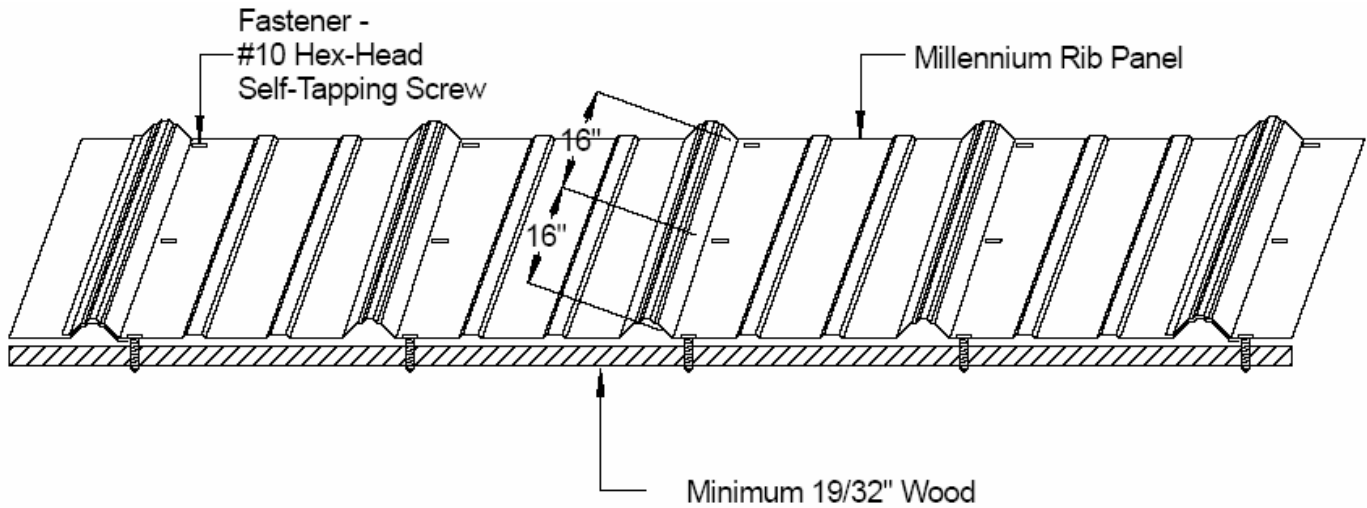
Assembly Profile

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Installation Method (Continued) Millennium Metals, Inc. “Millennium Rib” Attached to Wood Deck



Assembly Isometric View