

**Evaluation Report**  
**"Perfect Rib"**  
**Metal Roof Assembly**

**Manufacturer:**  
**American Construction Metals (ACM)**

5140 W. Clifton Street  
Tampa, Florida 33634  
(813) 884-0444

*for*

**Florida Product Approval**

**# FL 14623.13-R1**

**Florida Building Code 2010**

**Per Rule 9N-3**

**Method: 1 - D**

**Category: Roofing**

**Sub - Category: Metal Roofing**

**Product:** "Perfect Rib" Roof Panel  
**Material:** Steel  
**Panel Thickness:** 26 gauge (min.)  
**Panel Width:** 36" (max.)  
**Support:** Wood Deck

**Prepared by:**

James L. Buckner, P.E., SECB  
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Florida Evaluation ANE ID: 1916  
Project Manager: Diana Galloway  
Report No. 11-193-PR-S6W-ER  
Date: 11 / 24 / 11

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**CBUCK, Inc.**

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Phone: (561)491-9927 Fax: (561)491-9928 Website: [www.cbuckinc.net](http://www.cbuckinc.net)

A handwritten signature in black ink, appearing to read "J. L. Buckner".

James L. Buckner, P.E., SECB  
Florida P.E. # 31242

12/13/11

<b>Manufacturer:</b>	<b>American Construction Metals (ACM)</b>
<b>Product Name:</b>	<b>“Perfect Rib”</b>
<b>Product Category:</b>	Roofing
<b>Product Sub-Category</b>	Metal Roofing
<b>Compliance Method:</b>	State Product Approval Rule 9N-3.005 (1) (d)
<b>Product/System Description:</b>	“Perfect Rib” 3/4” Rib Height, 36” wide, 26 gauge Steel roof panel attached to 15/32” 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> Wood 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 , or</li><li>• Wood plank deck (based on minimum density/specific gravity of 0.42)</li></ul>
<b>Slope:</b>	Minimum slope shall be In accordance with manufacturer’s recommendations, FBC Section 1507.4.2 and applicable code sections.
<b>Performance:</b>	Wind Uplift Resistance: <ul style="list-style-type: none"><li>• Design Uplift Pressure: <b>- 99 PSF</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 1897-98 – *Uplift test for roof covering systems*
  - TAS 125-03 – *Standard Requirements for Metal Roofing Systems*
- Standards Equivalency:** The UL 580-94 & UL 1897-98 standard version used to test the evaluated product assembly is equivalent with the prescribed standards in UL 580-06 & UL 1897-04 adopted by the Florida Building Code 2010.
- Code Compliance:** The product described herein has demonstrated compliance with Florida Building Code 2010, Section 1504.3.2.
- 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 9N-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 9N-3.005. Per Rule 9N-3.004, the Florida Building Commission is the authority to approve products under “Optional Statewide Approval”.
  - Option for application outside “Limitations and Conditions of Use”  
Rule 9N-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.
  - Design of support system is outside the scope of this report.
  - Fire Classification is outside the scope of Rule 9N-3, and is therefore not included in this evaluation.
  - This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)
- Quality Assurance:** The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 9N-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: Perfect Rib  
Steel  
Thickness: 26 Gauge (min.)  
Panel Widths: 36" (max.) Coverage  
Rib Height: 3/4"  
Yield Strength: 50 ksi (min.)  
Corrosion Resistance: Per FBC Section 1507.4.3

**Fastener:**

**Panel to Deck:**

Type: Hex-washer Head Wood Screw  
Size : #10 x 1-1/2"  
Corrosion Resistance: Per FBC Section 1506.6 and 1507.4.4  
Standard: Per ANSI/ASME B18.6.1

**Panel to Panel (Sidelap)**

Type: Hex-washer Head Sheet Metal Screw  
Size : #14 x 7/8"  
Corrosion Resistance: Per FBC Section 1504.4 and 1506.6  
Standard: Per SAE J78-1979

**Underlayment:**

Per roofing manufacturer's guidelines in compliance with FBC Section 1507.4.5.

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

**Insulation (Optional):**

Type: Rigid Insulation Board  
Thickness: 3" (max.)  
Properties:  
Density: 2.25 pcf (lbs/ft<sup>3</sup>) min.  
Or Compressive Strength: 20 psi min.

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

**Installation:**

**Installation Method:**

(Refer to "TABLE A" below and drawings on Pages 6-7 of this evaluation report.)

- Fastener Spacing along Row: **Refer to Drawings on Page 6 - 7**  
(along the row, with fasteners attached in the panel flats, and a fastener on each side of panel laps)
- Row Spacing: **Refer to "TABLE A" Below**  
(along the length of the panel)
- Side Lap Spacing: 12" o.c.
- (along the length of the panel)
- Rib Interlock: Lapped
- 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.

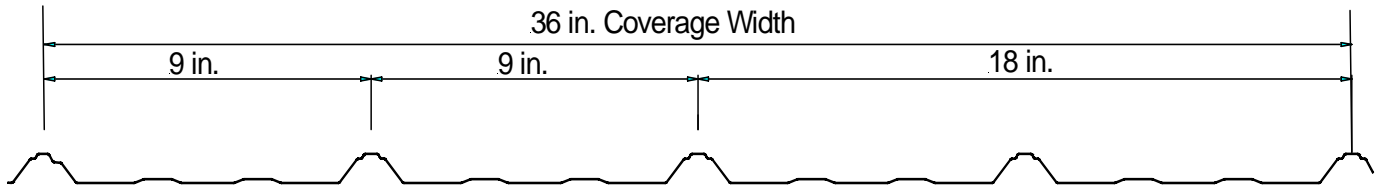
TABLE "A"	
	<b>METHOD 1:</b>
<b>Design Pressure:</b>	<b>- 99 PSF</b>
Row Spacing:	12" o.c.
Fastener Spacing Along Row:	9" o.c.
Sidelap Spacing:	12" o.c.

Install the "Perfect Rib" roof panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 2010. 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.

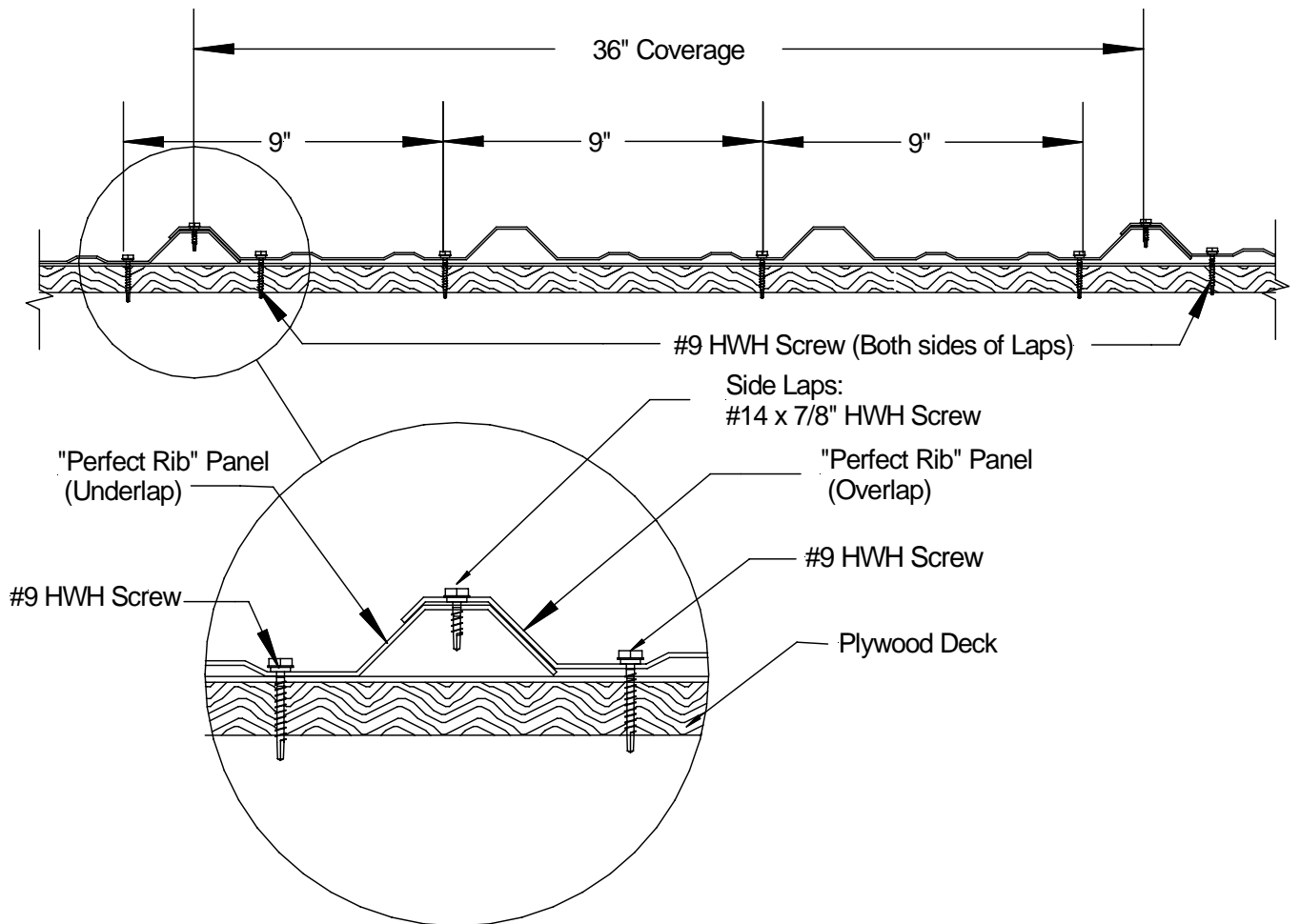
**Referenced Data:**

1. UL580 /TAS125 Uplift Test  
By Hurricane Test Laboratory, LLC. (FBC Organization ID# TST 1527)  
Report #: 0467-0909-07, Spec #3 Dated: 11 / 13 / 07
2. Quality Assurance  
Keystone Certifications, Inc. (FBC Organization ID# QUA 1824)  
ACM Licensee #761
3. Equivalency of Test Standard Certification  
By James L. Buckner, P.E. @ CBUGK Engineering  
(FBC Organization # ANE 1916)
4. Certification of Independence  
By James L. Buckner, P.E. @ CBUGK Engineering  
(FBC Organization # ANE 1916)

## Installation Method American Construction Metals (ACM) "Perfect Rib" (26 ga. min.) Roof Panel attached to 1/2" Plywood Deck

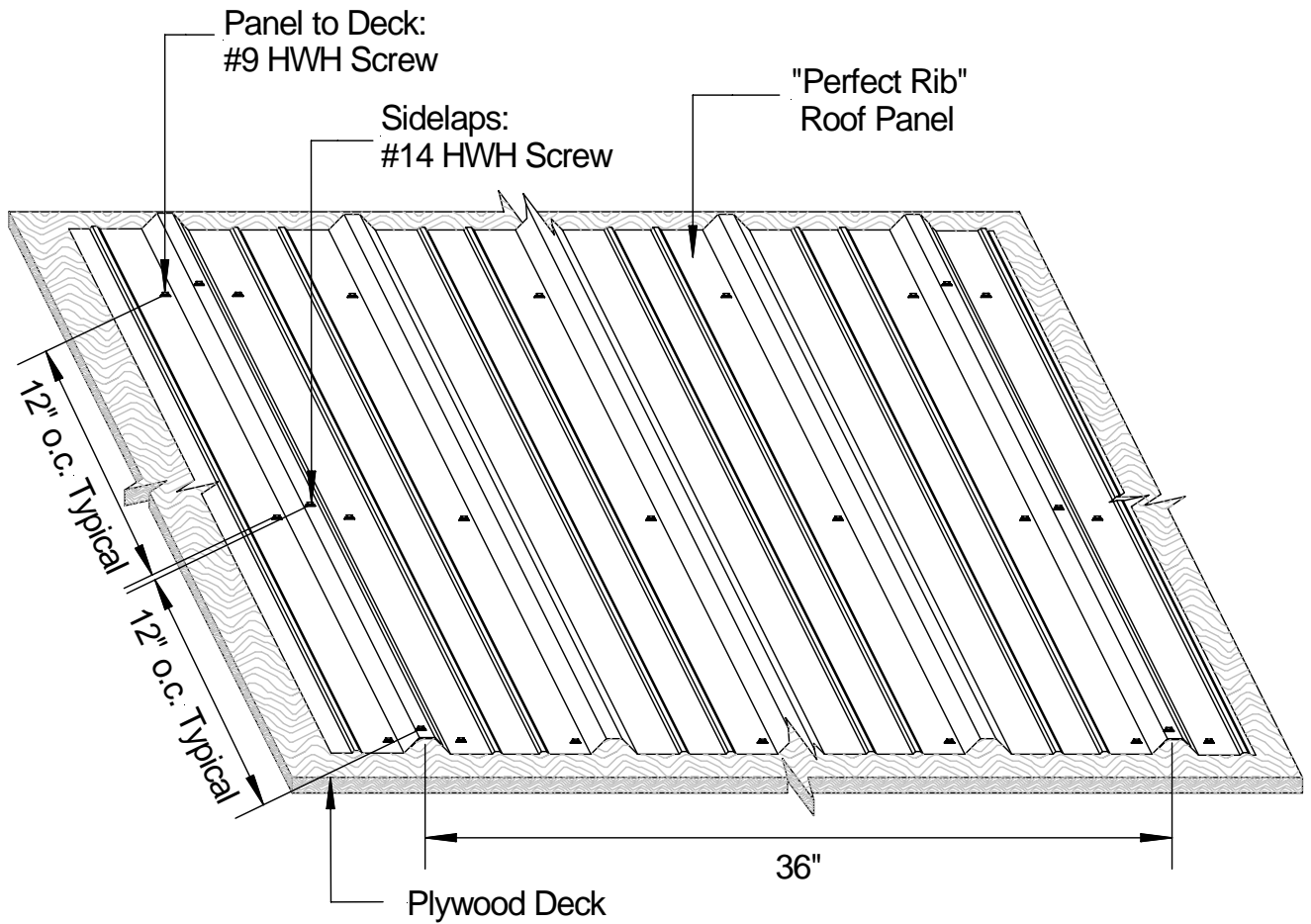


Typical Panel Profile



Typical Panel Assembly  
Section View

**Installation Method**  
**American Construction Metals (ACM)**  
**"Perfect Rib" (26 ga. min.) Roof Panel attached to 1/2" Plywood Deck**



**Typical Roof Assembly**  
**Isometric View**