



CBUCK Engineering

Specialty Structural Engineering

CBUCK, Inc. Florida Certificate of Authorization # 8064

Evaluation Report

of

Berridge Manufacturing Company

“Double-Rib Panel”

Metal Roof Assembly

for

Florida Product Approval

FL 11422.6

Florida Building Code 2007

Per Rule 9B-72

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product: “Double-Rib” Panel

Material: Steel

Panel Thickness: 24 Gauge

Panel Width: 24”

Support Type: Wood Deck

Prepared for:

Berridge Manufacturing Company

1720 Maury Road

Houston, TX 77026

Prepared by:

James L. Buckner, P.E.

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

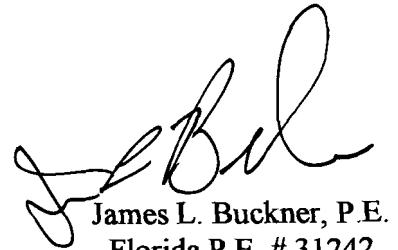
Project Manager: Diana Galloway

Report No. 08-136-DbIRib-24-S4W-ER

Date: 9 / 1 / 08

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9/17/08

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Manufacturer:	Berridge Manufacturing Company
Product Name:	“Double-Rib” Panel
Product Category:	Roofing
Product Sub-Category:	Metal Roofing
Compliance Method:	State Product Approval Rule 9B-72.070 (1) (d)
Panel Description:	“Double-Rib”, Lapped, Steel Roof Panel attached to Wood Deck
Panel Material / Standards:	Material: Steel Yield Strength: 40 ksi minimum Corrosion Resistance: Material shall comply with the Florida Building Code (FBC), 2007 Section 1507.4.3.
Panel Dimension(s):	Thickness: 24 gauge minimum Width: 24” (Maximum net coverage) Rib Height: 1/2”
Support Type:	Wood Deck (Design of support system is not included in this evaluation)
Support Description:	<ul style="list-style-type: none">• 19/32” or greater plywood, or• Wood plank
Support Joints:	All butt and side joints shall be sealed by tape and/or with a one-part urethane caulk sealant per the tested condition. Self-adhered underlayment may be used as an acceptable alternative.
Slope Range:	Minimum slope shall comply with FBC 2007, including Sections 1507.4.2, 1504.7 and in accordance with the Manufacturers recommendations.
Underlayment:	Underlayment shall be per manufacturer’s guidelines as required in FBC Section 1507.4.5
Insulation:	(Optional) Rigid Insulation Board, 3” maximum thickness and with a density of 2.25 pcf (lbs/ft ³) minimum or a compressive strength of 25 psi minimum.
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.



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**Attachment Component
Description:**

Roof Clip Fasteners

Size: **#9 - 15** x 1-1/2" (3/16" minimum penetration through deck)
Type: Hex-Head screws with weather-sealing washer
Corrosion Resistance: Per FBC Section 1507.6.6 and 1507.4.4
Standard: Per ANSI/ASME B18.6.1.

Installation:

Berridge "Double-Rib" Roof Panel to Wood Deck:

1. **Row spacing: 36" o.c.**
(along the length of the panel, and nominal 3 in from all ends)
2. **Fastener spacing along the row: 2", 9", 2", 9" Pattern**
(beginning from the center of the double V at the side-lap, for a total of 4 screws across the width of the panel)

Minimum fastener penetration or embedment into deck, 3/16".

Install the system in compliance with the attached installation method.
Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Design Uplift Pressure:

- 52.5 PSF (Safety Factor of 2 : 1)

Missile Impact Resistance:

Meets criteria for small missile impact resistance per FBC Section 1504.7.
(Based on material thickness)

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- Quality Assurance:** The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 9B-72.070 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Underwriter's Laboratories, Inc.** (FBC Organization #: QUA 1743)
- Performance Standards:** The product described herein has demonstrated compliance with:
- **UL580-94** – *Test for Uplift Resistance of Roof Assemblies—with Revisions through February 1998*
- Code Compliance:** The product described herein has demonstrated compliance with the Florida Building Code 2007, Section 1504.3.2
- 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 maximum fastener spacing listed herein shall not be exceeded. All deck butt and side joints shall be sealed by tape and/or with a one-part urethane caulk sealant per the tested condition. The required design wind loads shall be determined for each project per FBC, 2007, Section 1609. Any rational analysis computations shall be prepared by a qualified design professional and in compliance with FBC 2007, Sections 104, 105, 106. This report does not evaluate use of this product in the High Velocity Hurricane Zone.
- Referenced Data:**
1. UL580-94 (with 1998 Revisions) Uplift Class 90
By Underwriter's Laboratories, Inc. (FBC Organization #CER ID: 1739)
UL File #TGKX.453, Current as of 9/3/08
 2. Quality Assurance
Underwriters Laboratories, Inc. (FBC Organization #QUA ID:1743)
 3. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization# ANE ID: 1916)

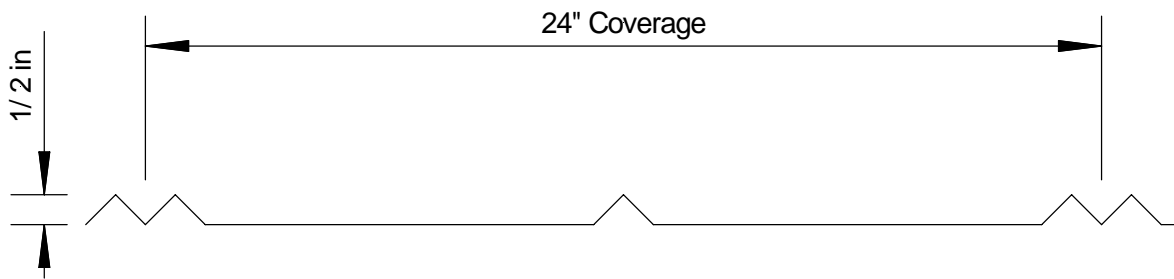
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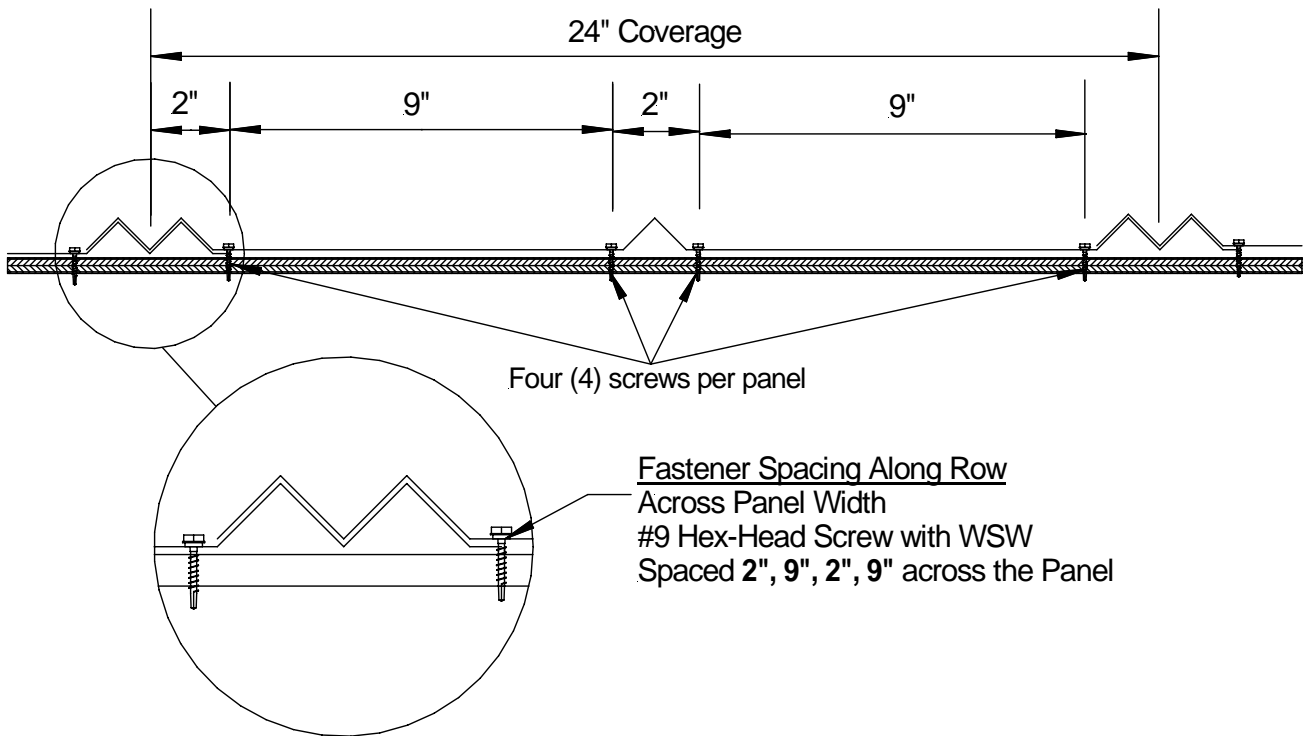
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Installation Method Berridge Manufacturing Company "Double-Rib" (24 Gauge) Roof Panel Attached to Wood Deck

Profile Drawings



Typical Panel Profile View



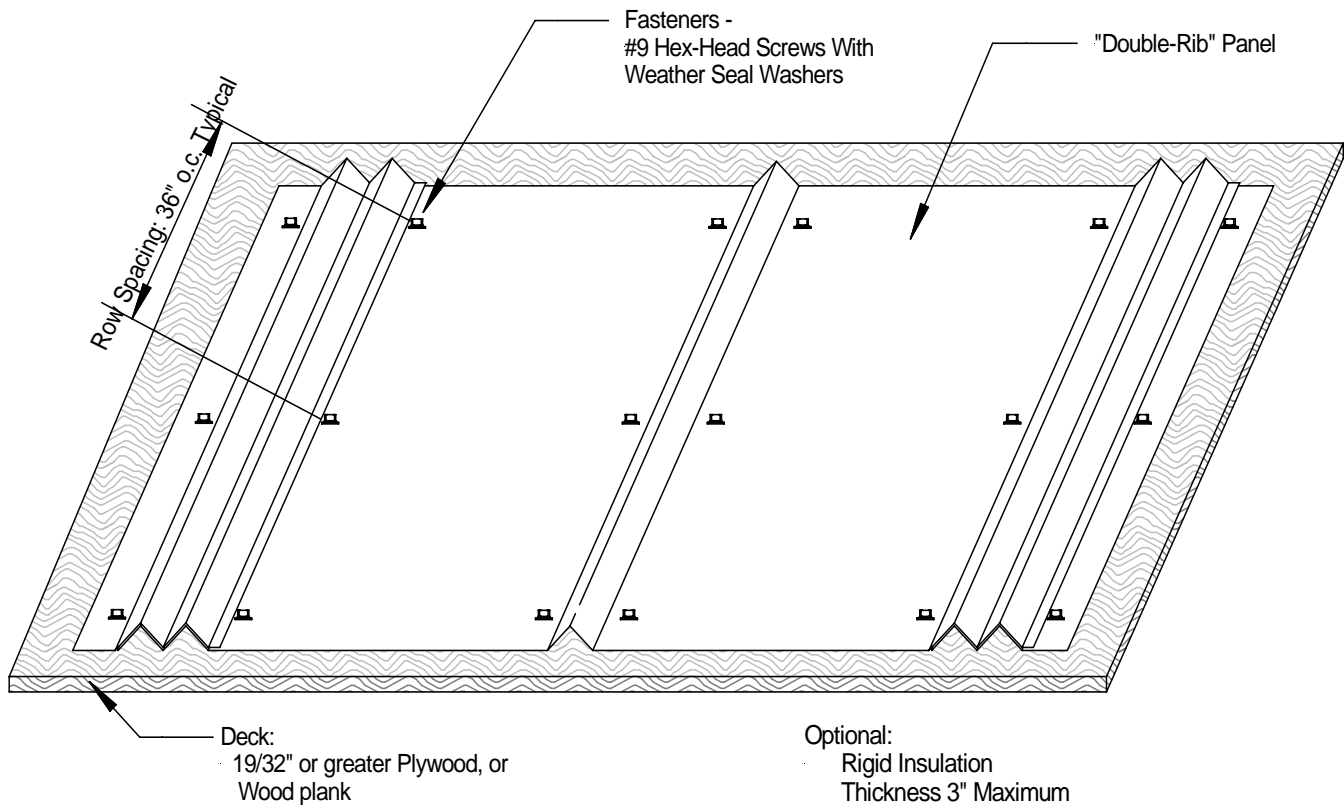
Typical Assembly Profile View

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Installation Method Berridge Manufacturing Company "Double-Rib" (24 Ga. Steel) Roof Panel Attached to Wood Deck



Typical Assembly Isometric View

Optional Insulation: Rigid Insulation Board, maximum thickness of 3" and shall be a minimum density of 2.25 pcf (lbs/ft³) or a compressive strength of 25 psi minimum.