



CBUCK Engineering

Specialty Structural Engineering

CBUCK, Inc. Florida Certificate of Authorization # 8064

Evaluation Report *of* Berridge Manufacturing Company “R-Panel”

Metal Roof Assembly

for

Florida Product Approval

FL 11422.10

Florida Building Code 2007

Per Rule 9B-72

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product: “R-Panel” Roof Panel

Material: Steel

Panel Thickness: 24 or 26 Gauge Min.

Panel Width: 36”

Support Type: Steel Purlins

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

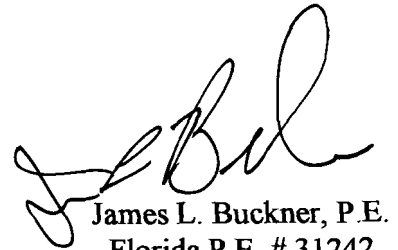
Project Manager: Diana Galloway

Report No. 08-136-RPanel-36-S6P-ER

Date: 9 / 1 / 08

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Manufacturer:	Berridge Manufacturing Company
Product Name:	“R-Panel” Roof Panel
Product Category:	Roofing
Product Sub-Category	Metal Roofing
Compliance Method:	State Product Approval Rule 9B-72.070 (1) (d)
Panel Description:	“R-Panel”, Steel, Lapped, Roof Panel attached to Steel Purlins.
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 or 26 gauge minimum Width: 36” Maximum (Net Coverage Width) Rib Height: 1-1/4”
Support Type:	Steel Purlins (Design of support system is not included in this evaluation)
Support Description:	<ul style="list-style-type: none">• Thickness: 16 gauge minimum• Yield strength: 50 ksi minimum
Slope Range:	Minimum slope shall comply with FBC 2007, including Sections 1507.4.2, 1504.7 and in accordance with the Manufacturers recommendations.
Insulation:	(Optional) <ul style="list-style-type: none">• Any compressible blanket insulation, thickness = 6” maximum before compression.
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:

Panel to Support Fasteners

Any of the following fasteners may be used:

- #12 - 14 x 3/4" minimum penetration through support
Hex-washer Head Self-drilling screws with a 5/8" OD formed steel washer and a neoprene sealing washer
- 1/4" -14 x 3/4" minimum penetration through support
Hex-washer Head Self-drilling screws with a 5/8" OD dome shaped steel washer and a neoprene sealing washer
- #14 -10 x 3/4" minimum penetration through support
Hex-washer Head Self-drilling screws with a 5/8" OD dome shaped steel washer and a neoprene sealing washer

Corrosion Resistance: Per FBC Section 1507.6.6 and 1507.4.4

Standard: Per SAE J78-1979

Panel to Panel, Stitch Fasteners

Size: #12 - 14 x 1"

Type: Hex-washer Head Self-drilling screws with a 5/8" OD formed steel washer and a neoprene sealing washer

Corrosion Resistance: Per FBC Section 1507.6.6 and 1507.4.4

Standard: Per SAE J78-1979

Installation:

Berridge "R-Panel" Roof Panel Attached to Steel Purlins:

Panel to Supports:

- **Purlin/Support Spacing: 60" o.c.** maximum
- **Fastener spacing: 12" o.c.**
(along the purlin, adjacent to every major corrugation)
Minimum fastener penetration or embedment into supports, 3/4".

Panel to Panel, Sticking:

- **Sidelap spacing: 20" o.c.**
(along the length of the side laps)

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)
@ maximum purlin spacing = 5' - 0" (Based on 2 or more spans)

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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 required design wind loads shall be determined for each project per FBC, 2007, Section 1609. Any rational analysis computations shall consider web crippling and fastener pullout/pullover per AISI Cold-Formed Steel specification and prepared by a qualified design professional as required by FBC 2007, Sections 104, 105, 106. The maximum fastener/clip and support spacing listed herein shall not be exceeded. Diaphragm and axial load capacity is outside the scope of this evaluation. 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.161, Current as of 9/1/08
 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)

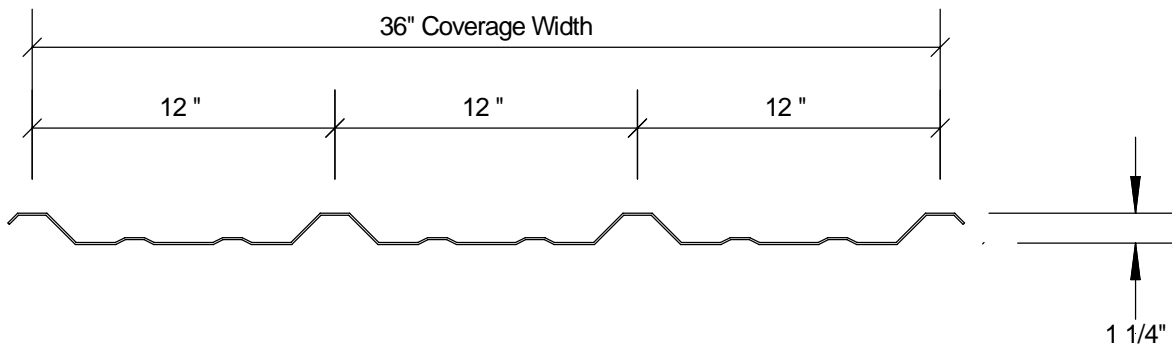
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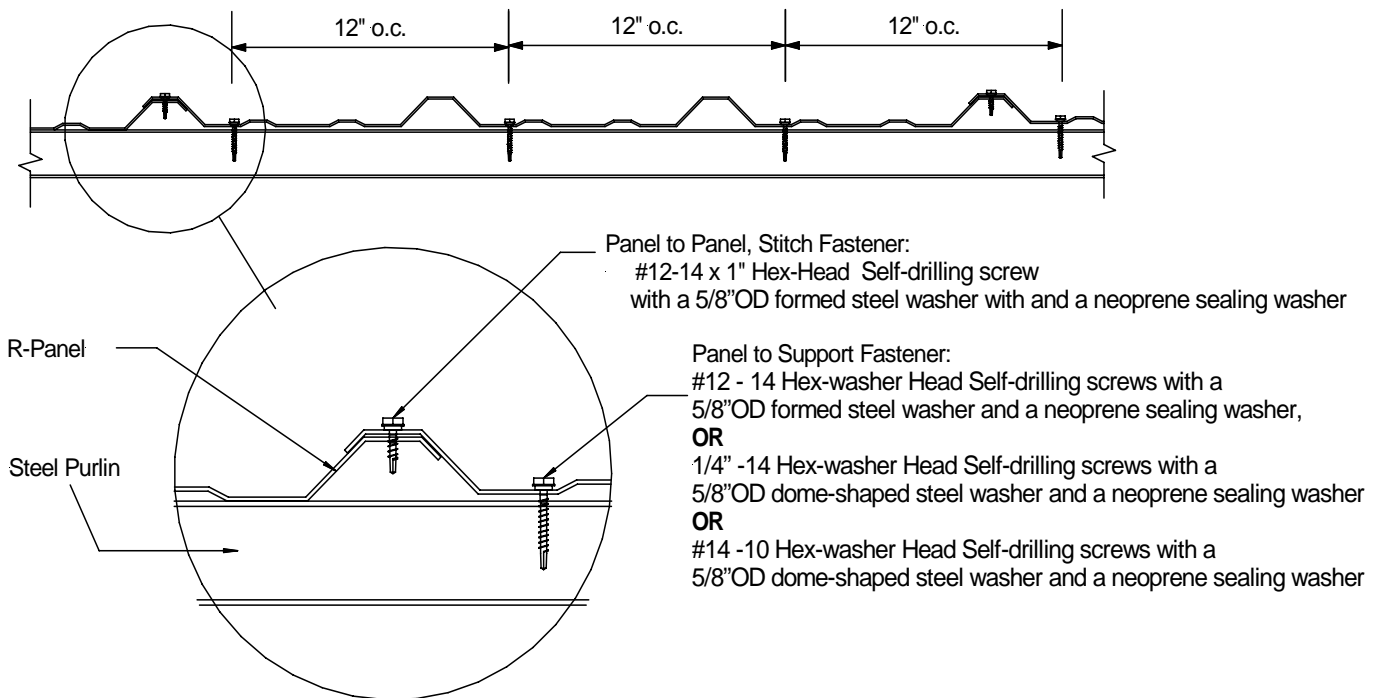
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Installation Method Berridge Manufacturing Company "R-Panel" (24 or 26 Ga. Min.) Roof Panel Attached to Steel Purlins

Profile Drawings



Typical Panel Profile View



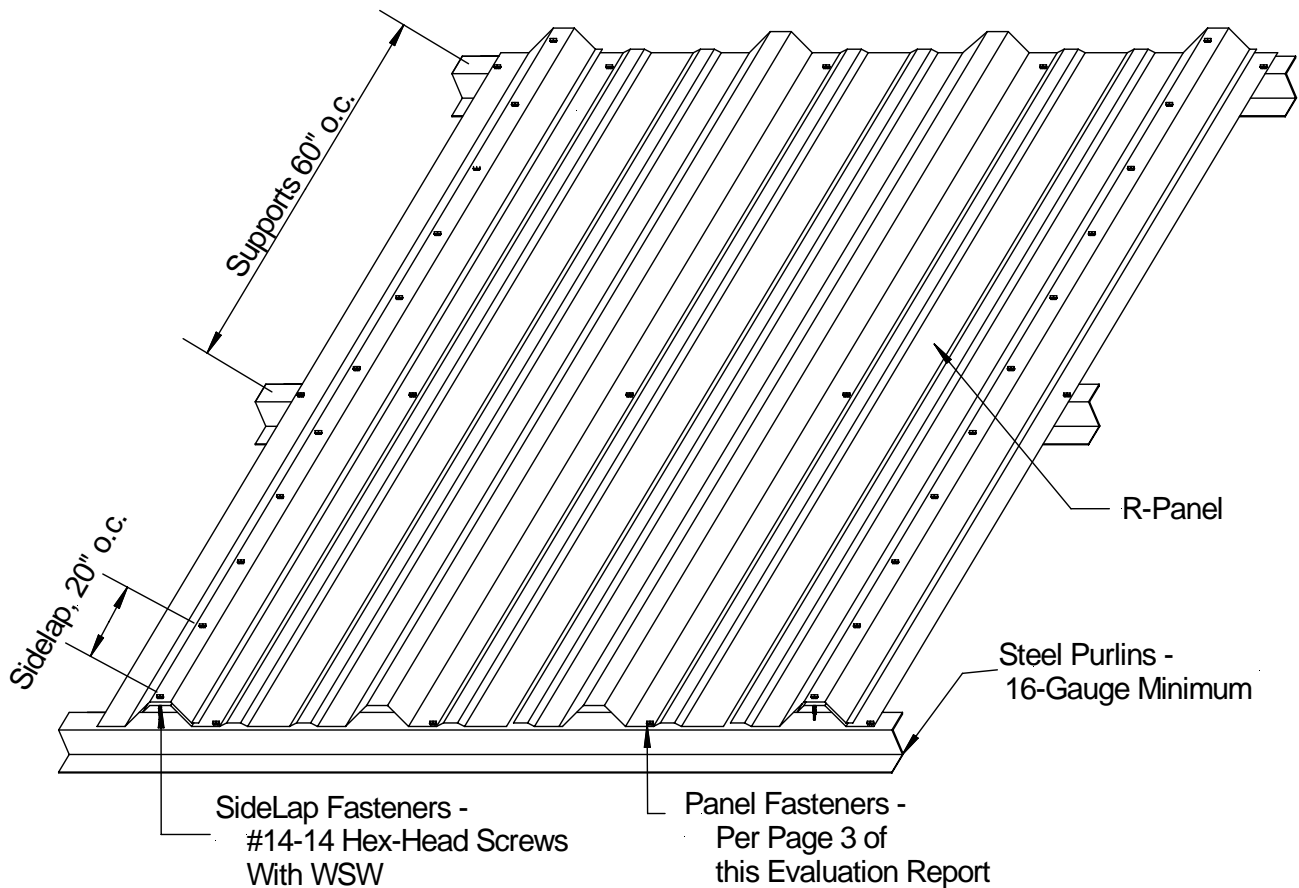
Typical Assembly Profile View

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Installation Method Berridge Manufacturing Company "R-Panel" (24 or 26 Ga. Min.) Roof Panel Attached to Steel Purlins



Typical Assembly Isometric View

Optional Insulation:

Any compressible blanket insulation, thickness = 6" maximum before compression.