

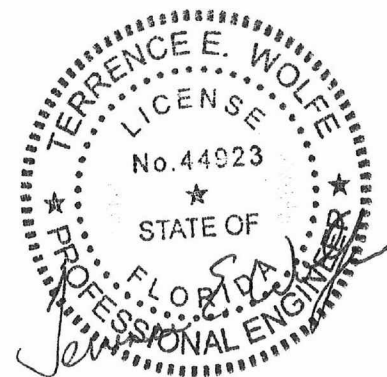


# PRODUCT EVALUATION REPORT

*26 Ga. Retro-R Panel*

State of Florida Professional Engineer:  
Terrence E. Wolfe, P.E. # 44923  
19530 Ramblewood Drive  
Humble, TX 77338

State of Florida  
C.O.A.  
# 26776



AUG 22 2016

**Manufacturer:**

**MBCI, L.P.** a division of NCI, L.P.

**Houston**  
14031 West Hardy  
Houston, TX 77064

**Lubbock**  
5711 FM-40  
Lubbock, TX 79401

**Oklahoma City**  
7000 S. Eastern Ave.  
Oklahoma City, OK 73149

**San Antonio**  
8677 I-10 East  
Converse, TX 78109

**Atlanta**  
2280 Monier Ave.  
Lithia Springs, GA 30122

**Richmond**  
801 South Ave.  
Colonial Heights, VA 23834

**Indianapolis**  
1780 McCall Drive  
Shelbyville, IN 46176

**Omaha**  
1011 Ellison Ave.  
Omaha, NE 68110

**Memphis**  
300 Highway 51 North  
Hernando, MS 38632

**Rome**  
6168 State Route 233  
Rome, NY 13440

**Adel**  
1600 Rogers Road  
Adel, GA 31620

**Phoenix**  
660 South 91<sup>th</sup> street  
Tolleson, AZ 85353

**Salt Lake City**  
1155 West 2300 North  
Salt Lake City, UT 84116

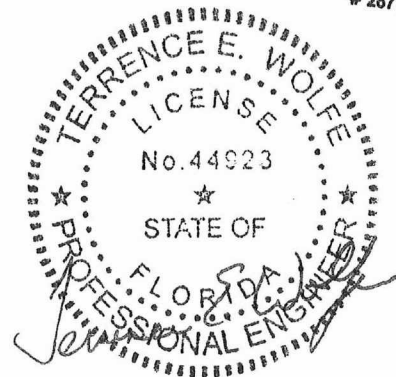
**Oskaloosa**  
515 13<sup>th</sup> Ave E.  
Oskaloosa, IA 52577

**Atwater**  
550 Industry Way  
Atwater, CA 95301

**Ennis**  
1804 Jack McKay Blvd.  
Ennis, TX 75120

**Nicholasville**  
6975 Danville Rd.  
Nicholasville, KY 40340

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**SUBJECT:**

Structural Component, Roof Deck.

**DESCRIPTION:**

Retro-R Panel— a 36", wide, through fastened, structural, metal roof panel, available in 26-ga. (.0185). Retro-R panel is installed over min 29 ga. (0.0150) PBR and over open framing.

**CODE CRITERIA:**

**PER RULE 61G20-3, CHAPTER 15, FLORIDA BUILDING CODE – BUILDING, 5<sup>TH</sup> EDITION (2014), ROOF ASSEMBLIES AND ROOFTOP STRUCTURES**

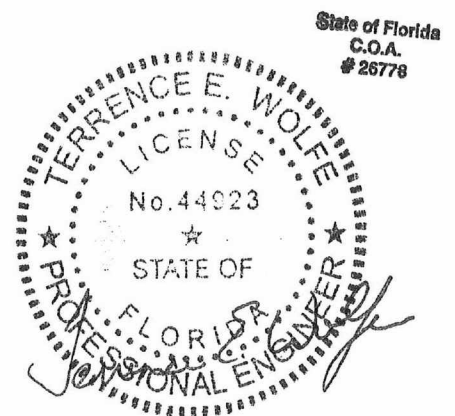
**SECTION 1504  
PERFORMANCE REQUIREMENTS**

**1504.1 Wind resistance of roofs.** Roof decks and roof coverings shall be designed for wind loads in accordance with Chapter 16, Sections 1504.2, 1504.3, and 1504.4.

**1504.3.2 Metal panel roof systems.** Metal panel roof systems through fastened or standing seam shall be tested in accordance with UL580 or ASTM E 1592 or TAS 125.

**Exception:** Metal roofs constructed of cold-formed steel, where the roof deck acts as the roof covering and provides both weather protection and support for structural loads, shall be permitted to be designed and tested with accordance with the applicable reference structural design standard in section 2210.1

**1504.7 Impact Resistance.** Roof coverings installed on low-slope roofs (roofs slope < 2:12) in accordance with Section 1507 shall resist impact damage based on the results of tests conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-GP-52M or the "Resistance to Foot Traffic" in Section 5.5 of FM 4470. All Structural metal roofing systems having a thickness equal or greater than 22 gage and all nonstructural metal roof systems having a thickness equal to or greater than 26 gage shall be exempt from test listed above.



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**SECTION 1506  
MATERIALS**

**1506.1 Scope.** The requirements set forth in this section shall apply to the application of roof-covering materials specified herein. Roof coverings shall be applied in accordance with this chapter and the manufacturer's installation instructions.

*See attached installation details.*

**1506.4 Product identification.** Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels required in accordance with 1505.

**1506.6 Screws.** Wood Screws shall conform to ANSI/ASME B 18.6.1. Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or suitable corrosion-resistant material. Corrosion resistance shall be equivalent to ASTM A641, Class1; TAS114, App E; or exhibit not more than 5 percent rust after 1000 hrs. exposure ASTM B 117.

**SECTION 1507  
REQUIREMENTS FOR ROOF COVERINGS**

**1507.4 Metal roof panels.** The installation of metal roof panels shall comply with the provisions of this section.

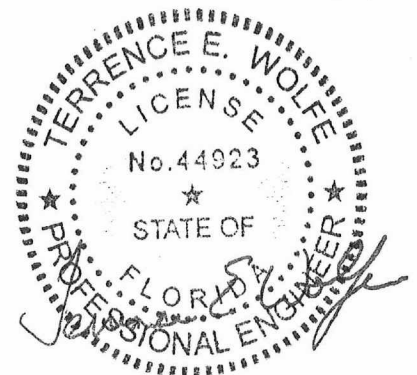
**1507.4.1 Deck requirements.** Metal roof panel roof coverings shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced supports.

*See attached limits of use.*

**1507.4.2 Deck slope.** The minimum slope for lapped, nonsoldered seam metal roofs with applied lap sealant shall be one-half unit vertical in 12 units horizontal (4-percent slope). Lap sealants shall be applied in accordance with the approved manufacturer's installation instructions.

*See attached limits of use.*

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**1507.4.3 Material standards.** Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance with Chapter 22. Metal-sheet roof coverings installed over structural decking shall comply with Table 1507.4.3(2).

Table 1507.4.3(2) Metal Roof Coverings

Roof Covering Type	Minimum Application Rate
55% Aluminum-Zinc Alloy Coated Steel	ASTM A 792 AZ 50
5% Aluminum Alloy Coated Steel	ASTM A 875 GF60
Galvanized Steel	ASTM A 653G-90
Prepainted Steel	ASTM A 755

**1507.4.4 Attachment.** Metal roof panels shall be secured to the supports in accordance with the manufacturer's fasteners. In absence of manufacturer recommendations, the following fasteners shall be used.

1. Galvanized fasteners shall be used for steel roofs.
2. Copper, brass, bronze, copper alloy or 300 series stainless-steel fasteners shall be used for copper roofs.
3. Aluminum-zinc coated fasteners are acceptable for aluminum-zinc coated roofs.
4. Stainless-steel fasteners are acceptable for all types of metal roofs.

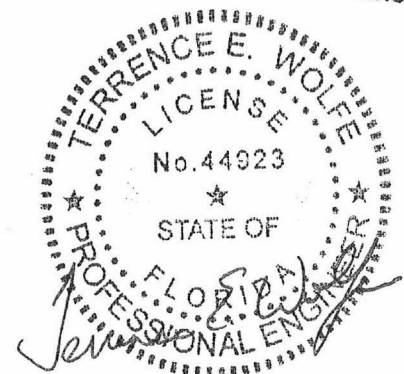
*See attached Installation instructions.*

## CHAPTER 22 STEEL

### SECTION 2210 COLD-FORMED STEEL CONSTRUCTION

**2210.1 Regular cold-formed steel.** The design of cold-formed carbon and low-alloy steel structural members shall be in accordance AISI S100.

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## LIMITATIONS OF USE FOR NON-HIGH VELOCITY HURRICANE ZONES

**Minimum Slope:** 1/2:12  
**Substrate:** Steel  
**Substrate Description:** Purlins or FL P.E. designed equal.  
**Substrate Attachment:** Designed by FL P.E. per FBC 5<sup>th</sup> edition (2014).  
**Insulation:** (Optional) Vinyl or reflective foil faced fiberglass batten insulations that have a flame spread rating of no more than 25 and a smoke development rating of not more than 450.  
**Minimum Substrate Thickness:** 16-ga purlins or FL P.E. designed equal per FBC 5<sup>th</sup> Edition (2014).

### Documentation Supporting the Compliance Statement:

The product has been tested in accordance with:

- ASTM E 1592-05: Test Report 07-0146T-16 A, B, dated 7-07-16 by Force Engineering & Testing, Inc. located in Humble, Texas.
- FM 4471 "Foot Traffic" PBR documentation for roof slopes 2:12 or less per section 1504.7. FM approvals report 3005245, dated July 24, 2000 located in Norwood, MA 02062.

**Application:** Install Retro-R Panel per the manufacturers approved details.

**Maximum Uplift Pressure:** -49.45 psf @ 5'-0"  
-130.05 psf @ 2'-0"

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