

Force Engineering & Testing

19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603 FAX: (281) 540-9966
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Product Evaluation Report
CAPITAL METAL SUPPLY, INC.

Min. 29 Ga. Capital Rib Roof Panel over open framing

Florida Product Approval # 20147.2 R4

Florida Building Code 2023

Per Rule 61G20-3

Method: 1 –D

Category: Structural Components

Subcategory: Roof Deck

Compliance Method: 61G20-3.005(1)(d)

NON HVHZ

Product Manufacturer:

Capital Metal Supply, Inc.

3845 S. US HWY 441

Lake City, Florida 32025

Capital Metal Supply, Inc.

629 SE Industrial Circle

Lake City, Florida 32025

Engineer Evaluator:

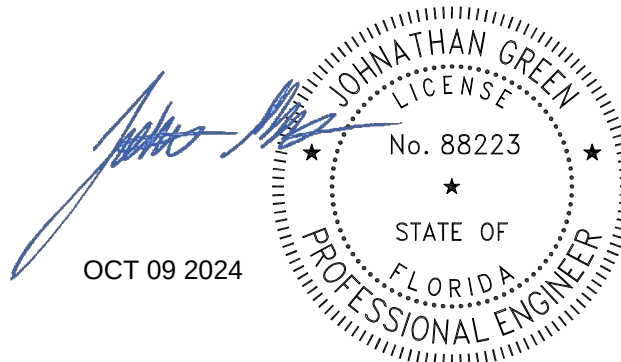
Johnathan Green, P.E. #88223

Florida Evaluation ANE ID: 12901

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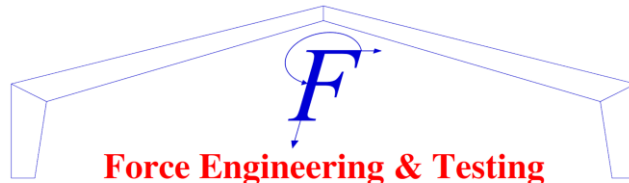
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Compliance Statement:	The product as described in this report has demonstrated compliance with the Florida Building Code 2023, Sections 1504.3.2, 1504.7.
Product Description:	Capital Rib Roof Panel, Min. 29 Ga. Steel, 36" Wide, through fastened structural roof panel. Structural Application.
Panel Material/Standards:	Material: Min. 29 Ga. Steel, ASTM A792 or ASTM A653 G90 conforming to Florida Building Code 2023, Section 1507.4.3. Paint finish optional. Yield Strength: Min. 80.0 ksi Corrosion Resistance: Panel Material shall comply with Florida Building Code 2023, Section 1507.4.3.
Panel Dimension(s):	Thickness: 0.0160" min. Width: 36" maximum coverage Rib Height: ¾" major rib at 9" O.C. Panel Rollformer: MRS Metal Rollforming Systems
Panel Fastener:	#12-14 x ¾" HWH SD3 with 9/16" (14mm) diameter bonded sealing washing or approved equal. Table A ONLY: Panel side laps fastened together w/ ¼-14 x 7/8" HWH SD1 with sealing washer at 20" O.C. Corrosion Resistance: Per Florida Building Code 2023, Section 1507.4.4.
Substrate Description:	Minimum 18 Ga. Grade 50 or 16 Ga. Grade 50 Steel Framing. See Table A, B & C for steel gauge. Framing must be designed in accordance w/ Florida Building Code 2023.

Allowable Design Pressures:

Table "A"

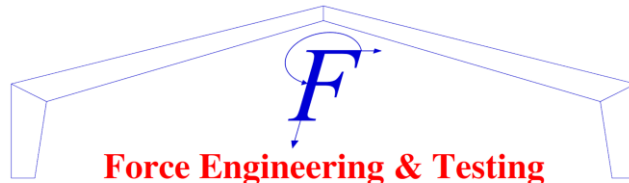
Maximum Design Pressure:	-36.4 psf	+31.2 psf	-41.6 psf	+39.0 psf
Panel Fastener Pattern:	9"-6"-3"-6"-3"-9"	9"-6"-3"-6"-3"-9"	9"-6"-3"-6"-3"-9"	9"-6"-3"-6"-3"-9"
Panel Side Lap Fastener:	20" O.C.	20" O.C.	20" O.C.	20" O.C.
Panel Span:	5'-0" O.C.	5'-0" O.C.	4'-0" O.C.	4'-0" O.C.
Substrate:	Min. 16 Ga. Steel Framing	Min. 18 Ga. Steel Framing	Min. 18 Ga. Steel Framing	Min. 18 Ga. Steel Framing

*Design Pressure includes a Safety Factor = 2.0.

Table "B"

Maximum Design Pressure:	-44.2 psf	-59.9 psf	-135.3 psf
Panel Fastener Pattern:	6"-3"-6"-3"-6"-3"-6"	6"-3"-6"-3"-6"-3"-6"	6"-3"-6"-3"-6"-3"-6"
Panel Side Lap Fastener:	None	None	None
Panel Span:	5'-0" O.C.	4'-0" O.C.	2'-0" O.C.
Substrate:	Min. 16 Ga. Steel Framing	Min. 18 Ga. Steel Framing	Min. 18 Ga. Steel Framing

*Design Pressure includes a Safety Factor = 2.0.



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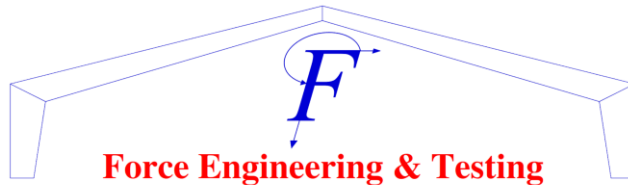
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Table "C"

Maximum Design Pressure:	+28.6 psf	+33.8 psf	+140.5 psf
Panel Fastener Pattern:	6"-3"-6"-3"-6"-3"-6"	6"-3"-6"-3"-6"-3"-6"	6"-3"-6"-3"-6"-3"-6"
Panel Side Lap Fastener:	None	None	None
Panel Span:	5'-0" O.C.	4'-0" O.C.	2'-0" O.C.
Substrate:	Min. 18 Ga. Steel Framing	Min. 18 Ga. Steel Framing	Min. 18 Ga. Steel Framing

*Design Pressure includes a Safety Factor = 2.0.

Code Compliance:	The product described herein has demonstrated compliance with The Florida Building Code 2023, Section 1504.3.2, 1504.7.
Evaluation Report Scope:	The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2023, as relates to Rule 61G20-3.
Performance Standards:	The product described herein has demonstrated compliance with: - ASTM E 1592-05 (2017) Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference - FM 4471-92 - Foot Traffic Resistance Test
Reference Data:	- ASTM E 1592-05 Test Force Engineering & Testing, Inc. (FBC Organization # TST-5328) Report No. 587-0072T-16A-D, 587-0072T-16F-I - ASTM E 1592-05 (2017) Test Force Engineering & Testing (FBC Organization # TST-5328) Report No. 587-0103T-24 - FM 4471-10, Section 4.4 Foot Traffic Resistance Test Force Engineering & Testing, Inc. (FBC Organization # TST-5328) Report No. 587-0072T-16E - Certificate of Independence By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing (FBC Organization # ANE ID: 12901)
Test Standard Equivalency:	The ASTM E 1592-05 test standard is equivalent to the ASTM E 1592-05 (2017) test standard. The FM 4471-10, Foot Traffic Resistance test standard is equivalent to the FM 4471-92, Foot Traffic Resistance test standard
Quality Assurance Entity:	The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.



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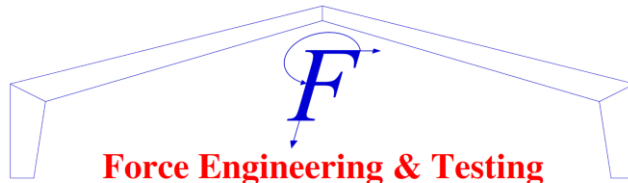
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Minimum Slope Range:	Minimum Slope shall comply with Florida Building Code 2023, including Section 1507.4.2 and in accordance with Manufacturers recommendations. For slopes less than 3:12, lap sealant must be used in the panel side laps.
Installation:	Install per manufacturer's recommended details.
Insulation:	Manufacturer's approved product (Optional).
Roof Panel Fire Classification:	Fire classification is not part of this acceptance.
Shear Diaphragm:	Shear diaphragm values are outside the scope of this report.
Design Procedure:	Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2023 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2023 Chapter 22 for steel, and Chapter 16 for structural loading.



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TABLE A PANEL FASTENER PATTERN

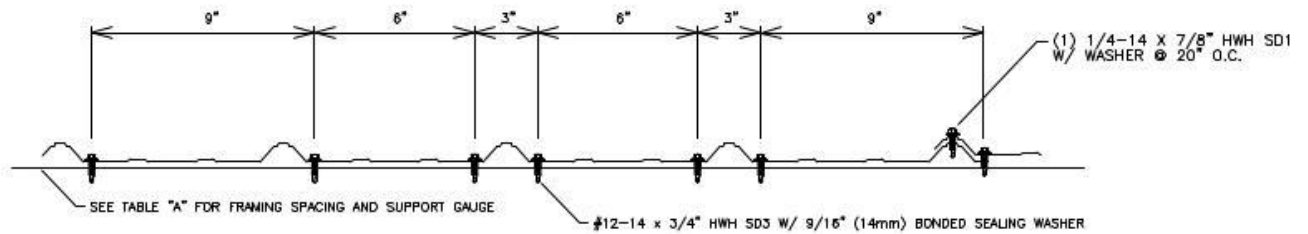


TABLE B & C PANEL FASTENER PATTERN

