

Evaluation Report

of

Bemo USA Corporation

"305"

Metal Roof Assembly

Manufacturer:

Bemo USA Corporation

1755 N. 48th Street

Mesa, AZ 85205

(877) 530-2366

for

Florida Product Approval

FL 11243.1 R8

Florida Building Code 8th Edition (2023)

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product: *"305" Standing Seam Roof Panel*

Material: *Aluminum*

Panel Thickness: *0.040"*

Width: *12"Nominal*

Support Type: *Steel Deck*

Prepared by:

James L. Buckner, P.E.

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

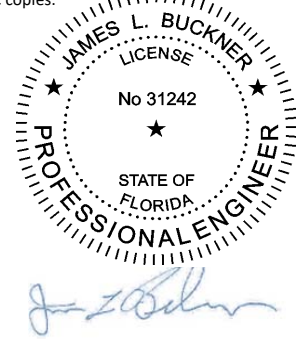
Project Manager: Diana Galloway

Report No. 23-559-305-A4S-ER

(Revises 21-418-305-A4S-ER, FL11243.1 R7)

Date: 08/16/2023

This item has been electronically signed and sealed by James L. Buckner, P.E., on this date using a Digital Signature. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



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Evaluation Report

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Date: 2023.08.16
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Manufacturer:	Bemo USA Corporation 1755 N. 48th Street Mesa, AZ 85205 (877) 530-2366 http://bemousa.com/
Product Name:	“305” Standing Seam Roof Panel
Product Category:	Roofing
Product Sub-Category	Metal Roofing
Compliance Method:	State Product Approval Rule 61G20-3.005 (1) (d)
Product/System Description:	BEMO “305” Standing Seam Roof Panel, 0.040” Aluminum, 12” Wide panel attached to steel deck with two-piece panel clips.
Product Assembly as Evaluated:	Refer to Page 4 of this report for product assembly components/materials & standards: 1. Roof Panel 2. Panel Clip 3. Fasteners 4. Insulation (Optional) 5. Fire Barrier Board (Optional)
Support:	Type: Steel Deck (Design of steel support and its attachment to support framing is outside the scope of this evaluation.) Description: • 20 Gauge min. or 22 Gauge min. (Per Table A), • Yield Strength: 50 ksi minimum
Slope:	Minimum slope shall be In compliance with FBC Chapter 15 based on the type of roof covering, applicable code sections and in accordance with manufacturer’s recommendations.
Performance:	Wind Uplift Resistance: • Design Uplift Pressure: Refer to Table “A” (Refer to “Table A” attachment details herein)

Performance Standards:

The product described herein has demonstrated compliance with:

- **TAS 125-03** – *Standard Requirements for Metal Roofing Systems*

Code Compliance:

The product described herein has demonstrated compliance with the Florida Building Code 8th Edition (2023).

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 61G20-3.

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 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "Optional Statewide Approval".
- Option for application outside "Limitations and Conditions of Use"
Rule 61G20-3.005(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.
- This report is a building code product evaluation per FLPE rule (FAC) 61G15-36 to comply with Florida product approval rule (FAC) 61G20-3. This evaluation report is part of the Florida Building Commission approval for the listed code related criteria. This report by James Buckner, P.E. and CBUCK Engineering is not a design certification of code compliance construction submittal documentation, per FBC section 107, for any individual structure, site specific or permit design.
- All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC, including but limited to Sections 1504.3.2, 1506.6 and 1507.4.4.
- Design of support system is outside the scope of this report.
- Fire Classification is outside the scope of Rule 61G20-3, 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 61G20-3.0005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through Farabaugh Engineering and Testing.

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

Roof Panel:

Material: BEMO "305" Roof Panel
Thickness: Aluminum
Panel Width: 0.040" (min.)
Rib Height: 11-7/8" (Net Coverage)
Alloy Type: 2-1/2"
Corrosion Resistance: 3105 – H14
Per FBC Section 1507.4.3

Roof Panel Clips:

Type: Bemo Sliding Hook Clip
Material/Thickness: Two-Piece, sliding clip
Clip Stem: 18 ga. Stainless Steel
Clip Base: 18 ga. Stainless Steel or Galvanized Steel
Clip Part #'s: Stainless Steel Base: BSHC-01
Galvanized Steel Base: BSHC-02
Dimensions: 3.168" (tall) x 5" (long) x 1.94" (base)
Yield Strength: Stainless Steel: 75 ksi min.
Galvanized Steel: 50 ksi min.
Corrosion Resistance: Per FBC Section 1506.7

Fastener:

Type: Pancake-Head Self-Drilling Screws
Size : #14 - 10 x 4-1/2"
Corrosion Resistance: Per FBC Section 1506.6 and 1507.4.4
Standard: Per SAE J78-1979

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

Insulation (Optional):

Type: Rigid Insulation Board
Thickness: 4" (max.)
Properties:
Density: 2.25 pcf (lbs/ft³) min.
Or Compressive Strength: 20 psi min.

Insulation Notes:

- Rigid Insulation shall meet minimum density OR compressive strength.
- Insulation shall comply with FBC Section 1508. When insulation is incorporated, fastener length shall conform to penetrate thru bottom of support a minimum of 3/4".

Fire Barrier Board (Optional):

1/2" thick Georgia-Pacific "Dens Deck"

Installation:

Installation Method:

(Refer to "TABLE A" below and drawings at the end of this evaluation report.)

- Steel Deck Gauge: Refer to Table "A" Below
- Clip spacing: Refer to Table "A" Below
(along the length of the panel and nominally within 3" from panel ends)
- Two fasteners per Clip
(minimum penetration through steel deck, 3/4")
- Rib Interlock: Mechanically seamed
- For panel construction at the end of panels, refer to manufacturer's instructions and any site specific design.

TABLE "A"				
BEMO "305" Aluminum Roof Panel attached to 22 ga. Steel Deck				
ALLOWABLE LOADS				
ATTACHMENT METHOD	DESIGN PRESSURE:	CLIP SPACING:	DECK MIN. GAUGE:	#FASTENERS PER CLIP
METHOD 1:	- 157.25 PSF	24"	22 Gauge	2
METHOD 2:	- 65 PSF	36"	22 Gauge	2
METHOD 3:	- 46 PSF	48"	22 Gauge	2
METHOD 4:	- 37 PSF	60"	22 Gauge	2
METHOD 5:	- 219.6 PSF	12"	20 Gauge	2
Notes:				
• Allowable design pressure(s) for allowable stress design (ASD).				

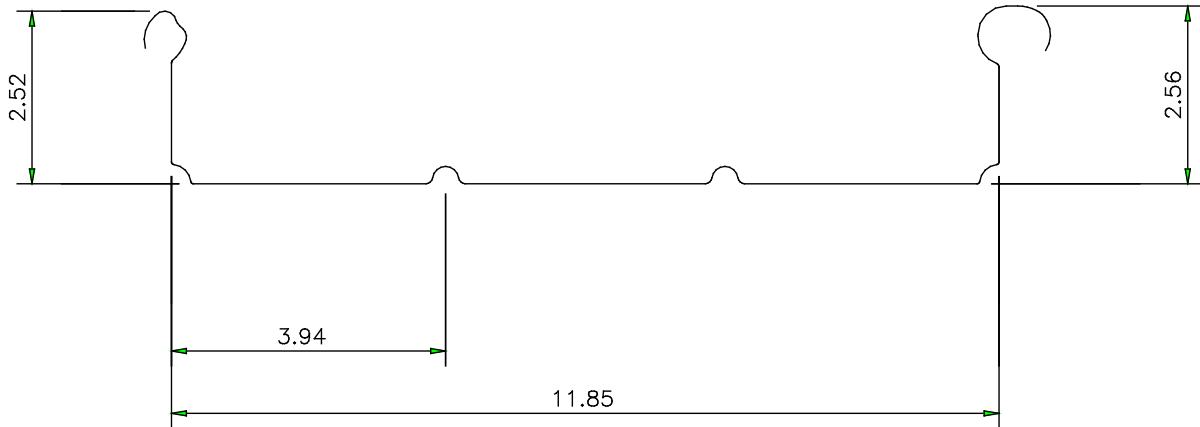
Install the "305" roof panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 8th Edition (2023). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Referenced Data:

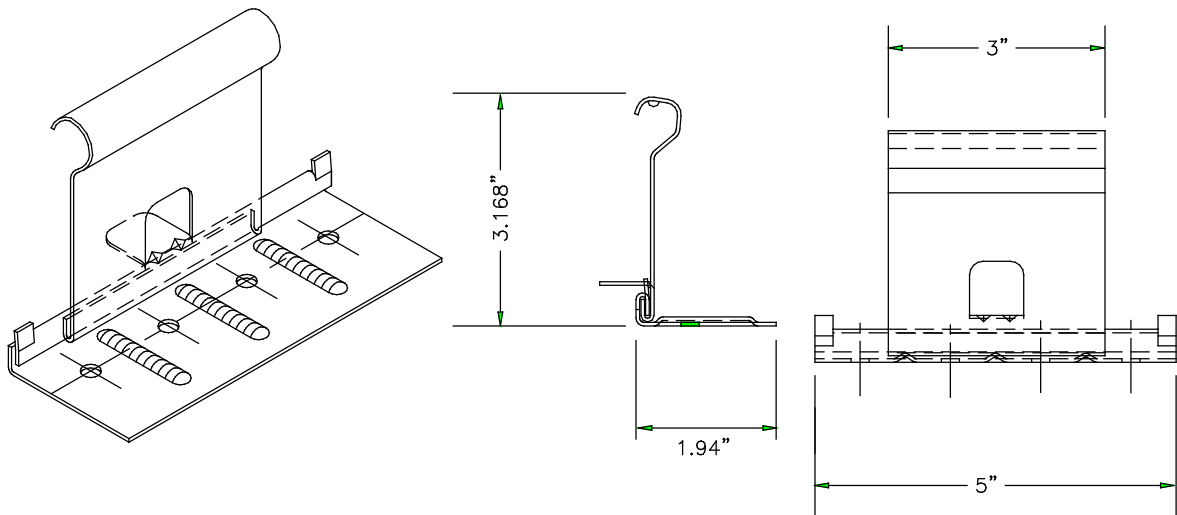
1. TAS 125-03 Uplift Test
By Farabaugh Engineering and Testing (FBC Organization #TST ID: 1654)
Report# T179-09, Report Date: 05/23/09
2. Quality Assurance
By Farabaugh Engineering and Testing
3. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization # ANE 1916)
4. Engineering Analysis
By CBUCK Engineering

Installation Method
BEMO USA CORPORATION
"305" Roof Panel (0.040" Aluminum) Attached to Steel Deck

Profile Drawings



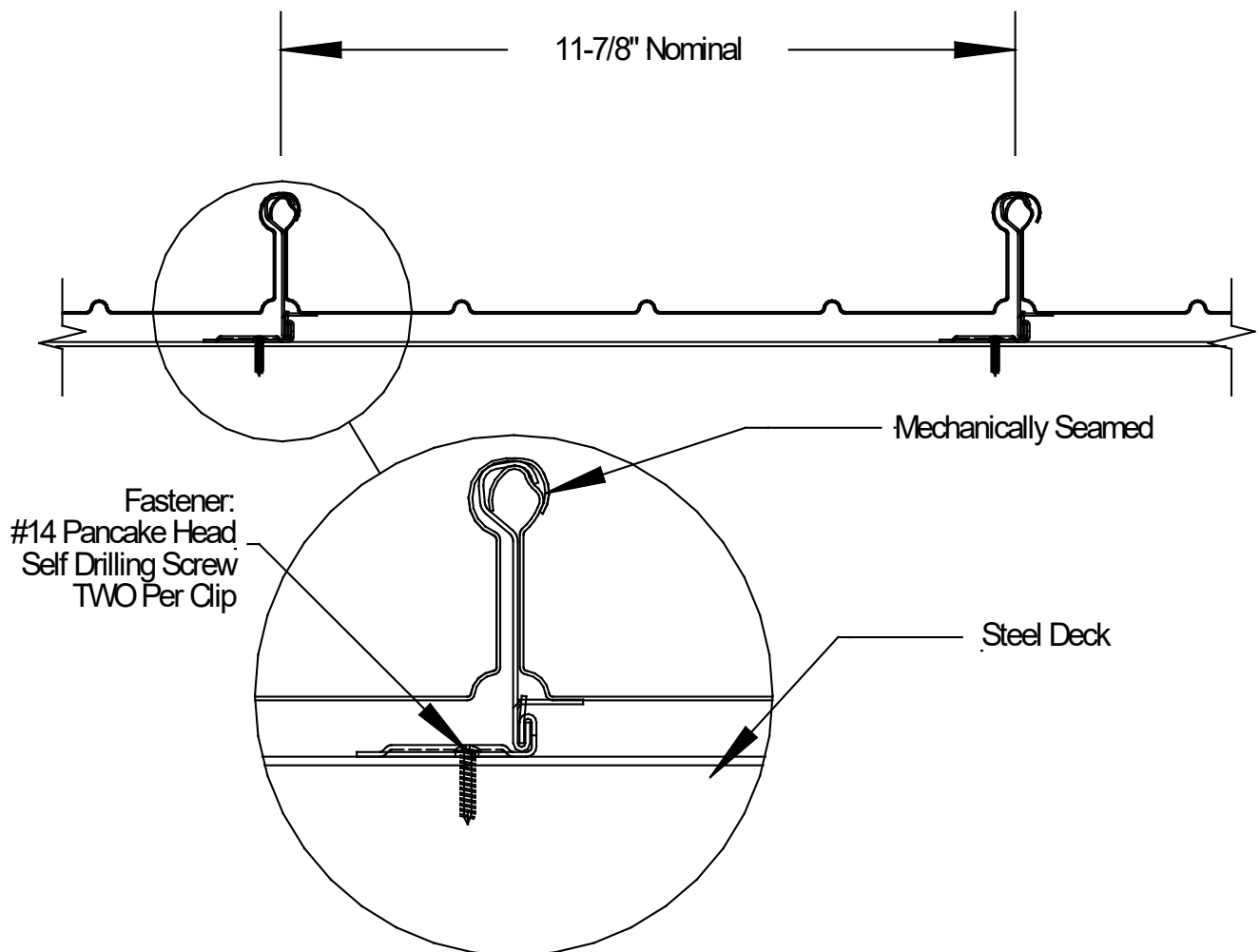
Typical Panel Profile View



Note:
Refer to Manufacturers
Instructions for Sealant
Application

BEMO Sliding Hook Clip
(Refer to Page 4 of this report for Additional Data)

Installation Method
BEMO USA CORPORATION
"305" Roof Panel (0.040" Aluminum) Attached to Steel Deck

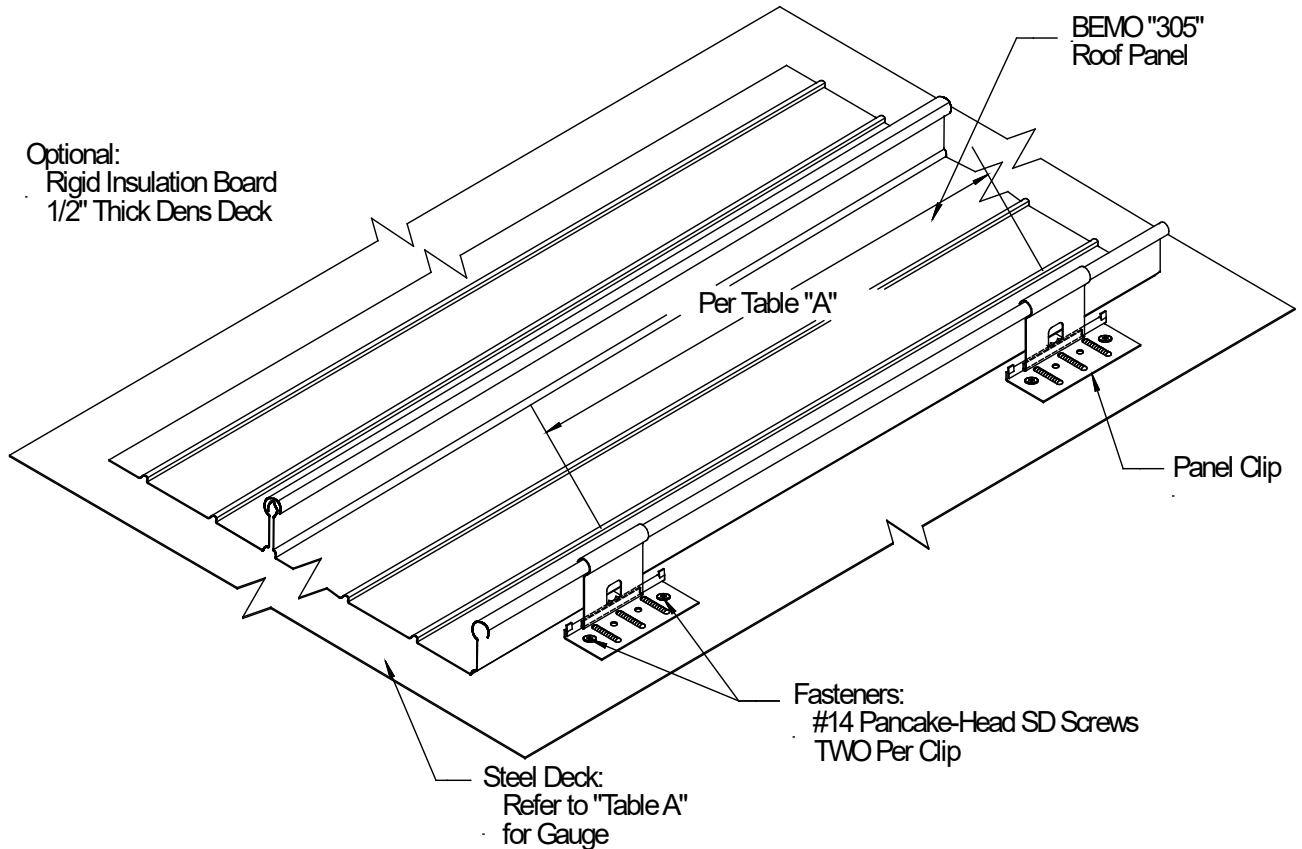


Typical Assembly Profile View

Installation Method

BEMO USA CORPORATION

“305” Roof Panel (0.040” Aluminum) Attached to Steel Deck



Typical Assembly Isometric View

TABLE "A"				
BEMO "305" Aluminum Roof Panel attached to 22 ga. Steel Deck				
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