Evaluation Report

"M-Panel"

Metal Wall Assembly

Manufacturer:

Berridge Manufacturing Company

1720 Maury Road

Houston, TX 77026

(800) 231-8127

for

Florida Product Approval

FL 14669.4 R4

Florida Building Code 7th Edition (2020)

Method: **1 - D**

Category: **Structural Components**

Sub - Category: **Structural Wall**

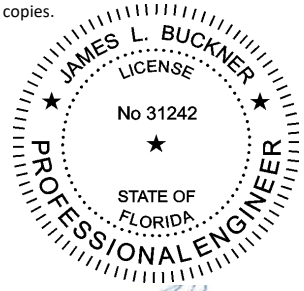
Product: "M-Panel" Wall Panel

Material: Steel

Prepared by:
James L. Buckner, P.E., S.E.C.B.
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Project Manager: Diana Galloway
Report No. 20-227- M-SG-ER
(Revises 17-128-M-SG-ER, fka FL14669.4 R3)
Date: 09 / 17 / 20

Contents:

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.



2020.10.15 19:45:20 -04'00'

Manufacturer:
Berridge Manufacturing Company
1720 Maury Road
Houston, TX 77026
(800) 231-8127
www.berridge.com

Product Name:
"M-Panel"

Product Category:
Structural Components

Product Sub-Category
Structural Wall

Compliance Method:
State Product Approval Rule 61G20-3.005 (1) (d)

Product/System Description:
"M-Panel" Wall Panel
Steel lapped wall panel fastened into structural Steel Supports.

Product Assembly as Evaluated:
Refer to Page 4 of this report for product assembly components/materials & standards:

1. Wall Panel
2. Fasteners

Support:
Type:
Steel Supports
(Design of steel support and its attachment to support framing is outside the scope of this evaluation.)

Description:
Material: Steel
Thickness: 16 Gauge minimum
Yield Strength: 50 ksi minimum
Girt/Stud Size: 2" min. flange bearing

Performance:
Wind Resistance:
- Design Pressure: **- 52.5 PSF**
  (Refer to "Table A" attachment details herein)

Performance Standards:
The product described herein has demonstrated compliance with:

- UL580-06 – *Test for Uplift Resistance of Roof Assemblies—with Revisions through February 1998*

Standards Equivalency: The UL 580-94 standard version used to test the evaluated product assembly is equivalent with the prescribed standards in UL 580-06 adopted by the Florida Building Code 7th Edition (2020).

Code Compliance: The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the current Florida Building Code.

Evaluation Report Scope: This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.

Limitations and Conditions of Use:

- Diaphragm and axial load capacity is outside the scope of this evaluation.
- 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.
- Design of support system is outside the scope of this report. Support shall be designed by others and shall comply with the FBC Chapters 22 for steel and Chapter 16 for structural loading.
- 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 wall 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 UL, LLC (FBC Organization #: QUA 9625).

Components/Materials (by Manufacturer):

Wall Panel:	Berridge "M-Panel"
Material:	Steel
Thickness:	24 Gauge
Panel Width:	36" Coverage
Rib Height:	3/4"
Yield Strength:	40 ksi min.
Steel Grade:	40
Corrosion Resistance:	In compliance with FBC Section 1405.2

Fastener:

FASTENER 1:	Panel to Support
Type:	Hex-Head Sheet Metal Screw with WSW
Size :	#12 – 14 x 3/4"
Corrosion Resistance:	Per FBC Section 1405.17
Standard:	Approved per FBC Section 1405.17
FASTENER 2:	Panel to Panel, Stitch Lap
Type:	Hex-Head Sheet Metal Screw with WSW
Size :	#12 – 14 x 1"
Corrosion Resistance:	Per FBC Section 1405.17
Standard:	Approved per FBC Section 1405.17

Installation:

Installation Method:
(Refer to **"TABLE A"** below and drawings at the end of this report.)

- Girt/Support Spacing: **60" (5'-0")** max.
- Fastener spacing: 6" o.c.
- Side Lap Spacing: 12" o.c
- Rib Interlock: Panel ribs shall be fully engaged to form an integral interlock**.**
- Minimum fastener penetration thru support, 3/4".
  (through flange of steel supports)

TABLE "A" ALLOWABLE LOADS	
	METHOD 1:
Design Pressure:	**- 52.5 PSF**
Panel Thickness:	24 gauge
Fastener Spacing:	6"
Max. Support Spacing:	60"
Side Lap Spacing:	12"
Span Condition:	2 or more
Notes: • Positive Pressure Inward/Negative Pressure Outward • Allowable design pressure(s) for allowable stress design (ASD). • Fastener Attachment to Steel Supports May Be Designed By A Qualified Design Professional As Required By The Florida Building Code For Site Specific Projects. • Diaphragm and axial load capacity are not included in this evaluation.	

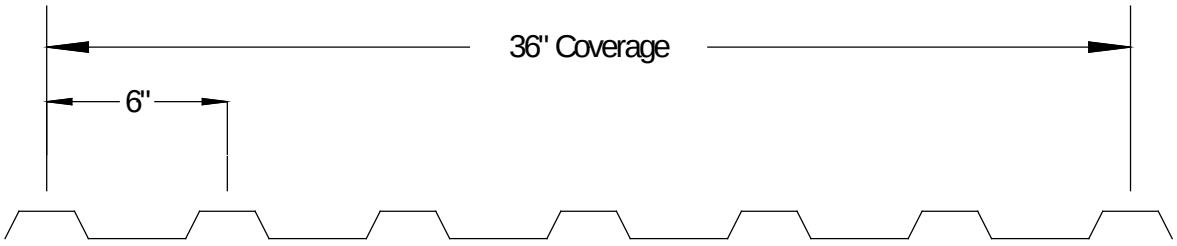
Install the "M-Panel" wall panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 7th Edition (2020). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Referenced Data:

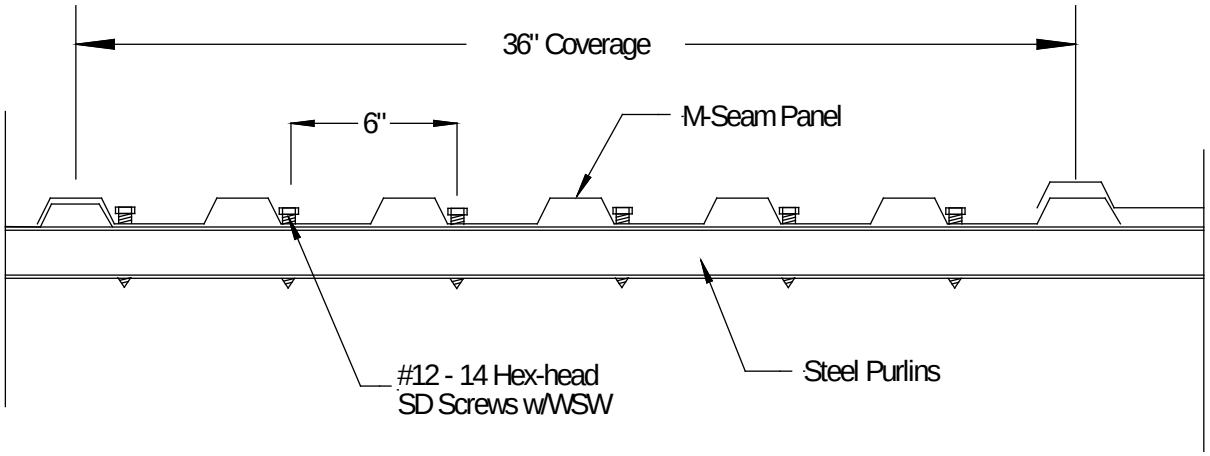
1. Uplift Class 90 Based on UL580-94 (with 1998 Revisions) Uplift Test
   UL, LLC (FBC Organization #: CER 9626)
   UL File #TGKX.39
2. Engineering Analysis
   By CBUCK Engineering
3. Equivalency of Test Standard Certification
   By James L. Buckner, P.E. @ CBUCK Engineering
4. Quality Assurance
   UL, LLC (FBC Organization #: QUA 9625)
5. Certification of Independence
   By James L. Buckner, P.E. @ CBUCK Engineering (FBC Organization #ANE 1916)

Installation Method
Berridge Manufacturing Company
"M-Panel" Steel Wall Panel attached to Steel Supports

Profile Drawings

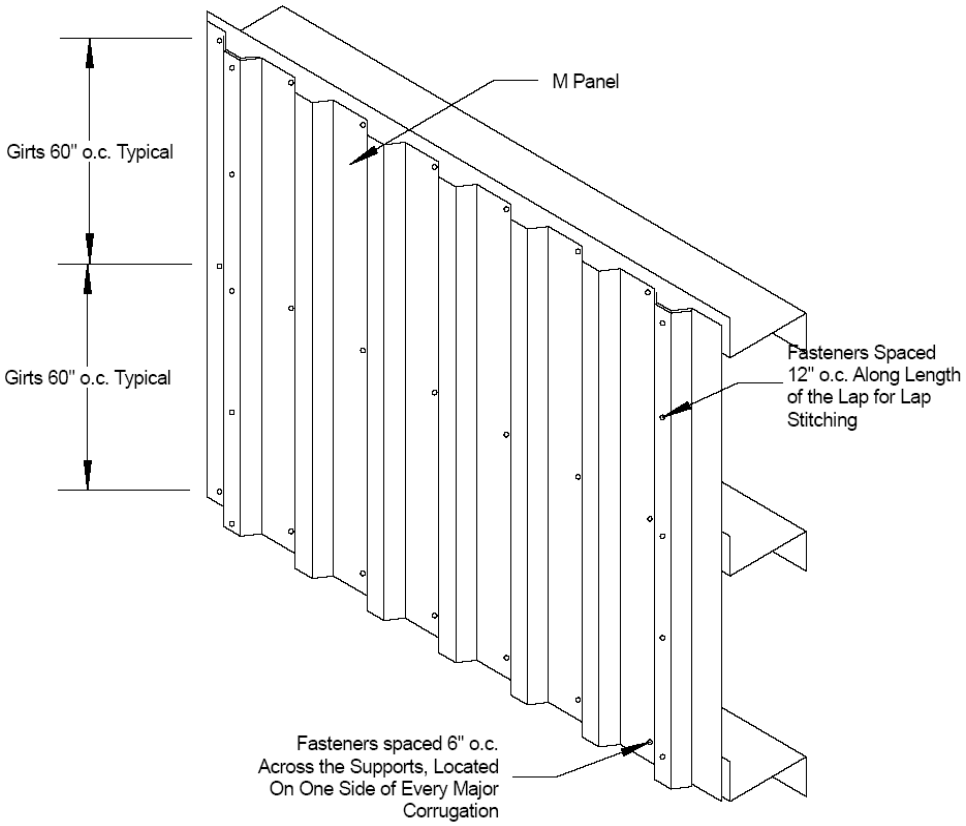


TYPICAL "M-Panel" PANEL
PROFILE VIEW



TYPICAL PANEL ASSEMBLY
SECTION VIEW

Installation Method
Berridge Manufacturing Company
"M-Panel" Steel Wall Panel attached to Steel Supports



TYPICAL ELEVATION VIEW
OUTSIDE OF WALL ASSEMBLY

TABLE "A"	
	METHOD 1:
Design Pressure:	**- 52.5 PSF**
Panel Thickness:	24 or 26 gauge
Fastener Spacing:	6"
Max. Support Spacing:	60"
Side Lap Spacing:	12"
Span Condition:	2 or more
NOTE: Negative Pressure Outward	