

**EVALUATION REPORT OF
METAL SALES MANUFACTURING CORPORATION
'24 GA. VERTICAL SEAM PANEL'**

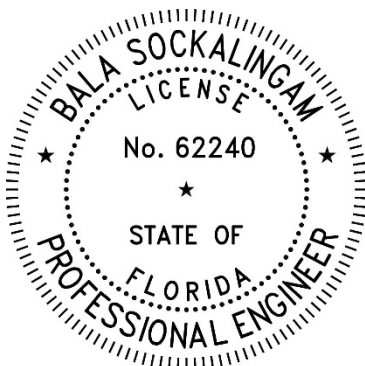
**FLORIDA BUILDING CODE 8TH EDITION (2023)
FLORIDA PRODUCT APPROVAL
FL 11560.7-R5
ROOFING
METAL ROOFING**

**Prepared For:
Metal Sales Manufacturing Corporation
7800 Highway 60
Sellersburg, IN 47172
Telephone: (502) 855-4300
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**Prepared By:
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Tulsa, OK 74106
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**This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (2 Pages)
Load Span Table (1 Page)**

**Report No. C2672-7
Date: 8.3.2023**



This item has been digitally signed and sealed by Bala Sockalingam, PE, on the date indicated.

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

| | |
|---|---|
| Manufacturer: | Metal Sales Manufacturing Corporation |
| Product Name: | Vertical Seam |
| Panel Description: | Standing seam panel with max. 16" wide coverage and 1.75" high ribs |
| Materials: | Min. 24 ga., 50 ksi steel. Galvanized coated steel (ASTM A653) or Galvalume coated steel (ASTM A792) or painted steel (ASTM A755). Pre-painted panels are required for use with adhesive and support strap. Corrosion resistant as per FBC 2023 Section 1507.4.3. |
| Deck Description: | Min. 15/32" thick plywood or min. 3/4" thick wood plank (min SG of 0.42) for new and existing constructions. Designed and installed as per FBC 2023. |
| Deck Attachment: (Minimum) | 8d x 2.5" long ring shank nails or #8 x 2" long wood screws at 6" o.c. in the field and 4" o.c. at edges. Designed as per FBC 2023. Deck fastener spacing at 3" o.c. in the field and edges for roof zones installed with support strap. Designed as per FBC 2023. |
| Underlayment: | Minimum underlayment as per FBC 2023 Section 1507.4.5.1 |
| Slope: | 1/4:12 or greater in accordance with FBC 2023 Section 1507.4.2. |
| Design Uplift Pressure: (Factor of Safety = 2) | 30.0 psf at clip spacing of 48" o.c. 73.0 psf at clip spacing of 24" o.c. 114.3 psf at clip spacing of 8" o.c. 200.0 psf at clip spacing of 12" o.c. with support strap and adhesive |
| Fastening Pattern: At panel seam | Panel clip (QMS 4923565) with (2) #10-12 x 1" long pancake head screws per clip. Fastener shall be of sufficient length to penetrate through the deck a minimum of 1/4". Clips and fasteners are corrosion resistant as per FBC 2023 Section 1506.7 and 1507.4.4, respectively. |
| Support Strap: | 4.25" wide, 24 ga., 50 ksi strap fastened to deck with 2 rows of #10-12 x 1" long pancake head screws at staggered 12" o.c. spacing. The strap is continuous over the entire corner or edge roof zones. Prior to the panel installation, two rows of 3/8" bead of adhesive are field applied along the length of the strap. |
| Support Strap Adhesive: | Geocel 4600™ Structural Adhesive Sealant. Applied in accordance with manufacturer's suggested installation. |
| Test Standards: | Roof assembly tested in accordance with TAS 125-03 'Standard Requirements for Metal Roofing Systems' UL 580-06 'Uplift |

Resistance of Roof Assemblies' and UL 1897-04 and 1897-12 'Uplift Tests for Roof Covering Systems'.

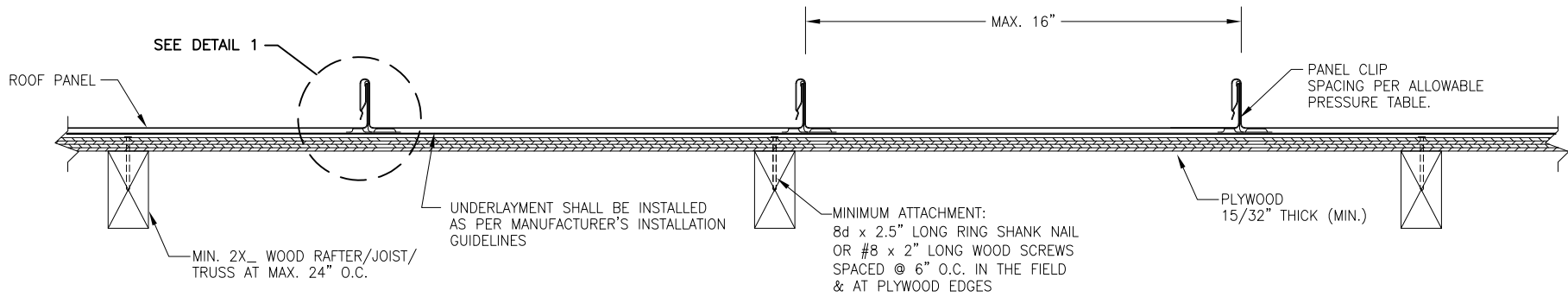
Test Equivalency: The test procedures in UL 1897-04 and 1897-12 comply with test procedures prescribed in UL 1897-15.

Code Compliance: The product described herein has demonstrated compliance with FBC 2023 Section 1507.4.

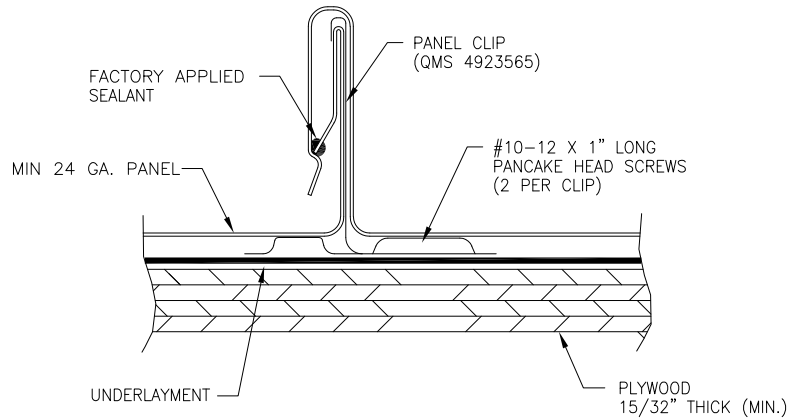
Product Limitations: Design wind loads shall be determined for each project in accordance with FBC 2023 Section 1609 or ASCE 7-22 using allowable stress design. The maximum clip spacing listed herein shall not be exceeded. The design pressure for reduced clip spacing may be computed using rational analysis prepared by a Florida Professional Engineer or based on Metal Sales load span table. This evaluation report is not applicable in High Velocity Hurricane Zone. Refer to current NOA for use of this product in High Velocity Hurricane Zone. Fire classification is not within the scope of this Evaluation Report. Refer to FBC 2023 Section 1505 and current approved roofing materials directory or ASTM E108/UL790 report from an accredited laboratory for fire ratings of this product.

Supporting Documents: TAS 125 Test Reports
Hurricane Test Laboratory, LLC
HTL Report #: 0103-0206-09, Reporting Date 3/25/2009

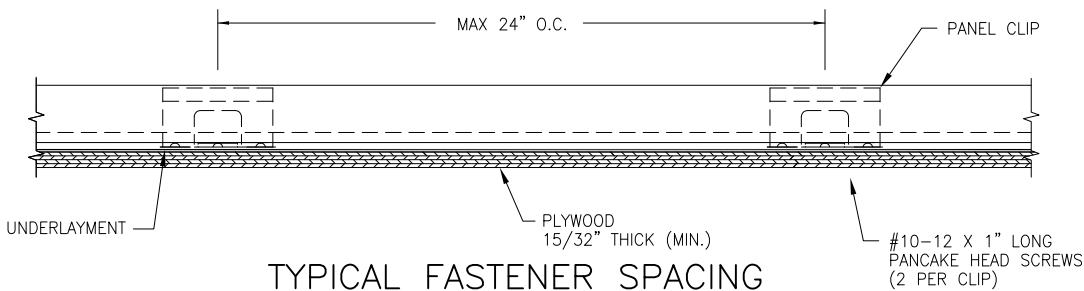
UL580 & 1897 Test Reports
PRI Construction Materials Technologies
MSMC-015-02-01, Reporting Date 9/20/2013
Farabaugh Engineering and Testing Inc.
Project No. T261-21, Reporting Date 10/30/2021



TYPICAL PANEL INSTALLATION X-SECTION



DETAIL 1

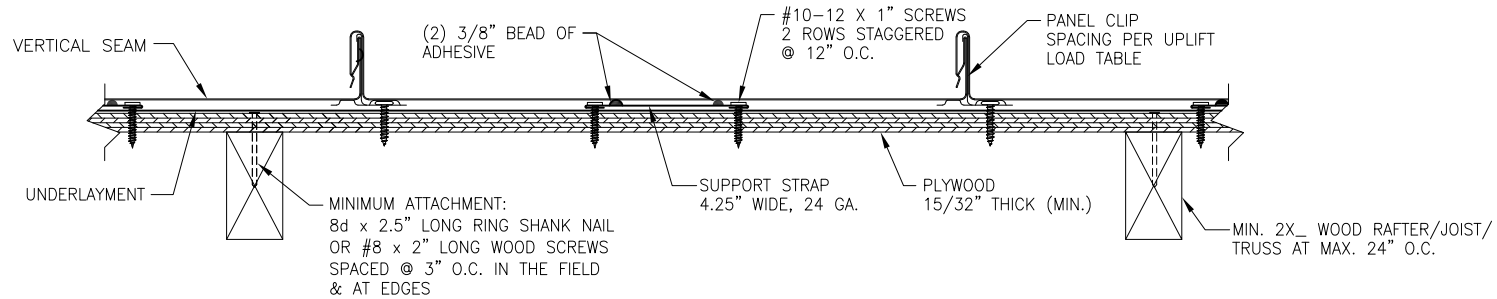


TYPICAL FASTENER SPACING

GENERAL NOTES:

1. ARCHITECTURAL STANDING SEAM ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS SHALL BE MIN. 24 GA. MAX. EFFECTIVE COVERING WIDTH OF PANEL = 16".
3. THE ROOF PANELS SHALL BE INSTALLED OVER SHEATHING & STRUCTURE AS SPECIFIED ON THIS DRAWING.
4. REQUIRED DESIGN WIND LOADS SHALL BE DETERMINED FOR EACH PROJECT. THIS PANEL SYSTEM MAY NOT BE INSTALLED WHEN THE REQUIRED DESIGN WIND LOADS ARE GREATER THAN THE ALLOWABLE WIND LOADS SPECIFIED ON THIS DRAWING.
5. ALL FASTENERS MUST BE IN ACCORDANCE WITH THIS DRAWING & THE FLORIDA BUILDING CODE. IF A DIFFERENCE OCCURS BETWEEN THE MINIMUM REQUIREMENTS OF THIS DRAWING & THE CODE, THE CODE SHALL CONTROL.
6. RAFTERS/JOISTS/TRUSSES MUST BE DESIGNED TO WITHSTAND WIND LOADS AS REQUIRED FOR EACH APPLICATION AND ARE THE RESPONSIBILITY OF OTHERS.

| | | | |
|---|----------------------|------------------|------|
| DRAWN BY: B.S. | | CHECKED BY: D.S. | |
| PLOT: | | DATE: 7/18/2023 | |
| NO. | REVISION DESCRIPTION | BY | DATE |
| | | | |
| DRAWING TITLE: VERTICAL SEAM PANEL | | | |
| MANUFACTURER: METAL SALES MANUFACTURING CORP. | | | |
| CONSULTANTS: BALA SOCKALINGAM, PH.D., P.E. | | | |
| 1216 N LANSING AVE, SUITE C TULSA, OK 74106 PHONE: 918-492-5992 FAX: 866-366-1543 | | | |
| DRAWING NO. 2672-7 | | REV. | |
| PAGE NO. 1 | | OF 2 | |



PANEL INSTALLATION X-SECTION
WITH SUPPORT STRAP & ADHESIVE

DRAWN BY: B.S.
 CHECKED BY: O.S.
 PLOT: DATE: 7/18/2023

| NO. | REVISION DESCRIPTION | BY | DATE |
|-----|----------------------|----|------|
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DRAWING TITLE: VERTICAL SEAM PANEL
 CONSULTANTS: BALA SOCKALINGAM, PH.D., P.E.
 1216 N LANSING AVE, SUITE C
 TULSA, OK 74106
 PHONE: 918-492-5992 FAX: 866-366-1543
 MANUFACTURER: METAL SALES MANUFACTURING CORP.
 7800 HIGHWAY 60
 SELLERSBURG, IN 47172
 502-855-4300

DRAWING NO. 2672-7
 REV. 1
 PAGE NO. 2 OF 2

METAL SALES MANUFACTURING CORPORATION
Vertical Seam Uplift Loads
(Min. 24 ga.)

| Description | Clip Spacing along Panel Length (in) | Allowable Uplift Load (psf) |
|--|--|-----------------------------------|
| Coverage width: 16" Clip: QMS 4923565 Clip Fastener: (2) #10-12 x 1" long pancake head screws | 8 | 114.3 |
| | 10 | 109.1 |
| | 12 | 103.9 |
| | 14 | 98.8 |
| | 16 | 93.6 |
| | 18 | 88.5 |
| | 20 | 83.3 |
| | 22 | 78.2 |
| | 24 | 73.0 |
| | 26 | 69.4 |
| | 28 | 65.8 |
| | 30 | 62.3 |
| | 32 | 58.7 |
| | 34 | 55.1 |
| | 36 | 51.5 |
| | 38 | 47.9 |
| | 40 | 44.3 |
| | 42 | 40.8 |
| | 44 | 37.2 |
| 46 | 33.6 | |
| 48 | 30.0 | |
| With Support Strap & Adhesive | 12 | 200.0 |

Notes:

1. The bold numbers indicate design loads calculated from test data with safety factor of 2.
2. Panels must be installed as per Evaluation Report FL 11560.7 and Metal Sales current installation procedure.
3. Three or more spans condition.
4. Optional wood purlins must be spaced same as panel clip spacing along the panel length.