

**EVALUATION REPORT OF
CENTRAL STATES MANUFACTURING, INC.
'R-LOC PANEL'**

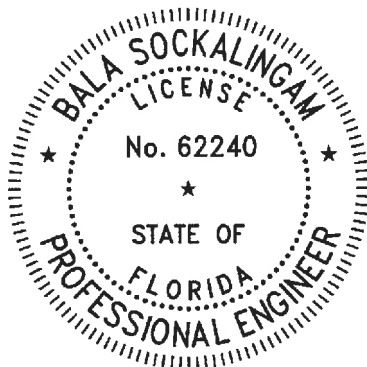
**FLORIDA BUILDING CODE 8TH EDITION (2023)
FLORIDA PRODUCT APPROVAL
FL 14016.5-R5
STRUCTURAL COMPONENTS
ROOF DECK**

**Prepared For:
Central States Manufacturing, Inc.
302 Jane Place
Lowell, AR 72745
Telephone: (800) 356-2733
Fax: (800) 356-2971**

**Prepared By:
Bala Sockalingam, Ph.D., P.E.
Florida Professional Engineer #62240
1216 N Lansing Ave., Suite C
Tulsa, OK 74106
Telephone: (918) 492-5992**

**This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (1 Page)**

**Report No. C2717-5
Date: 9.2.2023**



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.

A handwritten signature in blue ink, appearing to be "Bala Sockalingam", written over a horizontal line.

**2023.09.02
11:57:40 -05'00'**

Manufacturer: Central States Manufacturing, Inc.

Product Name: R-Loc Panel

Panel Description: 36" wide coverage with (4) 1-1/4" high ribs

Materials: Min. 26 ga., 80 ksi steel or min. 24 ga., 50 ksi steel. Galvanized coated steel (ASTM A653) or Galvalume coated steel (ASTM A792) or painted steel (ASTM A755). Corrosion resistant as per FBC 2023 Section 1507.4.3.

Support Description: Min. 16 ga., 50 ksi steel section. (Must be designed by others)

Slope: 1/2:12 or greater in accordance with FBC 2023 Section 1507.4.2. Requires applied lap sealant for roof slopes less than 3:12.

Design Uplift Pressure: 44.2 psf at fastener spacing of 60 o.c. (3 or more spans)
(Factor of Safety = 2) 112.7 psf at fastener spacing of 24 o.c. (3 or more spans)

Panel Attachment: All fasteners are corrosion resistant as per FBC 2023 Section 1507.4.4.
At panel ends #12-14 x 1-1/4" long SDS with integral washer at 7"-5"-7" o.c. across panel width
At intermediate #12-14 x 1-1/4" long SDS with integral washer at 12" o.c. across panel width

Sidelap Attachment: 1/4"-14 x 7/8" long SDS with washer at 20" o.c.

Test Standards: Roof assembly tested in accordance with ASTM E1592-01 'Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference' and FM 4471 Section 5.4 'Resistance to Foot Traffic'.

Test Equivalency: The test procedures in ASTM E1592-01 comply with test procedures prescribed in ASTM E1592-05(2017).

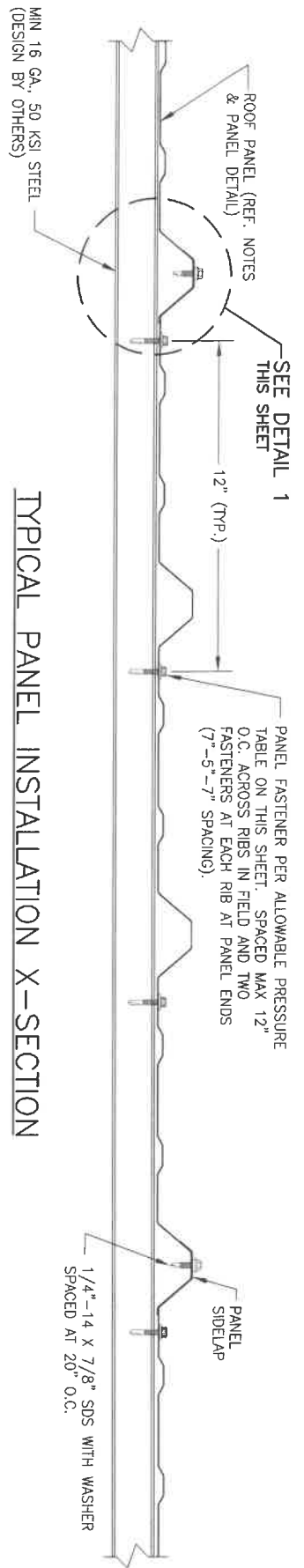
Code Compliance: The product described herein has demonstrated compliance with FBC 2023 Section 1507.4.

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 support 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. This evaluation report is not applicable 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: ASTM E1592 Test Reports
Force Engineering and Testing Inc.
Report No. 410-0237T-13 A & B, Reporting Date 12/21/2013

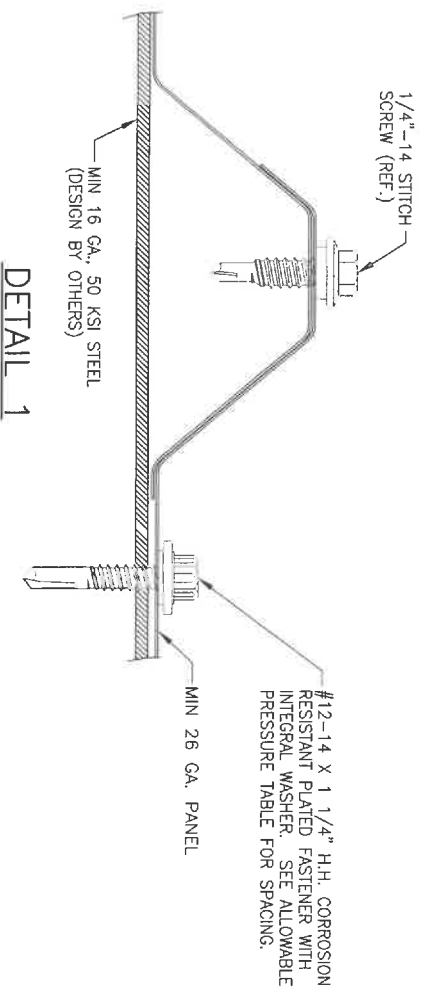
FM 4471 Test Report
Force Engineering & Testing, Inc.
Report No. 410-0277T-10, Reporting Date 08/23/2010



TYPICAL PANEL INSTALLATION X-SECTION

ALLOWABLE UPLIFT PRESSURE

| PANEL FASTENERS SPACING ALONG RIB | PRESSURE (PSF) |
|-----------------------------------|----------------|
| 60" | 44.2 |
| 24" | 112.7 |



- GENERAL NOTES:**
1. STRUCTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
 2. PANELS SHALL BE MIN. 26 GA. (t = 0.019"). EFFECTIVE COVERING WIDTH OF PANEL = 36".
 3. ROOF PANELS SHALL BE INSTALLED OVER 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. PURLINS/JOISTS/TRUSSES MUST BE DESIGNED TO WITHSTAND WIND LOADS AS REQUIRED FOR EACH APPLICATION AND ARE THE RESPONSIBILITY OF OTHERS.

DRAWING TITLE
R-LOC ROOF PANEL

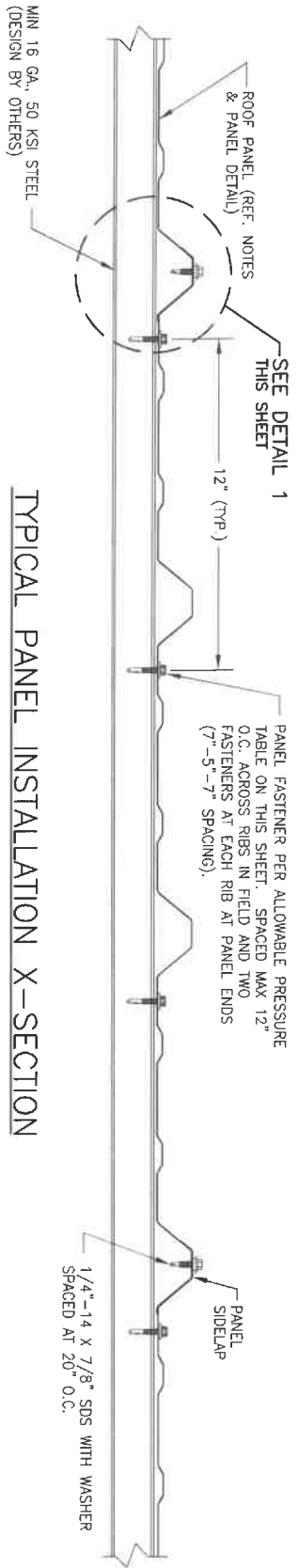
CONSULTANTS
BALA SOCKALINGAM, PH.D., P.E.

MANUFACTURER
CENTRAL STATES MANUFACTURING, INC.

1216 N LANSING AVE. SUITE C
 TULSA, OK 74106
 PHONE: 918-497-5892 FAX: 866-366-1543

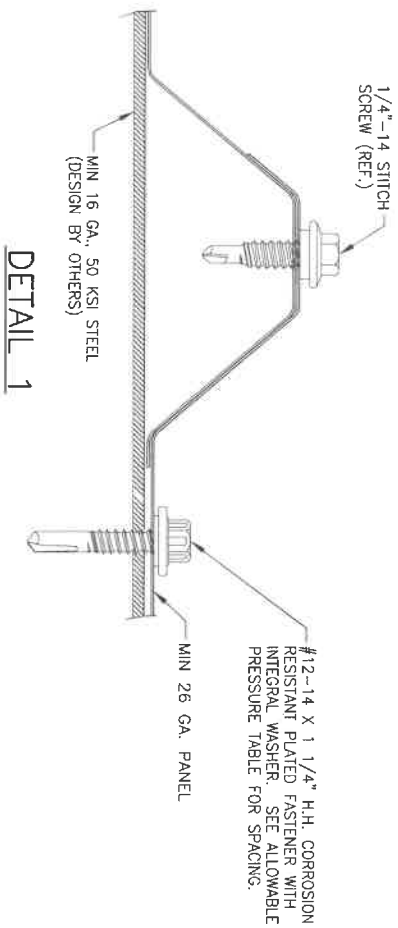
302 JANE PLACE
 LOWELL, AR 72745
 800-366-2733

| NO. | REVISION DESCRIPTION | BY | DATE |
|-----|----------------------|----|------|
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ALLOWABLE UPLIFT PRESSURE

| PANEL FASTENERS SPACING ALONG RIB | PRESSURE (PSF) |
|-----------------------------------|----------------|
| 60" | 44.2 |
| 24" | 112.7 |



GENERAL NOTES:

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6. PURLINS/JOISTS/TRUSSES MUST BE DESIGNED TO WITHSTAND WIND LOADS AS REQUIRED FOR EACH APPLICATION AND ARE THE RESPONSIBILITY OF OTHERS.

| | | | |
|---|--|----------------------------------|--|
| DRAWING TITLE R-LOC ROOF PANEL | | DRAWING NO. 2398-5 | |
| CONSULTANTS BALA SOCKALINGAM, PH.D., P.E. | | PAGE NO. 1 | |
| MANUFACTURER CENTRAL STATES MANUFACTURING, INC. | | DATE 8/21/15 | |
| 1216 N LANSING AVE, SUITE C TULSA, OK 74106 PHONE: 918-492-5992 FAX: 866-356-1543 | | CHECKED BY A.L. | |
| 302 JANE PLACE LOWELL, AR 72745 800-356-2733 | | NO. REVISION DESCRIPTION BY DATE | |

**EVALUATION REPORT OF
CENTRAL STATES MANUFACTURING, INC.
'R-LOC PANEL'**

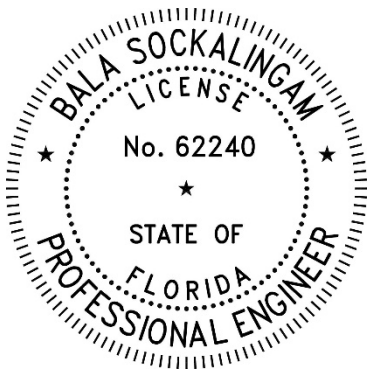
**FLORIDA BUILDING CODE 8TH EDITION (2023)
FLORIDA PRODUCT APPROVAL
FL 14024.2-R5
PANEL WALLS
SIDING**

**Prepared For:
Central States Manufacturing, Inc.
302 Jane Place
Lowell, AR 72745
Telephone: (800) 356-2733
Fax: (800) 356-2971**

**Prepared By:
Bala Sockalingam, Ph.D., P.E.
Florida Professional Engineer #62240
1216 N Lansing Ave., Suite C
Tulsa, OK 74106
Telephone: (918) 492-5992**

**This report consists of
Evaluation Report (2 Pages including cover)
Installation Details (1 Page)**

**Report No. C2718-2
Date: 9.2.2023**



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

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Manufacturer: Central States Manufacturing, Inc.

Product Name: R-Loc Panel

Panel Description: 36" wide coverage with (4) 1-1/4" high ribs

Materials: Min. 26 ga., 80 ksi steel or min. 24 ga., 50 ksi steel. Galvanized coated steel (ASTM A653) or Galvalume coated steel (ASTM A792) or painted steel (ASTM A755) as per FBC 2023 Section 1405.2.

Support Description: Min. 16 ga., 50 ksi steel section. (Must be designed by others)

Design Uplift Pressure: 44.2 psf at fastener spacing of 60 o.c. (3 or more spans)
(Factor of Safety = 2) 112.7 psf at fastener spacing of 24 o.c. (3 or more spans)

Panel Attachment: All fasteners are corrosion resistant.
At all supports: #12-14 x 1-1/4" long SDS with washer at 12" o.c. across panel width
Sidelap Attachment: 1/4"-14 x 7/8" long SDS with washer at 20" o.c.

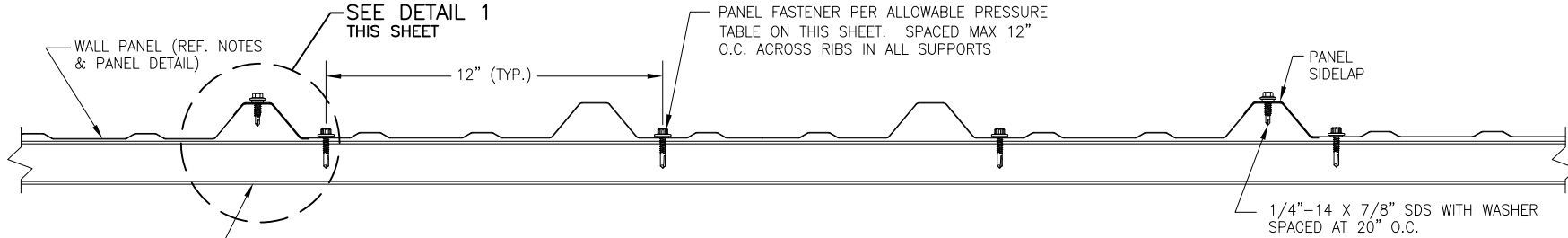
Test Standards: Wall assembly tested in accordance with ASTM E1592-01 'Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference'.

Test Equivalency: The test procedures in ASTM E1592-01 comply with test procedures prescribed in ASTM E1592-05(2017).

Code Compliance: The product described herein has demonstrated compliance with FBC 2023 Section 1404.5.

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 fastener spacing listed herein shall not be exceeded. The design pressure for reduced fastener spacing may be computed using rational analysis prepared by a Florida Professional Engineer. This evaluation report is not applicable in High Velocity Hurricane Zone.

Supporting Documents: ASTM E1592 Test Report
Force Engineering and Testing Inc.
Report No. 410-0237T-13A, B, Reporting Date 12/21/2013



MIN 16 GA., 50 KSI STEEL
(DESIGN BY OTHERS)

TYPICAL PANEL INSTALLATION X-SECTION

#12-14 X 1-1/4\"/>

R-LOC PANEL

SIDELAP FASTENER
1/4\"/>

MAX 60\"/>

#12-14 X 1-1/4\"/>

MIN 16 GA. SUPPORTS
(DESIGN BY OTHERS)

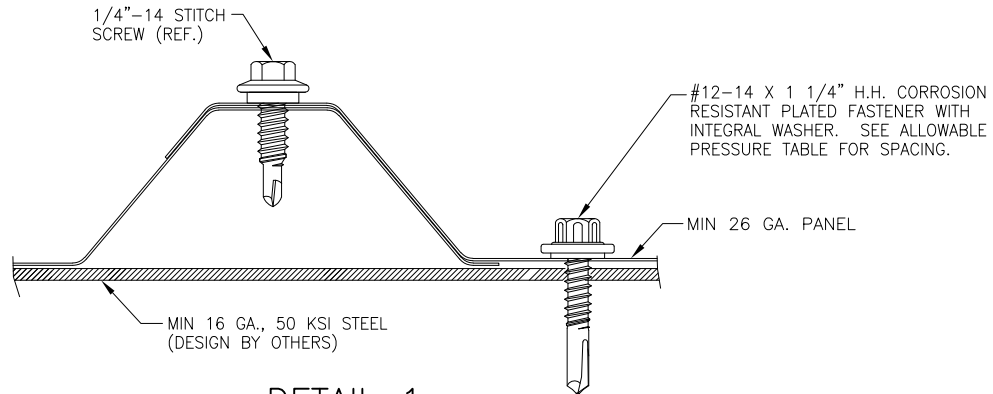
SECTION VIEW

ALLOWABLE OUTWARD PRESSURE

| PANEL FASTENERS SPACING ALONG RIB | PRESSURE (PSF) |
|-----------------------------------|----------------|
| 60" | 44.2 |
| 24" | 112.7 |

GENERAL NOTES:

1. STRUCTURAL WALL PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. PANELS SHALL BE MIN. 26 GA. (t = 0.019"). EFFECTIVE COVERING WIDTH OF PANEL = 36".
3. WALL PANELS SHALL BE INSTALLED OVER 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. SUPPORTS MUST BE DESIGNED TO WITHSTAND WIND LOADS AS REQUIRED FOR EACH APPLICATION AND ARE THE RESPONSIBILITY OF OTHERS.



DETAIL 1

| | |
|-------------------|----------------------|
| DRAWN BY: B.S. | CHECKED BY: A.H. |
| PLOT: | DATE: 8/21/15 |
| NO. | REVISION DESCRIPTION |
| BY | DATE |

| | |
|-----------------------------------|---|
| DRAWING TITLE R-LOC WALL PANEL | MANUFACTURER CENTRAL STATES MANUFACTURING, INC. 302 JANE PLACE LOWELL, AR 72745 800-356-2733 |
| | CONSULTANTS BALA SOCKALINGAM, PH.D., P.E. 1216 N. LANSING AVE., SUITE C TULSA, OK 74106 PHONE: 918-492-5992 FAX: 866-366-1543 |

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|-----------------------|---------|
| DRAWING NO. 2718-2 | REV. |
| PAGE NO. 1 | OF 1 |