

**EVALUATION REPORT OF
KIRBY BUILDING SYSTEMS
'LOC SEAM 360 PANEL'**

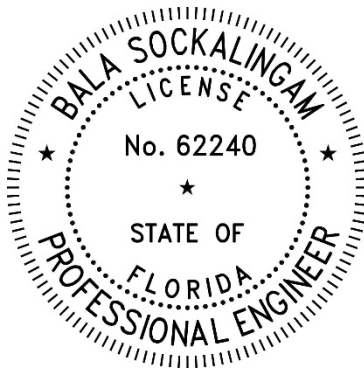
**FLORIDA BUILDING CODE 8TH EDITION (2023)
FLORIDA PRODUCT APPROVAL
FL 38033.1-R2
STRUCTURAL COMPONENTS
ROOF DECK**

**Prepared For:
Kirby Building Systems
124 Kirby Drive
Portland, TN 37148
Telephone: (615) 325-4165**

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**This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (1 Page)
Load Span Tables (2 Pages)**

**Report No. C2890-1
Date: 3.22.2025**



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

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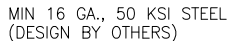
Manufacturer:	Kirby Building Systems
Manufacturing Location:	600 Apache Trail, Terrell, TX 75160
Product Name:	Loc Seam 360 Panel
Panel Description:	Standing seam panel with max. 16" wide coverage and 2" high ribs with 180° panel seam
Materials:	Min 24 ga. with galvalume coated steel (ASTM A792) ($F_y = 50$ ksi). 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:	1/4:12 or greater in accordance with FBC 2023 Section 1507.4.2
Design Uplift Pressure: (Factor of Safety = 2)	44.2 psf at clip spacing of 60" o.c. 156.1 psf at clip spacing of 12" o.c. 62.0 psf at clip and S-5-U Mini clamp spacing of 60" o.c. 157.5 psf at clip and S-5-U Mini clamp spacing of 24" o.c.
Panel Attachment:	LSEC-1 or LSEC-2T sliding clips with (2) 1/4"-14 x 1-1/4" long self-drilling screws per clip. Clips and fasteners are corrosion resistant as per FBC 2023 Section 1506.7 and 1507.4.4, respectively.
Clamp Attachment: (Optional)	S-5-U Mini clamp at each clip location. Clamps fastened to the seam with one set screw in accordance with the manufacturer's instructions.
Test Standards:	Roof assembly tested in accordance with ASTM E1592-05(2012) and E1592-05(2017) '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 E1592-05(2012) 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 clip spacing listed herein shall not be exceeded. The design uplift pressure for reduced clip spacing may be computed using rational analysis prepared by a Florida Professional Engineer or based on Kirby's load span tables. This product is not approved for use in the 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 for fire ratings of this product.

Supporting Documents: ASTM E1592 Test Reports
Force Engineering and Testing Inc.
Report No. 534-0047T-22 A-D, Reporting Date 9/12/2022
ENCON Technology Inc.
Project No. C2659-1, Reporting Date 8/31/2022

FM 4471 Test Report
FM Approvals
Project ID 3000525, Reporting Date 9/2/1999

(Kirby Building Systems is authorized to use Nucor Building Group's Test Reports)



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

MAX 60" O.C.
SPACING PER ALLOWABLE
LOAD TABLE

A technical diagram showing a cross-section of a panel being attached to a support. A horizontal line represents the panel, labeled "PANEL". Below it is a hatched area representing the support, labeled "MIN 16 GA. SUPPORT". A "CLIP" is shown attached to the bottom of the panel. The clip is a U-shaped metal piece. A "CLIP FASTENER" is shown as a screw-like bolt passing through the clip and into the support. A label "CLIP FASTENER (2 PER CLIP)" points to the fastener. The diagram illustrates how the clip and fastener secure the panel to the support.

A technical diagram showing a cross-section of the clip fastener assembly. A rectangular panel is shown with a dashed line indicating its internal structure. A clip is attached to the bottom edge of the panel. The clip is connected to a clip fastener, which is a U-shaped metal piece. The clip fastener is secured to a support structure by two screws. The support structure is labeled "MIN 16 GA. SUPPORT". The clip fastener is labeled "CLIP FASTENER (2 PER CLIP)".

Diagram illustrating the S-5-U Mini Clamp assembly. The components shown are:

- S-5-U MINI CLAMP (OPTIONAL)
- PANEL
- CLIP
- MIN 16 GA. SUPPORT
- CLIP FASTENER (2 PER CLIP)

A technical diagram showing a cross-section of a panel assembly. A rectangular panel is shown with a dashed line indicating a cut. A square clamp, labeled 'S-5-U MINI CLAMP (OPTIONAL)', is positioned on the top surface of the panel. A 'CLIP' is shown on the right side of the panel, securing it to a 'MIN 16 GA. SUPPORT' below. The support is a U-shaped metal piece with two vertical rods passing through it, labeled 'CLIP FASTENER (2 PER CLIP)'. The rods are secured with nuts and washers.

Figure 1 shows the dimensions of the test specimen. The specimen is a rectangular plate with a width of 16 inches and a height of 1.98 inches. A 2-inch section on the right side is labeled "FACTORY APPLIED MASTIC".

(MIN 24 GA.)

1. STRUCTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS SHALL BE MIN. 24 GA. ($t = 0.022"$). MAX. EFFECTIVE COVERING WIDTH OF PANEL = 16".
3. THE 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. CLIPS AND FASTENERS MUST BE IN ACCORDANCE WITH THIS DRAWING & 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		LOC SEAM 360 PANEL	
CONSULTANTS		MANUFACTURER	
BALA SOKKALINGAM, PH.D., P.E.		KIRBY BUILDING SYSTEMS	
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DRAWING NO.		REV.	
2890-1			
PAGE NO.			
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Kirby Building Systems
Loc-Seam 360 Panel
Allowable Uplift Loads

Description	Clip & Clamp Spacing (in)	Allowable Uplift Load (psf)
Loc-Seam 360 Panel Min. 24 ga. Clip LSEC-1 or LSEC-2T Clip Fasteners (2) 1/4"-14 SDS Support Min 16 ga.	12	156.1
	15	149.1
	18	142.1
	21	126.3
	24	110.5
	27	98.2
	30	88.4
	33	80.4
	36	73.7
	39	68.0
	42	63.1
	45	58.9
	48	55.3
	51	52.0
	54	49.1
	57	46.5
	60	44.2

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 38033.1 and Kirby's current installation procedure.
3. Three or more spans condition.

Kirby Building Systems
Loc-Seam 360 Panel with S-5-U Mini Clamps
Allowable Uplift Loads

Description	Clip & Clamp Spacing (in)	Allowable Uplift Load (psf)
Loc-Seam 360 Panel Min. 24 ga. Clip LSEC-1 or LSEC-2T Clip Fasteners (2) 1/4"-14 SDS Clamps S-5-U Mini Support Min 16 ga.	24	157.5
	27	140.0
	30	126.0
	33	114.5
	36	105.0
	39	96.9
	42	90.0
	45	84.0
	48	78.8
	51	74.1
	54	70.0
	57	66.3
	60	62.0

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 38033.1 and Kirby's current installation procedure.
3. Three or more spans condition.