

# CAPITAL METAL SUPPLY, INC. TEST REPORT

## SCOPE OF WORK

TAS 125 UPLIFT RESISTANCE TESTING OF 26GA 1" NAILSTRIP METAL ROOF PANELS

## REPORT NUMBER

R1472.01-450-18 R0

## TEST DATE(S)

03/18/24

## ISSUE DATE

04/18/24

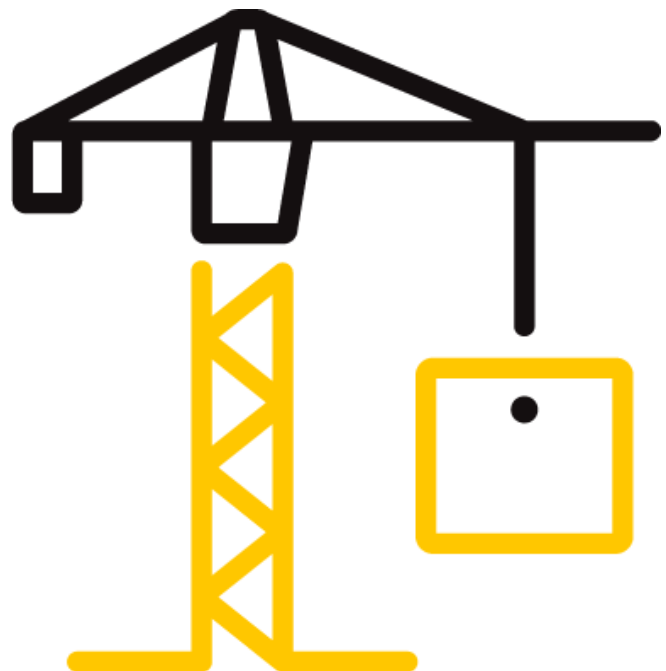
## PAGES

11

## DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-7806 (07/12/22)

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## TEST REPORT FOR CAPITAL METAL SUPPLY, INC.

Report No.: R1472.01-450-18 R0

Date: 04/18/24

### REPORT ISSUED TO

**CAPITAL METALS SUPPLY, INC.**

3845 S. US Hwy 441

Lake City, FL 32025

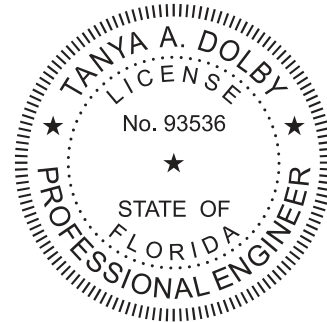
### SECTION 1

#### SCOPE


Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted to perform testing in accordance with TAS 125, *Standard Requirements for Metal Roofing Systems*, on their 26Ga 1" Nailstrip Roof Panels. Results obtained are tested values and were secured by using the designated test method(s). Uplift testing was conducted at the Intertek B&C test facility in West Palm Beach, FL.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.


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For INTERTEK B&C:

**COMPLETED BY:** Melissa Nuttall, FMPC  
**TITLE:** Senior Project Manager  
**SIGNATURE:**   
Digitally Signed by: Melissa Nuttall  
**DATE:** 04/18/24

MMN:sar

**REVIEWED BY:** Tanya Dolby, P.E.  
**TITLE:** Engineering Manager – Engineering Services  
**SIGNATURE:**   
Digitally Signed by: Tanya Dolby  
**DATE:** 04/18/24  
Date: 2024.04.19 14:46:53 -04'00'

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### SECTION 2

#### SUMMARY OF TEST RESULTS

**Product Type:**

**Series/Model:**

**Ultimate Test Load Achieved:** -127 psf

### SECTION 3

#### TEST METHOD(S)

The specimens were evaluated in general accordance with the following:

**TAS 125-03**, *Standard Requirements for Metal Roofing Systems* (Only 1 uplift test was performed, tensile testing was not performed.)

### SECTION 4

#### MATERIAL SOURCE/INSTALLATION

Test specimens were provided by the client. Installation of the tested product was performed by representatives of the client.

### SECTION 5

#### EQUIPMENT

**Cycling and Static Load Mechanism:** Computer controlled centrifugal blowers with electronic pressure measuring device

**Deflection Measuring Device:** Linear Transducers

### SECTION 6

#### LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Charles Gilbert	Intertek B&C

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### SECTION 7

#### TEST PROCEDURE

This test evaluates the comparative resistance of roof assemblies to positive and negative pressures by simulating the effects of wind gusts by use of oscillating exterior pressure and constant interior pressures. One assembly was tested per TAS 125 at each class rating. (Reference Chart No. 1 for test pressures and load durations.) The measurements were taken via linear transducers.

		NEGATIVE PRESSURE		POSITIVE PRESSURE	
TEST PHASE	DURATION minutes	POUNDS PER SQUARE FOOT psf (kPa)	INCHES OF WATER inches (mm)	POUNDS PER SQUARE FOOT psf (kPa)	INCHES OF WATER inches (mm)
Class 30					
1	5	16.2 (0.79)	3.1 (79)	0.0 (0.00)	0.0 (0)
2	5	16.2 (0.79)	3.1 (79)	13.8 (0.66)	2.7 (69)
3	60	8.1 - 27.7 (0.39 - 1.33)	1.5 - 5.3 (38 - 135)	13.8 (0.66)	2.7 (69)
4	5	24.2 (1.16)	4.7 (119)	0.0 (0.00)	0.0 (0)
5	5	24.2 (1.16)	4.7 (119)	20.8 (1.00)	4.0 (102)
Class 60					
1	5	32.3 (1.55)	6.2 (157)	0.0 (0.00)	0.0 (0)
2	5	32.3 (1.55)	6.2 (157)	27.7 (1.33)	5.3 (135)
3	60	16.2 - 55.4 (0.79 - 2.66)	3.1 - 10.7 (79 - 272)	27.7 (1.33)	5.3 (135)
4	5	40.4 (1.94)	7.8 (198)	0.0 (0.00)	0.0 (0)
5	5	40.4 (1.94)	7.8 (198)	34.6 (1.66)	6.7 (170)
Class 90 (maximum combined uplift pressure of 105 psf)					
1	5	48.5 (2.33)	9.3 (236)	0.0 (0.00)	0.0 (0)
2	5	48.5 (2.33)	9.3 (236)	41.5 (1.99)	8.0 (203)
3	60	24.2 - 48.5 (1.16 - 2.33)	4.7 - 9.3 (119 - 236)	41.5 (1.99)	8.0 (203)
4	5	56.5 (2.71)	10.9 (277)	0.0 (0.00)	0.0 (0)
5	5	56.5 (2.71)	10.9 (277)	48.5 (2.33)	9.3 (236)

**Chart No. 1**  
**TAS 125 Load Table Test Pressures**

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### SECTION 8

#### TEST SPECIMEN DESCRIPTION

**Product Type:** Metal Roof Panels

**Series/Model:** 1" Nailstrip

**Product Size(s):**

#### All Test Specimens

OVERALL AREA:	WIDTH		HEIGHT	
9.3 m <sup>2</sup> (100.0 ft <sup>2</sup> )	millimeters	inches	millimeters	inches
Overall Size	3048	120	3048	120
Panel Size	406	16	3048	120

*The following description applies to all specimens.*

#### Test Deck Construction:

The 10' 0" wide by 10' 0" long by 1' 3" deep test frame was fabricated from C15 by 33.9 steel channels. The test frame utilized six joists constructed from Southern Yellow Pine 2 x 12 lumber located on two sides of the test frame and spaced 24" on center. The joists were secured to the test frame using two 1/2" x 3" long bolts with washers and nuts through an 8" long, 2" by 4" by 1/8" steel angle with pre-drilled fastener locations. The steel angles were welded to the test frame 24" on center. Southern Yellow Pine 2 x 12 lumber was utilized as cross members at the midspan of the joists. The cross members were secured to the joists using two #8 X 3" long Torx flat head screws at each end. 7/16" OSB sheathing was utilized on the top of the test deck. The sheathing was secured using 8d coated ring shank nails spaced 4" on center.

#### Roof System:

COMPONENTS	DETAILS	ATTACHMENT METHOD
30# Asphalt saturated organic felt paper	A single layer was used with a 4" overlap between adjacent sheets.	0.120" x 1-1/4" galvanized annular ring shank roofing nails with 32 Ga tin caps spaced 6" on center at the perimeter and overlaps, with two intermediate rows with nails spaced 6" on center.
1" Nailstrip	The panels were constructed from 26Ga steel and had a 16" coverage width. Six full and two partial width panels were tested.	The male leg of the panels were secured with #10 x 1" pancake head screws through every slot. The female leg of the panels snap fit over the male leg. The perimeter was secured with #10 x 1" pancake head screws spaced 2" on center.

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### SECTION 9

#### UPLIFT TEST RESULTS

The temperature during testing was 73°F. The results are tabulated as follows.

#### Test Specimen #1

TEST TITLE	OBSERVATIONS	DEFLECTION MEASUREMENTS	RESULTS
Class 30, Phases 1-5	No visible damage to system	Reference Table No. 1	PASSED
Class 60, Phases 1-5	No visible damage to system	Reference Table No. 1	PASSED
Class 90, Phases 1-5	No visible damage to system	Reference Table No. 1	PASSED
Supplemental Loads -112 psf to -127 psf	No visible damage to system	Reference Table No. 2	PASSED
Supplemental Loads -142 psf	Seam disengaged	Reference Table No. 2	FAILED

#### Notes:

*Reference Chart No. 1 for test pressures and load durations.*

*Reference Sketch No. 1 for location of deflection measurement devices.*

*A loose fitting, pleated 4-mil plastic film was utilized to assist in obtaining uniform pressure on the roof system. The plastic film was located between the moisture barrier and the roof panels to facilitate testing. In our opinion, this did not influence test results.*

### SECTION 10

#### CONCLUSION

The product/model tested per TAS 125 achieved an ultimate test load of -127psf.

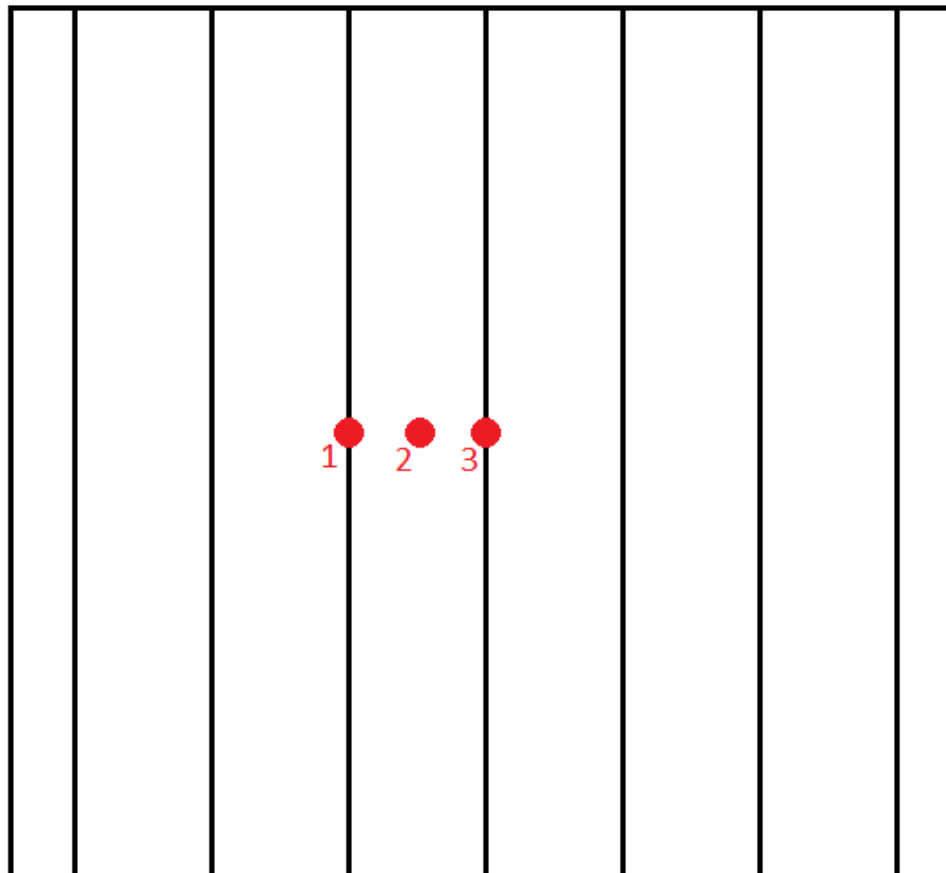
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**SECTION 11**

**SKETCH**



**Sketch No. 1**  
**Deflection Measurement Device Locations**

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**SECTION 12**
**TABLES**

CLASS	PHASE	DEFLECTION MEASUREMENTS (inches)		
		INDICATOR		
		#1	#2	#3
30	1	0.25	0.73	0.17
	2	0.42	0.98	0.31
	3 Minimum	0.41	0.91	0.27
	3 Maximum	0.43	0.98	0.31
	4	0.40	0.92	0.30
	5	0.58	1.19	0.48
	Final (0.0 psf)	0.21	0.21	0.11
60	1	0.50	1.06	0.40
	2	0.70	1.38	0.59
	3 Minimum	0.77	1.42	0.64
	3 Maximum	0.88	1.65	0.77
	4	0.70	1.33	0.59
	5	0.86	1.63	0.76
	Final (0.0 psf)	0.57	0.73	0.26
90	1	0.74	1.41	0.64
	2	0.95	1.74	0.84
	3 Minimum	0.92	1.66	0.79
	3 Maximum	0.97	1.77	0.84
	4	0.84	1.54	0.73
	5	1.10	1.92	0.95
	Final (0.0 psf)	0.62	0.84	0.32

**Table No. 1**  
**Deflection Measurements – Test Specimen #1**

VACUUM (psf)	UPLIFT (psf)	LOAD (psf)	SUPPLEMENTAL DEFLECTION MEASUREMENTS (inches)		
			INDICATOR		
			#1	#2	#3
-63.5	-48.5	-112.0	1.16	1.99	1.01
-78.5	-48.5	-127.0	1.28	2.14	1.10
-93.5	-48.5	-142.0	Failed		

**Table No. 2**  
**Supplemental Deflection Measurements – Test Specimen #1**





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### **SECTION 13**

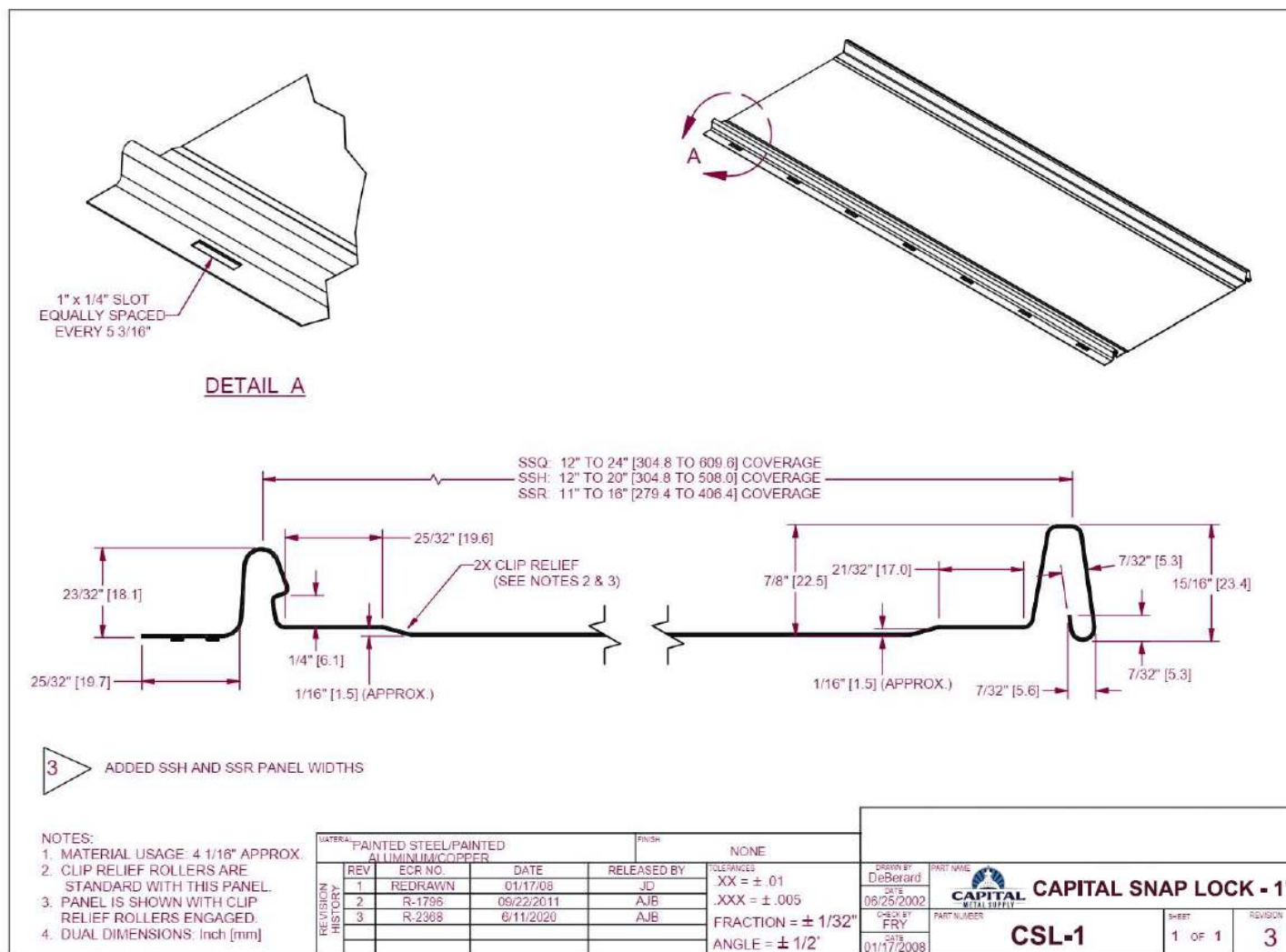
#### **DRAWINGS**

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

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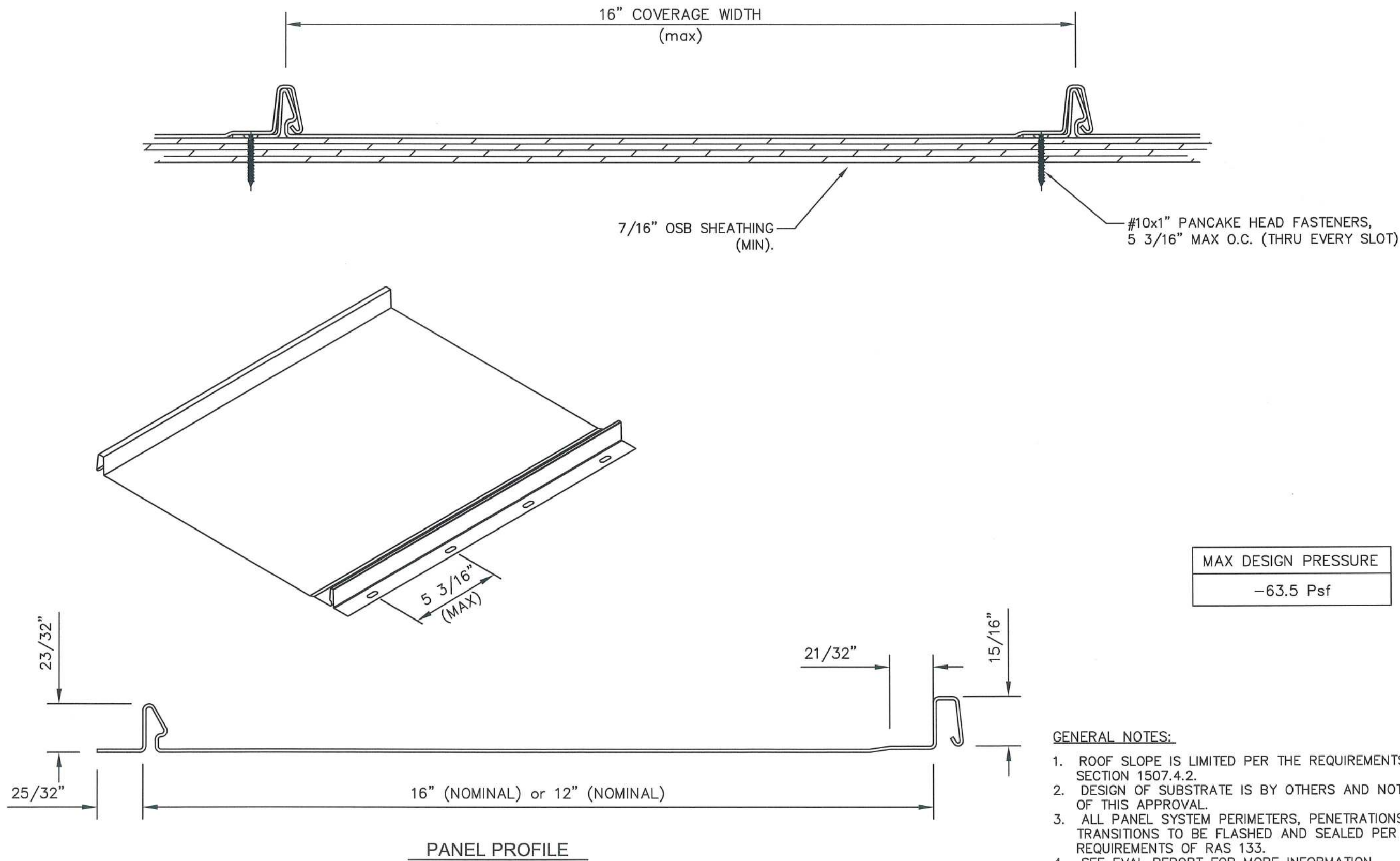
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### SECTION 14

#### REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	04/18/24	N/A	Original Report Issue

26 Ga. STEEL (min) 1" NAILSTRIP ROOF PANEL  
16" WIDE, OVER 7/16" OSB



- GENERAL NOTES:
1. ROOF SLOPE IS LIMITED PER THE REQUIREMENTS OF FBC SECTION 1507.4.2.
  2. DESIGN OF SUBSTRATE IS BY OTHERS AND NOT A PART OF THIS APPROVAL.
  3. ALL PANEL SYSTEM PERIMETERS, PENETRATIONS, AND TRANSITIONS TO BE FLASHED AND SEALED PER THE REQUIREMENTS OF RAS 133.
  4. SEE EVAL REPORT FOR MORE INFORMATION.

CAPITAL METAL SUPPLY, INC.

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