

#### DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION NOTICE OF ACCEPTANCE (NOA)

## EPIC Metals Corp. 11 Talbot Avenue Rankin, PA 15104

#### Scope:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

## **DESCRIPTION: EPIC Architectural & Sunscreen Perforated Steel Panels – N.I.**

**APPROVAL DOCUMENT:** Drawing No. **23-616-Epic-NI-ER**, titled "EPIC EST4 & ESW Series Perforated Steel Sunscreen Panel System", sheets 1 through 12 of 12, dated 09/14/2023, prepared by CBuck, Inc., signed and sealed by James L. Buckner, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

## **MISSILE IMPACT RATING: None**

**LABELING:** Each panel shall bear a permanent label with the manufacturer's name or logo, city, state, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official. This NOA **revises NOA No. 23-0523.03** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by Carlos M. Utrera, P.E.



NOA No: 23-0926.11 Expiration Date: May 23, 2024 Approval Date: November 9, 2023 Page 1

## NOTICE OF ACCEPTANCE: EVIDENCE PAGE

## 1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA # 17-1221.25.

## A. DRAWINGS

1. Drawing No. 16-148-ER-ES.1, titled "EPIC Metals ESW & EST Series Perforated Steel Sunscreen Panel", sheets 1 through 13 of 13, dated 06/04/19, prepared by CBuck, Inc., signed and sealed by James L. Buckner, P.E.

#### **B. TESTS**

	<u>Test Report No.</u>	<u>Test Standard</u>	<b>Date</b>	<u>Signature</u>
1.	T226-17	TAS 202-94	07/31/17	Daniel G. Farabaugh, P.E.
2.	T263-18	TAS 203-94	09/21/18	Daniel G. Farabaugh, P.E.
3.	T225-18	TAS 202-94	06/22/18	Daniel G. Farabaugh, P.E.
4.	T220-18 Rev	TAS 202-94	06/18/18	Daniel G. Farabaugh, P.E.
5.	T224-17	TAS 202-94	07/31/17	Daniel G. Farabaugh, P.E.
6.	T264-18	TAS 203-94	09/18/18	Daniel G. Farabaugh, P.E.
7.	T224-18	TAS 202-94	06/22/18	Daniel G. Farabaugh, P.E.
8.	T225-17	TAS 202-94	07/31/17	Daniel G. Farabaugh, P.E.
9.	T265-18	TAS 203-94	09/18/18	Daniel G. Farabaugh, P.E.
10.	T191-17	AISI S905-13	07/17/17	Daniel G. Farabaugh, P.E.

## C. CALCULATION

1. Engineering analysis prepared by CBuck, Inc., dated 03/28/2019, signed and sealed by James L. Buckner, P.E.

## **D. QUALITY ASSURANCE**

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

## E. MATERIAL CERTIFICATION

1. None.

## F. STATEMENTS

1. Statement letter of code conformance to the **FBC 6<sup>th</sup> Edition (2017)** and of no financial interest, dated 12/14/2017, issued by CBuck, Inc., signed and sealed by James L. Buckner, P.E.

Carlos M. Utrera, P.E. Product Control Examiner NOA No: 23-0926.11 Expiration Date: May 23, 2024 Approval Date: November 9, 2023

# NOTICE OF ACCEPTANCE: EVIDENCE PAGE

## 2. EVIDENCE SUBMITTED UNDER # 21-0830.03 AND NEW

#### A. DRAWINGS

1. Drawing No. 23-616-Epic-NI-ER, titled "EPIC EST4 & ESW Series Perforated Steel Sunscreen Panel System", sheets 1 through 12 of 12, dated 09/14/2023, prepared by CBuck, Inc., signed and sealed by James L. Buckner, P.E.

## **B. TESTS**

1. None

## C. CALCULATIONS

1. None

#### D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

## E. MATERIAL CERTIFICATIONS

1. None.

## F. STATEMENTS

- 1. Drawing statements of code conformance to the 8<sup>th</sup> edition (2023) of the FBC, issued by CBuck, Inc., dated 09/14/2023, signed and sealed by James L. Buckner, P.E.
- 2. Statement letter of code conformance to the FBC 7<sup>th</sup> Edition (2020) dated 03/11/2021, issued by CBuck, Inc., signed and sealed by James L. Buckner, P.E.

Carlos M. Utrera, P.E. Product Control Examiner NOA No: 23-0926.11 Expiration Date: May 23, 2024 Approval Date: November 9, 2023

# **Engineering Report & Drawings**

Of

**Epic Sunscreen Systems** 

EST 4 ESW 450 ESW 600 ESW 750

## **Perforated Sunscreen Panel System**

For

## Miami-Dade Notice of Acceptance (N.O.A.)

Category:	Panels
Sub - Category:	Sun Shades

Product Type: Material:

Perforated Sunscreen Panel System Steel

## **Prepared by:**

## James L. Buckner, P.E. Florida Professional Engineer # 31242 Report No.: 23-616-Epic-NonLMI-ER Date: 9/14/2023

#### Contents:

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Miami-Dade Product Control

23-0926.11

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(561) 491-9927

Jupiter, FL 33458

1374 Community Dr

Date: 9/14/23

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#### 1.0 Product:

- 1.1 Manufacturer:
  - Epic Metals Corp.
- 1.2 **Product Name:** "EST4 & ESW Series" Perforated Steel Sunscreen Panel
- 1.3 Category: Panels
- 1.4 Subcategory: Sun Shades

## 2.0 Evaluation Scope:

- 2.1 Evaluation Criteria:
  - Florida Building Code (FBC) 8th Edition (2023) 2.1.1
  - 2.1.2 Code Section: High Velocity Hurricane Zone (HVHZ)
  - 2.1.3 Miami-Dade Department Of Regulatory And Economic Resources, Product Control Section Checklist # 0250

## 2.2 Properties Evaluated:

- 2.2.1 **Structural Resistance Properties** 
  - 2.2.1.1 Uniform Static Air Pressure per TAS 202
  - 2.2.1.2 Cyclic Wind Pressure Loading per TAS 203
- 2.2.2 Material Properties

2.2.2.1 Tensile Strength per ASTM E8

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## 2.3 Limits of Evaluation:

This product is limited to compliance with the criteria in section 2.1 and properties in Section 2.2 of this report.

By

## 3.0 Evaluated Uses:

Epic Metals "EST4 & ESW Series" Perforated Steel Sunscreen Panels are evaluated for use as exterior Sunshades. They are attached to steel girts as exterior cladding.

## 4.0 Assembly Description:

## 4.1 General:

EST4, ESW450, ESW600 and ESW750 panels are made from steel conforming to ASTM A653 SS grade 40, with a minimum G90 galvanized steel with coating designation per section 12.0. As an option, the panels can be coated with an Epishield paint on all surfaces. The EST4 panels are made from 16 or 20 gage steel. The ESW450, ESW600 and ESW750 panels are made from 14 or 18 gage steel.

- 1. EST4: 4-inch deep panel, 24-inch width with perforations in the widest flange.
- 2. ESW450: 4.5-inch deep panel, 18-inch width with perforations in the widest flange and webs.
- 3. ESW600: 6.0-inch deep panel, 18-inch width with perforations in the widest flange and webs.
- 4. ESW750: 7.5-inch deep panel, 18-inch width with perforations in the widest flange and webs.

The standard perforation pattern contains 3/8-inch diameter round holes on a 1/2-inch staggered pattern. The perforation pattern is designated by the Industrial Perforators Association as pattern # 124. The percent open area is 51%. The load tables are valid for other perforation pattern configurations provided that the round hole diameter, spacing and percent open are less than the standard. Solid panels without perforations are acceptable.

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Epic Metals Corporation	REPORT#:23-616-Epic-NonLMI-ER	CBUCK, Inc. COA #8064	B STATE OF
11 Talbot Ave Rankin, PA 15104	REVISES#:22-489-Epic-NonLMI-ER	www.cbuckinc.net (561) 491-9927	TO ALOUND ST
www.epicmetals.com	PM: DG	1374 Community Dr	MILECO MILECO
(412) 351-3913	REVISIONS: 9/14/23	Jupiter, FL 33458	Munina Maria

#### 4.2 Panel Dimensions:

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Refer to panel drawings. 4.2.1

#### 4.3 Section Properties

Deck		Weight	Moment of	Section
Туре	Gage	(psf)	Inertia, I (in⁴/ft)	Modulus, S (in³/ft)
EST4	20	2.5	1.28	0.42
	16	4.3	2.13	0.75
ESW450	18	2.5	1.52	0.38
	14	3.9	2.49	0.75
ESW600	18	2.7	2.77	0.48
	14	4.3	5.09	1.10
ESW750	18	3.0	4.19	0.56
	14	4.7	8.80	1.39

Note: Values based on a steel yield strength of 40,000 psi

#### 5.0 Support:

The Support assembly is designed by others and shall have the following minimum Characteristics:

5.1 Type: Horizontal or Vertical framing members

Steel

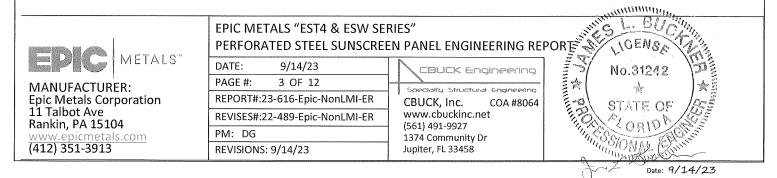
- 5.2 Material:
- 5.3 Thickness: 3/16 in. Minimum Structural Steel (Flange Thickness)
- 5.4 Yield Strength: 46 ksi Minimum
- 5.5 Support Spacing: **Refer to Table Below**

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#### 6.0 Performance:

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#### 6.1 Span Tables:

						Mian	ni-Dade	Product	Control	
Sunscreen	Panel	Sunscreen	Number of Fasteners	Uniform Allowable Design Pressures, PSF			PSF			
Panel	Span	Panel	Per Panel Flute	Span Length, Center to Center of Supports			ts (ft.)			
Model	Condition	Gage	Per Support	8	10	12	14	16	18	19
		20	1	105	85	65	46	26	-	-
EST4	Simple	16	1						42	27
	or	20	2	105	85	65	46	26		-
	Multiple	16	2						42	27

## 6.1.1 Table 2-1: EST 4 Uniform Allowable Design Pressures – (PSF)

#### 6.1.2 Table 2-2: ESW 450 Uniform Allowable Design Pressures – (PSF)

Sunscreen	Panel	Sunscreen	Number of Fasteners	Uniform Allowable Design Pressures, PSF			PSF			
Panel	Span	Panel	Per Panel Flute	Span Length, Center to Center of Supports			ts (ft.)			
Model	Condition	Gage	Per Support	8	10	12	14	16	18	20
		18	1	67	53	44	31	-	-	-
ESW450	Simple	14	1	-	-	-	-	-	-	27
	or	18	2	95	74	52	31	-	-	-
	Multiple	14	2	-	-	-	-	-	-	27

#### 6.1.3 Table 2-3: ESW 600 Uniform Allowable Design Pressures - (PSF)

Sunscreen	Panel	Sunscreen	Number of Fasteners	Un	iform A	llowab	le Desi	gn Pres	sures, l	PSF
Panel	Span	Panel	Per Panel Flute	Span Length, Center to Center of Supports			ts (ft.)			
Model	Condition	Gage	Per Support	8	10	12	14	16	18	20
		18	1	67	53	44	38	-	-	-
ESW600	Simple	14	1	-	-	-	-	-	· -	29
	or	18	2	95	74	52	31	-	-	-
	Multiple	14	2	-	-	-	-	-	-	27

#### 6.1.4 Table 2-4: ESW 750 Uniform Allowable Design Pressures – (PSF)

Sunscreen	Panel	Sunscreen	Number of Fasteners	Uniform Allowable Design Pressures, PSF			PSF					
Panel	Span	Panel	Per Panel Flute	Spa	n Len	gth, C	Cente	r to C	enter	of Su	ippor	ts (ft.)
Model	Condition	Gage	Per Support	14	16	18	19	20	22	24	26	27.5
		18	1	38	33	29	25	-	-	-	-	-
ESW750	Simple	14	1	-	1	1	-	29	27	24	22	21
	or	18	2	46	38	29	25	-	-	-	-	-
	Multiple	14	2	-	-	-	-	58	53	49	39	30

Notes for Tables 2-1 thru 2-4:

- 1. Design Pressures are based on ASD design.
- 2. See Table 2-5 for the allowable loads for fastening the panels to the steel supports.
- 3. Use linear interpolation to obtain load values for unlisted spans within ranges provided in above tables.
- 4. Not rated for Large Missile Impact

4. Not fated for La			antinininining -
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11 Talbot Ave Rankin, PA 15104	REVISES#:22-489-Epic-NonLMI-ER	www.cbuckinc.net (561) 491-9927	TOBIO ST
www.epicmetals.com	PM: DG	1374 Community Dr	THE SCIONAR EDGIN
(412) 351-3913	REVISIONS: 9/14/23	Jupiter, FL 33458	Man NE2

Date: 9/14/23

#### 6.1.5 Table 2-5: Design Loads for Fasteners Through Solid Material (lbs)

	Substrate	
	3/16" Structural Steel	
Deck Gauge	R <sub>n</sub> /Ω	Screw = 12-24 x 1-1/2" Elco Part# EAJ320 Bi-Flex w/ 9/16" outside
20	710	diameter & neoprene-backed washer.
18	795	
16	796	Note: $\Omega$ = 3.0 (Per AISI for pullout in steel)
14	871	

Tension Capacity values for connections based on FET Test T191-17 Assumes panel properties of Fy = 40 ksi, Fu = 55 ksi.

#### 7.0 Installation:

7.1 Attaching to Structural Steel Substrate: Each panel is fastened at each end to steel supports with (1) or (2) #12-24 X 1-1/2" ELCO Bi-Flex 300 Series SS Self Drilling Fasteners (P/N EAJ 320 Bi-Flex) w/9/16" diameter neoprenebacked washers per Tables 2-1 thru 2-4. Connection patterns are shown on pages 10-13.

#### 8.0 Limitations of Use:

- 8.1 The panel supports shall be 3/16" thick minimum structural steel.
- 8.2 Maximum support spacing shall not be exceeded.
- 8.3 The panels shall be supported by structural framing members complying with the The Florida Building Code, Chapter 22, including Florida High velocity zone.
- 8.4 Panel shall not be used as axial load bearing components and shall not be intended / designed to act as a diaphragm.
- 8.5 The engineer of record or architect shall verify that the supporting structure is capable of resisting the superimposed loads from the wall panel system and that the supporting structure is capable of providing lateral stability to carry the wind loads to the building foundation.

#### 9.0 Code Compliance

9.1 Product meets the High Velocity Hurricane Zone (HVHZ) Requirements of the Florida Building Code, 8th Edition (2023) for the properties evaluated.

#### 10.0 Identification:

10.1 Each Panel shall bear a permanent label with the manufacturer's name or logo, manufacturing plant's city, state and the statement reading "Miami-Dade County Product Control Approved" is to be located on each panel.

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Expiration Date 05/23/2024

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#### 11.0 Reference Data:

- 11.1TAS 202 Uniform Static Air Pressure Test. Report No.: T224-17 Report Date: 7/31/17 By: Farabaugh Engineering & Testing, Inc.
- 11.2 TAS 202 Uniform Static Air Pressure Test. Report No.: T225-17 Report Date: 7/31/17 By: Farabaugh Engineering & Testing, Inc.
- 11.3 TAS 202 Uniform Static Air Pressure Test. Report No.: T226-17 Report Date: 7/31/17 By: Farabaugh Engineering & Testing, Inc.
- 11.4 TAS 202 Uniform Static Air Pressure Test. Report No.: T194-18 Report Date: 5/25/18 By: Farabaugh Engineering & Testing, Inc.
- 11.5 TAS 202 Uniform Static Air Pressure Test. Report No.: T220-18Rev Report Date: 10/26/18 By: Farabaugh Engineering & Testing, Inc.
- 11.6 TAS 202 Uniform Static Air Pressure Test. Report No.: T224-18 Report Date: 6/22/18 By: Farabaugh Engineering & Testing, Inc.
- 11.7 TAS 202 Uniform Static Air Pressure Test. Report No.: T225-18 Report Date: 6/22/18 By: Farabaugh Engineering & Testing, Inc.
- 11.8 TAS 203 Cyclic Wind Pressure Loading Test Report No.: T263-18 Report Date: 12/06/18 By: Farabaugh Engineering & Testing, Inc.
- 11.9 TAS 203 Cyclic Wind Pressure Loading Test Report No.: T264-18 Report Date: 10/31/18 By: Farabaugh Engineering & Testing, Inc.
- 11.10 TAS 203 Cyclic Wind Pressure Loading Test Report No.: T265-18 Report Date: 9/18/18 By: Farabaugh Engineering & Testing, Inc.
- 11.11 ASTM-E8-09 Tensile Test Report No.: T246-18 Report Date: 7/24/18 By: Farabaugh Engineering & Testing, Inc.
- 11.12 Engineering Analysis/Calculations
  Report Number: 16-148-EA Report Date: 3/28/19
  By: James L Buckner, P.E.

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REVISES#:22-489-Epic-NonLMI-ER	WWW.cbuckinc.net	www.cbuckinc.net	
PM: DG	(561) 491-9927 1374 Community Dr		
REVISIONS: 9/14/23	Jupiter, FL 33458	Jupiter, FL 33458	

Date: 9/14/23

#### **12.0 Product Components:**

## 12.1 **EST 4** Series Perforated Steel Sunscreen Panel

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The panel is a 4" deep perforate	d steel panel.
Material:	Steel
Thickness:	16 Gau
	(t = 0.0

Yield Strength: Corrosion Resistance:

#### Miami-Dade Product Control uge Max - 20 Gauge Min 0600 in Max. – t = 0.0358 in Min) 40.0 ksi Minimum Galvanized Steel per ASTM A653 G-90

## 12.2 ESW 450 Series Perforated Steel Sunscreen Panel

The panel is a 4.5" deep perforated sto	eel panel.
Material:	Steel
Thickness:	14 Gauge Max - 18 Gauge Min
	(t = 0.0747 in Max. – t = 0.0474 in Min)
Yield Strength:	40.0 ksi Minimum
Corrosion Resistance:	Galvanized Steel per ASTM A653 G-90

## 12.3 **ESW 600** Series Perforated Steel Sunscreen Panel

The panel is a 6" deep perforated stee	el panel.
Material:	Steel
Thickness:	14 Gauge Max - 18 Gauge Min
	(t = 0.0747 in Max t = 0.0474 in Min)
Ultimate Yield Strength:	40.0 ksi Minimum
Corrosion Resistance:	Galvanized Steel per ASTM A653 G-90

## 12.4 ESW 750 Series Perforated Steel Sunscreen Panel

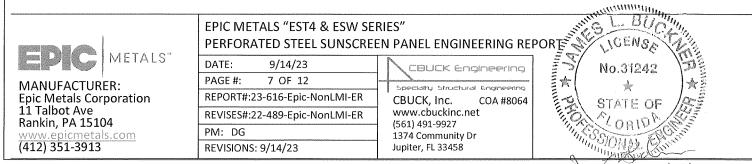
The panel is a 7.5" deep perforated steel panel.

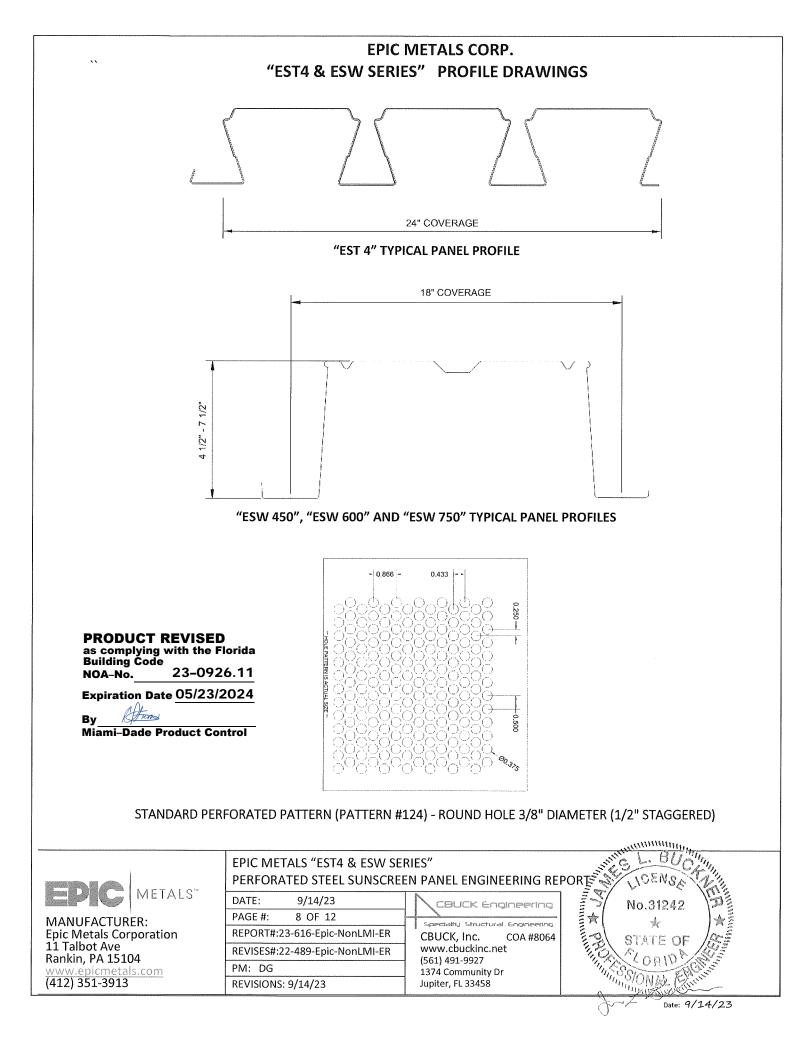
Steel
14 Gauge Max - 18 Gauge Min
(t = 0.0747 in Max t = 0.0474 in Min)
40.0 ksi Minimum
Galvanized Steel per ASTM A653 G-90

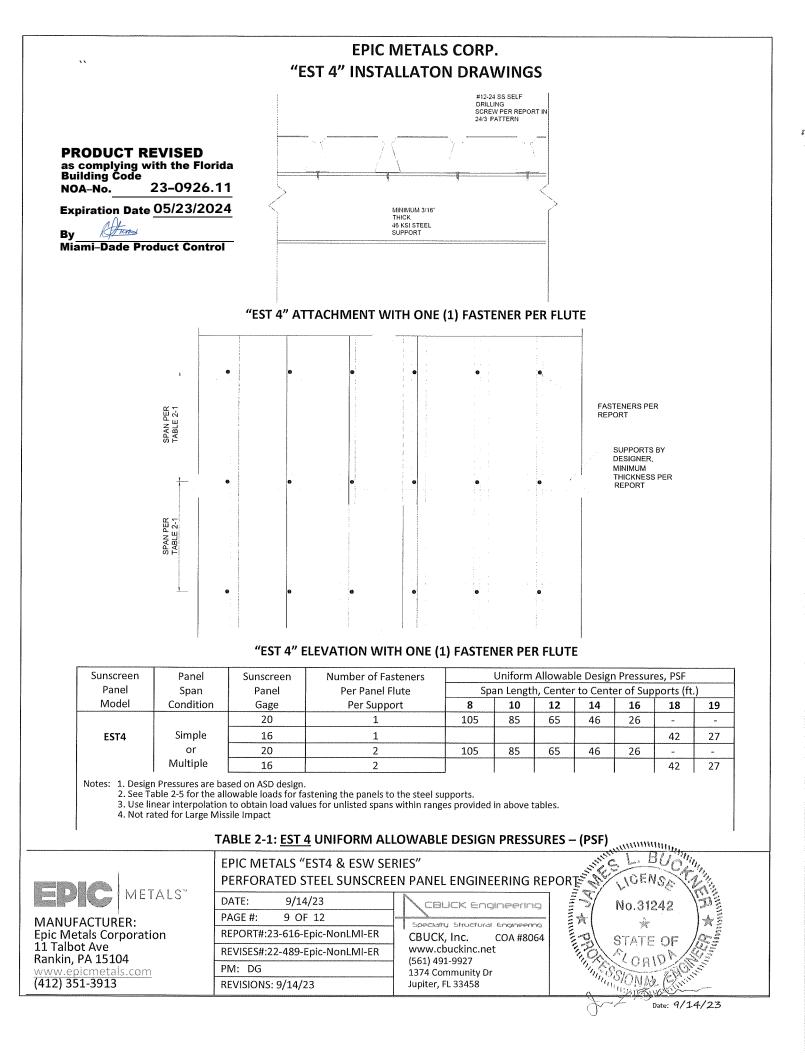
#### 12.5 **Fasteners:**

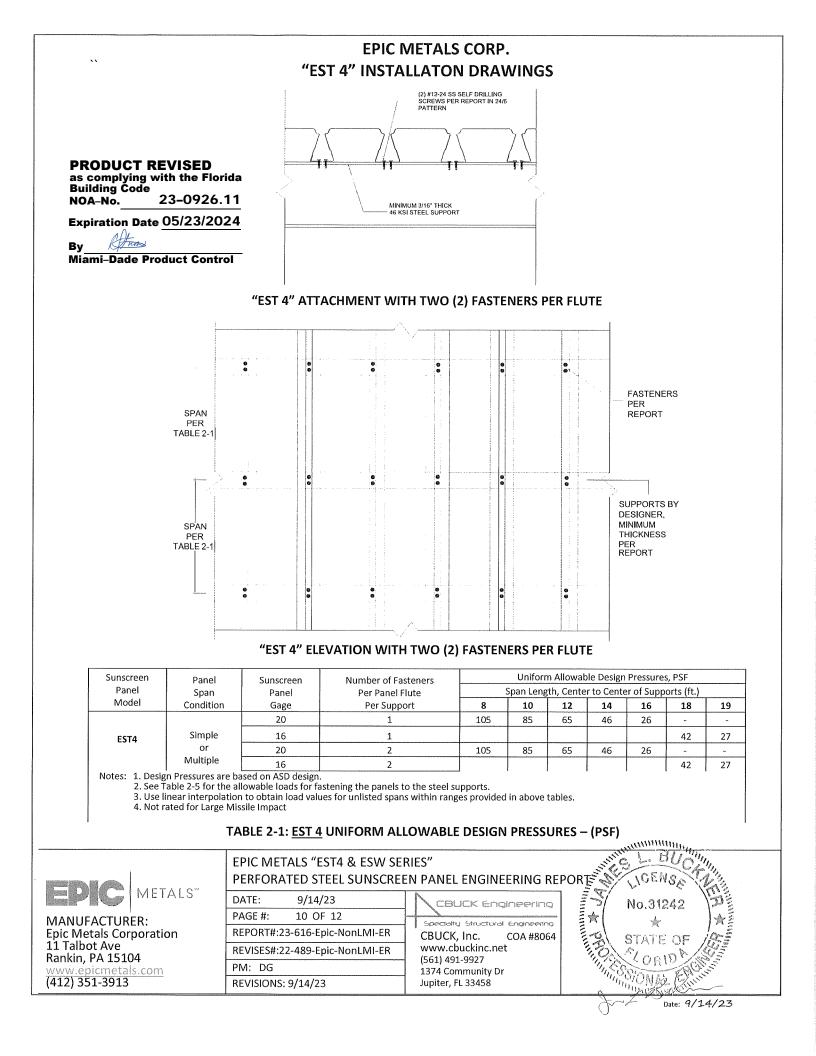
Specification/standard for fasteners to be used at intermediate and end steel supports.

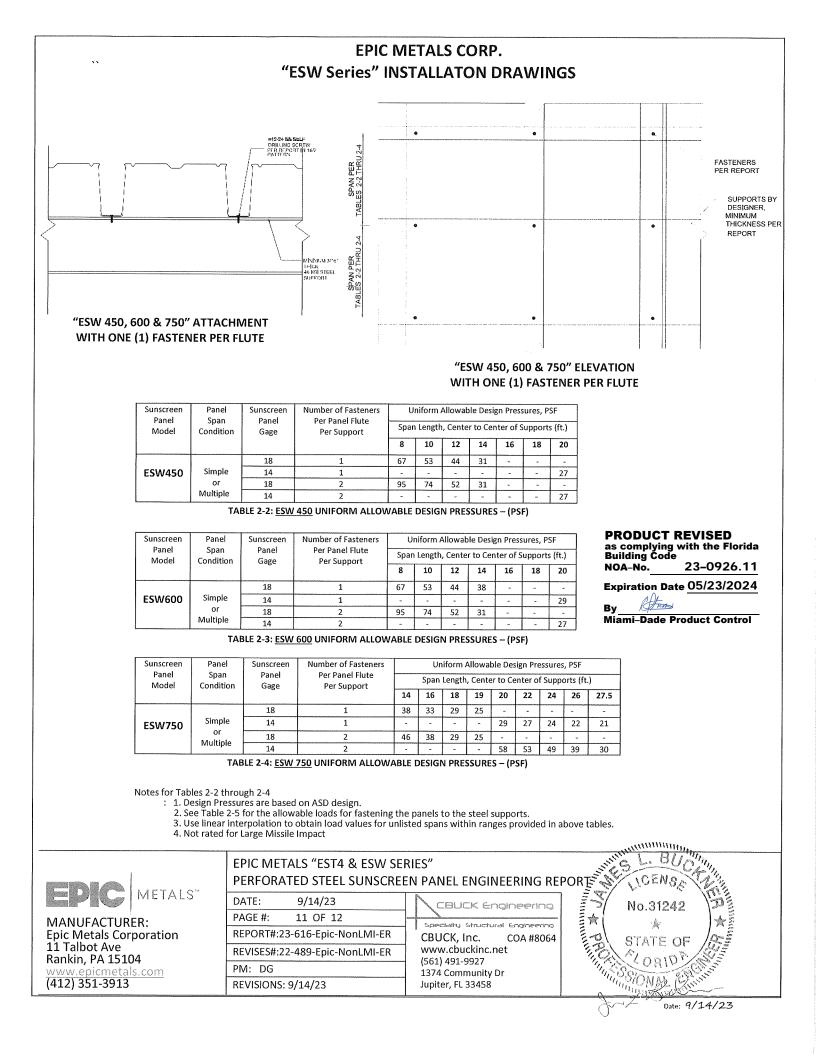
Material:	Stainless Steel
Name:	ELCO Bi-Flex 300 Series SS Self Drilling Fasteners
Type:	ELCO P/N EAJ 320 Bi-Flex
Diameter:	Fastener: #12-24 Washer: 9/16" diameter
Length:	1-1/2" minimum (Must penetrate steel support min 3/4")
Corrosion Resistance:	Stainless Steel per ASTM A240

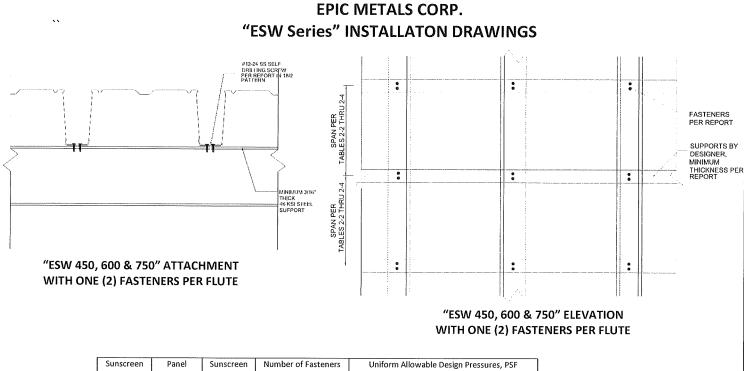












Sunscreen Panel	Panel	Panel      Sunscreen      Number of Fasteners        Span      Panel      Per Panel Flute        Condition      Gage      Per Support		Uniform Allowable Design Pressures, PSF							
Model	•		Span Length, Center to Center of Supports (ft.)								
				8	10	12	14	16	18	20	
	Simple	18	1	67	53	44	31	-	-	-	
ESW450		14	1	-	-	-	-	-	-	27	
	Of NAURISIE	18	2	95	74	52	31	-	-	-	
	Multiple	14	2	-	-	-	-	-	-	27	

TABLE 2-2: ESW 450 UNIFORM ALLOWABLE DESIGN PRESSURES – (PSF)

Sunscreen Panel Panel Span Model Condition ESW600 Simple or		Panel Per	Number of Fasteners	Uniform Allowable Design Pressures, PSF								
			Per Panel Flute Per Support	Span Length, Center to Center of Supports (ft.)								
				8	10	12	14	16	18	20		
		18	1	67	53	44	38	-	-	-		
	14	1	-	-	-	-	-	-	29			
		18	2	95	74	52	31	-	-	-		
	Multiple	14	2	-	-	-		-	-	27		

**PRODUCT REVISED** as complying with the Florida Building Code 23-0926.11 NOA-No. Expiration Date 05/23/2024

Atum By

Miami-Dade Product Control

TABLE 2-3: ESW 600 UNIFORM ALLOWABLE DESIGN PRESSURES - (PSF)

Sunscreen Panel Model Co	Panel	Sunscreen	Number of Fasteners	Span Length, Center to Center of Supports (ft.)								
	Span Condition											
				14	16	18	19	20	22	24	26	27.5
2500750		18	1	38	33	29	25	-	-	-	-	-
	Simple or Multiple	14	1	-	-	-	-	29	27	24	22	21
		18	2	46	38	29	25	-	-	-	-	-
		14	2	-	-	-	-	58	53	49	39	30

TABLE 2-4: ESW 750 UNIFORM ALLOWABLE DESIGN PRESSURES - (PSF)

Notes for Tables 2-2 through 2-4

: 1. Design Pressures are based on ASD design.

2. See Table 2-5 for the allowable loads for fastening the panels to the steel supports.

3. Use linear interpolation to obtain load values for unlisted spans within ranges provided in above tables.

4. Not rated for Large Missile Impact

