

## Evaluation Report

**"EC-100"**

### Manufacturer

#### East Coast Metal Systems

407 53<sup>rd</sup> Street  
Bellaire, OH 43906  
(740)-676-2400

*for*

### Florida Product Approval

**# FL 13754.1 R6**

Florida Building Code 8th Edition (2023)

Per Rule 61G20-3

**Method: 2 - B**

**Category: Structural Components**

**Sub - Category: Structural Wall**

**Product Assembly Name:** *EC-100*

**Material Description:** *Aluminum Composite Wall Panel System*

**Support Type:** *Steel Studs*

This item has been digitally signed and sealed by James L. Buckner, P.E., on this date below. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

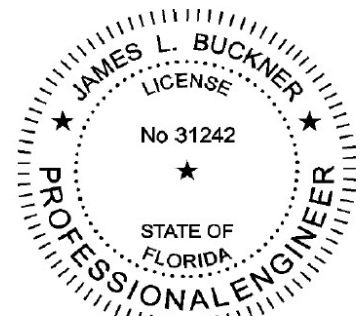
### Prepared by:

James L. Buckner, P.E., SECB  
Florida Professional Engineer # 31242  
Florida Evaluation ANE ID: 1916  
Report No. 23-603.01\_EC100-ACMonStStuds-ER  
(Revises Report No. 20-300.01\_EC100-ACMonStStuds-ER, FL13754.1 R4, R5)  
Date: 12/26/2023

### Contents:

Evaluation Report

Pages 1 – 8



James L. Buckner, P.E.  
FL31242

2023.12.26  
16:29:54 -05'00'

**CBUCK, Inc. – Palm Beach County, Florida**

Phone: (561) 491-9927 · Email: cbuck@cbuckinc.net · Website: www.cbuckinc.net

Main Office: 1374 Community Drive, Jupiter, Florida 33458

## 1.0 Product

- 1.1 **Manufacturer:** East Coast Metal Systems  
1.2 **Product Name:** EC-100

## 2.0 Evaluation Scope:

- 2.1 **Compliance with the following**  
Florida Building Code 8th Edition (2023)  
International Building Code (IBC) 2021
- 2.2 **Evaluation Method:**  
Florida Product Approval Rule 61G20-3.005 (2) (b)
- 2.3 **Evaluation Classification:**  
Category: Structural Components  
Sub Category: Structural Wall
- 2.4 **Properties Evaluated**  
Structural (Wind Resistance) Properties
- 2.5 **Limits of Evaluation:**  
This product assembly evaluation is limited to compliance with section 2.1 to section 2.4 of this report.

## 3.0 Evaluated Uses:

The EC-100 Aluminum Composite system is an exterior wall cladding system.

## 4.0 Product Assembly Description:

- 4.1 **General:**  
The EC-100 is an exterior wall system with aluminum composite panels with a variety of finishes. The EC-100 aluminum composite panel (ACP) system utilizes panel length, male/female extrusions, that are interlocking.

## 5.0 General Assembly as Evaluated:

EC-100 Panel  
Aluminum Extrusions / Sub-framings  
Steel Stud Support

## 6.0 Evaluated Support Description:

Type: Wall Studs  
Material: Steel  
Flange Thickness: 12 Ga. Minimum  
Yield Strength: 50 ksi Minimum  
Spacing: 16 in. o.c. Maximum

(Design of support system is outside the scope of this evaluation)

## 7.0 Structural Performance:

### 7.1 Wind Resistance:

|          |          |
|----------|----------|
| Positive | + 45 PSF |
| Negative | - 45 PSF |

#### Notes:

- Positive Pressure Inward, Negative Pressure Outward
- Allowable design pressure (s) for allowable stress design (ASD) with a margin of safety of 1.5 : 1.
- Based on 3 or more spans

## 8.0 Performance Standard:

- 8.1 The following test protocol was performed to demonstrate compliance with the intent of the code:  
**ASTM E330 – Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference**

## 9.0 Code Compliance:

- 9.1 The product assembly described herein has demonstrated compliance with the:
- 9.1.1 Florida Building Code 8th Edition (2023), Section 1708.2
  - 9.1.2 International Building Code 2021, Section 1708.2.2

## 10.0 Limitations and Conditions of Use:

### 10.1 Scope of "Limitations and Conditions of Use" for this evaluation:

This evaluation report for "State Approval" contains technical documentation, specifications and installation method(s) which include "Limitations and Conditions of Use" throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "State Approval".

### 10.2 Option for application outside "Limitations and Conditions of Use"

Rule 61G20-3.005(1)(e) allows engineering analysis for "project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code". Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.

10.3 Diaphragm and axial load capacity is outside the scope of this evaluation.

10.4 Design of support system is outside the scope of this report. Support shall be structural framing members complying with FBC Chapter 22 for steel and Chapter 16 for structural loading and shall be designed by others.

10.5 Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.

10.6 This report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

## 11.0 Quality Assurance:

The manufacturer has demonstrated compliance of products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Farabaugh Engineering and Testing, Inc.** (FBC Organization #: QUA 7733).

## 12.0 Components

### 12.1 Panel:

#### "EC-100"

- Type: Aluminum Composite Panel (ACP)
- Panel Overall Dimensions
  - Thicknesses: 4 mm (0.157"), 6 mm (0.236"), 8 mm (0.315")
  - Maximum Width: 4' 11-7/16" (Wide)
  - Maximum Length: 11' 5" (High)
- Panel Faces (Interior & Exterior Faces)
  - Material: Aluminum
  - Thickness: 0.020"
  - Alloy: 3105-H25
- Panel Core
  - Material: Thermoplastic
  - Typical Average Density: 0.033 lb/in<sup>3</sup>

### 12.2 Panel Clip Edge Angle: *(Factory installed)*

Part #: EC-101  
Material: Aluminum (Extruded)  
Alloy: 6063-T5

### 12.3 Panel Clip Male Connector: *(Factory installed)*

Part #: EC-102  
Material: Aluminum (Extruded)  
Alloy: 6063-T5

### 12.4 Panel Clip Female Connector: *(Factory installed)*

Part #: EC-103  
Material: Aluminum (Extruded)  
Alloy: 6063-T5

### 12.5 Corner Angle: *(Factory installed)*

Part #: EC-104  
Material: Aluminum (Extruded)  
Alloy: 6063-T5

### 12.6 Fastener #1: *(Factory Installed EC-10, EC-102 & EC103 Panel Clips To Panel)*

Type: Pop Rivet  
Material: Aluminum  
Diameter Size: 3/16"  
Spacing: 14" o.c. Maximum

#### Alternate Fastener #1

Type: Self-Drilling Screws  
Material: Corrosion Resistant Steel  
Size: # 10 × 3/4" Minimum  
Spacing: 14" o.c. Maximum

**12.7 Panel Stiffeners:** *(Factory installed)*

|                    |                                                                                                                      |
|--------------------|----------------------------------------------------------------------------------------------------------------------|
| Profile:           | Rectangular Tubing                                                                                                   |
| Material:          | Aluminum                                                                                                             |
| Alloy:             | 6063-T5                                                                                                              |
| Dimension:         | 2" x 1" x 1/8"                                                                                                       |
| Attachment Method: | 1" wide Normount V2682 Double Sided Tape                                                                             |
| Location:          | Parallel to Panel Width,<br>Minimum of One per panel<br>Maximum Distance to panel edge or another stiffener: 34-1/2" |

**12.8 Fastener #2:** *(EC 101 & EC-102 Panel Clips to Support)*

|                            |                           |
|----------------------------|---------------------------|
| Type:                      | Self-Drilling Screws      |
| Material:                  | Corrosion Resistant Steel |
| Size:                      | # 10 x 3/4" Minimum       |
| Spacing Along Steel Studs: | 18" o.c. Maximum          |

**13.0 Installation Method:**

"EC-100" Route & Return Wet Joint System shall be installed in compliance with the installation method listed in this report and applicable code sections of FBC 8th Edition (2023) and IBC 2021. The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

(Refer to installation method on Pages 6 through 8 of this evaluation report.)

**14.0 Evaluation Reference Data:**

**14.1 ASTM E330 Structural Performance Test**

By Architectural Testing, Inc. (FBC Organization ID# TST 1558)

Report #: 88620.01-109-44, Dated: 03 / 13 / 09, Revision 1: 02 / 01 / 10

**14.2 Quality Assurance**

Farabaugh Engineering and Testing, Inc. (FBC Organization #: QUA 7733)

**14.3 Certification of Independence**

By James L. Buckner, P.E. @ CBUCK Engineering (FBC Organization # ANE 1916)

**15.0 Additional Standards Tests:**

Performed with EC-100 Aluminum Composite Wall Panel System but not evaluated in this report.

**15.1 ASTM E331-00**

By Architectural Testing, Inc. (FBC Organization ID# TST 1558)

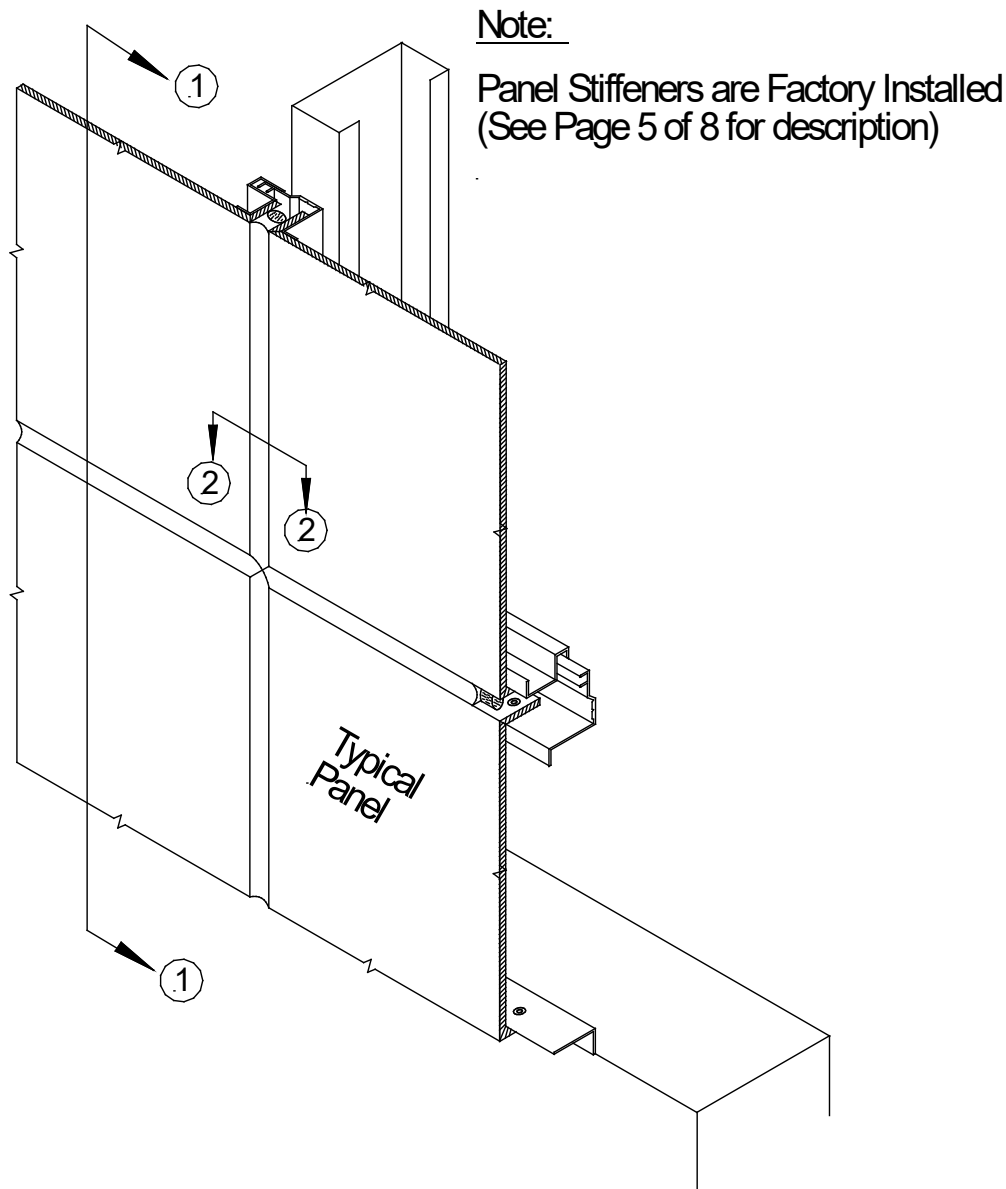
Report #: 88620.01-109-44, Dated: 03 / 13 / 09, Revision 1: 02 / 01 / 10

**15.2 ASTM E283-04**

By Architectural Testing, Inc. (FBC Organization ID# TST 1558)

Report #: 88620.01-109-44, Dated: 03 / 13 / 09, Revision 1: 02 / 01 / 10

## Installation Method East Coast Metal Systems "EC-100" Wall Panel System Attached Wall Studs Support



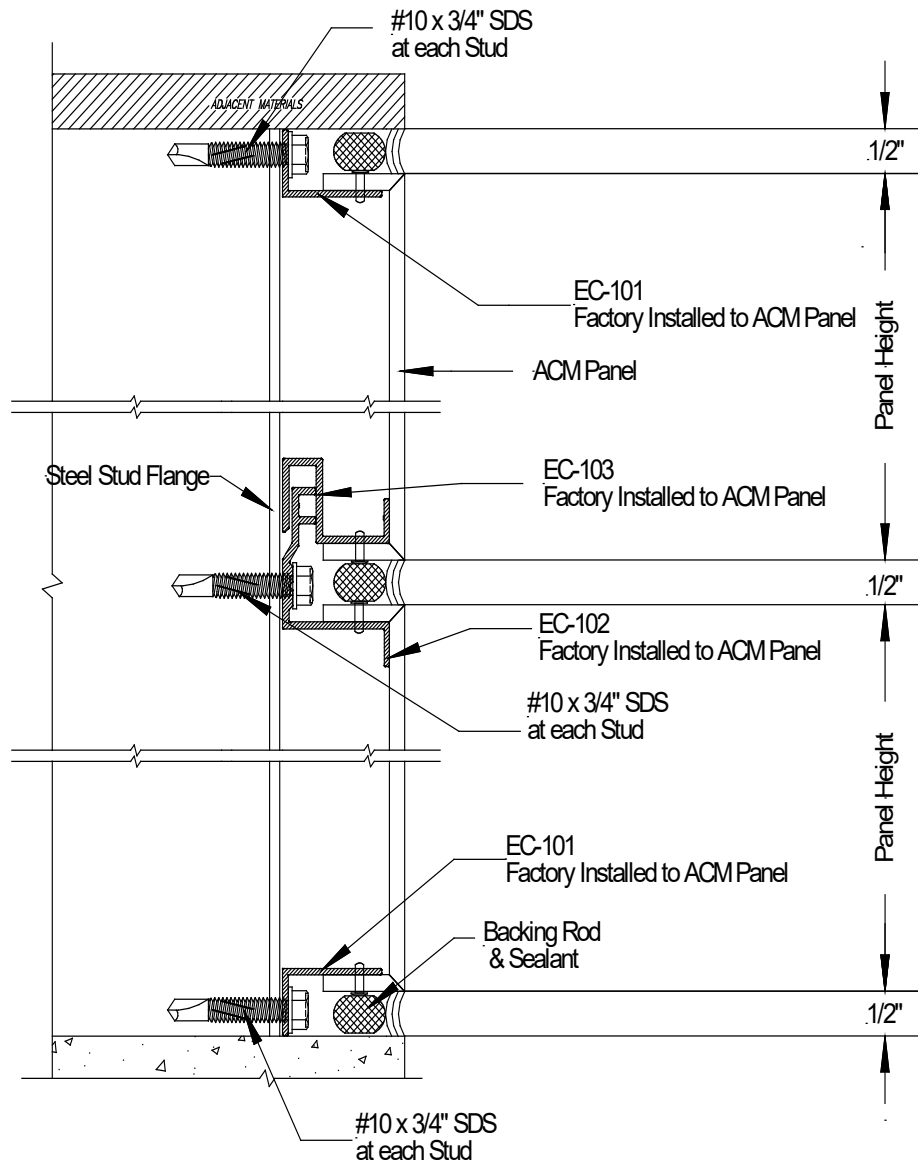
**Wall System Assembly**  
(Not To Scale)

Panel Width: Up to 4' 11-7/16"  
Panel Height: Up to 11' 5"

## Installation Method

### East Coast Metal Systems

#### “EC-100” Wall Panel System Attached Wall Studs Support



**Wall System Assembly**  
**Horizontal Joints Section View (Detail 1)**  
*(Not To Scale)*

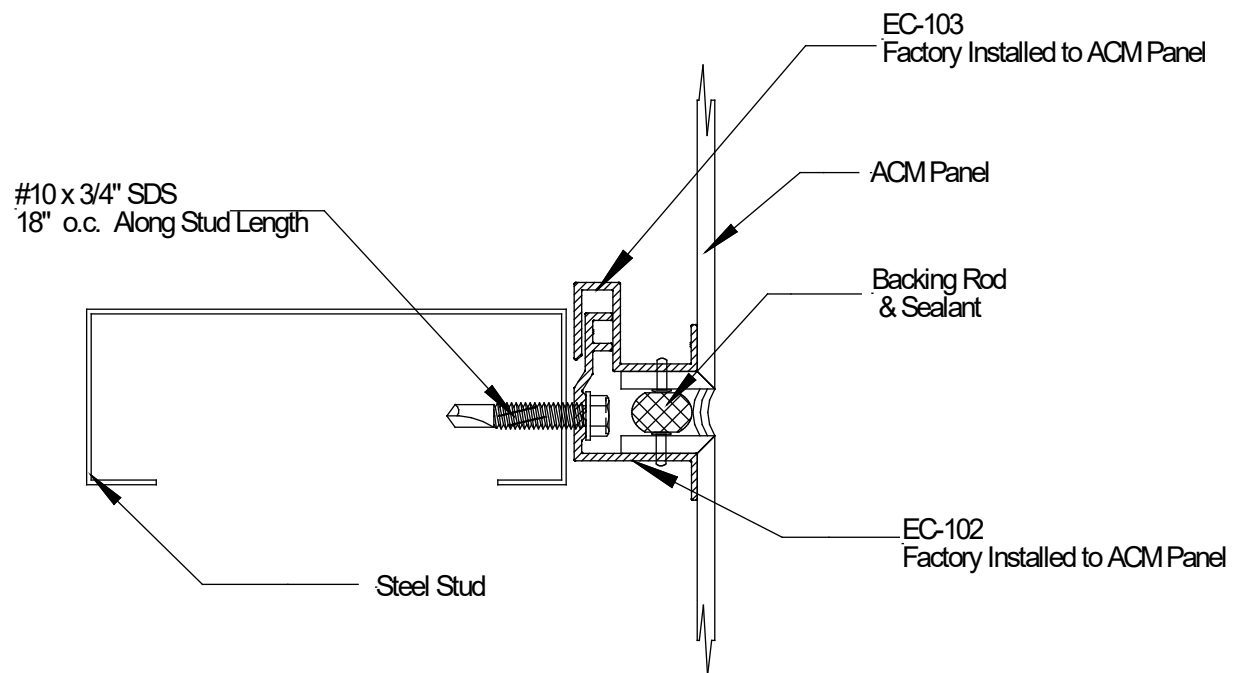
Note:

Steel Studs Spacing: 16" o.c. Maximum

Stud Flange Thickness: 12 Ga. Minimum

Backing Rod and Sealant per Manufacturer's Installation Instructions.

**Installation Method**  
**East Coast Metal Systems**  
**"EC-100" Wall Panel System Attached Wall Studs Support**



**Typical Vertical joint Section**  
**(Detail 2)**  
*(Not To Scale)*