



# PRI Construction Materials Technologies LLC

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## Laboratory Test Report

**Report for:** Petersen Aluminum  
1234 Gardiner Lane  
Louisville, KY 40213

**Product Name(s):** 0.032" Aluminum 12" - Board and Batten Wall Panels

**Project No.:** 2651T0008A.01

**Date(s) Tested:** April 19<sup>th</sup> – 22<sup>nd</sup>, 2024

**Test Methods:** ASTM E283 / ASTM E331 (AAMA 501.1)

**Results Summary:** ASTM E283: Infiltration @  $\Delta P$  75Pa = 0.1 L/s·m<sup>2</sup> (0.02 cfm/ft<sup>2</sup>)  
Exfiltration @  $\Delta P$  75Pa = 0.2 L/s·m<sup>2</sup> (0.03 cfm/ft<sup>2</sup>)  
ASTM E331 (AAMA 501.1): 2hr @  $\Delta P$  300Pa = Pass  
15min @  $\Delta P$  720Pa = Pass

**Purpose:** Evaluate the air leakage and water infiltration of the Petersen’s 0.032" aluminum Board and Batten 12" wall panel cladding system in accordance with ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

**Test Methods:** Testing was completed as described in ASTM E283/E283M-19 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen, ASTM E331-00(2023) Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference with pressure differentials referenced from AAMA 501.1-17 Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure.

**Sampling:** The following materials were received by PRI. All other materials for testing were procured by PRI-CMT through local distribution.

<u>Product</u>	<u>Source</u>	<u>Date</u>	<u>Sampling</u>
12" 0.032" Aluminum Board & Batten Panels	Elg Grove, Village, IL	Feb. 23 <sup>rd</sup> , 2024	Petersen Aluminum
#10-13 x 1" GP Concealor Pancake Head Screws			
Tyvek® HomeWrap®	Tampa, FL	April 9 <sup>th</sup> , 2024	
1" ring shank plastic cap nails			

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- Assembly Detail:** The test frame was 56" wide by 96" tall wall fabricated from nominal 2x12 SYP perimeter framing members with 2x6 SYP wooden intermediate framing members spaced 16" O.C. (See Appendix A for details) The framing was sheathed with nominal 15/32" plywood fabricated with one (1) horizontal joint and two (2) vertical staggered joints, Sheathing was anchored to the framing with 8D nails; 6" O.C. around the perimeter and in the field. DuPont™ Tyvek® HomeWrap® WRB was attached to the exterior sheathing with 1" ring shank plastic cap nails, 6" O.C. around the perimeter edges and vertical intermediate studding. The DuPont™ Tyvek® HomeWrap® was applied creating one (1) horizontal joint and two (2) vertically staggered joints with 3" overlaps. The vertical and horizontal joints were sealed with DuPont™ Tyvek® self-adhered tape.
- System Details:** The assembly was constructed with four (4) full panels, one (1) starter strip (cut from a panel), and one (1) fabricated panel. A 96" length of starter strip was attached to the vertical edge of the assembly with each adjacent panel slid into the corresponding interlock. The starter strip and each panel was attached into the sheathing only with fourteen (14) #10-13 x 1" GP Concealor screws spaced approximately 6-1/2" O.C. into each nail flange slot.
- Testing Location:** Testing was conducted at PRI-CMT located in Tampa, FL. Verification of testing instrumentation was performed by either an ISO accredited calibration laboratory or by a PRI-CMT representative in compliance with PRI-CMT In-House quality control program governed by ISO/IEC 17025-17.

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**Test Results:** Conditions at the beginning of testing were 23°C (73°F) with 50% Rh.

Table 1: Results ASTM E283

Property	Test Method	Result	Requirement
<b>Performance Requirements</b>			
Air Leakage Rate 56in x 96in Assembly; $\Delta P = 75\text{Pa}$ (1.57 psf)	ASTM E283		
Infiltration	L/(s·m <sup>2</sup> )	0.1	Report
	cfm/ft <sup>2</sup>	0.02	Report
Exfiltration	L/(s·m <sup>2</sup> )	0.2	Report
	cfm/ft <sup>2</sup>	0.03	Report
Air Leakage Rate 56in x 96in Assembly; $\Delta P = 300\text{Pa}$ (6.27 psf)	ASTM E283		
Infiltration	L/(s·m <sup>2</sup> )	0.2	Report
	cfm/ft <sup>2</sup>	0.03	Report
Exfiltration	L/(s·m <sup>2</sup> )	0.6	Report
	cfm/ft <sup>2</sup>	0.12	Report

Note(s): None

Table 2: Results ASTM E331 (AAMA 501.1)

Property	Test Method	Result	Requirement
<b>Performance Requirements</b>			
Water-penetration [Pass/Fail] 56in x 96" Assembly; 3.4 L/m <sup>2</sup> ·min water spray	ASTM E331		
$\Delta P = 300\text{Pa}$ (6.27 psf) for 2h;		Pass	No Water <sup>1</sup>
$\Delta P = 720\text{Pa}$ (15 psf) for 15min;		Pass	No Water <sup>1</sup>

Note(s): 1-No water observed on the back side of the sheathing, through any joints, or any fasteners.

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**Statement of Attestation:**

Testing was conducted in accordance with methods designated ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen, ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference with pressure differentials referenced from AAMA 501.1 Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure. The laboratory test results presented in this report are representative of the material supplied. This report does not constitute certification of this product which may only be granted by the certification program administrator.

Signed:   
 Timothy Efaw  
 Manager

Date: 05/21/2024

Signed:   
 Zachary Priest - PE  
 Director

Date: 05/21/2024

**Report Issue History:**

Issue #	Date	Pages	Revision Description (if applicable)
Original	05/15/2024	7	NA
Revision 1	05/21/2024	All	Added PE Seal

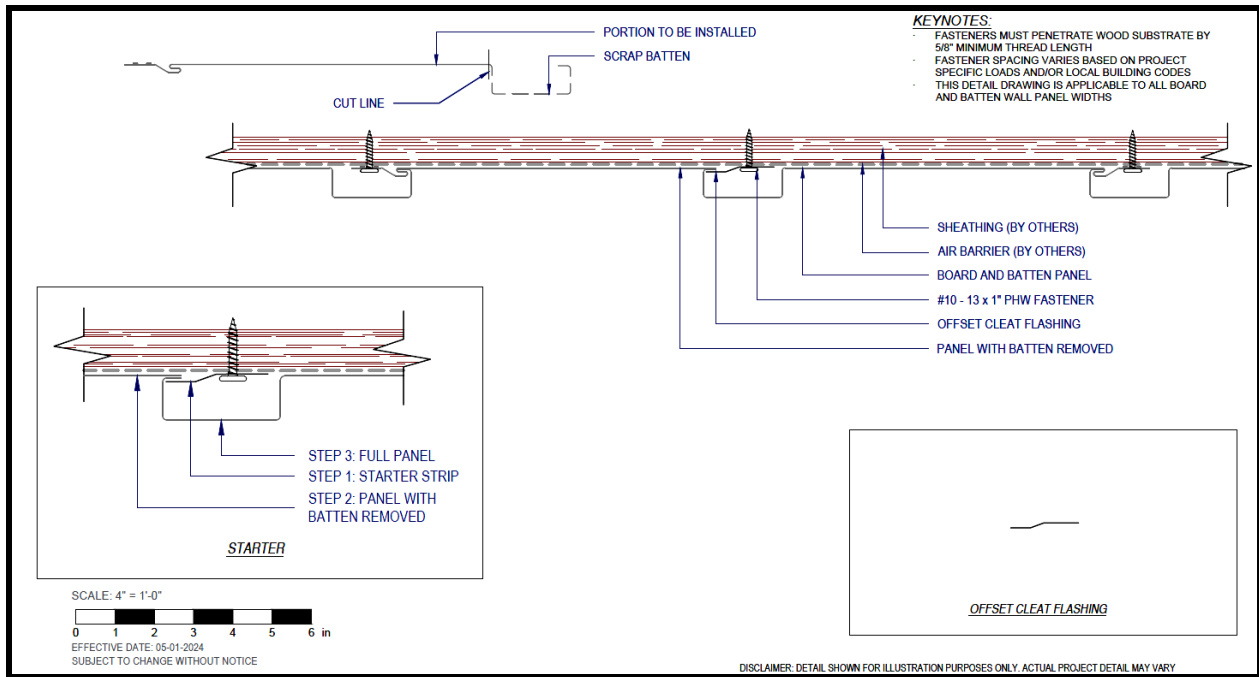
*Appendix Follows...*

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Sketches

Anchoring Details



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## Photographs

### Assembly Prior to Panel Installation



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### Assembly Prior to Test



**END OF REPORT**

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