

# ICC-ES Evaluation Report

**ESR-4944**

Reissued March 2024

This report also contains:


Revised May 2024

- FBC Supplement

Subject to renewal March 2025

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<p><b>DIVISION: 07 00 00— THERMAL AND MOISTURE PROTECTION</b></p> <p><b>Section: 07 46 33— Plastic Siding</b></p>	<p><b>REPORT HOLDER:</b>  <b>FIBERON COMPOSITES, LLC</b></p>	<p><b>EVALUATION SUBJECT:</b>  <b>FIBERON COMPOSITE CLADDING BOARDS</b></p>	
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## 1.0 EVALUATION SCOPE

### Compliance with the following codes:

- 2024, 2021, 2018, 2015, 2012, and 2009 [International Building Code® \(IBC\)](#)
- 2024, 2021, 2018, 2015, 2012, and 2009 [International Residential Code® \(IRC\)](#)
- 2013 *Abu Dhabi International Building Code (ADIBC)*<sup>†</sup>

<sup>†</sup>The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

### Properties evaluated:

- Structural
- Durability
- Surface-burning Characteristics
- Ignition resistance

## 2.0 USES

Fiberon Wildwood and Concordia boards are used for exterior, open joint cladding applications for all types of construction under the IBC and dwellings constructed in accordance with the IRC. For limitations in Types I, II, III, and IV construction under the IBC, see Section 4.3.

## 3.0 DESCRIPTION

Fiberon Wildwood and Concordia boards are solid rectangular shapes manufactured with a composite polyethylene (PE) and wood fiber core with a high density polyethylene (HDPE) capstock. Available board dimensions and evaluated colors are shown in [Table 1](#). Concordia boards have also been evaluated for use as deck boards and trim, as described in ESR-4947.

### 3.1 Durability:

The Fiberon Wildwood and Concordia boards have been evaluated for structural performance when exposed to a temperature range from -20°F to 125°F (-29°C to 52°C).

### 3.2 Surface-burning Characteristics:

When tested in accordance with ASTM E84, the Fiberon Wildwood boards are considered to have a Class B finish in accordance with Section 803.1.2 of the 2024, 2021 and 2018 IBC (Section 803.1.1 of the 2015, 2012 and 2009 IBC). Additionally, the boards exhibit a flame spread index of no greater than 200 in accordance with Section R302.9.1 of the IRC.

## 4.0 DESIGN AND INSTALLATION

### 4.1 Design:

The cladding boards have been evaluated for installation as part of a rainscreen system. They are fastened to furring strips, which allow for a drainage cavity behind the boards. The allowable positive and negative wind pressures for boards installed horizontally, vertically and at an angle of 45 degrees are shown in [Table 2](#).

### 4.2 Installation:

**4.2.1 General:** The cladding boards must be installed in accordance with the manufacturer's published installation instructions and this report. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. In the case of a conflict between the manufacturer's published installation instructions and this report, this report governs.

**4.2.2 Substrate Preparation:** The cladding boards have been evaluated for installation over wood-framed walls with studs spaced no more than 16 inches (406 mm) on center. The studs must have a minimum assigned specific gravity of 0.42, in accordance with the ANSI/AWC *National Design Specification for Wood Construction*<sup>®</sup> (NDS). The walls must be sheathed with wood structural panel sheathing complying with DOC PS-1 or PS-2, having a minimum thickness of  $\frac{7}{16}$  inch (11.1 mm). The sheathing must be covered with a water-resistive barrier complying with 2024, 2021 and 2018 IBC Section 1403.2 (2015, 2012 and 2009 IBC Section 1404.2), and flashing must be installed in accordance with 2024, 2021 and 2018 IBC Section 1404.4 (2015, 2012 and 2009 IBC Section 1405.4). The cladding must be installed over furring strips, to create a drainage cavity. For horizontal installation and diagonal installation up to an angle of 45 degrees, the furring strips must be installed vertically, and fastened to the center of the studs. For vertical installation, the furring strips must be installed horizontally at a maximum spacing of 16 inches (406 mm) on center. For diagonal installation of more than 45 degrees, the furring strips must be installed horizontally at a maximum spacing of 12 inches (305 mm) on center.

### 4.2.3 Cladding Board Installation:

**4.2.3.1 General:** The boards must be installed with a  $\frac{3}{16}$ -inch (4.8 mm) gap between them. At butt joints, the boards must be gapped in accordance with the report holder's installation instructions, taking into account the ambient temperature at the time of installation.

Screws used to fasten the cladding boards to the wall must be intended for use with composite deck board material. They must be minimum #9 screws having a minimum outside thread diameter of 0.200 inch (5.1 mm), and a minimum head diameter of 0.265 (6.73 mm). The fastener length must be selected to meet the penetration requirements described in Sections 4.2.3.2 and 4.2.3.3. Where exposed to saltwater, stainless steel screws are recommended.

Screws must be installed a minimum of 1 inch (25.4 mm) from each edge of the board and a minimum of 1 inch (25.4 mm) from the ends of the board.

**4.2.3.2 Horizontal Installation:** Board ends must be supported by furring. At each furring strip, the board must be fastened with two screws having sufficient length to penetrate a minimum of  $\frac{1}{2}$  inch (12.7 mm) into the stud. See [Figure 1](#) for typical installation.

**4.2.3.3 Vertical Installation: Board ends must be supported by furring.** At each furring strip, the board must be fastened with two fasteners having sufficient length to penetrate through the sheathing a minimum of  $\frac{1}{2}$  inch (12.7 mm). See [Figure 2](#) for typical installation.

**4.2.3.4 Diagonal Installation:** Board ends must be supported by furring. At each furring strip, the board must be fastened with two screws having sufficient length to penetrate a minimum of  $\frac{1}{2}$  inch (12.7 mm) into the stud (for angles up to 45 degrees) or to penetrate through the sheathing a minimum of  $\frac{1}{2}$  inch (12.7 mm) (for angles greater than 45 degrees). See [Figures 3](#) and [4](#) for typical installation.

### 4.3 Use on Exterior Walls in Types I, II, II and IV-HT Construction under 2024 IBC Section 1405.1 and Types I, II, II and IV Construction under 2021 and 2018 IBC Section 1405.1 (2015, 2012 and 2009 IBC Section 1406.2) for Wall Heights of 40 Feet or Less (Ignition Resistance):

When installed as described in Section 4.2 above, the cladding boards meet the requirement of 2024, 2021 and 2018 IBC Section 1405.1.1.1.1 (2015, 2012 and 2009 IBC Section 1406.2.1.1), based on testing in accordance with NFPA 268, and may be installed on exterior walls of Types I, II, III and IV construction having a fire separation distance of 5 feet (1524 mm) or less.

## 5.0 CONDITIONS OF USE:

The Fiberon cladding boards described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The Fiberon boards must be installed in accordance with this report and the manufacturer's published installation instructions. In the case of a conflict between the manufacturer's published installation instructions and this report, the more restrictive requirements govern.
- 5.2 Adequacy of the exterior wall envelope has not been evaluated and is subject to the approval of the code official.
- 5.3 Durability of furring strip material has not been evaluated and must be justified to the satisfaction of the code official.
- 5.4 For installation over horizontal furring strips, the adequacy of the sheathing and furring strips to transfer the loads to the framing members is outside the scope of this evaluation, and must be justified to the satisfaction of the code official.
- 5.5 The Fiberon Wildwood and Concordia boards are limited to installations in which the clearance between the siding and earth on the exterior of a building is not less than 6 inches (152 mm) or less than 2 inches (51 mm) vertical from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather in accordance with 2024, 2021, 2018 and 2015 IBC Section 2304.12.1.5 (2012 and 2009 IBC Section 2304.11.2.6).
- 5.6 Fire resistance rated wall assemblies are outside of the scope of this report.
- 5.7 The Fiberon cladding boards are produced in North Carolina and Idaho under quality control programs with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with the [Acceptance Criteria for Wood-plastic Composite Products Used as Exterior Siding \(AC524\)](#), dated June 2021 (editorially revised April 2024).

## 7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4944) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 In addition, packages of Fiberon Wildwood boards must be identified with the report holder name (Fiber Composites), the product name (Fiberon Wildwood), the nominal board size and length, the color and the evaluation report number (ESR-4944).  
  
Packages of Fiberon Concordia boards must be identified with the report holder name (Fiber Composites), the product name (Fiberon Concordia), the nominal board size and length, the color and one or both of the following evaluation report numbers: ESR-4944 or ESR-4947.
- 7.3 The report holder's contact information is the following:

**FIBER COMPOSITES, LLC**  
**181 RANDOM DRIVE**  
**NEW LONDON, NORTH CAROLINA 28127**  
**(800) 573-8841**  
[www.fiberondecking.com](http://www.fiberondecking.com)  
[info@fiberondecking.com](mailto:info@fiberondecking.com)

TABLE 1—FIBERON COMPOSITE CLADDING DESCRIPTIONS

PRODUCT NAME	DESCRIPTION <sup>2</sup>	NOMINAL BOARD SIZE	ACTUAL DIMENSIONS (inches)	AVAILABLE LENGTHS (feet)	EVALUATED COLORS
Wildwood	Solid board with HDPE capstock on three sides	1 x 6	0.75 x 6	12, 16, 20	Koa, Meranti, Mora, Mulga, Palo, Sumac, Tupelo, Wenge, Bamboo
		1 x 8	0.75 x 7 <sup>1</sup> / <sub>4</sub>	12	
		1 x 12	0.75 x 11 <sup>1</sup> / <sub>4</sub>	12	
Concordia	Solid board with HDPE capstock on four sides	1 x 6	0.935 x 5.4	12, 16, 20	Burnt Umber, Castle Gray, Cinnabar, Graphite, Ipe, Rosewood, Tudor Brown, Warm Sienna, Mountain Ash, Seaside Mist, Prairie Wheat
		1 x 8	0.75 x 7 <sup>1</sup> / <sub>4</sub>	12	
		1 x 12	0.75 x 11 <sup>1</sup> / <sub>4</sub>	12	

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

TABLE 2—ALLOWABLE POSITIVE AND NEGATIVE WIND DESIGN PRESSURE

CLADDING TYPE AND SIZE	CLADDING ORIENTATION	WALL FRAMING SPACING (inches)	FURRING STRIP SPACING (inches)	ALLOWABLE DESIGN PRESSURE (psf)
Concordia 1 x 6	Horizontal	16	16	106
	Vertical	16	16	85
	Diagonal	16	16	80
Wildwood 1 x 6, 1 x 8 Concordia 1 x 8	Horizontal	16	16	76
	Vertical	16	16	55
	Diagonal	16	16	52
Wildwood 1 x 12 Concordia 1 x 12	Horizontal	16	16	59
	Vertical	16	16	55
	Diagonal	16	16	52

For SI: 1 inch = 25.4 mm, 1 psf = 47.9 Pa.

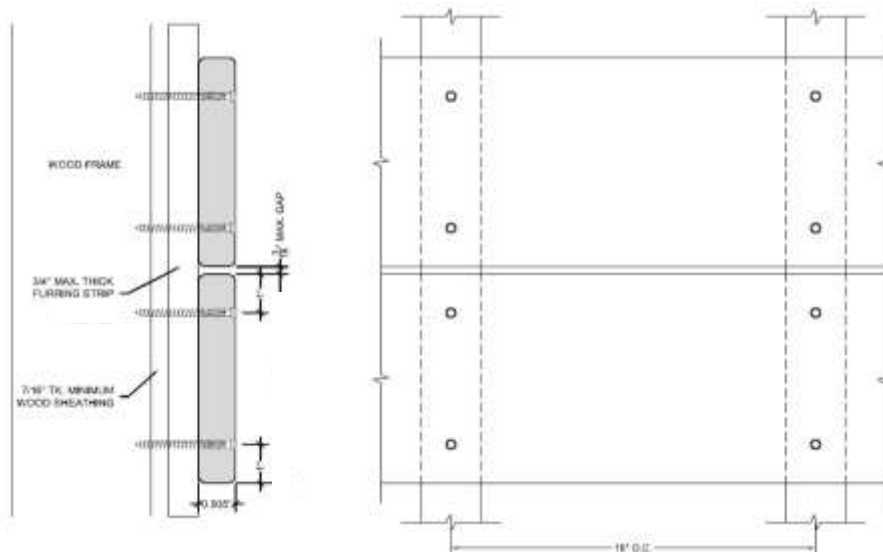


FIGURE 1—HORIZONTAL INSTALLATION OF FIBERON CLADDING BOARDS

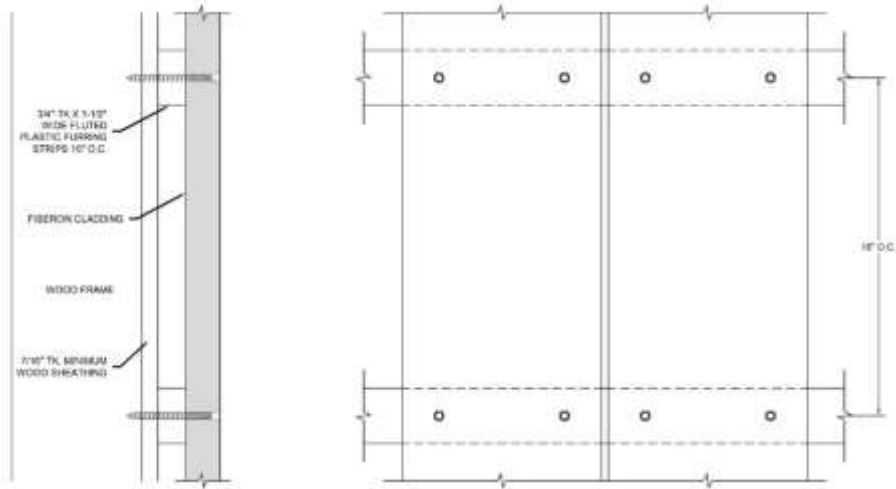


FIGURE 2—VERTICAL INSTALLATION OF FIBERON CLADDING BOARDS

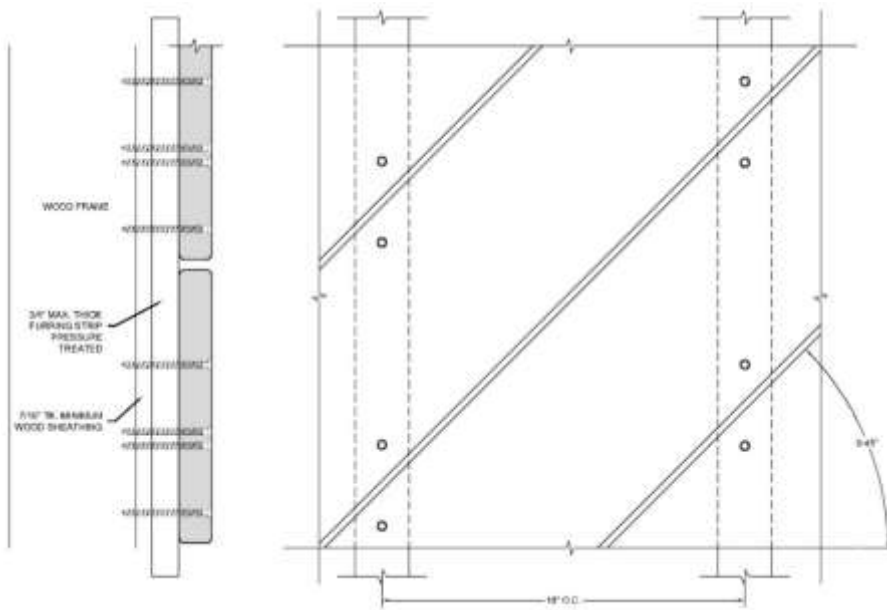


FIGURE 3—DIAGONAL INSTALLATION (UP TO 45 DEGREES) OF FIBERON CLADDING BOARDS

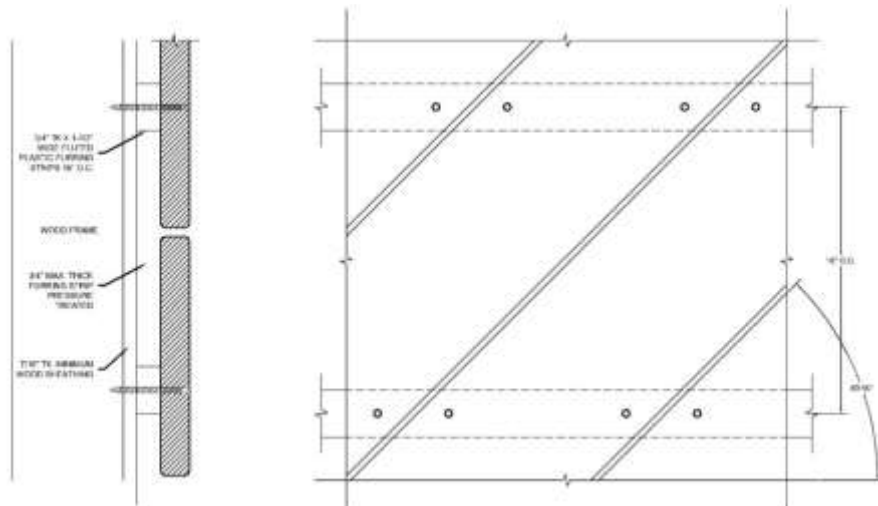


FIGURE 4—DIAGONAL INSTALLATION (OVER 45 DEGREES) OF FIBERON CLADDING BOARDS

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**  
**Section: 07 46 33—Plastic Siding**

**REPORT HOLDER:**

**FIBER COMPOSITES, LLC**

**EVALUATION SUBJECT:**

**FIBERON COMPOSITE CLADDING BOARDS**

**1.0 REPORT PURPOSE AND SCOPE**

**Purpose:**

The purpose of this evaluation report supplement is to indicate that Fiberon Composite Cladding Boards, described in ICC-ES evaluation report ESR-4944, has also been evaluated for compliance with the codes noted below.

**Applicable code editions:**

- 2023 *Florida Building Code—Building*
- 2023 *Florida Building Code—Residential*

**2.0 CONCLUSIONS**

The Fiberon Composite Cladding Boards, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-4944, complies with the *Florida Building Code—Building* and *Florida Building Code—Residential*. The design requirements must be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-4944 for the 2021 *International Building Code*® meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable.

Use of the Fiberon Composite Cladding Boards has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, with the following conditions:

- The Fiberon Composite Cladding Boards must be installed over a minimum  $\frac{5}{8}$ -inch thick (15.9 mm) wood structural panel sheathing complying with DOC PS-1 or PS-2.
- The allowable positive and negative wind design pressures must not exceed the tabulated values in Table 2 of the evaluation report ESR-4944.

In addition to the data noted in Section 6.0 of the evaluation report ESR-4944, data in accordance with the *Florida Building Code Test Protocols for High-Velocity Hurricane Zones*, TAS 201, TAS 202 and TAS 203, was submitted.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued March 2024 and revised May 2024.