ICC-ES Evaluation Report

ESR-5329

Issued *December 2024*

Subject to renewal December 2025

This report also contains:
- City of LA Supplement
- CA Supplement w/ DSA and OSHPD and Exterior Wildfire Exposure
- FL Supplement w/ HVHZ

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION Section: 07 46 16—Aluminum Siding Section: 07 42 93—Linear Metal Soffits	REPORT HOLDER: ARCHITECTURAL METAL SOLUTIONS LLC DBA: LUMABUILT	EVALUATION SUBJECT: MOSAIC PLANKS	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024 and 2021 *International Building Code®* (IBC)
- 2024 and 2021 *International Residential Code®* (IRC)

Property evaluated:

- Noncombustibility
- Surface Burning Characteristics
- Transverse Wind Loading

2.0 USES

Mosaic Planks are made from aluminum billets and are used as a siding on exterior walls and as unvented roof eave soffits on combustible or non-combustible construction.

3.0 DESCRIPTION

3.1 Mosaic Planks: Mosaic Planks are aluminium extrusions conforming to 6063 T6. Mosaic Planks are available in different sizes, with lengths up to 24 feet (7.3 m). The Mosaic Planks have several powder coated paint finishes. See Table 1 and Figure 1 for additional information.

Based on testing in accordance with ASTM E136, the base material is classified as non-combustible. When tested in accordance with ASTM E84, the powder coated Mosaic Planks have a flame spread index of less than 25, and a smoke-developed index of less than 450. The Mosaic Planks with the powder coating are composite materials in accordance with the exception in IBC Section 703.3.1 and are acceptable as non-combustible materials.

3.2 Clips: The clips used to attach the panels to the supporting structure are formed from minimum No. 20 gage thick [base-metal thickness of 0.035-inch (0.89 mm)] stainless steel conforming to Type 304-2B finish.

3.3 Fasteners: The fasteners used to attach the Mosaic Planks to the supporting structure must be corrosion resistant No 8. screws. When alternates to the fasteners and spacing indicated in Table 2 are required, fasteners must be sized and spaced as determined by a registered design professional.

4.0 DESIGN AND INSTALLATION

4.1 General: The Mosaic Planks comply with the requirements of Section 1403.5 of the IBC or Section R703 and R704 of the IRC, when designed using Table 2 of this report, and must be installed in accordance with this evaluation report, and the report holder's published installation instructions.

4.2 Transverse Wind Loading: The allowable wind pressures reported are based on the Mosaic Planks attached to the substrates indicated in Table 2, using clips and fasteners described in Section 3.0 of this report.

4.3 Installation: The Mosaic Planks are installed directly to the substrate. Clips are supplied with the Mosaic Planks and installed between the substrate and siding. The substrate must be covered with an approved water-resistive barrier where required by the code. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. See Figure 2 for additional installation information.

5.0 CONDITIONS OF USE:

5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the manufacturer's published installation instruction and this report, the most stringent governs.

5.2 Calculations and construction documents verifying compliance with applicable code provisions and this report, must be submitted to the code official for each project. A registered design professional must seal the calculations and construction documents where required by the statutes of the jurisdiction in which the project is to be constructed.

5.3 The allowable wind pressures listed in Table 2 are for the Mosaic Planks only. The substrate and/or framing to which the Mosaic Planks is attached must be designed by a registered design professional for the applicable positive and negative wind loads, in accordance with the IBC or IRC. Design of the substrate and/or framing is outside the scope of this report.

5.4 A water-resistive barrier must be provided as required by the applicable code.

5.5 Mosaic Planks must be backed by a solid substrate. When that substrate is plywood sheathing, it must be no less than $^1/_2$ inch (15.9 mm) thick plywood.

5.6 The Mosaic Planks are manufactured under a quality control system with inspections by ICC-ES

6.0 EVIDENCE SUBMITTED

6.1 Manufacturer's descriptive literature and installation instructions.

6.2 Documentation in accordance with American Architectural Manufactures Association Standard Specifications for Aluminum Siding, Soffit and Fascia (AAMA 1402).

6.3 Structural calculations based on Aluminum Design Manual by a registered design professional.

6.4 Data in accordance with ASTM E8, ASTM E136 and ASTM E84.

6.5 Data in accordance with Florida TAS 201-94, TAS 202-94 and TAS 203-94.

6.6 Quality documentation in accordance with ICC-ES Acceptance Criteria for Quality Documentation (AC10).

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-5329) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, the Mosaic Planks are identified with a label that includes the report holder's address, serial number and production dates.

7.3 The report holder's contact information is the following:

LUMABUILT
2529 W. JACKSON ST.
PHOENIX, AZ 85009
(602) 275-1676
www.lumabuilt.com

TABLE 1 – MOSAIC PLANKS SECTION PROPERTIES

PART	NOMINAL THICKNESS (in)	AREA (in^2)	WEIGHT (lb./ft)	I_{min} (in^4)	S_{min} (in^3)
2.5 in. wide plank	0.062	0.271	0.325	0.005	0.017
4 in. wide plank	0.062	0.395	0.474	0.008	0.026
6 in. wide plank	0.062	0.518	0.592	0.009	0.028
8 in. wide plank	0.062	0.642	0.770	0.010	0.028
10 in. wide plank	0.100	1.262	1.506	0.018	0.052

For **SI:** 1 inch = 25.4 mm; 1 lb. = 4.45 N; 1 foot = 0.3048 m

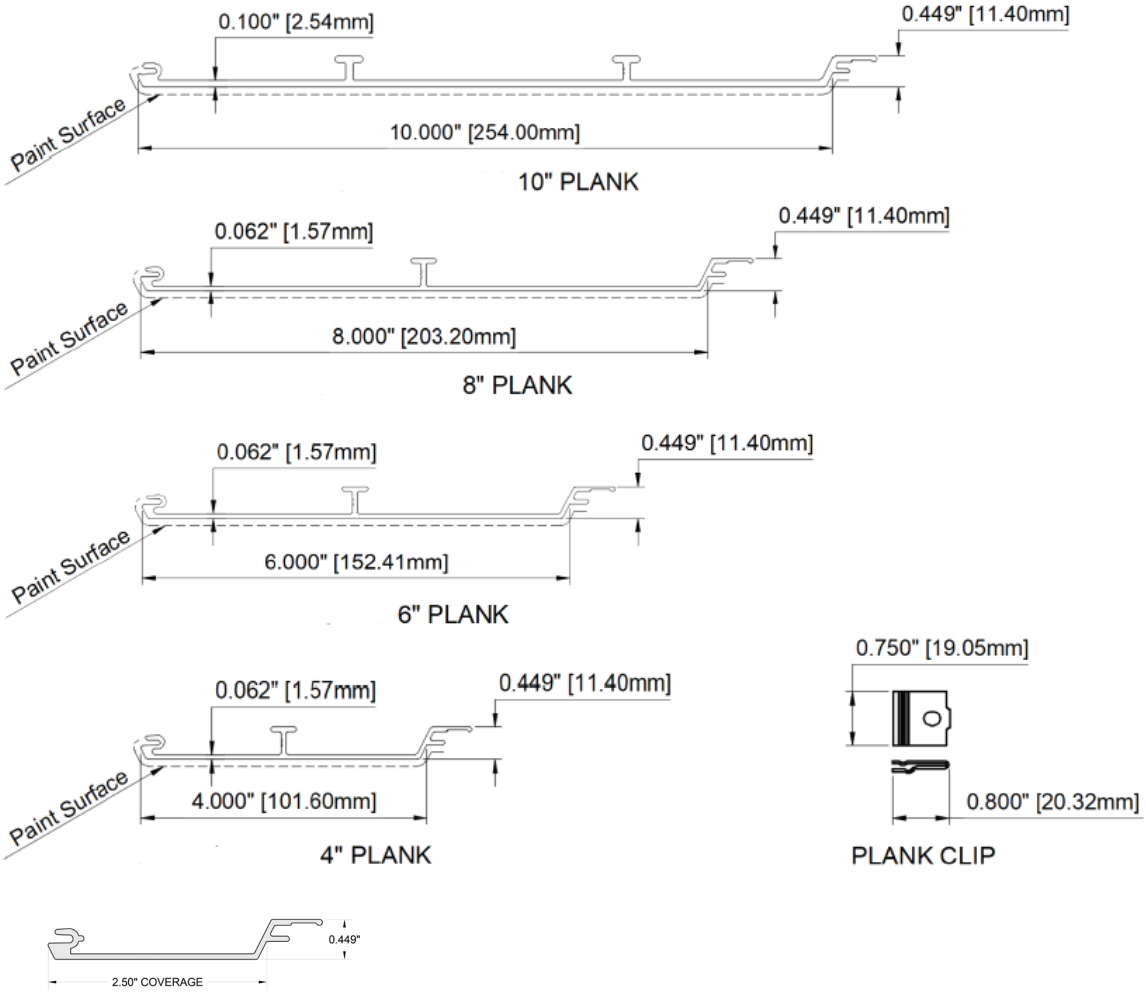
TABLE 2—MOSAIC PLANKS ALLOWABLE WIND PRESSURES

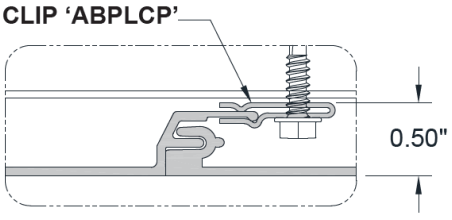
PART	SUBSTRATE	ATTACHMENT TO SUBSTRATE		ALLOWABLE POSITVE AND NEGATIVE WIND PRESSURES,[6] (psf)
		CLIP SPACING[4] (in)	NUMBER OF FASTENERS[5]	
2.5 in. wide plank	Steel Stud[1]	16	1	120
		24	1	109
		32	1	61
	Wood Stud[2]	16	1	120
		24	1	109
		32	1	61
	Plywood Sheathing[3]	16	1	70
		24	1	50
		32	1	30
4 in. wide plank	Steel Stud[1]	16	1	120
		24	1	105
		32	1	59
	Wood Stud[2]	16	1	120
		24	1	103
		32	1	59
	Plywood Sheathing[3]	16	1	40
		24	1	30
		32	1	20
6 in. wide plank	Steel Stud[1]	16	1	112
		24	1	75
		32	1	43
	Wood Stud[2]	16	1	103
		24	1	69
		32	1	43
	Plywood Sheathing[3]	16	1	30
		24	1	20
		32	1	16
8 in. wide plank	Steel Stud[1]	16	1	84
		24	1	56
		32	1	32
	Wood Stud[2]	16	1	77
		24	1	52
		32	1	32
	Plywood Sheathing[3]	16	1	23
		24	1	16
		32	1	12
10 in. wide plank	Steel Stud[1]	16	1	68
		24	1	45
		32	1	34
	Wood Stud[2]	16	1	62
		24	1	41
		32	1	31
	Plywood Sheathing[3]	16	1	19
		24	1	12
		32	1	9

For **SI:** 1 inch = 25.4 mm, 1 psf = 47.88 Pa.

Table 2 Notes:

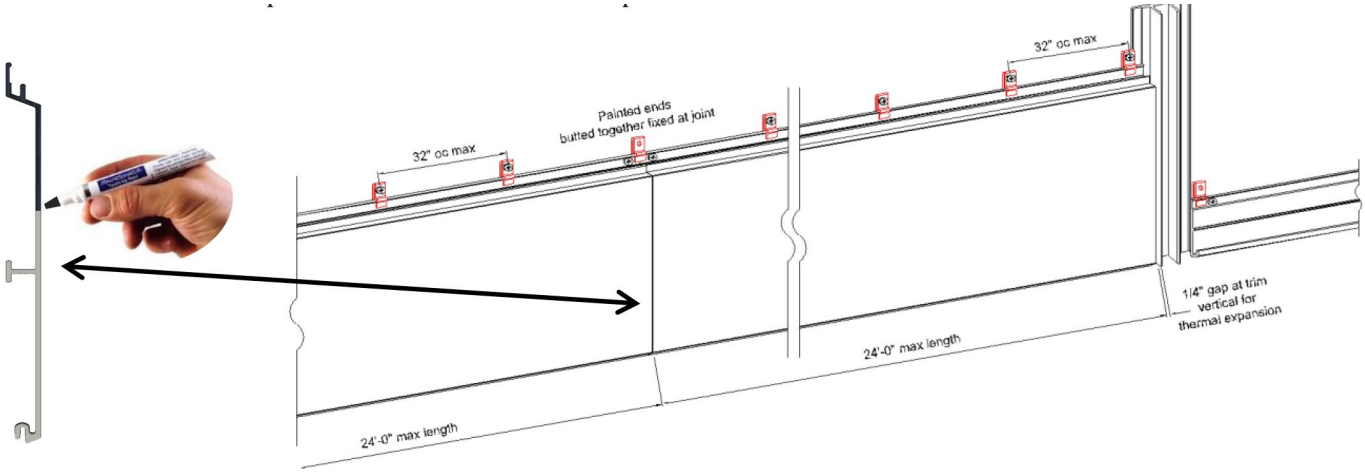
[1]Steel substrate stud framing must be at least 20ga with an Fy = 33 ksi (227 MPa).
[2]Wood substrate stud framing must be at least 2x with a min. Specific Gravity (S.G.) = 0.42.
[3]Sheathing substrate must be ½ in. (15.9 mm) plywood min, complying with PS1 Group 1 through 5.
[4]Clip spacing is based on conventional framing spacing, as applicable.
[5]Fastener must be #8 Pan Head Wood screws with 1½ in. (38.1 mm) min penetration for wood stud substrates, #8-18 Pan Head ITW Buildex TEKS Self- Drilling Screws with full penetration + 3 threads, as evaluated in ESR-1976 for steel stud substrates, or #8 Pan Head Wood Screws with full penetration for plywood sheathing substrate.
[6]The allowable wind pressures comply with a minimum deflection criteria of L/60.





PLANK ENGAGEMENT

FIGURE 1—MOSAIC PLANKS PROFILES, CLIP AND FINISHES



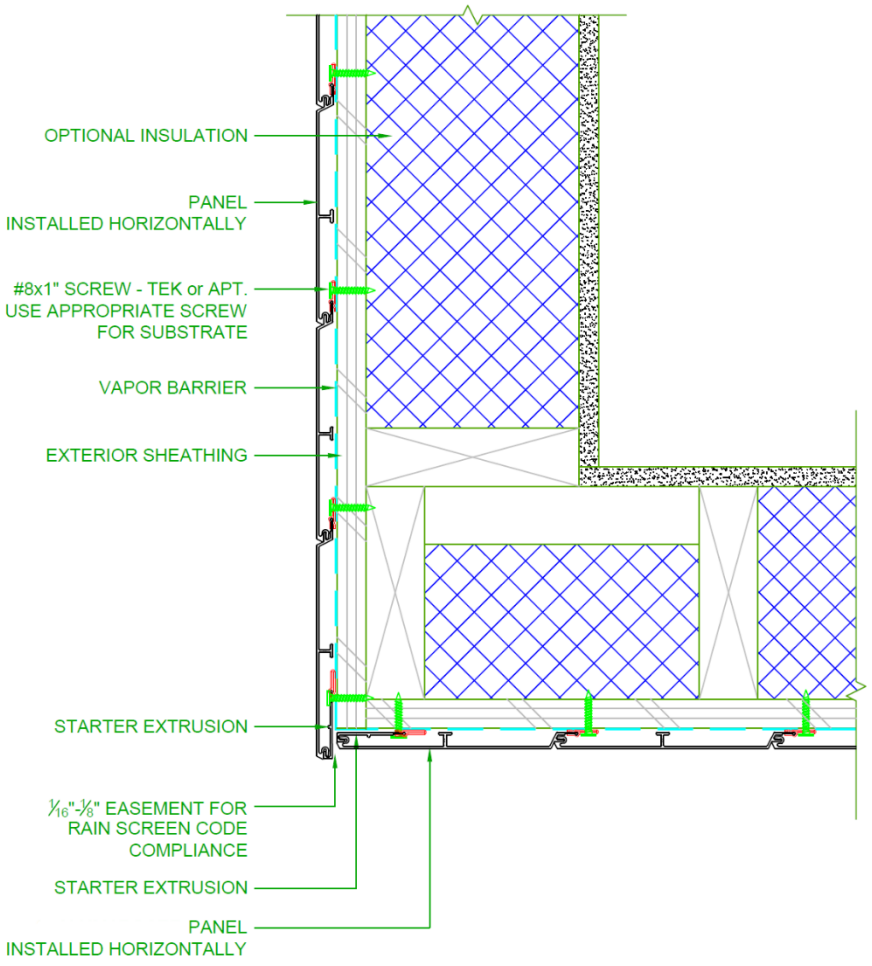


FIGURE 2—MOSAIC PLANKS INSTALLATION SCHEMATICS

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 46 16—Aluminum Siding
Section: 07 42 93—Linear Metal Soffits

REPORT HOLDER:

ARCHITECTURAL METAL SOLUTIONS LLC DBA: LUMABUILT

EVALUATION SUBJECT:

MOSAIC PLANKS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Mosaic Planks, described in ICC-ES evaluation report ESR-5329, have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

■ 2023 *City of Los Angeles Building Code* (LABC)

■ 2023 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The Mosaic Planks, described in Sections 2.0 through 7.0 of the evaluation report ESR-5329, comply with the LABC Chapter 14, and the LARC Section R703, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Mosaic Planks described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-5329.
- The design, installation, conditions of use and identification of the Mosaic Planks are in accordance with the 2021 *International Building Code®* (IBC) and the 2021 *International Residential Code®* (IRC) provisions, as applicable, noted in the evaluation report ESR-5329.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, and LARC Section R703, as applicable.
- The Mosaic Planks may be used in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or Wildland–Urban Interface Fire Area, provided installation is in accordance with the 2021 *International Building Code®* (IBC) provisions noted in the evaluation report and the additional requirements of CBC Sections 701A.3. The Mosaic Planks comply with the noncombustible material performance requirements of CBC Section 707A.3 (Item 1) when tested in accordance with ASTM E136 and may be used in the exterior design and construction of exterior walls in new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or Wildland–Urban Interface Fire Area.
- The Mosaic Planks may be used in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or Wildland–Urban Interface Fire Area, provided installation is in accordance with the 2021 *International Residential Code®* (IRC) provisions noted in the evaluation report and the additional requirements of CRC Sections R337.1.3. The Mosaic Planks comply with the noncombustible material performance requirements of CRC Section R337.7.3 (Item 1) when tested in accordance with ASTM E136 and may be used in the exterior design and construction of exterior walls in new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or Wildland–Urban Interface Fire Area.

This supplement expires concurrently with the evaluation report, issued December 2024.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 46 16—Aluminum Siding
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REPORT HOLDER:

ARCHITECTURAL METAL SOLUTIONS LLC DBA: LUMABUILT

EVALUATION SUBJECT:

MOSAIC PLANKS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Mosaic Planks, described in ICC-ES evaluation report ESR-5329, have also been evaluated for compliance with the code*(s)* noted below.

Applicable code edition*(s)*:

- 2022 *California Building Code* (CBC)

For evaluation of applicable chapters and sections adopted by California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architects (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 *California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Mosaic Planks, described in Sections 2.0 through 7.0 of the evaluation report ESR-5329, comply with CBC Chapter 14, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 14, 16 and 17, as applicable.

The Mosaic Planks may be used in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or Wildland–Urban Interface Fire Area, provided installation is in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Sections 701A.3. The Mosaic Planks comply with the noncombustible material performance requirements of CBC Section 707A.3 (Item 1) when tested in accordance with ASTM E136 and may be used in the exterior design and construction of exterior walls in new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or Wildland–Urban Interface Fire Area.

2.1.1 OSHPD:

The Mosaic Planks, described in Sections 2.0 through 7.0 of the evaluation report ESR-5329, comply with CBC Chapter 14 with applicable amendments [OSHPD 1, 1R, 3, 4 and 5], provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16, 16A, 17 and 17A, as applicable.

2.1.2 DSA:

The Mosaic Planks, described in Sections 2.0 through 7.0 of the evaluation report ESR-5329, comply with CBC Chapter 14 with applicable amendments [DSA-SS, DSA-SS/CC], provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements in CBC Chapters 16, 16A and 17A, as applicable.

2.2 CRC:

The Mosaic Planks, described in Sections 2.0 through 7.0 of the evaluation report ESR-5329, comply with CRC Chapter 7, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Chapter 3 and 7 as applicable.

The Mosaic Planks may be used in the exterior design and construction of new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or Wildland–Urban Interface Fire Area, provided installation is in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and the additional requirements of CRC Sections R337.1.3. The Mosaic Planks comply with the noncombustible material performance requirements of CRC Section R337.7.3 (Item 1) when tested in accordance with ASTM E136 and may be used in the exterior design and construction of exterior walls in new buildings located in a Fire Hazard Severity Zone within State Responsibility Areas or Wildland–Urban Interface Fire Area.

The products included in this supplement have not been evaluated for compliance with the *International Wildland – Urban Interface Code*®.

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ICC-ES Evaluation Report

ESR-5329 FL Supplement w/ HVHZ

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1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Mosaic Planks, described in ICC-ES evaluation report ESR-5329, have 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 Mosaic Planks, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-5329, comply 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-5329 for the 2021 *International Building Code®* meet the requirements of the *Florida Building Code-Building* and the *Florida Building Code—Residential.*

Use of the Mosaic Planks have also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code-Building* and the *Florida Building Code—Residential.*

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).

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