



ICC-ES Evaluation Report ESR-3970

Reissued July 2023

This report is subject to renewal July 2024.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 46 43—Composition Siding

REPORT HOLDER:

EVOLVE STONE, INC.

EVALUATION SUBJECT:

EVOLVE STONE

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)

Properties evaluated:

- Exterior veneer
- Durability
- Wind resistance
- Flame spread

1.2 Evaluation to the following green code(s) and/or standards:

- 2022 *California Green Building Standards Code* (CALGreen), Title 23, Part 11
- 2020, 2015, 2012 and 2008 *ICC 700 National Green Building Standard*™ (ICC 700-2020, ICC 700-2018, ICC 700-2012 and ICC 700-2008)

Attributed verified:

See Section 2.0

2.0 USES

Evolve Stone units are used as exterior wall coverings over a code-complying sheathing capable of supporting the imposed loads on buildings of Type V-B construction (IBC), and on structures constructed in accordance with the IRC.

The attributes of Evolve Stone units have been verified as conforming to the provisions of (i) CALGreen Sections A4.405.1.3 (reduced maintenance) and A5.406.1.2 (siding, factory coated materials); (ii) ICC 700-2020 Sections 601.7

and 11.601.7 (site-applied finishing materials); (iii) ICC 700-2015 and ICC 700-2012 Sections 601.7, 11.601.7 and 12.1(A).601.7 (site-applied finishing materials) and; (iv) ICC 700-2008 Section 601.7 (site-applied finishing materials). Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. The code may provide supplemental information as guidance.

3.0 DESCRIPTION

3.1 Stone units:

Evolve Stone units are made of polymer-based material that is cast into a variety of sizes that are intended to appear as dry stacked natural stone when installed. The products have a nominal density of 33.8 lb./ft³ (541 kg/m³) and are cast with an irregular face to simulate a natural stone finish. The stone units are manufactured in a variety of sizes, ranging from a minimum 2 inches by 2 inches (50.8 mm by 50.8 mm) to a maximum 8 inches by 18 inches (203.2 mm by 457.2 mm) while have varying nominal thicknesses between ½ inch (12.7 mm) to 1¼ inches (31.75 mm). The stone units can be field cut and are to be face-nailed to wood-based sheathing.

When tested in accordance with ASTM E84, the stone units have a flame-spread index of no greater than 200.

3.2 Sheathing substrate:

- Minimum 7/16-inch-thick (11.1 mm) solid plywood structural sheathing complying with DOC PS-1.
- Minimum 7/16-inch-thick (11.1 mm) Exposure 1 oriented strand board (OSB) sheathing complying with DOC PS-2.

3.3 Fasteners:

Corrosion-resistant (aluminum or stainless steel) fasteners shall be a minimum 16 gauge with a fastener length to penetrate through the backside of the sheathing substrate by ¼ inch (6.35 mm), a minimum shank diameter of 0.069 inch (1.75 mm), and minimum head diameter of 0.117 inch (2.97 mm).

4.0 DESIGN AND INSTALLATION

4.1 General:

Evolve Stone units must be installed in accordance with the manufacturer's published installation instructions, the applicable code, and this report. The manufacturer's

published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available on the jobsite at all times during installation.

4.2 Wind Resistance:

The design wind pressures must be determined in accordance with the requirements of Chapter 16 of the IBC or Section R301.2.1 of the IRC, as applicable, and must not exceed the allowable transverse loads in Table 1.

4.3 Installation:

Evolve Stone units must be backed by a substrate capable of withstanding the imposed positive and negative design loads. Sheathing substrate must be fastened to the wall framing in accordance with the applicable code, taking into account the transverse wind loads it will be subjected to in use. The substrate must be covered with an approved water-resistive barrier where required by code.

Fastening must be in accordance with Table 1 to withstand the tabulated allowable positive and negative transverse wind loads.

The corrosion-resistant fastener’s shank diameter and head diameter must comply with Section 3.3 of this report, and it must be long enough to fully penetrate the substrate sheathing.

Stone units, 5 inches (127 mm) to 8 inches (203.2 mm) wide and at a length of 10 inches (254 mm) or less, must be face-nailed to the sheathing substrate 1 inch (2.54 mm) from the width end edges, for a total of 2 nailing rows at four fasteners total. If the length of the stone unit exceeds 10 inches (254 mm), then an additional nail will be added to each nailing row and located at the center between each nailing row.

Stone units, 2 inches (50.8 mm) to 5 inches (127 mm) wide and at a length of 10 inches (254 mm) or less, must be face-nailed to the sheathing substrate located at the centerline length-wise 1 inch (2.54 mm) from the width end edge, for a total of 1 nailing row at two fasteners total. If the length of the stone unit exceeds 10 inches (254 mm), then an additional nail will be installed and located at the center between the nailing row.

Flashing in accordance with the applicable code must be installed at all openings, penetrations, and abutments with dissimilar materials, and at terminations of the stone unit.

5.0 CONDITIONS OF USE

The Evolve Stone units described in this report comply with, or are a suitable alternative to what is specified in, those

codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** Installation must comply with this report, the manufacturer’s published instructions, and the applicable code. In the event of a conflict between the manufacturer’s published installation instructions and this report, this report governs.
- 5.2** The stone units are limited to the maximum allowable transverse wind loads in Table 1. The withdrawal capacity of the fasteners used to attach the stone units to wood sheathing must equal or exceed the negative transverse load values and must be determined by registered design professional.
- 5.3** The stone units are limited to use on Construction Type V-B (IBC) and to structures constructed in accordance with the IRC.
- 5.4** Exterior walls must be braced or sheathed to resist racking loads with approved materials in accordance with the requirements of the applicable code.
- 5.5** The Evolve Stone units are manufactured in Winchester, Virginia, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1** Data in accordance with the ICC-ES Acceptance Criteria for Polymer-based, Polymer-modified and High-pressure Laminate Exterior and Interior Wall Cladding (AC92), dated December 2013 (editorially revised August 2019).
- 6.2** Reports of testing in accordance with ASTM E84 and ASTM E330.

7.0 IDENTIFICATION

- 7.1** The Evolve Stone units are labeled with the manufacturer’s name (Evolve Stone, Inc.); manufacturing date, lot number, and the ICC-ES evaluation report (ESR-3970).
- 7.2** The report holder’s contact information is the following:

EVOLVE STONE, INC.
200 LENOIR DRIVE, UNIT B
WINCHESTER, VIRGINIA 22603
(703) 646-8090
www.evolestone.com

TABLE 1— ALLOWABLE TRANSVERSE LOAD

TYPE OF FASTENER TO ATTACH EVOLVE STONE TO THE SHEATHING SUBSTRATE ^{2,3}	SUPPORT/ SPAN MAXIMUM SPACING (inches)	ALLOWABLE TRANSVERSE LOAD ¹ (psf)
		POSITIVE AND NEGATIVE
Minimum 0.069-inch shank diameter and 0.117-inch head diameter; minimum 16 gauge with a fastener length to penetrate through the backside of sheathing substrate by ¼-inch (6.35 mm)	16	104
Minimum 0.069-inch shank diameter and 0.117-inch head diameter; minimum 16 gauge with a fastener length to penetrate through the backside of sheathing substrate by ¼-inch (6.35 mm)	24	71

For SI: 1 inch = 25.4 mm, 1 psf = 0.0479 kPa

Footnote:

¹Maximum allowable transverse (positive and negative) wind load capacity determined in accordance with ASTM E330.

²Fastener specifications are in accordance with ASTM F1667.

³Fastener length shall be sufficient to penetrate back side of the wood sheathing by at least ¼ inch. The wood sheathing shall not be less than 7/16 inch in thickness.

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EVOLVE STONE, INC.

EVALUATION SUBJECT:

EVOLVE STONE

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that Evolve Stone, described in ICC-ES evaluation report ESR-3970, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2019 California Building Code (CBC)

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

- 2019 California Residential Code (CRC)

2.0 CONCLUSIONS**2.1 CBC:**

The Evolve Stone, described in Sections 2.0 through 7.0 of the evaluation report ESR-3970, complies with CBC Chapter 8, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 8 and 16 as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Evolve Stone, described in Sections 2.0 through 7.0 of the evaluation report ESR-3970, complies with CRC Chapter 3, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued July 2023.

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1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that Evolve Stone, recognized in ICC-ES evaluation report ESR-3970, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2020 and 2017 *Florida Building Code—Building*
- 2020 and 2017 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The Evolve Stone, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-3970, complies with the *Florida Building Code—Building* and *Florida Building Code—Residential*, provided the design requirements are 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-3970 for the *International Building Code*® meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable.

Use of the Evolve Stone for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* or the *Florida Building Code—Residential* has not been evaluated and is outside the scope of this supplemental report.

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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