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ICC-ES Evaluation Report

ESR-3303

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Reissued 11/2017
This report is subject to renewal 11/2019.

DIVISION: 04 00 00—MASONRY

SECTION: 04 71 00—MANUFACTURED BRICK MASONRY

SECTION: 04 73 00—MANUFACTURED STONE MASONRY

REPORT HOLDER:

ANATOLIY STONE PRODUCTS

**330 WILLIAMS STREET
PENDLETON, SOUTH CAROLINA 29670**

EVALUATION SUBJECT:

ANATOLIY STONE



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DIVISION: 04 00 00—MASONRY

Section: 04 71 00—Manufactured Brick Masonry

Section: 04 73 00—Manufactured Stone Masonry

REPORT HOLDER:

ANATOLIY STONE PRODUCTS

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ADDITIONAL LISTEES:

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PENDLETON, SOUTH CAROLINA 29670

(864) 231-1256

www.vanguardveneer.com

DECADE STONE LLC

330 WILLIAMS STREET

PENDLETON, SOUTH CAROLINA 29670

(864) 231-1256

www.decadestone.com

EVALUATION SUBJECT:

ANATOLIY STONE

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2012 *International Building Code*® (IBC)
- 2012 *International Residential Code*® (IRC)
- Other Codes (see Section 8.0)

Properties evaluated:

Veneer strength and durability

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

- 2016 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 3.0

2.0 USES

Anatoliy Stone is used as an adhered, non-load-bearing exterior veneer on non-fire-resistance-rated wood-framed or light gage steel stud walls, concrete walls or concrete masonry walls.

3.0 DESCRIPTION

Anatoliy Stone veneers are precast concrete products made to resemble natural stone, brick or adobe, in color and in texture. The concrete is composed of cement, aggregate, water, admixtures and coloring. The veneer units are molded and cured at the plant. The average saturated weight of the installed veneer units does not exceed 15 pounds per square foot (73.2 kg/m²). Recognized patterns of veneer and accents are listed in Table 1.

The attributes of the stone veneer have been verified as conforming to the requirements of (i) CALGreen Section A4.405.1.3 for prefinished building materials and Section A5.406.1.2 for reduced maintenance; (ii) ICC 700-2015 and ICC 700-2012 Section 602.1.6 and 11.602.1.6 for termite-resistant materials and Sections 601.7, 11.601.7, and 12.1(A).601.7 for site-applied finishing materials; and (iii) ICC 700-2008 Section 602.8 for termite-resistant materials and Section 601.7 for 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. These codes or standards often provide supplemental information as guidance.

4.0 INSTALLATION

4.1 General:

Installation of Anatoliy Stone Products precast stone veneer must comply with this report, the manufacturer's published installation instructions, and the applicable code. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. The veneer may be applied over backings of cement plaster, concrete or concrete masonry.

4.2 Preparation of Backing:

4.2.1 Cement Plaster Backings: Cement plaster backings may be applied over plywood, OSB or gypsum sheathing, supported by wood or steel studs; over open wood or steel studs; over concrete walls; and over concrete masonry walls, when installed as described in Sections 4.2.1.1 through 4.2.1.3.

4.2.1.1 Installation over Sheathing: The cement plaster backing must be installed over a water-resistive barrier complying with IBC Sections 1404.2 and 2510.6 or IRC Sections R703.2 and R703.6.3, as applicable. Also, flashing must be installed as required by IBC Sections 1405.4 and 1405.10.1.2 or IRC Sections R703.8 and R702.12.2, as applicable, and weep screeds must be installed at the bottom of the stone veneer. The weep screeds must comply with, and be installed in accordance with, IBC Section 1405.10.1.2 or IRC Section R703.12.2, as applicable. In addition, the weep screeds must have holes with a minimum diameter of $\frac{3}{16}$ inch (4.8 mm) spaced at a maximum of 33 inches (838 mm) on center, as required by Section 6.1.6.2 of TMS 402/ACI 530/ASCE 5, which is referenced in IBC Section 1405.10. The veneer must be installed with the clearances required by IBC Section 1405.10.1.3 or IRC Section R703.12.1, as applicable.

Studs must be spaced no more than 16 inches (406 mm) on center. Lath must be a corrosion-resistant, self-furred, 2.5 lb/yd^2 (1.4 kg/m^2) diamond mesh metal lath complying with ASTM C847, or a 1.4 lb/yd^2 (0.760 kg/m^2), corrosion-resistant, woven wire plaster base complying with ASTM C1032. The lath must be fastened to the wall framing in accordance with the minimum requirements of Section 7.10 of ASTM C1063, or IRC Section R703.6.1, as applicable. In addition, fasteners must be spaced a maximum of 6 inches (152 mm) on center, must penetrate a minimum of 1 inch (25.4 mm) into wood framing and must penetrate a minimum of $\frac{3}{8}$ inch (9.5 mm) through steel framing.

A scratch coat of Type N or S mortar (cement plaster) complying with ASTM C926 must be applied over the lath to a minimum thickness of $\frac{1}{2}$ inch (12.7 mm). The scratch coat must be scored horizontally in accordance with the manufacturer's published installation instructions, and must be allowed to cure in accordance with IBC Section 2512.6, prior to the application of the veneer units.

4.2.1.2 Installation over Open Studs: The cement plaster backing must be installed over a water-resistive barrier, flashing and weep screeds as described in Section 4.2.1.1. Studs must be spaced no more than 16 inches (406 mm) on center. Lath must be a corrosion-resistant, 3.4 lb/yd^2 (1.8 kg/m^2), $\frac{3}{8}$ -inch (9.5 mm) rib lath complying with ASTM C847. The lath must be fastened to wall framing and the scratch coat applied as described in Section 4.2.1.1.

4.2.1.3 Installation over Concrete and Masonry: The veneer units may be applied directly to concrete and masonry backing without lath, provided the concrete and masonry surface is clean. Where lath is used, it must be corrosion-resistant metal lath complying with ASTM C847, or 1.4 lb/yd^2 (0.760 kg/m^2), corrosion-resistant, woven wire plaster base complying with ASTM C1032. The lath must be fastened to the wall in accordance with Section 7.10 of ASTM C1063, or IRC Section R703.6.1, as applicable. The fasteners must be spaced a maximum of 6 inches (152 mm) on center vertically and 16 inches (406 mm) on center horizontally. The gravity load (shear) capacity and negative wind load (pull-out) capacity of the proprietary fasteners must be justified to the satisfaction of the code official. The scratch coat must be applied as described in Section 4.2.1.1.

4.2.2 Concrete and Masonry Backing: Concrete masonry and poured concrete wall surfaces must be prepared in accordance with Section 5.2 of ASTM C926, and IBC Section 2510.7, as applicable. Alternatively, a cement plaster backing may be installed as described in Section 4.2.1.

4.3 Application of Veneer Units:

Prior to the application of the veneer units, the scratch coat or other backing and the back of the veneer units must be moistened in accordance with the manufacturer's instructions. A minimum $\frac{1}{2}$ -inch-thick (12.7 mm) setting bed of Type N or S mortar must be applied to the back of the veneer units, and the veneer units must be pressed firmly in place, squeezing the mortar out around all veneer unit edges. Joints between veneer units must be grouted and tooled in accordance with the veneer manufacturer's published installation instructions.

5.0 CONDITIONS OF USE

The precast stone veneer described in this report complies with, or is 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 installation 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 use of the precast stone veneer is limited to installation on walls with cement plaster, concrete or concrete masonry backings.
- 5.3** Expansion or control joints, used to limit the effect of differential movement of supports on the veneer system, are to be specified by the architect, designer or veneer manufacturer, in that order. Consideration must also be given to movement caused by temperature change, shrinkage, creep and deflection.
- 5.4** In jurisdictions adopting the IBC, the supporting wall must be designed to support the installed weight of the veneer system, including veneer, setting bed and cement plaster backing, as applicable. At wall openings, the supporting members must be designed to limit deflection to $\frac{1}{600}$ of the span of the supporting members.
- 5.5** In jurisdictions adopting the IRC, where the seismic provisions of IRC Section R301.2.2 apply, the average weight of the wall supporting the precast stone veneer, including the weight of the veneer system, must be determined. When this weight exceeds the applicable limits of IRC Section R301.2.2.2.1, an engineered design of the wall construction must be performed in accordance with IRC Section R301.1.3.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Precast Stone Veneer (AC51), dated February 2008 (editorially revised April 2012).

7.0 IDENTIFICATION

Boxes of precast stone veneer units are identified with the manufacturer's name (Anatoliy Stone Products), the pattern name, the manufacturing date and location, and the evaluation report number (ESR-3303).

8.0 OTHER CODES

8.1 Evaluation Scope:

In addition to the codes referenced in Section 1.0, the products described in this report were evaluated for compliance with the following codes:

- 2009 *International Building Code*® (2009 IBC)
- 2009 *International Residential Code*® (2009 IRC)
- 2006 *International Building Code*® (2006 IBC)

■ 2006 *International Residential Code*® (2006 IRC)

The Anatoliy Stone products described in this report comply with, or are suitable alternatives to what is specified in, the codes listed above, subject to the provisions of Sections 8.2 through 8.7.

8.2 Uses:

See Section 2.0.

8.3 Description:

See Section 3.0.

8.4 Installation:

8.4.1 General: See Section 4.1.

8.4.2 Preparation of Backing:

8.4.2.1 Cement Plaster Backings: See Section 4.2.1.

8.4.2.1.1 Installation over Sheathing: The cement plaster backing must be installed over a water-resistive barrier complying with 2009 and 2006 IBC Sections 1404.2 and 2510.6 or 2009 and 2006 IRC Sections R703.2 and R703.6.3, as applicable. Also, flashing must be installed as required by 2009 IBC Section 1405.4 (2006 IBC Section 1405.3) or 2009 and 2006 IRC Section R703.8, as applicable, and weep screeds must be installed at the bottom of the stone veneer. The weep screeds must comply with, and be installed in accordance with, 2009 and

2006 IBC Section 2512.1.2 or 2009 and 2006 IRC Section R703.6.2.1, as applicable. In addition, the weep screeds must have holes with a minimum diameter of ³/₁₆ inch (4.8 mm) spaced at a maximum of 33 inches (838 mm) on center, as required by Section 6.1.5.2 of TMS 402/ACI 530/ASCE 5 (Section 6.1.5.2 of ACI 530/ASCE 5/TMS 402), which is referenced in 2009 IBC Section 1405.10 (2006 IBC Section 1405.9).

For additional requirements, see Section 4.2.1.1.

8.4.2.1.2 Installation over Open Studs: See Section 4.2.1.2.

8.4.2.1.3 Installation over Concrete and Masonry: See Section 4.2.1.3.

8.4.2.2 Concrete and Masonry Backings: See Section 4.2.2.

8.4.3 Application of Veneer Units: See Section 4.3.

8.5 Conditions of Use:

See Section 5.0.

8.6 Evidence Submitted:

See Section 6.0.

8.7 Identification:

See Section 7.0.

TABLE 1—RECOGNIZED PATTERNS OF ANATOLIY STONE

Olde Country LedgeStone, Southeastern LedgeStone, Dressy Fieldstone, Field Cobble, River Rock, Tuscany Villa, Italian Manor, Rustic LedgeStone, Weathered Edge, Limestone, Euro Castle, Castle Stone, LedgeStone, Mountain Ledge, Shadow Rock, Country Field, Rubble, Used Brick, Olde Brick, Coral Stone, Caroling LedgeStone, Stream Stone