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ICC-ES Report

ESR-2859

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Reissued 02/2016
This report is subject to renewal 02/2017.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 44 53—GLASS-FIBER-REINFORCED CEMENTITIOUS PANELS

REPORT HOLDER:

BORAL STONE PRODUCTS, LLC

**200 MANSELL COURT EAST, SUITE 310
ROSWELL, GEORGIA 30076**

EVALUATION SUBJECT:

VERSETTA STONE™



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**DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION****Section: 07 44 53—Glass-Fiber-Reinforced Cementitious
Panels****REPORT HOLDER:****BORAL STONE PRODUCTS, LLC**
200 MANSELL COURT EAST, SUITE 310
ROSWELL, GEORGIA 30076
(419) 318-5345www.versettastone.com
www.culturedstone.com**EVALUATION SUBJECT:****VERSETTA STONE™****1.0 EVALUATION SCOPE****1.1 Compliance with the following codes:**

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

[†]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:

- Weather resistance
- Transverse loading

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

- 2013 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 3.0

2.0 USES

Versetta Stone™ is used as a nonstructural exterior wall covering for installation over wood-based structural panel sheathing applied to wood framing capable of supporting the imposed loads, including but not limited to positive and negative transverse wind loads.

3.0 DESCRIPTION

Versetta Stone panels are precast, glass-fiber-reinforced cement panels made of proprietary components, portland

cement and glass fibers. The Versetta Stone panels have a 0.0217-inch-thick (0.55 mm), minimum G90 galvanized steel nailing flange embedded in, and molded along the top edge of the panels; and a simulated stone veneer surface. The panels measure a nominal 36 inches long by 9.5 inches high (including nailing hem) by approximately 1.8 inches thick (914 by 241 by 46 mm), and have a weight of approximately 17 pounds (91 N) per panel. The installed panels have an 8-by-36-inch (203 mm by 914 mm) exposure, resulting in an installed weight of approximately 8.5 psf (0.38 kPa).

The attributes of the stone veneer have been verified as conforming to the provisions of (i) CALGreen Section A4.405.1.3 for prefinished building materials and Section A5.406.1.2 for reduced maintenance; (ii) ICC 700-2012 Sections 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 DESIGN AND INSTALLATION**4.1 Design:**

The allowable negative (outward) wind pressure of 20.4 psf (1.0 kPa) must exceed the design pressure determined in accordance with IBC Chapter 16 or IRC Section R301.2.1, as applicable.

4.2 Installation:

The panels must be installed over solid wood-based sheathing (plywood or OSB) covered with a water-resistive barrier as required by IBC Section 1404.2 and IRC Section R703.2, as applicable. The sheathing must be minimum 7/16-inch-thick (11 mm) OSB Struct I rated sheathing complying with U.S. DOC PS-2 as Exposure 1, or 1/2-inch-thick (13 mm) plywood Struct I rated sheathing complying with U.S. DOC PS-1 as Exterior Grade, and provide a span rating complying with the applicable code. The sheathing must be attached, in accordance with the applicable code, to wood wall framing having a minimum specific gravity of 0.42 and spaced a maximum of 16 inches (406 mm) on center. The Boral Stone starter strip must be installed at the base of the wall to provide a means of drainage. The nailing flange of the starter strip must be behind the water-resistive barrier, and must be fastened at 6 inches

(152 mm) on center with hot-dipped galvanized roofing nails, having a minimum $\frac{3}{8}$ -inch-diameter (9.5 mm) head and a 0.125-inch-diameter (3.2 mm) shank. Each panel must be attached using two fasteners installed through the sheathing and into framing; and two additional fasteners installed into the sheathing. The fasteners must be hot-dipped galvanized roofing nails, with a minimum $\frac{3}{8}$ -inch-diameter (9.5 mm) head and a 0.125-inch-diameter (3.2 mm) shank. Fasteners installed into framing must have sufficient length to penetrate the framing 1 inch (25.4 mm); fasteners installed only into sheathing must have a sufficient length to protrude $\frac{1}{2}$ inch (12.7 mm) through the back of the sheathing. Vertical panel joints must be staggered between adjacent rows. See Figures 1 through 3 for details. Installation and flashing details at windows, doors, material transitions, penetrations and terminations must be in accordance with the manufacturer's published installation instructions and the applicable code.

5.0 CONDITIONS OF USE

The Versetta Stone 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 conflict between the manufacturer's published instructions and this report, this report governs.
- 5.2 The panels are limited to use on exterior walls of buildings of Type V-B construction, and to construction permitted by the IRC.
- 5.3 The panels must be installed only on exterior walls with wood framing and solid wood-based structural panel sheathing capable of supporting the imposed loads, including but not limited to positive and negative transverse wind loads. The sheathing must be covered with a water-resistive barrier, as required by the applicable code.

5.4 In jurisdictions adopting the IRC, where seismic provisions of IRC Section R301.2.2 apply, the average weight of the wall supporting the siding, including the weight of the siding, must be determined. When this weight exceeds the applicable limits of IRC Section R301.2.2.1, an engineered design of the wall construction must be performed in accordance with IRC Section R301.1.3.

5.5 The exterior walls must be braced to resist racking loads with approved materials in accordance with the applicable code.

5.6 The panels are manufactured in Chester, South Carolina, under a quality control program with inspections by ICC Evaluation Service, LLC.

6.0 EVIDENCE SUBMITTED

- 6.1 Reports of testing of the physical and mechanical properties of the panels in accordance with ASTM C1186, including Supplementary Type A requirements.
- 6.2 Reports of nailing hem bond strength testing before and after conditioning.
- 6.3 Reports of water drainage testing in accordance with the ICC-ES Acceptance for EIFS Clad Drainage Wall Assemblies (AC235), dated October 2009.
- 6.4 Reports of negative transverse wind load testing in accordance with ASTM D5206, Procedure B.
- 6.5 Quality documentation in accordance with the ICC-ES Acceptance Criteria for Quality Documentation (AC10).

7.0 IDENTIFICATION

The Versetta Stone described in this report is identified with the Boral Stone, LLC, name; the product name; the name of the inspection agency (ICC-ES); and the evaluation report number (ESR-2859).

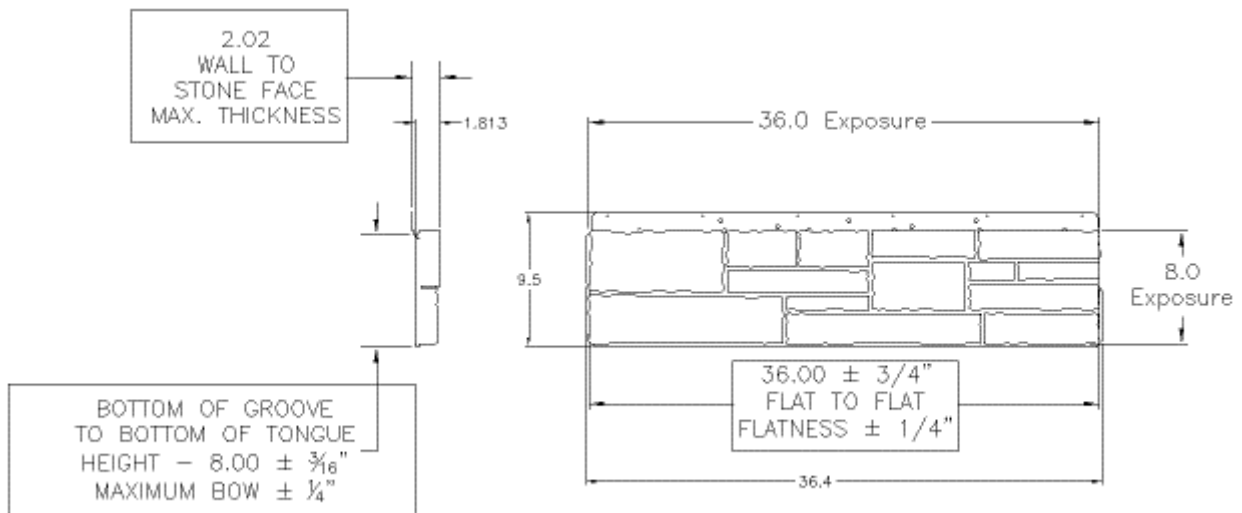


FIGURE 1—FLAT PANEL (8 inches)

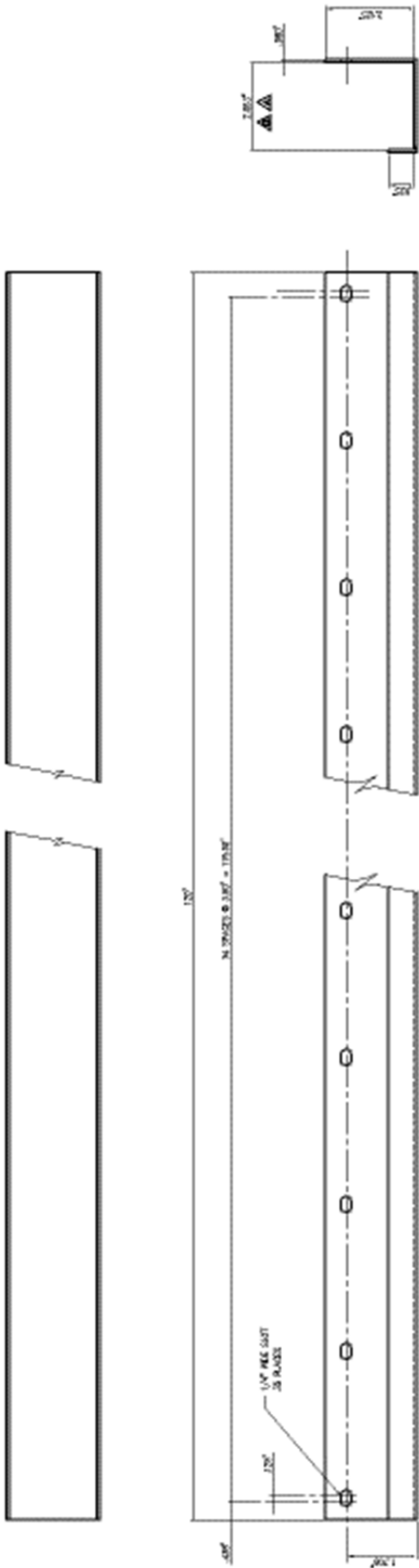


FIGURE 2—J TRIM

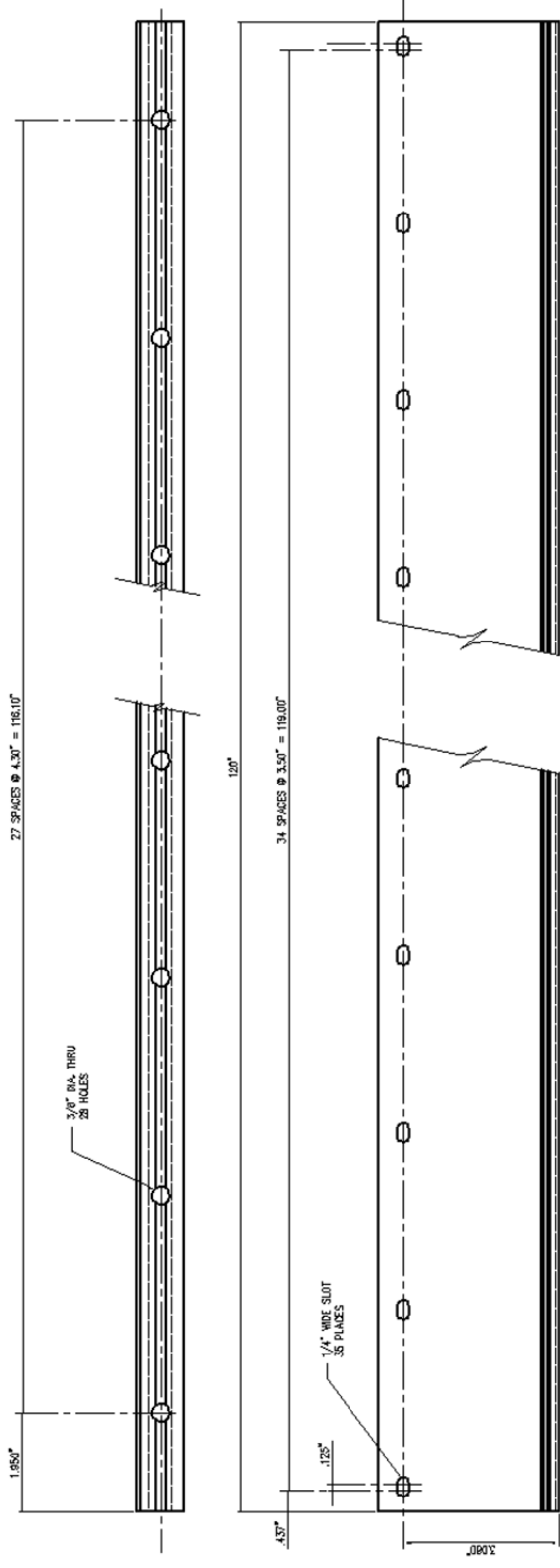


FIGURE 3—STARTER STRIP