ICC-ES Evaluation Report

ESR-1593

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Subject to renewal October 2025

DIVISION: 04 00 00—MASONRY **Section: 04 73 00—Manufactured Stone Masonry**	**REPORT HOLDER: G. S. HARRIS CO., INC.**	**EVALUATION SUBJECT: HARRISTONE PRECAST STONE VENEER**	

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2012, 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.

- 1997 *Uniform Building Code*™ (UBC)

Property evaluated:

Veneer strength and durability

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

- 2022 California Green Building Standards Code (CALGreen), Title 24, Part 11
- 2020, 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

See Section 3.0

2.0 USES

Harristone Precast Stone Veneer is used as an adhered wall veneer.

3.0 DESCRIPTION

Harristone Precast Stone Veneer (HPSV) is a precast concrete product made to resemble stone in color and in texture. The concrete is composed of portland cement, fine and coarse expanded shale aggregates, pigments, concrete admixtures, and water Units of HPSV are approximately $^5/_8$ to $2^5/_8$ inches thick (16 to 67 mm) and have a maximum area of 720 square inches (0.464 m^2) with a maximum dimension of 36 inches (914 mm). The maximum veneer weight is 15 pounds per square foot (73.2 kg/m^2).

Recognized veneer types and patterns are as follows:

- Guillotine
- Chief Joseph
- Uintah Drystack Ledgestone

- Limestone
- Sandstone
- Granite
- Ledgestone
- Ridgestone
- Rolled River Rock
- Cobble
- Thin Brick
- Mason's Choice
- Fieldstone

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 700-2020, ICC 700-2015 and ICC 700-2012 Section 602.1.6 for termite-resistant materials(iii) ICC 700-2020 Sections 601.7 and 11.601.7 and ICC 700-2015 and ICC 700-2012 Sections 601.7, 11.601.7, and 12.1(A).601.7 for site-applied finishing materials; and (iv) 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 HPSV 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. If there are conflicts between this report and the manufacturer's published installation instructions, this report shall govern.

Harristone Precast Stone Veneer must be applied to new or existing wood-frame or light gage steel framed walls and to masonry walls. The HPSV must be adhered to the supporting walls with a Type S mortar setting bed. The Type S mortar must comply with 2012 IBC Section 2103.9 (Section 2103.8 of the 2009 and 2006 IBC), IRC Table R607.1, or UBC Table 21-A. The ambient temperature must be 40°F (4°C) or higher at the time of veneer application.

4.2 Application to Stud Construction:

HPSV units must be applied to open studs spaced a maximum of 16 inches on center (406 mm) or over existing wall surfaces of exterior plaster (stucco), wood siding, or wood sheathing backed by studs spaced a maximum of 16 inches (406 mm) on center.

Open studs must be covered with wire backing and a water-resistive barrier in accordance with IBC Section 1404.2 or IRC Section R703.2, or a weather-resistive barrier in accordance with UBC Section 1402.1. For installations over wood siding or wood sheathing, a water-resistive barrier must be installed over the wood siding or sheathing in accordance with IBC Section 2510.6 or IRC Section R703.6.3. Installations over exterior plaster walls require a water-resistive or weather-resistive barrier, in accordance with the applicable code, behind the plaster.

Flashing must be installed as required by 2012 IBC Sections 1405.4 and 1405.10.1.2 (Section 1405.4 of the 2009 IBC and Section 1405.3 of the 2006 IBC) or 2006 IRC Section R703.8, as applicable. Weep screeds must be installed at the bottom of the wall and at all horizontal terminations of the HPSV. The weep screeds must comply with, and be installed in accordance with, IBC Section 1405.10.1.2, IRC Section R703.12.2 or UBC Section 2506.5, 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 6.1.6.2 of TMS 402/ACI 530/ASCE 5, which is referenced in IBC Section 1405.10. In addition, the weep screeds must have holes with a minimum diameter of $^{3}/_{16}$ inch (4.8 mm) spaced at a maximum of 16 inches (406 mm) on center. The veneer must be installed with the clearances required by 2012 IBC Section 1405.10.1.3 (Section 2512.1.2 of the 2009 and 2006 IBC) or 2012 IRC Section R703.12.1, as applicable.

A 3.4-pound-per-square-yard (1.84 kg/m^2), self-furring, metal lath or No. 17 gage [0.0539 inch (1.37 mm)], $1^{1}/_{2}$-inch (38 mm) hexagonal woven-wire mesh must be installed over the water-resistive or weather-resistive barrier. The lath or mesh must be fastened to each of the wall studs at 6 inches (152 mm) on center vertically. For wood studs, fasteners must be galvanized nails, with diameter and penetration as shown in Table 1 of this report, or minimum No. 16 gage [0.063 inch (1.6 mm)] galvanized staples of sufficient length to penetrate the studs a minimum of $1^{3}/_{8}$ inches (35 mm). For steel studs, fasteners must be No. 8 wafer head screws of

sufficient length to penetrate the studs a minimum of 3/8 inch (9.5 mm). Wood studs must have a minimum specific gravity of 0.42. Steel studs must be 20 gage [0.033 inch (0.84 mm) bare-metal thickness], minimum.

A 1/2-inch-thick (12.7 mm) scratch coat of Type S mortar must be applied over the lath or mesh and allowed to cure for at least 48 hours before the mortar setting bed is applied. The scratch coat must be moistened and a 3/4-inch-thick (19.1 mm) Type S mortar setting bed must be applied in areas of approximately 10 square feet (0.929 m^2). The HPSV units must be lightly but firmly tapped into the mortar setting bed to ensure bond while the mortar is soft and pliable. Alternatively, the setting bed must be applied to the back of each veneer unit and the unit pressed into place. In either case, the mortar setting bed thickness and consistency must allow the mortar to be squeezed out around all edges of the veneer unit to assure full bond. All joints must be tooled.

4.3 Application to Masonry:

The HPSV units must be applied directly to a masonry backing without the use of lath or mesh, provided the surface is clean. Concrete masonry 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. Painted, waterproofed, or dirty masonry surfaces must be cleaned by sandblasting to provide a good bond surface. A minimum 1/2-inch-thick (12.7 mm) Type S mortar setting bed must be applied to the masonry backing in areas of approximately 10 square feet (0.929 m^2). The HPSV units must be lightly but firmly tapped into the mortar setting bed to ensure bond while the mortar is soft and pliable. Alternatively, the setting bed must be applied to the back of each veneer unit and the unit pressed into place. In either case, the mortar setting bed thickness and consistency must allow mortar to be squeezed out around all edges of the veneer unit to assure full bond. All joints must be tooled.

5.0 CONDITIONS OF USE:

The Harristone 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 there is a conflict between the manufacturer's published installation instructions and this report, this report shall govern.

5.2 The HPSV units must be limited to installation on wood-frame, light-gage-steel framed, or masonry walls only.

5.3 Expansion or control joints used to limit the effect of differential movement of supports must 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 UBC, the height of HPSV attached to wood-frame construction must be limited by UBC Section 1403.1.2.

5.5 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 1/600 of the span of the supporting members.

5.6 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

7.1 All pallets of HPSV units must be labeled or stamped with the manufacturer's name (G. S. Harris Co., Inc.), product name and evaluation report number (ESR-1593).

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

G. S. HARRIS CO., INC.
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(801) 621-1380
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TABLE 1—REQUIRED NAIL PENETRATION (inches)

STUD SPECIFIC GRAVITY	NAIL DIAMETER (inch)		
	0.120	**0.128**	**0.131**
0.42	$1^{3}/_{8}$	$1^{5}/_{16}$	$1^{1}/_{4}$
0.43	$1^{5}/_{16}$	$1^{1}/_{4}$	$1^{3}/_{16}$
0.46	$1^{1}/_{8}$	1	1
0.50	1	1	1

For **SI:** 1 inch = 25.4 mm.