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ESR-3760

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Reissued 03/2016
This report is subject to renewal 03/2018.

DIVISION: 08 00 00—OPENINGS
SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

REPORT HOLDER:

FLOOD SOLUTIONS, LLC

**ONE INDUSTRIAL PARK DRIVE, BUILDING 27
PELHAM, NEW HAMPSHIRE 03076**

EVALUATION SUBJECT:

STATIC FLOOD VENTS



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Section: 08 95 43—Vents/Foundation Flood Vents**REPORT HOLDER:****FLOOD SOLUTIONS, LLC**
ONE INDUSTRIAL PARK DRIVE
BUILDING 27
PELHAM, NEW HAMPSHIRE 03076
(800) 325-9775
www.floodsolutions.com
info@floodsolutions.com**EVALUATION SUBJECT:****STATIC FLOOD VENTS****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2015, 2012 and 2009 *International Building Code*®
- 2015, 2012 and 2009 *International Residential Code*®

Property evaluated:

Water flow

2.0 USES

Flood Solutions' static flood vents are used to provide for the equalization of hydrostatic flood forces on exterior walls.

3.0 DESCRIPTION**3.1 General:**

Flood Solutions' static flood vents are engineered, permanently open flood vents with no moving parts that automatically allow flood waters to enter and exit enclosed areas. The vents are constructed of aluminum and available in four models. See Table 1 for model designations and sizes. See Figure 1 for illustrations of the flood vents.

3.2 Engineered Opening:

The Flood Solutions static flood vents comply with the design principle noted in Section 2.6.2.2 of ASCE/SEI 24 for a rate of rise and fall of 5 feet per hour (0.423 mm/s). In order to comply with the engineered opening requirement of ASCE/SEI 24, the static flood vents must be installed in accordance with Section 4.0 of this report.

3.3 Ventilation:

Flood Solutions' static flood vents may be used to supply natural ventilation for under-floor ventilation. See Table 1

for net free area for under-floor ventilation provided by each of Flood Solutions' static flood vents.

4.0 DESIGN AND INSTALLATION

The Flood Solutions static flood vents are designed to be installed into walls or doors of existing or new construction from the exterior side. Installation of the vents must be in accordance with the manufacturer's instructions, the applicable code and this report. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the vents must be installed as follows:

- With a minimum of two opening on different sides of each enclosed area.
- With a minimum of one vent for the square footage of enclosed area noted in Table 1.
- Below the base flood elevation.
- With the bottom of the vent located a maximum of 12 inches (305 mm) above grade.

5.0 CONDITIONS OF USE

The static flood vents 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** The static flood vents must be installed in accordance with this report, the applicable code and the manufacturer's installation instructions. In the event of a conflict, the instructions in this report govern.
- 5.2** The static flood vents must not be used in the place of "breakaway walls" in coastal high hazard areas, but are permitted for use in conjunction with breakaway walls in other areas.

6.0 EVIDENCE SUBMITTED

- 6.1** Manufacturer's descriptive literature and installation instructions.
- 6.2** Detail drawings.
- 6.3** Engineering calculations in accordance with ASCE/SEI 24.
- 6.4** Quality documentation in accordance with the ICC-ES Acceptance Criteria for Quality Documentation (AC10), dated June 2014.

7.0 IDENTIFICATION

The Flood Solutions static flood vents recognized in this report must be identified by a label bearing the manufacturer's name (Flood Solutions), the model number, and the evaluation report number (ESR-3760).

TABLE 1—FLOOD SOLUTIONS STATIC FLOOD VENTS

MODEL	VENT SIZE (Width x Height) (in)	ROUGH OPENING SIZE (Width x Height) (in)	ENCLOSED AREA COVERAGE (ft ²)	NET FREE AREA ¹ (in ²)
FS-1608	18 ¹ / ₂ x 10 ¹ / ₂	16 x 8	97	80.7
FS-1616	18 ¹ / ₂ x 18 ¹ / ₂	16 x 16	191	158.2
FS-1412	17 x 14 ¹ / ₂	14 ¹ / ₂ x 12	129	106.7
FS-1608-Hex	18 ¹ / ₂ x 10 ¹ / ₂	16 x 8	110	91.4

For SI: 1 inch = 25.4 mm; 1 ft = 304.8 mm

¹Available for use as under-floor ventilation.



FS-1412



FS-1608



FS-1616



FS-1608-HEX

FIGURE 1—FLOOD SOLUTIONS STATIC FLOOD VENTS

ICC-ES Evaluation Report**ESR-3760 FBC Supplement**

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BUILDING 27
PELHAM, NEW HAMPSHIRE 03076
(800) 325-9775**www.floodsolutions.com
info@floodsolutions.com**EVALUATION SUBJECT:****STATIC FLOOD VENTS****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that Flood Solutions' flood vents, recognized in ICC-ES master evaluation report ESR-3760, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2014 *Florida Building Code—Building* (FBC)
- 2010 *Florida Building Code—Building* (FBC)
- 2014 *Florida Building Code—Residential* (FRC)
- 2010 *Florida Building Code—Residential* (FRC)

2.0 CONCLUSIONS

The Flood Solutions flood vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-3760, comply with the FBC and the FRC, provided the design and installation are in accordance with the *International Building Code*® (IBC) provisions noted in the master report.

Use of the Flood Solutions' flood vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the FBC and the FRC for structures not subject to 2010 FBC Section 2326.1 or 2010 FRC 4409.13.3.1, as applicable.

For products falling under Florida Rule 9N-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).

This supplement expires concurrently with the master report, reissued March 2016.