DIVISION: 08 00 00—OPENINGS
Section: 08 95 43—Vents/Foundation Flood Vents

REPORT HOLDER:
FLOOD SOLUTIONS, LLC

EVALUATION SUBJECT:
STATIC FLOOD VENTS

1.0 EVALUATION SCOPE

Compliance with the following codes:

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 floor 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 openings 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

7.1 The Flood Solutions static flood vents evaluated 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).
7.2 The holder’s contact information is the following:
FLOOD SOLUTIONS, LLC
ONE INDUSTRIAL PARK DRIVE
UNIT 26
PELHAM, NEW HAMPSHIRE 03076
(603) 595-5222
www.floodsolutions.com
info@floodsolutions.com

<table>
<thead>
<tr>
<th>MODEL</th>
<th>VENT SIZE (Width x Height) (in)</th>
<th>ROUGH OPENING SIZE (Width x Height) (in)</th>
<th>ENCLOSED AREA COVERAGE (ft²)</th>
<th>NET FREE AREA¹ (in²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS-1608</td>
<td>18 1/2 x 10 1/4</td>
<td>16 x 8</td>
<td>97</td>
<td>80.7</td>
</tr>
<tr>
<td>FS-1616</td>
<td>18 1/2 x 18 1/2</td>
<td>16 x 16</td>
<td>191</td>
<td>158.2</td>
</tr>
<tr>
<td>FS-1412</td>
<td>17 x 14 1/2</td>
<td>14 1/2 x 12</td>
<td>129</td>
<td>106.7</td>
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<tr>
<td>FS-1608-Hex</td>
<td>18 1/2 x 10 1/2</td>
<td>18 x 8</td>
<td>110</td>
<td>91.4</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm; 1 ft² = 304.8 mm²
¹Available for use as under-floor ventilation.

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**TABLE 1—FLOOD SOLUTIONS STATIC FLOOD VENTS**

**FIGURE 1—FLOOD SOLUTIONS STATIC FLOOD VENTS**
DIVISION: 08 00 00—OPENINGS
Section: 08 95 43—Vents/Foundation Flood Vents

REPORT HOLDER:
FLOOD SOLUTIONS, LLC

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, described in ICC-ES evaluation report ESR-3760, have also been evaluated for compliance with the codes noted below.

Applicable code editions:
- 2020 Florida Building Code—Building
- 2020 Florida Building Code—Residential

2.0 CONCLUSIONS

The Flood Solutions flood vents, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-3760, comply with the Florida Building Code—Building and the 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-3760 for the 2018 International Building Code® meet the requirements of the Florida Building Code—Building or the Florida Building Code—Residential, as applicable.

Use of the Flood Solutions' flood vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the Florida Building Code—Building and the Florida Building Code—Residential.

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).

This supplement expires concurrently with the evaluation report, reissued March 2022.
FLOOD SOLUTIONS™ MODEL “FS”
FEMA COMPLIANT, ICC CERTIFIED ENGINEERED FLOOD VENTS

FEMA Compliant Engineered Flood Vents meet FEMA requirements when installed properly.
- Use at least 2 flood vents per enclosed area below flood grade, installed on at least two separate walls.
- The bottom of the flood vent opening must not be higher than 12 inches above the grade.
- At least 1 square inch of engineered opening for every 1 square foot of enclosed space.
- ICC-ES CERTIFIED VENT

<table>
<thead>
<tr>
<th>Qty</th>
<th>Model</th>
<th>Minimum Opening Required</th>
<th>Tip to Tip Dimensions</th>
<th>Engineered Opening Covers</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS-1608</td>
<td>16” Wide x 8” High</td>
<td>18-1/2”W x 10-1/2”H</td>
<td>97 sq ft</td>
<td></td>
</tr>
<tr>
<td>FS-1616</td>
<td>16” Wide x 16” High</td>
<td>18-1/2”W x 18-1/2”H</td>
<td>191 sq ft</td>
<td></td>
</tr>
<tr>
<td>FS-1412</td>
<td>14-1/2”W x 12”H</td>
<td>17”W x 14-1/2”H</td>
<td>129 sq ft</td>
<td></td>
</tr>
</tbody>
</table>

Frame: ALUMINUM; .050” minimum thickness, with square openings in front face, each opening is ¼” x ¼”
Finish: each vent has a satin sanded finish. This finish may be field painted.

FLOOD SOLUTIONS, LLC.
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Toll Free: 1-800-325-9775
In NH: 603-595-5222
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www.floodsolutions.com
info@floodsolutions.com

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FLOOD SOLUTIONS™ MODEL “FS-HEX”
FEMA COMPLIANT, ICC CERTIFIED ENGINEERED FLOOD VENTS

FEMA Compliant Engineered Flood Vents meet FEMA requirements when installed properly.
- Use at least 2 flood vents per enclosed area below flood grade, installed on at least two separate walls.
- The bottom of the flood vent opening must not be higher than 12 inches above the grade.
- At least 1 square inch of engineered opening for every 1 square foot of enclosed space.
- ICC-ES CERTIFIED VENT

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<th>Engineered Opening Covers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FS-1608-HEX</td>
<td>16” Wide x 8” High</td>
<td>18-1/2”W x 10-1/2”H</td>
<td>110 sq ft</td>
</tr>
</tbody>
</table>

Frame: ALUMINUM; .063” minimum thickness, with 6 square openings in front face, each opening in the vent is ¾” hexagon
Finish: each vent has a satin sanded finish. This finish may be field painted.

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