U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

OMB No. 1660-0008
Expiration Date: November 30, 2018

# ELEVATION CERTIFICATE

**Important:** Follow the instructions on pages 1–9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

## SECTION A – PROPERTY INFORMATION

FOR INSURANCE COMPANY USE

A1. Building Owner's Name
Frank M. & Karen T. Marino

Policy Number:

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
315 110th St

Company NAIC Number:

| City | State | ZIP Code |
|---|---|---|
| Stone Harbor | New Jersey | 08247 |

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
Block 110.04, Lot 86 & 88.01

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential

A5. Latitude/Longitude: Lat. N39°02'41.74" Long. W74°46'07.57" Horizontal Datum: ☐ NAD 1927 ☒ NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number 8

A8. For a building with a crawlspace or enclosure(s):

a) Square footage of crawlspace or enclosure(s) 1236.00 sq ft

b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 10

c) Total net area of flood openings in A8.b 2000.00 sq in

d) Engineered flood openings? ☒ Yes ☐ No

A9. For a building with an attached garage:

a) Square footage of attached garage N/A sq ft

b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade

c) Total net area of flood openings in A9.b sq in

d) Engineered flood openings? ☐ Yes ☐ No

## SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

| B1. NFIP Community Name & Community Number | B2. County Name | B3. State |
|---|---|---|
| Borough of Stone Harbor #345323 | Cape May | New Jersey |

| B4. Map/Panel Number | B5. Suffix | B6. FIRM Index Date | B7. FIRM Panel Effective/ Revised Date | B8. Flood Zone(s) | B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) |
|---|---|---|---|---|---|
| 345323-0001 | C | 01-08-1971 | 02-02-1983 | A7 | 10.0 |

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9:
☐ FIS Profile ☒ FIRM ☐ Community Determined ☐ Other/Source:

B11. Indicate elevation datum used for BFE in Item B9: ☒ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source:

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No
Designation Date: ☐ CBRS ☐ OPA

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|---|---|---|---|
| Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.<br>315 110th St | | | Policy Number: |
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## SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☒ Finished Construction

*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO. Complete Items C2.a–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: KEYNET RTN GPS Vertical Datum: NAVD 1988

Indicate elevation datum used for the elevations in items a) through h) below.

☒ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source: _____

Datum used for building elevations must be the same as that used for the BFE.

| | | Check the measurement used. | |
|---|---|---|---|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor) | 6.98 | ☒ feet | ☐ meters |
| b) Top of the next higher floor | 12.59 | ☒ feet | ☐ meters |
| c) Bottom of the lowest horizontal structural member (V Zones only) | N/A | ☒ feet | ☐ meters |
| d) Attached garage (top of slab) | N/A | ☒ feet | ☐ meters |
| e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments) | 10.57 | ☒ feet | ☐ meters |
| f) Lowest adjacent (finished) grade next to building (LAG) | 6.97 | ☒ feet | ☐ meters |
| g) Highest adjacent (finished) grade next to building (HAG) | 7.39 | ☒ feet | ☐ meters |
| h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support | 6.85 | ☒ feet | ☐ meters |

## SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. *I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.*

Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No ☒ Check here if attachments.

| Certifier's Name<br>Scott D. Brown | License Number<br>NJ Lic. No. 38250 | | Place Seal Here |
|---|---|---|---|
| Title<br>Professional Engineer & Land Surveyor | | | |
| Company Name<br>Dante Guzzi Engineering Associates, LLC | | | |
| Address<br>418 Stokes Road | | | |
| City<br>Medford | State<br>New Jersey | ZIP Code<br>08055 | |
| Signature | Date<br>06-30-2017 | Telephone<br>(609) 654-4440 | Ext. |

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including type of equipment and location, per C2(e), if applicable)

A8.b) Smart Vent Model 1540-510 @ 200 sq in/each. C2.a) Crawl space floor. C2.b) Finished floor living area. C2.e) Bottom heating duct. Bottom HVAC unit is el 12.17. Parcel also in Zone AE (BFE: 9.0, NAVD1988) as shown on Preliminary FIRM Map #34009C0242F, dated 1/30/2015. There is a 110 sq ft cabana in the rear yard with 2 Smart Vents Model 1540-570 @ 200 sq in/each. To convert NGVD1929 elevations to NAVD1988 elevations, subtract 1.3 feet.

DGEA File No. C-16-113

# ELEVATION CERTIFICATE

OMB No. 1660-0008
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|---|---|---|---|
| Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.<br>315 110th St | | | Policy Number: |
| City<br>Stone Harbor | State<br>New Jersey | ZIP Code<br>08247 | Company NAIC Number |

## SECTION E – BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1–E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B,and C. For Items E1–E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).

a) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6–9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 1–2 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E3. Attached garage (top of slab) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E4. Top of platform of machinery and/or equipment servicing the building is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown. The local official must certify this information in Section G.

## SECTION F – PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. The statements in Sections A, B, and E are correct to the best of my knowledge.

| Property Owner or Owner's Authorized Representative's Name | | | |
|---|---|---|---|
| Address | City | State | ZIP Code |
| Signature | Date | Telephone | |

Comments

☐ Check here if attachments.

# ELEVATION CERTIFICATE

OMB No. 1660-0008
Expiration Date: November 30, 2018

| IMPORTANT: In these spaces, copy the corresponding information from Section A. | | | FOR INSURANCE COMPANY USE |
|---|---|---|---|
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## SECTION G – COMMUNITY INFORMATION (OPTIONAL)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8–G10. In Puerto Rico only, enter meters.

G1. ☒ The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)

G2. ☐ A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G3. ☐ The following information (Items G4–G10) is provided for community floodplain management purposes.

| G4. Permit Number | G5. Date Permit Issued | G6. Date Certificate of Compliance/Occupancy Issued |
|---|---|---|
| 16-12077 | 11/15/16 | 8/3/17 |

G7. This permit has been issued for: ☒ New Construction ☐ Substantial Improvement

G8. Elevation of as-built lowest floor (including basement) of the building: 12 59 ☒ feet ☐ meters Datum NGVD1929

G9. BFE or (in Zone AO) depth of flooding at the building site: 10 0 ☒ feet ☐ meters Datum NGVD1929

G10. Community's design flood elevation: 11 0 ☒ feet ☐ meters Datum NAVD 1988

Local Official's Name: MICHAEL KOOCHEMBERG Title: CONSTRUCTION OFFICIAL

Community Name: BOROUGH OF STONE HARBOR Telephone: 609.368.6214

Signature: [signature] Date: 8/3/17

Comments (including type of equipment and location, per C2(e), if applicable)

☐ Check here if attachments.

# ELEVATION CERTIFICATE

## BUILDING PHOTOGRAPHS

See Instructions for Item A6.

OMB No. 1660-0008
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| City<br>Stone Harbor | State<br>New Jersey | ZIP Code<br>08247 | Company NAIC Number |

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A6. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.

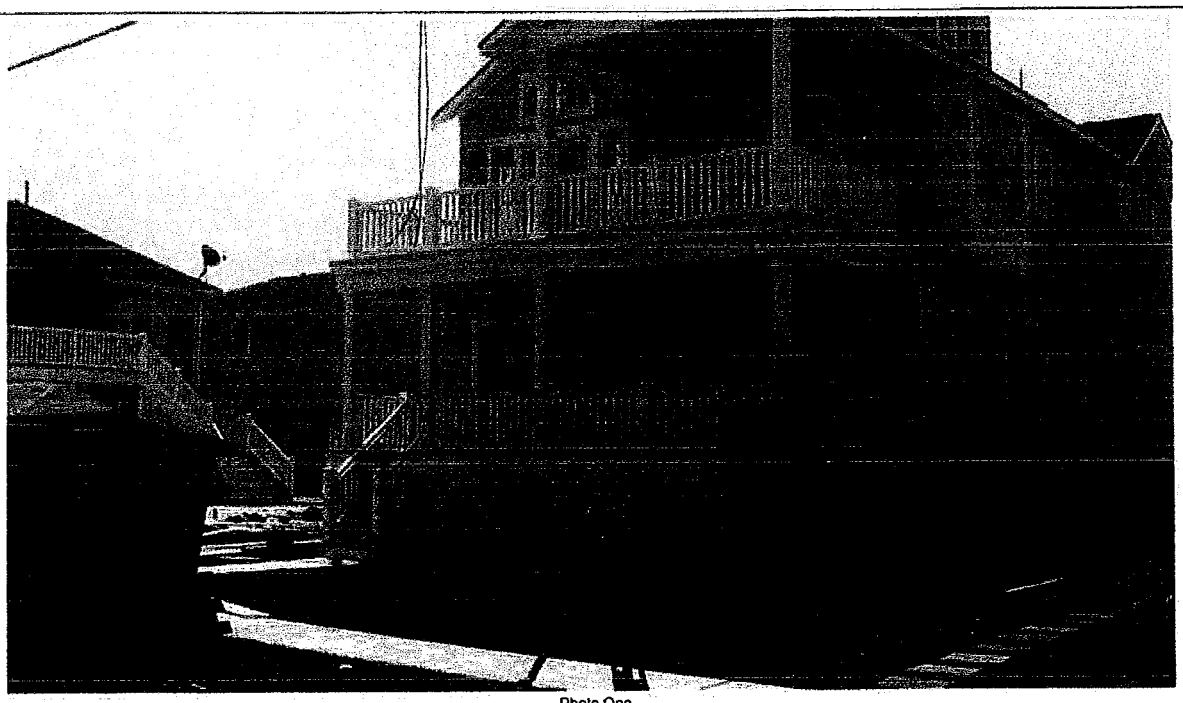

Photo One

Photo One Caption Front View 6/29/2017

Clear Photo One

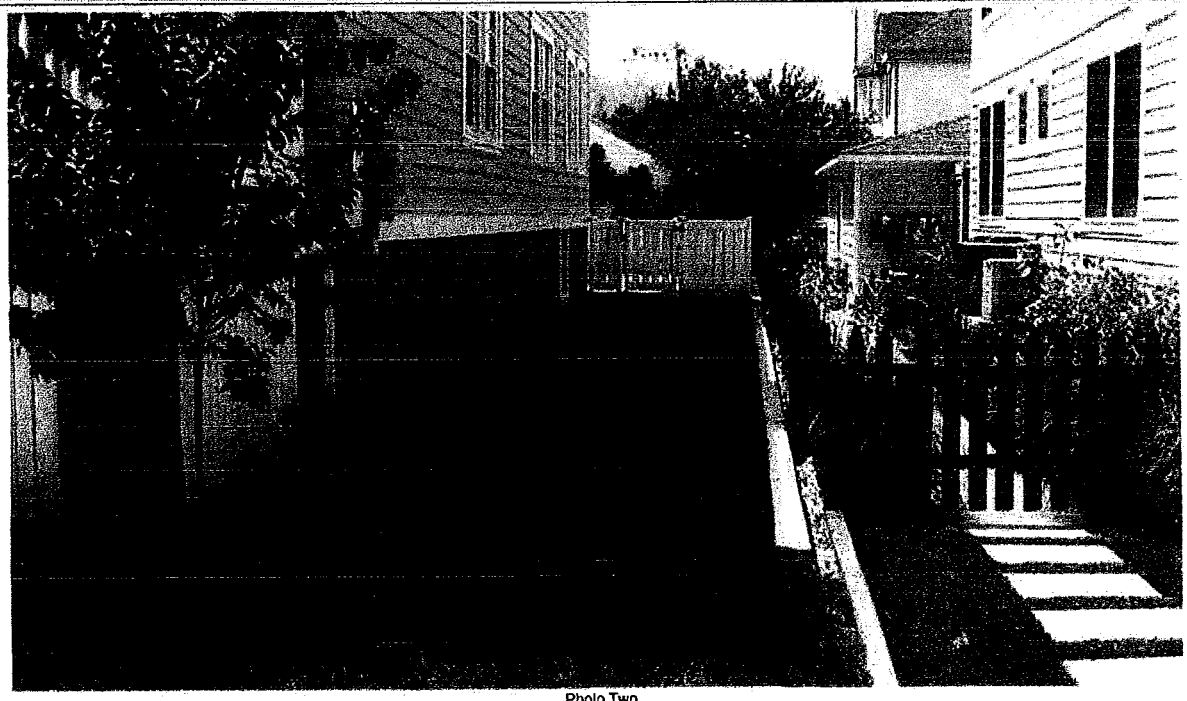

Photo Two

Photo Two Caption Right Side View 6/29/2017

Clear Photo Two

| **IMPORTANT: In these spaces, copy the corresponding information from Section A.** | | | FOR INSURANCE COMPANY USE |
|---|---|---|---|
| Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.<br>315 110th St | | | Policy Number: |
| City<br>Stone Harbor | State<br>New Jersey | ZIP Code<br>08247 | Company NAIC Number |

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8.

Photo Three

Photo Three Caption Rear View 6/29/2017 — Clear Photo Three

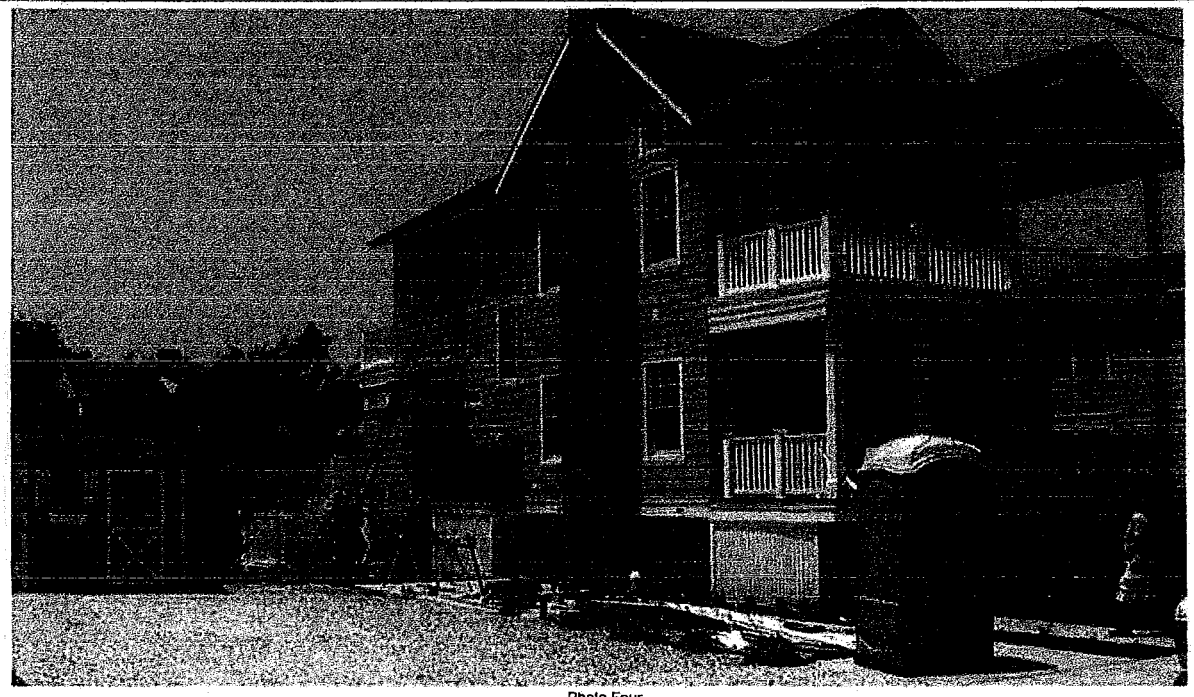

Photo Four

Photo Four Caption Left Side View 6/29/2017 — Clear Photo Four

ICC EVALUATION SERVICE

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# ICC-ES Report

**ESR-2074**

ICC-ES | (800) 423-6587 | (562) 699-0543 | www.icc-es.org

Reissued 02/2015
This report is subject to renewal 02/2017.

**DIVISION: 08 00 00—OPENINGS**

**SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS**

**REPORT HOLDER:**

## SMARTVENT PRODUCTS, INC.

**430 ANDBRO DRIVE, UNIT 1**
**PITMAN, NEW JERSEY 08071**

**EVALUATION SUBJECT:**

**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514**

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# ICC-ES Evaluation Report

**ESR-2074***

*Reissued February 2015*

*This report is subject to renewal February 2017.*

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

**REPORT HOLDER:**

**SMARTVENT PRODUCTS, INC.**
**430 ANDBRO DRIVE, UNIT 1**
**PITMAN, NEW JERSEY 08071**
**(877) 441-8368**
**www.smartvent.com**
**info@smartvent.com**

**EVALUATION SUBJECT:**

**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514**

## 1.0 EVALUATION SCOPE

**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.

**Properties evaluated:**

- Physical operation
- Water flow

## 2.0 USES

The Smart Vent® units are engineered mechanically operated flood vents (FVs) employed to equalize hydrostatic pressure on walls of enclosures subject to rising or falling flood waters. Certain models also allow natural ventilation.

## 3.0 DESCRIPTION

### 3.1 General:

When subjected to rising water, the Smart Vent® FVs internal floats are activated, then pivot open to allow flow in either direction to equalize water level and hydrostatic pressure from one side of the foundation to the other. The FV pivoting door is normally held in the closed position by a buoyant release device. When subjected to rising water, the buoyant release device causes the unit to unlatch, allowing the door to rotate out of the way and allow flow. The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. Smart Vent® Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT®Stacking Model #1540-511 and FloodVENT® Stacking Model #1540-521 units each contain two vertically arranged openings per unit.

### 3.2 Engineered Opening:

The FVs comply with the design principle noted in Section 2.6.2.2 of ASCE/SEI 24 for a maximum rate of rise and fall of 5.0 feet per hour (0.423 mm/s). In order to comply with the engineered opening requirement of ASCE/SEI 24, Smart Vent FVs must be installed in accordance with Section 4.0.

### 3.3 Ventilation:

The SmartVENT® Model #1540-510 and SmartVENT® Overhead Door Model #1540-514 both have screen covers with $^1/_4$-inch-by-$^1/_4$-inch (6.35 by 6.35 mm) openings, yielding 51 square inches (32 903 $mm^2$) of net free area to supply natural ventilation. The SmartVENT® Stacking Model #1540-511 consists of two Model #1540-510 units in one assembly, and provides 102 square inches (65 806 $mm^2$) of net free area to supply natural ventilation. Other FVs recognized in this report do not offer natural ventilation.

## 4.0 DESIGN AND INSTALLATION

SmartVENT® and FloodVENT® are designed to be installed into walls or overhead 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. The mounting straps allow mounting in masonry and concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent® FVs must be installed as follows:

- With a minimum of two openings on different sides of each enclosed area.
- With a minimum of one FV for every 200 square feet (18.6 $m^2$) of enclosed area, except that the SmartVENT® Stacking Model #1540-511 and FloodVENT® Stacking Model #1540-521 must be installed with a minimum of one FV for every 400 square feet (37.2 $m^2$) of enclosed area.
- Below the base flood elevation.
- With the bottom of the FV located a maximum of 12 inches (305.4 mm) above the higher of the final

grade or floor and finished exterior grade immediately under each opening.

## 5.0 CONDITIONS OF USE

The Smart Vent® FVs described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

**5.1** The Smart Vent® FVs 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 Smart Vent® FVs 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

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

## 7.0 IDENTIFICATION

The Smart VENT® models recognized in this report must be identified by a label bearing the manufacturer's name (Smartvent Products, Inc.), the model number, and the evaluation report number (ESR-2074).

**TABLE 1—MODEL SIZES**

| MODEL NAME | MODEL NUMBER | MODEL SIZE (in.) | COVERAGE (sq. ft.) |
|---|---|---|---|
| FloodVENT® | 1540-520 | $15^3/_4$" X $7^5/_4$" | 200 |
| SmartVENT® | 1540-510 | $15^3/_4$" X $7^3/_4$" | 200 |
| FloodVENT® Overhead Door | 1540-524 | $15^3/_4$" X $7^3/_4$" | 200 |
| SmartVENT® Overhead Door | 1540-514 | $15^3/_4$" X $7^3/_4$" | 200 |
| Wood Wall FloodVENT® | 1540-570 | 14" X $8^3/_4$" | 200 |
| Wood Wall FloodVENT® Overhead Door | 1540-574 | 14" X $8^3/_4$" | 200 |
| SmartVENT® Stacker | 1540-511 | 16" X 16" | 400 |
| FloodVent® Stacker | 1540-521 | 16" X 16" | 400 |

For **SI:** 1 inch = 25.4 mm; 1 square foot = $m^2$

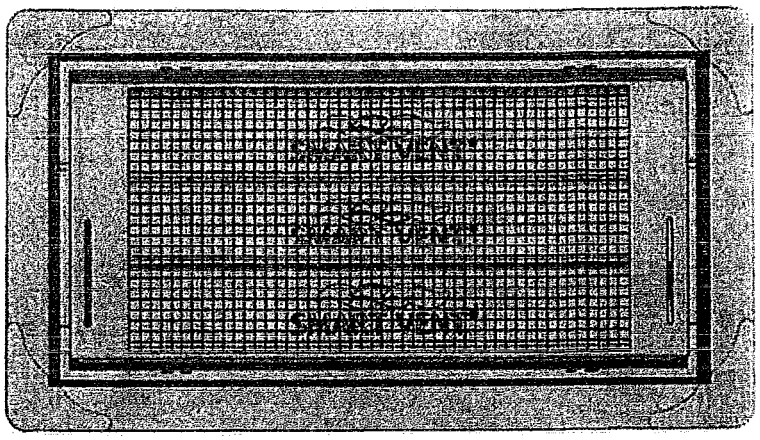

FIGURE 1—SMART VENT: MODEL 1540-510

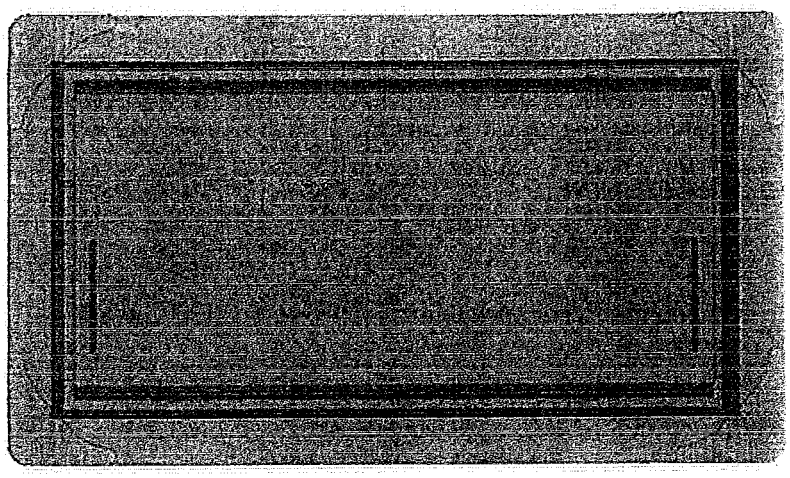

FIGURE 2—SMART VENT MODEL 1540-520

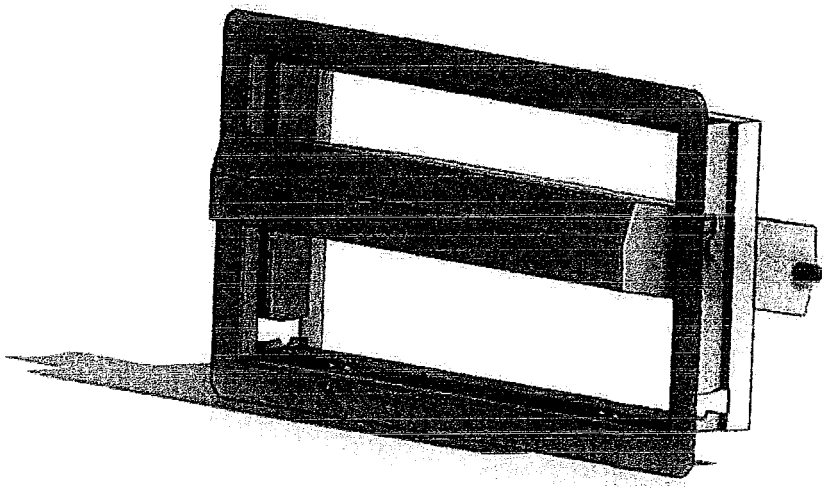

FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN