# U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY

# **ELEVATION CERTIFICATE**

OMB No. 1660-0008

| FEDERAL EMERGENCY MANAGEMENT AGENCY National Flood Insurance Program IMPOR   | TANT: Follow the instructions on pages 1–9.  | Expiration Date: July 31, 2015                                       |
|--|--|--|
| SEC  | TION A – PROPERTY INFORMATION  | FOR INSURANCE COMPANY USE  |
| A1. Building Owner's Name LANDMARK DEVELOPMENT NO.   | 11 1 1 6   | Policy Number:   |
| 2. Building Street Address (including Apt., Unit, Suite, and   | /or Bldg. No.) or P.O. Route and Box No.   | Company NAIC Number:   |
| CityMARGATE  | State  | ZIP Code 08402   |
| A3. Property Description (Lot and Block Numbers, Tax Parc  | el Number, Legal Description, etc.)  | 00702  |
| A4. Building Use (e.g., Residential, Non-Residential, Additional A |  |  |
| A5. Latitude/Longitude: Lat. 39,32937°   |  | zontal Datum: 🗋 NAD 1927 🔀 NAD 1983                                  |
| A6. Attach at least 2 photographs of the building if the Cer A7. Building Diagram Number   | ificate is being used to obtain flood insurance.   | 7 17 10  |
| A8. For a building with a crawlspace or enclosure(s):  | A9. For a building with  | an attached garage:  |
| Square footage of crawlspace or enclosure(s)   |  | e of attached garage sq ft   |
| <ul> <li>No. of permanent flood openings in the crawlspace<br/>enclosure(s) within 1.0 foot above adjacent grade</li> </ul>  | within 1.0 foot  | manent flood openings in the attached garage<br>above adjacent grade |
| c) Total net area of flood openings in A8.b  | 12.00  | of flood openings in A9.bsq in                                       |
| d) Engineered flood openings? ⊠Yes ☐ No  | d) Engineered flo  | od openings? Yes No  |
|  | D INSURANCE RATE MAP (FIRM) INFORM   | MATION   |
| B1. NFIP Community Name & Community Number CITY OF MARGATE 345304  | B2. County Name ATLANTIC   | B3. State \  |
| B4. Map/Panel Number   B5. Suffix   B6. FIRM Index   | Date B7. FIRM Panel Effective/ B8. Flood   | Zone(s) B9. Base Flood Elevation(s) (Zone                            |
| 345304 0001 C 10/18/8  | 3 Revised Date 3 10/18/83 A  | AO, use base flood depth)  |
| B10. Indicate the source of the Base Flood Elevation (BFE) d   |  | 8   70,0   |
| ☐ FIS Profile ☐ FIRM ☐ Community Determined  |  |  |
|  |  | Source:  |
| B12. Is the building located in a Coastal Barrier Resources S  |  | PPA)? ☐ Yes  |
| Designation Date:// CBF  |  |  |
|  | IG ELEVATION INFORMATION (SURVEY RE  |  |
| C1. Building elevations are based on: Construction *A new Elevation Certificate will be required when cons   |  |  |
| C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V. C2.a–h below according to the building diagram specific  | d in Item A7. In Puerto Rico only, enter meters.   |  |
|  |  | GVD 1929   |
| Indicate elevation datum used for the elevations in item<br>Datum used for building elevations must be the same a  |  | 1988   |
| 465 MAC 100 100 100 100 100 100 100 100 100 10   | Check  | the measurement used.  |
| <ul> <li>a) Top of bottom floor (including basement, crawlspace</li> <li>b) Top of the next higher floor</li> </ul>  |  | ⊠ feet   |
| c) Bottom of the lowest horizontal structural member (   |  | feet meters  |
| d) Attached garage (top of slab)   | 1.4  | ☐ feet ☐ meters  |
| <ul> <li>e) Lowest elevation of machinery or equipment servicin<br/>(Describe type of equipment and location in Comme.</li> </ul>  |  | ☑ feet ☐ meters /  |
| f) Lowest adjacent (finished) grade next to building (LA   |  | ☑ feet ☐ meters  |
| g) Highest adjacent (finished) grade next to building (H   | ^ ^  | feet meters  |
| <ul> <li>h) Lowest adjacent grade at lowest elevation of deck of<br/>structural support</li> </ul>   | stairs, including  | ⊋ feet   |
| SECTION D - SURVE  | YOR, ENGINEER, OR ARCHITECT CERTIF   | ICATION  |
| This certification is to be signed and sealed by a land surveyon information. I certify that the information on this Certificate rep   | resents my best efforts to interpret the data availab  | 2/2  |
| understand that any false statement may be punishable by fin<br>√Check here if comments are provided on back of form.  | e or imprisonment under 18 U.S. Code, Section 100<br>Were latitude and longitude in Section A provided | 6555   |
| Check here if attachments.   | licensed land surveyor?   Yes   No   | PLACE  |
| Certifier's Name I-DWARD A. TRANSUE  | License Number G S 3354 I  | SEAL   |
| TILLE<br>PROFESSIONAL LAND SURVEYOR  | Company Name<br>SCHAEFFER NASSAR SCHEIDEGG, CO   | E, LLC HERE  |
| Address  | City State ZIP C   |  |

Signature

Telephone (609) 625-7400

# **ELEVATION CERTIFICATE**, page 2

| IMPORTANT: In these spaces, copy the co  | orresponding information from Se  | ection A.                                   | FOR INSURA  | ANCE COMPANY USE   |
|--|---|---|---|--|
| Building Street Address (including Apt., Uni   | t, Suite, and/or Bldg. No.) or P.O.  R AVENUE                           | Route and Box No.                           | Policy Numbe  | r.   |
| City<br>MARGATE  | State   | ZIP Code<br>09 402                          | Company NAI   | C Number:  |
|  | - SURVEYOR, ENGINEER, OF  |   |   |  |
| Copy both sides of this Elevation Certificate  | e for (1) community official, (2) ins                                   | surance agent/com                           | pany, and (3) building owner.                                       |  |
| Comments ITEM ABB VENT   |   | , 3-model                                   | 1540-510 AND 3-   | MODEL 1540-520   |
| ALL RATED AT 200 SQ.   |   |   |   |  |
| ITEM CZE IS THE HEAT   | ma anii.  |   |   |  |
| Signature  |   | Date  | 7/15/2015   |  |
| SECTION E - BUILDING ELEVATI   | ON INFORMATION (SURVE)  | NOT REQUIRE                                 | ) FOR ZONE AO AND ZONE  | A (WITHOUT BFE)  |
| For Zones AO and A (without BFE), complete<br>For Items E1–E4, use natural grade, if availa  | ltems E1–E5. If the Certificate is<br>able. Check the measurement us    | s intended to suppo<br>ed. In Puerto Rico o | rt a LOMA or LOMR-F request, cor<br>nly, enter meters.              | nplete Sections A, B,and C.  |
| E1. Provide elevation information for the foll grade (HAG) and the lowest adjacent gradering and the lowest gradering and the lowest adjacent gradering and the lowest gradering gradering and the lowest gradering g | ade (LAG).  | boxes to show whe                           | ther the elevation is above or belo                                 | ow the highest adjacent  |
| a) Top of bottom floor (including baseme   |   |   |   | e or below the HAG.  |
| b) Top of bottom floor (including baseme   |   |   |   | e or  below the LAG.   |
| E2. For Building Diagrams 6–9 with permane<br>the next higher floor (elevation C2.b in the   |   | ction a Items 8 and                         |   | ons),<br>e or  |
| E3. Attached garage (top of slab) is   | ne diagrams) of the building is   |   |   | e or  below the HAG.   |
| E4. Top of platform of machinery and/or equ  | ipment servicing the building is  |   |   | e or  below the HAG.   |
| E5. Zone AO only: If no flood depth number   |   | om floor elevated in                        | accordance with the community's                                     |  |
| SECTION F -  | PROPERTY OWNER (OR OV   | VNER'S REPRES                               | ENTATIVE) CERTIFICATION   | 14-309   |
| The property owner or owner's authorized re<br>Zone AO must sign here. The statements in   |   |   |   |  |
| Property Owner or Owner's Authorized Repre   |   |   |   | ,  |
| Address  |   | City  | State Z   | IP Code  |
| Signature  |   | Date  | Telephone   |  |
| Comments   |   |   |   |  |
|  |   |   |   |  |
|  |   |   |   | heck here if attachments.  |
|  | SECTION G - COMMUNIT  | Y INFORMATION                               | (OPTIONAL)  |  |
| The local official who is authorized by law or of G of this Elevation Certificate. Complete the a  | ordinance to administer the community policable item(s) and sign below. | unity's floodplain ma<br>Check the measure  | nagement ordinance can complete<br>nent used in Items G8–G10. In Pu | Sections A, B, C (or E), and erto Rico only, enter meters.   |
| G1. The information in Section C was to who is authorized by law to certify  | elevation information. (Indicate t                                      | he source and date                          | of the elevation data in the Con                                    | nments area below.)  |
| G2. A community official completed Sec<br>G3. The following information (Items G4  |   |   |   | E) or Zone AO.   |
| G4. Permit Number  | G5. Date Permit Issued  | G6.   | Date Certificate Of Compliance/0                                    | Occupancy Issued   |
| The state of the s |   | ntial Improvement                           |   |  |
| G8. Elevation of as-built lowest floor (includ   |   |   |   |  |
| G9. BFE or (in Zone AO) depth of flooding at   | t the building site:  | · · · · · · · · · · · · · · · · · · ·       |   |  |
| G10. Community's design flood elevation:   |   |   | feet meters Datum _   | The second secon |
| Local Official's Name JIM &ALANTINO  |   | Title CFM                                   | , ,   |  |
|  |   |   |   |  |
| Community Name CITY OF MARC  | BATE  | Telephone                                   | /w/15   |  |
| Community Name CITY OF MARC  | GATE  | Telephone<br>Date                           | lufis   |  |
| CITY OF MARG   | SATE  |   | lufis   |  |
| Signature CTTY OF MARC   | GATE  |   | lufis   | 1  |
| Signature CTTY OF MARC   | GATE  |   | /w/s  | ?  |

#### **BUILDING PHOTOGRAPHS**

See Instructions for Item A6.

| IMPORTANT: In these spaces, copy the cor  | esponding 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. |                            |                   | Policy Number:            |  |
| MARGATE   | State                      | ZIP Code<br>08402 | 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.





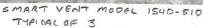
FRONT VIEW



RIGHT SIDE VIEW

LEFT SIDE VIEW



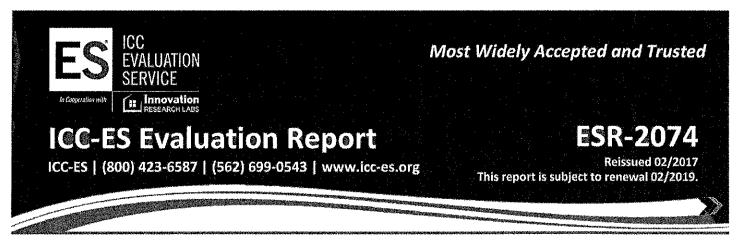




SMART VENT MODEL 1540-520 TYPICAL OF 3

14-309

PICTURES TAKEN 7/13/2015



**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 2017 Revised November 2017

This report is subject to renewal February 2019.

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

A Subsidiary of the International Code Council®

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:

- 2015, 2012, 2009 and 2006 International Building Code® (IBC)
- 2015, 2012, 2009 and 2006 International Residential Code® (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)<sup>†</sup>

<sup>†</sup>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<sup>®</sup> 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 2.7.2.2 and Section 2.7.3 of ASCE/SEI 24-14 [Section 2.6.2.2 of ASCE/SEI 24-05 (2012, 2009, 2006 IBC and IRC)] 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 mm²) 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 mm²) 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. Installation clips allow mounting in masonry and concrete walls of any thickness. In order to comply with the engineered opening design principle noted in Section 2.7.2.2 and 2.7.3 of ASCE/SEI 24-14 [Section 2.6.2.2 of ASCE/SEI 24-05 (2012, 2009, 2006 IBC and IRC)], 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 m²) 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  $400 \text{ square feet } (37.2 \text{ m}^2) \text{ of enclosed area.}$ 

- 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<sup>®</sup> 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 August 2015.

# 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 <sup>®</sup>               | 1540-520     | 15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> " | 200                |
| SmartVENT <sup>®</sup>               | 1540-510     | 15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> " | 200                |
| FloodVENT <sup>®</sup> Overhead Door | 1540-524     | 15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> " | 200                |
| SmartVENT <sup>®</sup> Overhead Door | 1540-514     | 15 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> " | 200                |
| Wood Wall FloodVENT®                 | 1540-570     | 14" X 8 <sup>3</sup> / <sub>4</sub> "                              | 200                |
| Wood Wall FloodVENT® Overhead Door   | 1540-574     | 14" X 8 <sup>3</sup> / <sub>4</sub> "                              | 200                |
| SmartVENT <sup>®</sup> Stacker       | 1540-511     | 16" X 16"  | 400                |
| FloodVent <sup>®</sup> Stacker       | 1540-521     | 16" X 16"  | 400                |

For SI: 1 inch = 25.4 mm; 1 square foot = m<sup>2</sup>

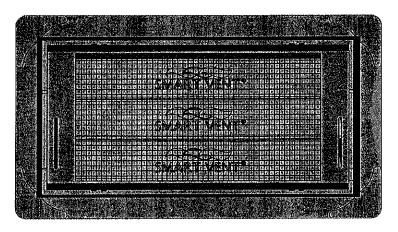


FIGURE 1—SMART VENT: MODEL 1540-510

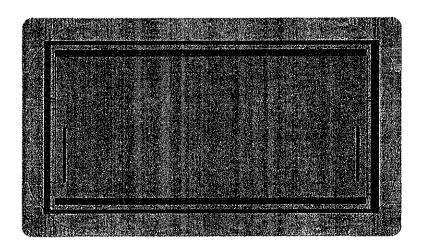


FIGURE 2-SMART VENT MODEL 1540-520

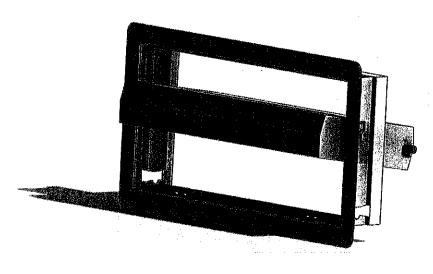


FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN