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

National Flood Insurance Program

ELEVATION CERTIFICATE

Important: Read the instructions on pages 1-9.

OMB No. 1660-0008 Expiration Date: July 31, 2015

		SECT	ION A - PROPE	RTY INFOR	MATION	FOR INSURANCE COMPANY USE
A1. Building Owner's Nam	e The Canuso's					Policy Number:
A2. Building Street Addres 4 N. Clarendon Ave.	s (including Apt.,	Unit, Suite, and/or I	Bldg. No.) or P.O. I	Route and Box	No.	-Company NAIC Number:
City CITY OF MARG	TE CITY		State NJ	ZIP Code	08402	· · · · · · · · · · · · · · · · · · ·
A3. Property Description (BLOCK 204.01 LOT 24	Lot and Block Nu	mbers, Tax Parcel N	Number, Legal Des	cription, etc.)		·
 A4. Building Use (e.g., Re A5. Latitude/Longitude: La A6. Attach at least 2 photo A7. Building Diagram Num A8. For a building with a c a) Square footage of b) Number of perman or enclosure(s) wit c) Total net area of flud) Engineered flood of 	t. <u>N 39.3322</u> Lo graphs of the bui ber <u>8</u> rawlspace or encl crawlspace or encl crawlspace or en ent flood opening hin 1.0 foot above bod openings in A openings?	ng. <u>W 074.4957</u> Ho Iding if the Certificat losure(s): closure(s) js in the crawlspace e adjacent grade \8.b ☑ Yes □ No	rizontal Datum: te is being used to <u>1360</u> sq ft <u>7</u> <u>1400</u> sq in	NAD 1927 区 obtain flood ins A9. For a a) S b) N w c) T d) E	urance. a building with an atta Gquare footage of atta Jumber of permanent vithin 1.0 foot above a Total net area of flood Engineered flood oper	ached garage <u>N/A</u> sq ft flood openings in the attached garage adjacent grade <u>N/A</u> openings in A9.b <u>N/A</u> sq in nings? <u>Yes</u> No
	SECT	TION B - FLOOD	INSURANCE R	ATE MAP (FI	RM) INFORMATIO	N
B1. NFIP Community Name CITY OF MARGATE	e & Community N 345304	lumber	B2. County Name ATLANTIC COUN			B3. State NJ
B4. Map/Panel Number 345304 / 0001	B5. Suffix C	B6. FIRM Index D	Effective	IRM Panel /Revised Date /18/1983	B8. Flood Zone(s) A8**	B9. Base Flood Elevation(s) (Zone AO, use base flood depth)
 B10. Indicate the source of FIS Profile B11. Indicate elevation data B12. Is the building located Designation Date: 	☑ FIRM Im used for BFE i in a Coastal Barr	Community Det in Item B9: NG	ermined	Other/Source	Cher/Source:	¥/18/15
	SECTIO	N C – BUILDING	ELEVATION IN	FORMATION	(SURVEY REQUI	RED)
C1. Building elevations are	hanad an:					
below according to the Benchmark Utilized: <u>pri</u> Indicate elevation datur	cate will be requi -A30, AE, AH, A (building diagram <u>vate</u> n used for the ele	(with BFE), VE, V1– specified in Item A7 evations in items a) i	on of the building is V30, V (with BFE), . In Puerto Rico or Vertical Datum through h) below.	s complete. . AR, AR/A, AR/ hly, enter meters : <u>NGVD 1929</u> ⊠ NGVD 1929	S.	Finished Construction /AH, AR/AO. Complete Items C2.a-h Other/Source:
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FEMA Form 086-0-33 (7/12)

Replaces all previous editions.

	mation from Section A.	FOR INSURANCE COMPANY USE
uilding Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or F N. Clarendon Ave.	P.O. Route and Box No.	Policy Number:
ty MARGATE S	State NJ ZIP Code 08402	Company NAIC Number:
SECTION D – SURVEYOR, ENGINEER	, OR ARCHITECT CERTIFICATI	ON (CONTINUED)
ppy both sides of this Elevation Certificate for (1) community official, (2)) insurance agent/company, and (3) b	uilding owner.
omments 8b.) Smart Vents Model #1540-520 engineered for 200 square inches 38 & B9.) FEMA Pre-FIRM Zone "AE"Base Flood Elevation 9 ft. (N C2a.) crawlspace enclosure **C2e.) exterior air unit elev. is 12.4, interior air unit elev. is 11.1, duct	AVD88) converted = 10.3 ft. (NGVD2	· •
gnature	Date 8/14/15	
SECTION E - BUILDING ELEVATION INFORMATION (SUR	RVEY NOT REQUIRED) FOR ZO	NE AO AND ZONE A (WITHOUT BFE)
 or Zones AO and A (without BFE), complete Items E1–E5. If the Certifiend C. For Items E1–E4, use natural grade, if available. Check the meass 1. Provide elevation information for the following and check the apprograde (HAG) and the lowest adjacent grade (LAG). a) Top of bottom floor (including basement, crawlspace, or enclosu b) Top of bottom floor (including basement, crawlspace, or enclosu b) Top of bottom floor (including basement, crawlspace, or enclosu celevation C2.b in the diagrams) of the building is Attached garage (top of slab) is feet med. Top of platform of machinery and/or equipment servicing the building. Zone AO only: If no flood depth number is available, is the top of the ordinance? Yes No Unknown. The local official mustice. 	surement used. In Puerto Rico only, e priate boxes to show whether the ele- ire) is feet [n ire) is feet [n d in Section A Items 8 and/or 9 (see p feet [meters] above or [ters] above or [below the HAC ing is feet] meter he bottom floor elevated in accordance	nter meters. vation is above or below the highest adjacent neters above or below the HAG. neters above or below the LAG. ages 8–9 of Instructions), the next higher floor below the HAG. G. rs above or below the HAG.
e property owner or owner's authorized representative who completes Zone AO must sign here. The statements in Sections A, B, and E are of		nout a FEMA-issued or community-issued BFE)
operty Owner's or Owner's Authorized Representative's Name	City	State ZIP Code
operty Owner's or Owner's Authorized Representative's Name Idress gnature		State ZIP Code Telephone #
operty Owner's or Owner's Authorized Representative's Name Idress gnature omments	City	Telephone #
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Building Photographs

	Continuation P	age	For Insurance Company Use:
Building Street Address (ir 4 N. Clarendon Av	ncluding Apt., Unit, Suite, and/or Bldg.) No. or e.	P.O. Route and Box No.	Policy Number
City Margate	A State NJ	ZIP Code 08402	Company NAIC Number
	ographs than will fit on the preceding pag aken; "Front View" and "Rear View"; and, if i		







07/28/2015



Right Side View – Date of Photograph: (See Photo Stamp)



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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ESR-2074

Reissued February 2017 Revised November 2017 This report is subject to renewal February 2019.

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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:

- 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)[†]

 $^{\dagger} \text{The ADIBC}$ 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,

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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

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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 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).

MODEL NAME	MODEL NUMBER	MODEL SIZE (in.)	COVERAGE (sq. ft.)
FloodVENT®	1540-520	15 ³ /4" X 7 ³ /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

TABLE 1-MODEL SIZES

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

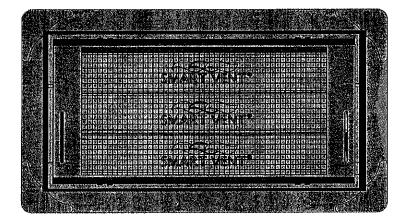


FIGURE 1-SMART VENT: MODEL 1540-510

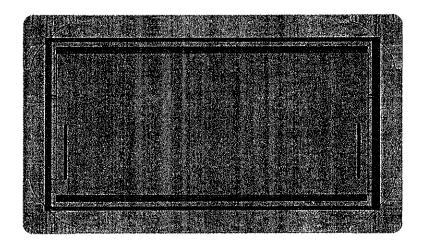


FIGURE 2-SMART VENT MODEL 1540-520

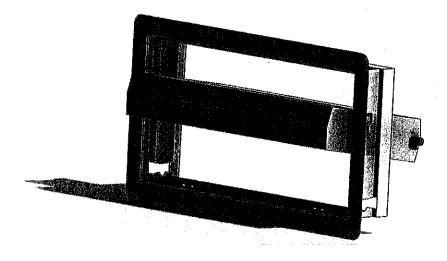


FIGURE 3-SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN