## U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY National Flood Insurance Program

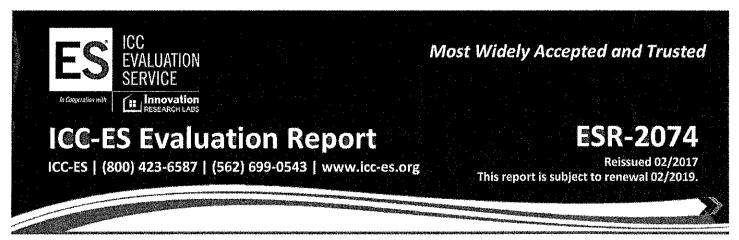
# **ELEVATION CERTIFICATE**

Important: Read the instructions on pages 1-9.

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

								44-
		SECT	TION A –	PROPERTY INF	ORMA	rion	come in a second dist	SURANCE COMPANY USE
A1. Building Owner's Nam	e Craig Franks						Policy N	lumber:
Building Street Addres 11 S. Andover Ave.	s (including Apt.,	Unit, Suite, and/or B	ldg. No.) o	r P.O. Route and B	ox No.		Compar	ny NAIC Number:
City CITY OF MARGA	TE CITY		Sta	ate NJ ZIP C	ode 084	102		
A3. Property Description (LBLOCK 101.01 LOT 7	ot and Block Nu	mbers, Tax Parcel N	Number, Le	egal Description, et	C.)			
<ul> <li>A4. Building Use (e.g., Res</li> <li>A5. Latitude/Longitude: La</li> <li>A6. Attach at least 2 photo</li> <li>A7. Building Diagram Num</li> <li>A8. For a building with a cr</li> <li>a) Square footage of 6</li> <li>b) Number of permanor enclosure(s) with</li> <li>c) Total net area of flod</li> <li>d) Engineered flood or</li> </ul>	IN 39.3322 Lographs of the builder 8 awlspace or encorawlspace or encorawlspace or endent flood opening in 1.0 foot above od openings in Appenings?	ng. W 074.4928 Ho ilding if the Certificat losure(s): closure(s) gs in the crawlspace e adjacent grade A8.b Yes No	rizontal Da te is being 890 s 5 1000 s	tum: NAD 192 used to obtain floo A9. If sq ft tsq in	7 ⊠ NA d insurar For a bui a) Squa b) Numl withir c) Total d) Engir	lding with an atta re footage of atta ber of permanen n 1.0 foot above net area of flood neered flood ope	ached gar t flood op adjacent of l opening nings?	rage <u>N/A</u> sq ft enings in the attached garage grade <u>N/A</u>
	SECT	TION B – FLOOD	INSURAI	NCE RATE MAP	(FIRM)	INFORMATIC	ON	
B1. NFIP Community Name CITY OF MARGATE	& Community N 345304	lumber	B2. Count	ty Name C COUNTY			B3. Stat	te
B4, Map/Panel Number 345304 / 0001	B5. Suffix	B6. FIRM Index D	E	B7. FIRM Panel Effective/Revised D 10/18/1983		B8. Flood Zone(s) A8		Base Flood Elevation(s) (Zone AO, use base flood depth) 10
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:  Indicate elevation datum used for BFE in Item B9: NGVD 1929 NAVD 1988 Other/Source:  Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)?  Designation Date:  CBRS OPA								
SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)								
C1. Building elevations are at A new Elevation Certific Elevations – Zones A1–below according to the Benchmark Utilized: privalent patum used for building	pased on: cate will be requi A30, AE, AH, A ouilding diagram rate n used for the ele	Construction Dr red when constructi (with BFE), VE, V1– specified in Item A7	awings* on of the bi V30, V (wit . In Puerto Vertica hrough h)	☐ Building uilding is complete th BFE), AR, AR/A, Rico only, enter m I Datum: MGVD 19 below. ☑ NGVD 1	Under C AR/AE, eters.	Construction* AR/A1-A30, AR	⊠ F WAH, AR/	inished Construction  AO. Complete Items C2.a-h  urce:
Datum used for building	elevations must	be the same as tha	t used for t	He DI L.		Chec	k the mea	asurement used.
a) Top of bottom floor (i b) Top of the next highe c) Bottom of the lowest d) Attached garage (top e) Lowest elevation of n (Describe type of equ	r floor horizontal structi of slab) nachinery or equi	ural member (V Zono	es only)	oor)	10.7 14.4 N/A. N/A.	<del>, -</del>	<ul><li>⋈ feet</li><li>⋈ feet</li><li>⋈ feet</li><li>⋈ feet</li><li>⋈ feet</li></ul>	☐ meters ☐ meters ☐ meters ☐ meters ☐ meters ☐ meters
<ul><li>f) Lowest adjacent (finisg)</li><li>h) Highest adjacent (finish)</li><li>h) Lowest adjacent grad</li></ul>	shed) grade nex	t to building (HAG)	s including	n structural support	10.1 10.6 N/A		<ul><li>⋈ feet</li><li>⋈ feet</li><li>⋈ feet</li></ul>	☐ meters ☐ meters ☐ meters
.,,						CEDTIFICAT		
This cortification is to be significant.		by a land sunvoyor			_			
This certification is to be signiformation. I certify that the I understand that any false  Check here if commer  Certifier's Name Paul M. Kritle Licensed Land Surve	e information on statement may b ts are provided d ents. pelling, PLS, CFI	this Certificate repre- be punishable by fine on back of form.	e or impriso Were lati	pest efforts to interponment under 18 U tude and longitude land surveyor?	in Section  Yes	data available. e, Section 1001. on A provided by	' a	× × × × × × × × × × × × × × × × × × ×
Address 2161 Shore Road		City Linwood		State NJ	ZIP Co	ode 08221		
Signature	Tole	11/14/14		Telephone	(609) 9	27-0279		

LLLVATION OLIVINIOATE, PE	195 £			
MPORTANT: In these spaces, c	opy the corresponding information fron	n Section A.	FOR I	NSURANCE COMPANY USE
Building Street Address (including Apt. 11 S. Andover Ave.	, Unit, Suite, and/or Bldg. No.) or P.O. Route an	d Box No.	Policy	Number: `
City MARGATE	State NJ	ZIP Code 08402	Compa	any NAIC Number:
SECTION	D – SURVEYOR, ENGINEER, OR ARCH	ITECT CERTIFICA	TION (CONTIN	UED)
Copy both sides of this Elevation Certif	ficate for (1) community official, (2) insurance ag	ent/company, and (3	) building owner.	
**B8 & B9.) FEMA Flood Hazard Reso ***C2a.) crawlspace	engineered for 200 square inches of net area ources Map Zone AEBase Flood Elevation 10			GVD29)
		11/14/14		
722				
SECTION E – BUILDING ELE	VATION INFORMATION (SURVEY NOT F	REQUIRED) FOR 2	ZONE AO AND	ZONE A (WITHOUT BFE)
<ul> <li>E1. Provide elevation information for grade (HAG) and the lowest adja a) Top of bottom floor (including b) Top of bottom floor (including b) Top of bottom floor (including E2. For Building Diagrams 6–9 with p (elevation C2.b in the diagrams)</li> <li>E3. Attached garage (top of slab) is E4. Top of platform of machinery and E5. Zone AO only: If no flood depth</li> </ul>	basement, crawlspace, or enclosure) is basement, crawlspace, or enclosure) is bermanent flood openings provided in Section A of the building is   feet m	feet feet feet seed feet feet feet feet feet feet feet f	meters above meters above meters above e pages 8–9 of Inabove below the HAC HAG. eters above on ance with the com	te or  below the HAG. te or  below the LAG. structions), the next higher floor c.
	F – PROPERTY OWNER (OR OWNER'S			TION
~	zed representative who completes Sections A, B			
	nents in Sections A, B, and E are correct to the			sued of community-issued BFE)
Address	City		State	ZIP Code
Signature	Date		Telephone	
Comments				
				Charle have if attachmen
				Check here if attachmen
The local official who is authorized by law	SECTION G – COMMUNITY INFOR			lete Sections A. B. C. (or E.) and C
	applicable item(s) and sign below. Check the me			
	vas taken from other documentation that has be elevation information. (Indicate the source and o			
	d Section E for a building located in Zone A (with		•	ued BFE) or Zone AO.
33. The following information (Item	ns G4–G10) is provided for community floodplain	n management purpo	ses.	
G4. Permit Number	G5. Date Permit Issued	G6. Date Certific	cate Of Compliand	e/Occupancy issued
G7. This permit has been issued for:	☐ New Construction ☐ Substantial In	nprovement		
G8. Elevation of as-built lowest floor (in			neters Datu	m
69. BFE or (in Zone AO) depth of flood		_	. 4	m
G10. Community's design flood elevation				n
Local Official's Name JIM GALANTING	Ti	tle CFM		
Community Name CITY OF MARGAT		elephone 609-822-1	074	
Signature ///		ate / 609-822-1	7	
10	E .	10/14/	15	
Comments	•	, .		
				Check here if attachmen



**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.

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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>

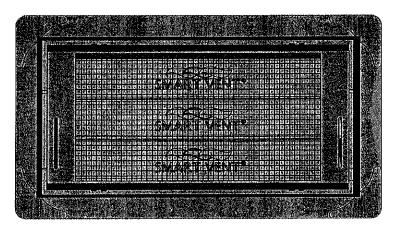


FIGURE 1—SMART VENT: MODEL 1540-510

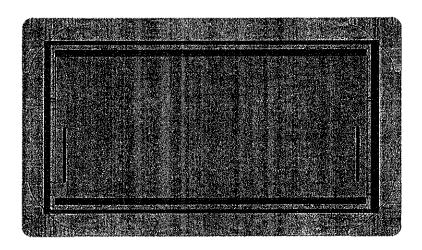


FIGURE 2-SMART VENT MODEL 1540-520

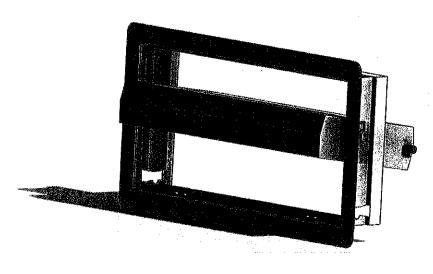


FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN