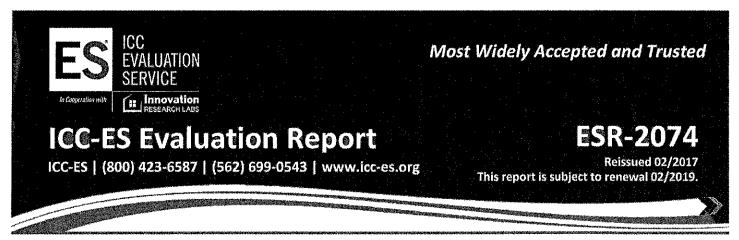
# U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY

# **ELEVATION CERTIFICATE**

OMB No. 1660-0008

National Flood Insurance Prog	ram	Important: R	lead t	he instructions o	n pages 1–9.	Expira	tion Date: July 31, 2015		
		SEC.	TION	A - PROPERTY INF	ORMATION	FOR IN	SURANCE COMPANY USE		
A1. Building Owner's Nam	e Kavky Develo	pment LLC				Policy N	lumber:		
A2. Building Street Addres	ss (including Apt.	, Unit, Suite, and/or	Bldg. N	No.) or P.O. Route and	Box No.	Compar	ny NAIC Number:		
City Margate				State NJ ZIP C	ode 08402				
A3. Property Description ( Block 309.02 Lot 8	Lot and Block Nu	ımbers, Tax Parcel I	Numbe	er, Legal Description, et	c.)				
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) with c) Total net area of flo	it. N 39d-19'-45" ographs of the burber Z rawlspace or encrawlspace or entent flood opening in 1.0 foot abovood openings in 1.0.	Long. W 74d-29'59 illding if the Certifica closure(s): aclosure(s) gs in the crawlspace e adjacent grade	9'''' ite is be 1020	eing used to obtain floor A9. I sq ft t sq in	d insurance. For a building with an a a) Square footage of a	ttached gar attached gar ent flood ope e adjacent g od openings	age <u>n/a</u> sq ft enings in the attached garage grade <u>n/a</u>		
	SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION								
B1. NFIP Community Name Margate City, 345304	e & Community N	lumber	B2. C Atlant	ounty Name tic		B3. Stat	е		
B4. Map/Panel Number 345304 0001	B5. Suffix C	B6. FIRM Index E 10-18-13	Date	B7. FIRM Panel Effective/Revised D 10-18-13	B8. Flood Zone(s) A-8		Base Flood Elevation(s) (Zone AO, use base flood depth) 10.00		
☐ FIS Profile  B11. Indicate elevation datu  B12. Is the building located  Designation Date:	m used for BFE in a Coastal Barı		/D 192 em (CB	9 🔲 NAVD 19	B8		☐ Yes		
	SECTIO	N C - BUILDING	ELEV	ATION INFORMATI	ON (SURVEY REQI	JIRED)			
C1. Building elevations are based of the service of	cate will be requi A30, AE, AH, A ( puilding diagram <u>S Mon</u> n used for the ele	with BFE), VE, V1- specified in Item A7 evations in items a) t	on of th V30, V . In Puo Ver hrough	ne building is complete. (with BFE), AR, AR/A, erto Rico only, enter me tical Datum: 1929 h) below.   NGVD 1	eters.	R/AH, AR/A			
Datum used for building	elevations must	be the same as tha	usea	ior the BFE.	Che	eck the mea	surement used.		
<ul> <li>a) Top of bottom floor (in</li> <li>b) Top of the next higher</li> <li>c) Bottom of the lowest I</li> <li>d) Attached garage (top</li> <li>e) Lowest elevation of m</li> </ul>	r floor horizontal structu of slab) nachinery or equi	ral member (V Zone	es only	)	7.4 14.35 n/a n/a 14.35	<ul><li>☐ feet</li><li>☐ feet</li><li>☐ feet</li><li>☐ feet</li><li>☐ feet</li></ul>	☐ meters ☐ meters ☐ meters ☐ meters ☐ meters ☐ meters		
(Describe type of equ f) Lowest adjacent (finis g) Highest adjacent (finis h) Lowest adjacent grad	hed) grade next shed) grade next	to building (LAG) to building (HAG)	s, inclu	ding structural support	7.4 7.6 7.3	⊠ feet ⊠ feet ⊠ feet	☐ meters ☐ meters ☐ meters		
	SECTIO	ON D - SURVEYO	R, EN	IGINEER, OR ARCH	IITECT CERTIFICA	TION			
This certification is to be signiformation. I certify that the I understand that any false Check here if comment Check here if attachment	information on t statement may b ts are provided o	his Certificate repre- e punishable by fine	sents n or imp Were	ny best efforts to interports prisonment under 18 U. latitude and longitude i	ret the data available. S. Code, Section 1001.		PLACE SEAL		
Certifier's Name James R. E	Boney			License Num	nber 31264				
Title Land Surveyor Company Name James R. Boney & Associates, LLC									
Address 13 Stone Mill Ct		City Egg Harbor T	wp	State NJ	ZIP Code 08234				
Signature M/W	3	Date July 10, 201	15	Telephone	(609) 788-8013				
					F6				

	corresponding information from Se		R INSURANCE COMPANY USE
uilding Street Address (including Apt., Unit, Su 11 N Huntington Ave	x No. Pol	icy Number:	
ity Margate	State NJ ZIP	Code 08402 Co	mpany NAIC Number:
SECTION D - SUI	RVEYOR, ENGINEER, OR ARCHITEC	CT CERTIFICATION (CON	(INUED)
opy both sides of this Elevation Certificate for (	(1) community official, (2) insurance agent/o	company, and (3) building owner	er.
omments Two story frame dwelling on elevate	ed crawlspace.All mechancals are above th	e FF	
_			
man and my			
gnature	Date July	10, 2015	
SECTION E - BUILDING ELEVATION	INFORMATION (SURVEY NOT REQ	UIRED) FOR ZONE AO AN	ID ZONE A (WITHOUT BFE)
For Building Diagrams 6–9 with permanen (elevation C2.b in the diagrams) of the buil     Attached garage (top of slab) is     Top of platform of machinery and/or equiprications. Zone AO only: If no flood depth number is ordinance? ☐ Yes ☐ No ☐ Unknow	vailable. Check the measurement used. In Fixing and check the appropriate boxes to show the (LAG).  t, crawlspace, or enclosure) is t, crawlspace, or enclosure) is t, crawlspace, or enclosure) is t flood openings provided in Section A Item Idding is feet meters feet meters above or ment servicing the building is  available, is the top of the bottom floor elevers. The local official must certify this information. The local official must certify the sufficient of the period of the best of the completes Sections A, B, and ections A, B, and E are correct to the best of the completes.	Puerto Rico only, enter meters.  www.hether the elevation is above the HAG.  below the HAG.  feet meters above or below the HAG.  feet meters above or below the HAG.  feet meters above or the had above or below the HAG.  Feet meters above or the had above or below the HAG.  Feet meters above or the had above or the had accordance with the contain in Section G.	ove or below the highest adjacent bove or below the HAG. bove or below the LAG. Instructions), the next higher floo AG.  or below the HAG. below the HAG.
mments			
mments			☐ Check here if attachme
	CTION G - COMMUNITY INFORMAT	ION (OPTIONAL)	☐ <u>Check here if attachme</u>
SE local official who is authorized by law or ordinan	CTION G – COMMUNITY INFORMAT	management ordinance can cor	nnlete Sections A. R. C. (or E.) and
SE local official who is authorized by law or ordinan is Elevation Certificate. Complete the applicable	ce to administer the community's floodplain in item(s) and sign below. Check the measure	management ordinance can cor ment used in Items G8–G10. In	nplete Sections A, B, C (or E), and Puerto Rico only, enter meters.
SE local official who is authorized by law or ordinan is Elevation Certificate. Complete the applicable  The information in Section C was taken f is authorized by law to certify elevation ir	ice to administer the community's floodplain in titem(s) and sign below. Check the measure from other documentation that has been sign formation. (Indicate the source and date o	management ordinance can cor ment used in Items G8–G10. In ned and sealed by a licensed s f the elevation data in the Com	nplete Sections A, B, C (or E), and Puerto Rico only, enter meters. surveyor, engineer, or architect wi ments area below.)
SE  local official who is authorized by law or ordinan is Elevation Certificate. Complete the applicable  The information in Section C was taken f is authorized by law to certify elevation ir  A community official completed Section E	ice to administer the community's floodplain in the titem(s) and sign below. Check the measure from other documentation that has been sign formation. (Indicate the source and date of Efor a building located in Zone A (without a	management ordinance can cor ment used in Items G8–G10. In ned and sealed by a licensed s f the elevation data in the Com FEMA-issued or community-is	nplete Sections A, B, C (or E), and Puerto Rico only, enter meters. surveyor, engineer, or architect wi ments area below.)
SE  local official who is authorized by law or ordinan is Elevation Certificate. Complete the applicable  The information in Section C was taken f is authorized by law to certify elevation in A community official completed Section E  The following information (Items G4–G10)	ice to administer the community's floodplain in titem(s) and sign below. Check the measure from other documentation that has been sign formation. (Indicate the source and date o	management ordinance can cor ment used in Items G8–G10. In ned and sealed by a licensed s f the elevation data in the Com FEMA-issued or community-is	nplete Sections A, B, C (or E), and Puerto Rico only, enter meters. surveyor, engineer, or architect wi ments area below.)
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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

### **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>

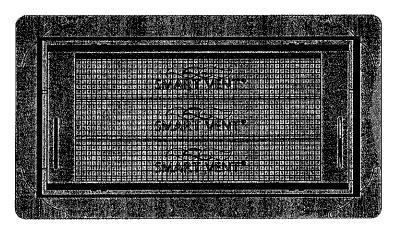


FIGURE 1—SMART VENT: MODEL 1540-510

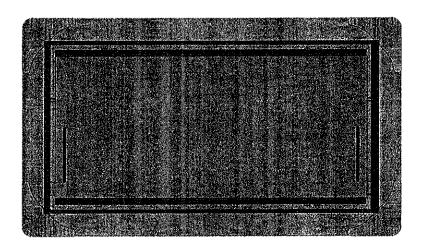


FIGURE 2-SMART VENT MODEL 1540-520

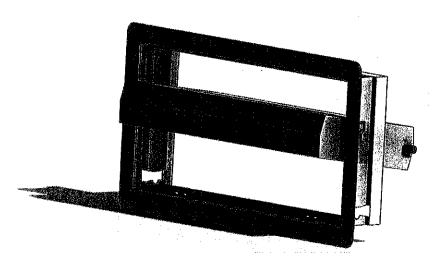


FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN