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

OMB No. 1	1660-0	0008		
Expiration	Date:	November	30,	2018

# ELEVATION CERTIFICATE Important: Follow the instructions on pages 1–9.

Copy all pages of this E	levation Certificate and all attachments	for $(1)$ c	ommunity official	(2) insurance a	ident/company	and (3)	) huilding owner

SEC	TION A - PROPERTY	INFOR	MATION	<u> </u>	FOR INSU	RANCE COMPANY USE
A1. Building Owner's Name Vito Gadelleta	4mm			•	Policy Num	iber:
A2. Building Street Address (inc Box No. 114 Beverly Way	cluding Apt., Unit, Suit	e, and/o	r Bldg. No.) c	r P.O. Route and	d Company N	NAIC Number:
City Neptune Township			State New Jer	sey	ZIP Code 07753	
A3. Property Description (Lot an Lot 11-13, Block 475	nd Block Numbers, Ta	ax Parcel	Number, Le	gál Description, e	etc.)	
A4. Building Use (e.g., Residen	tial, Non-Residential,	Addition	, Accessory,	etc.) Residen	tial	
A5. Latitude/Longitude: Lat. 40	0.19422	Long, 74	4.04077	Horizon	tal Datum: 🔲 NAD	1927 🔀 NAD 1983
A6. Attach at least 2 photograp A7. Building Diagram Number A8. For a building with a crawls	7		ate is being i	ised to obtain flo	od insurance.	
<ul> <li>a) Square footage of crawl</li> </ul>	space or enclosure(s)			988.00 sq ft		
b) Number of permanent flo	ood openings in the cr	awlspace	e or enclosur	e(s) within 1.0 fo	ot above adjacent gr	ade 5
c) Total net area of flood or	penings in A8.b	1	00.000 sq ir	1		
d) Engineered flood openin	igs? 🛛 Yes 🗌 N	ю				
A9. For a building with an attach	ed garage:					
a) Square footage of attach	ed garage		416.00 sq f			
b) Number of permanent flo	ood openings in the at	tached g	arage within	1.0 foot above a	djacent grade 3	
c) Total net area of flood op	enings in A9.b		600.00 sc	in		
d) Engineered flood openin	gs? 🖂 Yes 🗌 N	lo		·		
SE	CTION B - FLOOD	INSURA	NCE RATE	MAP (FIRM) IN	FORMATION	
B1. NFIP Community Name & C Neptune Township - 340317	community Number		B2. County Monmouth			B3. State New Jersey
B4. Map/Panel Number 34025C0333 F	B6. FIRM Index Date	Effe Rev	RM Panel ective/ vised Date	B8. Flood Zone(s)		Elevation(s) e Base Flood Depth)
34025C0333 F	09-25-2009	09-25-2	2009	AE	9	
B10. Indicate the source of the ☐ FIS Profile ⊠ FIRM	Community Deter	mined [	] Other/Soι	rce:		
B11. Indicate elevation datum u	sed for BFE in Item B	9: 🔲 N	GVD 1929	🗙 NAVD 1988	Other/Source:	
B12. Is the building located in a	Coastal Barrier Reso	urces Sy	stem (CBRS	) area or Otherw	ise Protected Area (	OPA)? 🗌 Yes 🔀 No
Designation Date:		CBRS	OPA			
FEMA Form 086-0-33 (7/15)	R	eplaces :	all previous e	ditions.		Form Page 1 of 6

ATANT: In these spaces, copy the c			FOR INSURANCE COMPANY
مُرَّسُ ading Street Address (including Apt., Uni 14 Beverly Way	it, Suite, and/or Bldg. No.) or P.O. I	Route and Box No.	Policy Number:
City Veptune Township		IP Code 7753	Company NAIC Number
		· · · · · · · · · · · · · · · · · · ·	
		Building Under Constr	
*A new Elevation Certificate will be re		•	
C2. Elevations – Zones A1–A30, AE, AH, Complete Items C2.a–h below accord	ding to the building diagram specifi	ed in Ítem A7. In Pue	
Benchmark Utilized: GPS Observatio		um: NAVD88	
Indicate elevation datum used for the	· •	elow.	
☐ NGVD 1929 🔀 NAVD 19 Datum used for building elevations m		e BFF	
			Check the measurement use
a) Top of bottom floor (including bas	ement, crawlspace, or enclosure fl	oor)	5.4 X feet meters
b) Top of the next higher floor			14.5 X feet meters
<ul><li>c) Bottom of the lowest horizontal str</li></ul>	ructural member (V Zones only)	······································	N.A. feet meters
d) Attached garage (top of slab)			5.4 X feet meters
<ul> <li>e) Lowest elevation of machinery or (Describe type of equipment and I</li> </ul>	equipment servicing the building location in Comments)		12.0 X feet meters
f) Lowest adjacent (finished) grade i	next to building (LAG)		5.0 × feet meters
g) Highest adjacent (finished) grade	next to building (HAG)	· · · · · · · · · · · · · · · · · · ·	5.5 X feet meters
<ul> <li>h) Lowest adjacent grade at lowest e structural support</li> </ul>	elevation of deck or stairs, including	}	5.0 [] feet [] meters
SECTION D	- SURVEYOR, ENGINEER, OR	RCHITECT CERTI	FICATION
This certification is to be signed and seale I certify that the information on this Certific statement may be punishable by fine or in	cate represents my best efforts to i	nterpret the data avai	by law to certify elevation informati lable. I understand that any false
Were latitude and longitude in Section A p	provided by a licensed land survey	or? 🛛 Yes 🗌 No	Check here if attachment
Certifier's Name Kenneth P. Frank	License Number NJ 36727		
Title			· · · · · · · · · · · · · · · ·
Owner/President			Place
Company Name KF2T Professional Land Surveyors			Saal
Address			
P.O. Box 521			Here
City Colts Neck	State New Jersey	ZIP Code 07722	
Signature	Date	Telephone	Ext.
Kenneth P: Kum	08-26-2019	(908) 692-7853	
Copy all pages of this Elevation Certificate a	and all attachments for (1) communit	y official, (2) insurance	agent/company, and (3) building o
Comments (including type of equipment ar (8) Eight Smart Vents Installed Model 1540 Outside air condition unit on raised platforr Bottom of Solar Electric Meter at Elevation	0-510 (Cert. to cover 200 s.f. each) m at elevation =12.0'		

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Zones AO and A (without BFE), complete Items E1–E5. If the plete Sections A, B,and C. For Items E1–E4, use natural gra r meters. Provide elevation information for the following and check the the highest adjacent grade (HAG) and the lowest adjacent grade a) Top of bottom floor (including basement, crawlspace, or enclosure) is	ZIP Code ey 07753 NINFORMATION (SI ID ZONE A (WITHOL ee Certificate is intende ade, if available. Check e appropriate boxes to grade (LAG).	d Box No.	Policy Number: Company NAIC EQUIRED) OMA or LOMR- ent used. In Pue the elevation is a	-F request, erto Rico only,
Interform       New Jerse         SECTION E – BUILDING ELEVATION FOR ZONE AO AN         Zones AO and A (without BFE), complete Items E1–E5. If the plete Sections A, B,and C. For Items E1–E4, use natural graph r meters.         Provide elevation information for the following and check the the highest adjacent grade (HAG) and the lowest adjacent grade a) Top of bottom floor (including basement, crawlspace, or enclosure) is	ey 07753  N INFORMATION (SID ZONE A (WITHOU)  De Certificate is intende ade, if available. Check e appropriate boxes to grade (LAG).  f provided in Section A I	URVEY NOT R IT BFE) ed to support a L the measurement show whether t seet meters feet meters	EQUIRED) OMA or LOMR- ent used. In Pue the elevation is a above or	F request, erto Rico only, above or below
FOR ZONE AO AN Zones AO and A (without BFE), complete Items E1–E5. If the plete Sections A, B,and C. For Items E1–E4, use natural gra r meters. Provide elevation information for the following and check the the highest adjacent grade (HAG) and the lowest adjacent grade a) Top of bottom floor (including basement, crawlspace, or enclosure) is	ID ZONE A (WITHOL be Certificate is intende ade, if available. Check e appropriate boxes to grade (LAG).	tt BFE) d to support a L the measurem show whether t eet meters eet meters	OMA or LOMR- ent used. In Pue he elevation is a above or	erto Rico only, above or below
<ul> <li>plete Sections A, B,and C. For Items E1–E4, use natural grar meters.</li> <li>Provide elevation information for the following and check the highest adjacent grade (HAG) and the lowest adjacent grade a) Top of bottom floor (including basement, crawlspace, or enclosure) is</li> <li>b) Top of bottom floor (including basement, crawlspace, or enclosure) is</li> <li>For Building Diagrams 6–9 with permanent flood openings pathe next higher floor (elevation C2.b in the diagrams) of the building is</li> <li>Attached garage (top of slab) is</li> </ul>	ade, if available. Check e appropriate boxes to grade (LAG). f f f provided in Section A I	the measurem show whether t eet meters eet meters	ent used. In Pue he elevation is a above or	erto Rico only, above or below
<ul> <li>the highest adjacent grade (HAG) and the lowest adjacent grade adjacent grade (HAG) and the lowest adjacent grade adj</li></ul>	grade (LAG).	eet meters	above or	
<ul> <li>b) Top of bottom floor (including basement, crawlspace, or enclosure) is</li> <li>For Building Diagrams 6–9 with permanent flood openings in the next higher floor (elevation C2.b in the diagrams) of the building is</li> <li>Attached garage (top of slab) is</li> </ul>	provided in Section A I	eet meters		below the H.
For Building Diagrams 6–9 with permanent flood openings p the next higher floor (elevation C2.b in the diagrams) of the building is	provided in Section A I			below the LA
the diagrams) of the building is Attached garage (top of slab) is			(see pages 1-2	
		feet 🗌 meters	above or	below the H
	f	eet 🗌 meters	above or	below the H
Top of platform of machinery and/or equipment servicing the building is	f	eet 🗌 meters	above or	below the H
Zone AO only: If no flood depth number is available, is the t floodplain management ordinance? Yes No	top of the bottom floor ] Unknown.   The loca			
SECTION F - PROPERTY OWNER (OR	OWNER'S REPRESE	NTATIVE) CER	TIFICATION	
property owner or owner's authorized representative who co munity-issued BFE) or Zone AO must sign here. The statem perty Owner or Owner's Authorized Representative's Name	ompletes Sections A, E nents in Sections A, B,	3, and E for Zon and E are corre	e A (without a F ect to the best of	EMA-issued or my knowledge.
ress	City	Stat	e	ZIP Code
ature	Date		phone	
	Duic		priorie	
iments				

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ION CERTIFICA	TE		OMB No. 1660-0008 Expiration Date: November 30, 201
	opy the corresponding information for Apt., Unit, Suite, and/or Bldg. No.) or F		FOR INSURANCE COMPANY US p. Policy Number:
City Neptune Township	State New Jersey	ZIP Code 07753	Company NAIC Number
	SECTION G - COMMUNITY INFO	ORMATION (OPTION	AL)
The local official who is authorize Sections A, B, C (or E), and G of used in Items G8–G10. In Puerto	this Elevation Certificate. Complete the	community's floodplai applicable item(s) and	n management ordinance can complete I sign below. Check the measurement
G1. The information in Sect engineer, or architect w data in the Comments a	ion C was taken from other documentat ho is authorized by law to certify elevati area below.)	on that has been sign on information. (Indica	ed and sealed by a licensed surveyor, ate the source and date of the elevation
G2. A community official co or Zone AO.	mpleted Section E for a building located	in Zone A (without a	FEMA-issued or community-issued BFE
G3.  The following information	on (Items G4–G10) is provided for comr	nunity floodplain mana	agement purposes.
G4. Permit Number	G5. Date Permit Issued		G6. Date Certificate of Compliance/Occupancy Issued
G7. This permit has been issued	I for: New Construction S	ıbstantial Improvemei	nt
G8. Elevation of as-built lowest f of the building:	floor (including basement)		feet imeters Datum
9. BFE or (in Zone AO) depth	of flooding at the building site:		feet imeters Datum
G10. Community's design flood e	levation:		feet meters
Local Official's Name	1	itle	
Community Name	T	elephone	
Signature	E	pate	
Comments (including type of equi	pment and location, per C2(e), if application	able)	
		•	
)			
)			

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## **BUILDING PHOTOGRAPHS**

See Instructions for Item A6.

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

TANT: In these spaces, copy	the corresponding information	from Section A.	FOR INSURANCE COMPANY USE
uiding Street Address (including Ap 14 Beverly Way	t., Unit, Suite, and/or Bldg. No.) or	P.O. Route and Box No.	Policy Number:
City Neptune Township	State New Jersey	ZIP Code 07753	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 Caption Front View

**, ON CERTIFICATE** 

Clear Photo One

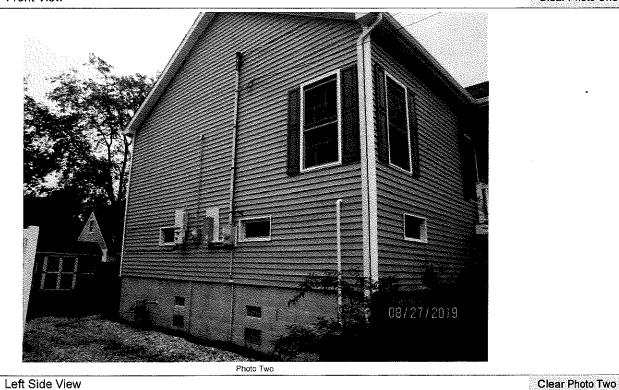


Photo Two Caption Left Side View

ION CERTIFICATE	Continuatio	n Page	OMB No. 1660-0008 Expiration Date: November 30, 201
ATANT: In these spaces, copy the co	orresponding information	from Section A.	FOR INSURANCE COMPANY US
ailding Street Address (including Apt., Unit	, Suite, and/or Bldg. No.) or	P.O. Route and Box No.	Policy Number:
City	State	ZIP Code	Company NAIC Number
Neptune Township	New Jersey	07753	
If submitting more photographs than will t with: date taken; "Front View" and "Rea photographs must show the foundation with	ar View"; and, if required	, "Right Side View" and	"Left Side View." When applicable,
			27/2019
Photo Three Caption Right Side View	Photo Th	ree	Clear Photo Th
		 • • • • •	27/2019
*			

Photo Four Caption Rear View

FEMA Form 086-0-33 (7/15)

Replaces all previous editions.

Clear Photo Four

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## **ICC-ES Evaluation Report**

## **ESR-2074**

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Reissued 02/2019 This report is subject to renewal 02/2021.

DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

**REPORT HOLDER:** 

## SMART VENT PRODUCTS, INC.

**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 FLOOD VENT SEALING KIT #1540-526



*"2014 Recipient of Prestigious Western States Seismic Policy Council (WSSPC) Award in Excellence"* 

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## **ESR-2074**

Reissued February 2019

This report is subject to renewal February 2021.

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

**REPORT HOLDER:** 

SMART VENT PRODUCTS, INC.

## **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514 FLOOD VENT SEALING KIT #1540-526

## 1.0 EVALUATION SCOPE

## Compliance with the following codes:

- 2018, 2015, 2012, 2009 and 2006 International Building Code<sup>®</sup> (IBC)
- 2018, 2015, 2012, 2009 and 2006 *International Residential Code*<sup>®</sup> (IRC)
- 2018 International Energy Conservation Code<sup>®</sup> (IECC)
- 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<sup>®</sup> 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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-inch (6.35 by 6.35 mm) openings, yielding 51 square inches (32 903 mm<sup>2</sup>) of net free area to supply natural ventilation. The SmartVENT<sup>®</sup> Stacking Model #1540-511 consists of two Model #1540-510 units in one assembly, and provides 102 square inches (65 806 mm<sup>2</sup>) of net free area to supply natural ventilation. Other FVs recognized in this report do not offer natural ventilation.

## 3.4 Flood Vent Sealing Kit:

The Flood Vent Sealing Kit Model #1540-526 is used with SmartVENT<sup>®</sup> Model #1540-520. It is a Homasote 440 Sound Barrier<sup>®</sup> (ESR-1374) insert with 21 - 2-inch-by-2-inch (51 mm x 51 mm) squares cut in it. See Figure 4.

## 4.0 DESIGN AND INSTALLATION

## 4.1 SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup>:

SmartVENT<sup>®</sup> and FloodVENT<sup>®</sup> 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<sup>®</sup> 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

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feet (18.6 m<sup>2</sup>) of enclosed area, except that the SmartVENT<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> Stacking Model #1540-521 must be installed with a minimum of one FV for every 400 square feet (37.2 m<sup>2</sup>) 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.

#### 4.2 Flood Vent Sealing Kit

The Flood Vent Sealing Kit Model 1540-526 is used in conjunction with FloodVENT<sup>®</sup> Model #1540-520. When installed and tested in accordance with ASTM E283, the FV and Flood Vent Sealing Kit assembly have an air leakage rate of less than 0.2 cubic feet per minute per lineal foot (18.56 l/min per lineal meter) at a pressure differential of 1 pound per square foot (50 Pa) based on 12.58 lineal feet (3.8 lineal meters) contained by the Flood Vent Sealing Kit.

## 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<sup>®</sup> 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<sup>®</sup> 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

- **6.1** Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated August 2015 (editorially revised October 2017).
- **6.2** Test report on air infiltration in accordance with ASTM E283.

## 7.0 IDENTIFICATION

- **7.1** The Smart VENT<sup>®</sup> models and the Flood Vent Sealing Kit 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).
- **7.2** The report holder's contact information is the following:

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

TABLE	1-MODEL	SIZES
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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®	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 <sup>®</sup>	1540-570	14" X 8 <sup>3</sup> / <sub>4</sub> "	200
Wood Wall FloodVENT <sup>®</sup> 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 =  $m^2$ 

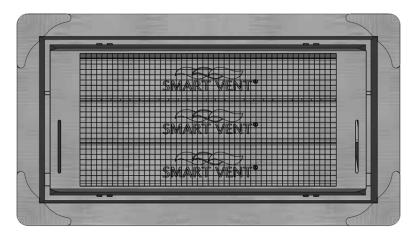


FIGURE 1-SMART VENT: MODEL 1540-510

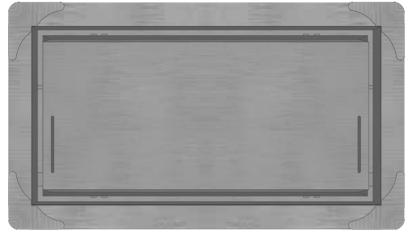


FIGURE 2—SMART VENT MODEL 1540-520



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

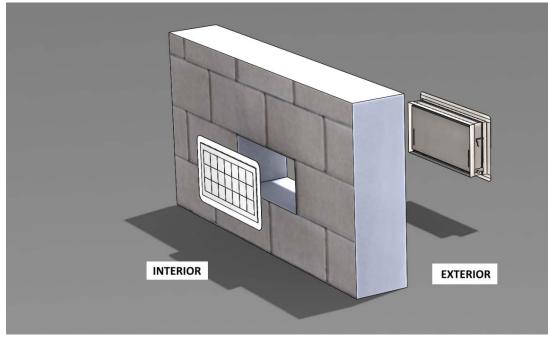


FIGURE 4—FLOOD VENT SEALING KIT



## ESR-2074 CBC and CRC Supplement

Reissued February 2019 This report is subject to renewal February 2021.

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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:** 

SMART VENT PRODUCTS, INC.

## **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514 FLOOD VENT SEALING KIT #1540-526

## 1.0 REPORT PURPOSE AND SCOPE

## Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, recognized in ICC-ES master evaluation report ESR-2074, have also been evaluated for compliance with codes noted below.

## Applicable code edition:

- 2016 California Building Code (CBC)
- 2016 California Residential Code (CRC)

## 2.0 CONCLUSIONS

## 2.1 CBC:

The Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2074, comply with 2016 CBC Chapter 12, provided the design and installation are in accordance with the 2015 *International Building Code*<sup>®</sup> (IBC) provisions noted in the master report and the additional requirements of CBC Chapters 12, 16 and 16A, as applicable.

The products recognized in this supplement have not been evaluated under CBC Chapter 7A for use in the exterior design and construction of new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area.

## 2.2 CRC:

The Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2074, comply with the 2016 CRC, provided the design and installation are in accordance with the 2015 *International Residential Code*<sup>®</sup> (IRC) provisions noted in the master report.

The products recognized in this supplement have not been evaluated under 2016 CRC Chapter R337, for use in the exterior design and construction of new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area.

The products recognized in this supplement have not been evaluated for compliance with the International Wildland–Urban Interface Code<sup>®</sup>.

This supplement expires concurrently with the master report, reissued February 2019.

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.





## ESR-2074 FBC Supplement

Reissued February 2019 This report is subject to renewal February 2021.

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A Subsidiary of the International Code Council<sup>®</sup>

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

**REPORT HOLDER:** 

SMART VENT PRODUCTS, INC.

## **EVALUATION SUBJECT:**

SMART VENT<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514 FLOOD VENT SEALING KIT #1540-526

## 1.0 REPORT PURPOSE AND SCOPE

## Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, recognized in ICC-ES master report ESR-2074, have also been evaluated for compliance with the codes noted below.

## Applicable code editions:

- 2017 Florida Building Code—Building
- 2017 Florida Building Code—Residential

## 2.0 CONCLUSIONS

The Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2074, comply with the *Florida Building Code*—*Building* and the FRC, provided the design and installation are in accordance with the 2015 *International Building Code*<sup>®</sup> provisions noted in the master report.

Use of the Smart Vent<sup>®</sup> Automatic Foundation Flood Vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential*.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report, reissued February 2019.



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

1

OMB No. 1	1660-0	0008		
Expiration	Date:	November	30,	2018

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# **ELEVATION CERTIFICATE important:** Follow the instructions on pages 1–9.

	TION A - PROPERTY	INFORMATION	. F	OR INSURANCE COMPANY U
A1. Building Owner's Name VINCENT SERRAINO			. F	olicy Number:
<ul><li>A2. Building Street Address (in Box No.</li><li>9 RIVERVIEW COURT</li></ul>	cluding Apt., Unit, Suit	e, and/or Bldg. No.) or P.C	D. Route and C	Company NAIC Number:
City		State		IP Code
NEPTUNE TOWNSHIP		New Jersey	0	7753
A3. Property Description (Lot a TAX MAP LOT 6 BLOCK 53		ax Parcel Number, Legal D	escription, etc.)	
A4. Building Use (e.g., Resider	ntial, Non-Residential,	Addition, Accessory, etc.)	RESIDENTIAL	
A5. Latitude/Longitude: Lat. N	40 11 40.35	Long. W 74 02 26.75	Horizontal Datum:	NAD 1927 X NAD 1983
A6. Attach at least 2 photograp	ohs of the building if the	e Certificate is being used	to obtain flood insuran	ce.
A7. Building Diagram Number	7			
A8. For a building with a crawls				
a) Square footage of craw		600 on #		
	•			
<ul> <li>b) Number of permanent fl</li> </ul>	lood openings in the cr	awispace or enclosure(s)	within 1.0 foot above a	djacent grade 3
c) Total net area of flood o	penings in A8.b 3	84 sq in		
d) Engineered flood opening	ngs? 🛛 Yes 🗌 N	lo		
A9. For a building with an attac	hed garage:			
5				
a). Square footage of attac		0 saft		
a) Square footage of attac	hed garage1,34		oot abovo adiacont ar	do 7
b) Number of permanent f	hed garage1,34 lood openings in the at	tached garage within 1.0 fo	oot above adjacent gra	ade7
	hed garage1,34 lood openings in the at		oot above adjacent gra	ade 7
b) Number of permanent f	hed garage1,34 lood openings in the at penings in A9.b8	tached garage within 1.0 fo	oot above adjacent gra	ade 7
<ul> <li>b) Number of permanent fl</li> <li>c) Total net area of flood o</li> <li>d) Engineered flood opening</li> </ul>	hed garage1,34 lood openings in the at penings in A9.b8 ngs? Yes N	tached garage within 1.0 fo 896 sq in No		
<ul> <li>b) Number of permanent fl</li> <li>c) Total net area of flood o</li> <li>d) Engineered flood openir</li> </ul>	hed garage 1,34 lood openings in the at penings in A9.b 8 ngs? X Yes N ECTION B – FLOOD I	tached garage within 1.0 fr 896 sq in No NSURANCE RATE MAP	(FIRM) INFORMAT	ION
<ul> <li>b) Number of permanent fl</li> <li>c) Total net area of flood o</li> <li>d) Engineered flood openin</li> <li>SI</li> <li>B1. NFIP Community Name &amp; C</li> </ul>	hed garage 1,34 lood openings in the at penings in A9.b 8 ngs? X Yes N ECTION B – FLOOD I	tached garage within 1.0 fo 896 sq in No	(FIRM) INFORMAT	
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<ul> <li>b) Number of permanent fl</li> <li>c) Total net area of flood o</li> <li>d) Engineered flood openin</li> <li>SI</li> <li>B1. NFIP Community Name &amp; O</li> <li>NEPTUNE TOWNSHIP 340</li> <li>B4. Map/Panel B5. Suffix</li> </ul>	hed garage1,34 lood openings in the at penings in A9.b ngs? ⊠ Yes N ECTION B – FLOOD I Community Number 0317 B6. FIRM Index	tached garage within 1.0 fr 896 sq in No NSURANCE RATE MAP B2. County Nam MONMOUTH B7. FIRM Panel	P <b>(FIRM) INFORMAT</b> I e	B3. State New Jersey B9. Base Flood Elevation(s)
<ul> <li>b) Number of permanent fl</li> <li>c) Total net area of flood o</li> <li>d) Engineered flood openin</li> <li>SI</li> <li>B1. NFIP Community Name &amp; C</li> <li>NEPTUNE TOWNSHIP 340</li> <li>B4. Map/Panel Number</li> <li>B5. Suffix</li> <li>B4025C0333</li> </ul>	hed garage1,34 lood openings in the at penings in A9.b8 ngs? ⊠ Yes N ECTION B - FLOOD I Community Number 1317 B6. FIRM Index Date 09/25/2009	tached garage within 1.0 fr 896 sq in No NSURANCE RATE MAP B2. County Nam MONMOUTH B7. FIRM Panel Effective/ Revised Date 09/25/2009	e B8. Flood Zone(s) AE	B3. State New Jersey B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 9
<ul> <li>b) Number of permanent fl</li> <li>c) Total net area of flood o</li> <li>d) Engineered flood openin</li> <li>SI</li> <li>B1. NFIP Community Name &amp; O</li> <li>NEPTUNE TOWNSHIP 340</li> <li>B4. Map/Panel Number</li> <li>B4025C0333</li> <li>B10. Indicate the source of the</li> </ul>	hed garage,34 lood openings in the at penings in A9.b ngs? ⊠ Yes N ECTION B – FLOOD I Community Number 0317 B6. FIRM Index Date 09/25/2009 Base Flood Elevation	tached garage within 1.0 fr 896 sq in No NSURANCE RATE MAP B2. County Nam MONMOUTH B7. FIRM Panel Effective/ Revised Date 09/25/2009 (BFE) data or base flood d	e B8. Flood Zone(s) AE	B3. State New Jersey B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 9
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<ul> <li>b) Number of permanent finds</li> <li>c) Total net area of flood of oddition of the second diamond diamond of the second diamond diam</li></ul>	hed garage,34 lood openings in the at penings in A9.b ngs? ⊠ Yes N ECTION B - FLOOD I Community Number 0317 B6. FIRM Index Date 09/25/2009 Base Flood Elevation Community Determ	tached garage within 1.0 fr 896 sq in No NSURANCE RATE MAP B2. County Name MONMOUTH B7. FIRM Panel Effective/ Revised Date 09/25/2009 (BFE) data or base flood d nined [] Other/Source:	e B8. Flood Zone(s) AE lepth entered in Item E	B3. State New Jersey B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 9
<ul> <li>b) Number of permanent fl</li> <li>c) Total net area of flood o</li> <li>d) Engineered flood opening</li> </ul> B1. NFIP Community Name & O NEPTUNE TOWNSHIP 340 34. Map/Panel Number 34. Map/Panel Number B10. Indicate the source of the □ FIS Profile ⊠ FIRM	hed garage1,34 lood openings in the at penings in A9.b8 ngs? ⊠ Yes N ECTION B – FLOOD I Community Number 1317 B6. FIRM Index Date 09/25/2009 Base Flood Elevation Community Determ used for BFE in Item B8	tached garage within 1.0 fr 896 sq in No NSURANCE RATE MAP B2. County Nam MONMOUTH B7. FIRM Panel Effective/ Revised Date 09/25/2009 (BFE) data or base flood d nined Other/Source: 9: NGVD 1929 X N.	P (FIRM) INFORMATION         e         B8. Flood Zone(s)         AE         lepth entered in Item E         AVD 1988       Othe	B3. State New Jersey B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 9 89: r/Source:
<ul> <li>b) Number of permanent fi</li> <li>c) Total net area of flood o</li> <li>d) Engineered flood opening</li> </ul> B1. NFIP Community Name & O NEPTUNE TOWNSHIP 340 34. Map/Panel Number 34. Map/Panel Number B10. Indicate the source of the □ FIS Profile ⊠ FIRM B11. Indicate elevation datum of B12. Is the building located in a	hed garage1,34 lood openings in the at penings in A9.b ngs? ⊠ Yes N ECTION B - FLOOD I Community Number 0317 B6. FIRM Index Date 09/25/2009 Base Flood Elevation Community Detern used for BFE in Item B9 a Coastal Barrier Resou	tached garage within 1.0 fr 896 sq in No NSURANCE RATE MAP B2. County Nam MONMOUTH B7. FIRM Panel Effective/ Revised Date 09/25/2009 (BFE) data or base flood d nined Other/Source: 9: NGVD 1929 X N.	P (FIRM) INFORMATION         e         B8. Flood Zone(s)         AE         lepth entered in Item E         AVD 1988       Othe	B3. State New Jersey B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 9 89: r/Source:

ELEVATION CERTIFICATE			OMB No. 1660-0008 Expiration Date: November 30, 2018
IMPORTANT: In these spaces, copy the corresponding info	mation from Sec	tion A.	FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, and/or Bldg. 9 RIVERVIEW COURT	. No.) or P.O. Rou	te and Box No.	Policy Number:
City State NEPTUNE TOWNSHIP New Jers		Code	Company NAIC Number
SECTION C – BUILDING ELEVAT	TION INFORMAT	ION (SURVEY RE	EQUIRED)
C1. Building elevations are based on: Construction Dra *A new Elevation Certificate will be required when constru-		<b>•</b>	ction* 🔀 Finished Construction
<ul> <li>C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V Complete Items C2.a–h below according to the building d</li> </ul>	/1V30, V (with Bl	= E), AR, AR/A, AR/	
Benchmark Utilized: R.M. 28 & R.M. 29 OLD FIRM	Vertical Datum:	NAVD 1988	-
Indicate elevation datum used for the elevations in items a	a) through h) below	N.	
🔲 NGVD 1929 🔀 NAVD 1988 🗌 Other/Source			
Datum used for building elevations must be the same as t	that used for the B	FE.	Check the measurement used.
a) Top of bottom floor (including basement, crawlspace,	or enclosure floor)	<u> </u>	X feet
b) Top of the next higher floor		<u> </u>	X feet T meters
c) Bottom of the lowest horizontal structural member (V 2	Zones only)	N/A	IX feet I meters
d) Attached garage (top of slab)		7 0	X feet I meters
<ul> <li>e) Lowest elevation of machinery or equipment servicing (Describe type of equipment and location in Comment</li> </ul>	the building s)	29_0	X feet meters
f) Lowest adjacent (finished) grade next to building (LAG	5)	<u> </u>	X feet 🔲 meters
g) Highest adjacent (finished) grade next to building (HA		7.5	I feet I meters
h) Lowest adjacent grade at lowest elevation of deck or s	•	6.6	X feet meters
SECTION D – SURVEYOR, ENG	INEER OR ARC	HITECT CERTIFI	CATION
This certification is to be signed and sealed by a land surveyor			
I certify that the information on this Certificate represents my b statement may be punishable by fine or imprisonment under 1	est efforts to inter 8 U.S. Code, Sec	oret the data availa ion 1001.	ble. I understand that any false
Were latitude and longitude in Section A provided by a license	d land surveyor?	⊠Yes ∐No	Check here if attachments.
	ense Number 35855		
Title LAND SURVEYOR			
Company Name PAUL K. LYNCH LS			
Address P.O. BOX 1453		· · · · · · · · · · · · · · · · · · ·	- Here
City Sta	to	ZIP Code	
	v Jersey	07719	
Signature Dat	e 29/2018	Telephone (732) 681-4035	
Copy all pages of this Elevation Certificate and all attachments fo	r (1) community off	icial, (2) insurance a	gent/company, and (3) building owner.
Comments (including type of equipment and location, per C2(e A7 STRUCTURE IS ELEVATED ON PARTIAL STORY FOUN A8,9a ENTIRE FOUNDATION OUTLINE IS 2075 SF, WITHIN FILL WHICH LEAVES BALANCE OF APPROX. 600 SF A8,9bc ALL OPENINGS HAVE "SMART" VENT MODEL 1540 SF (ENCLOS. COVERAGE 600 SF, GARAGE COVERAGE 1 C2e ELEVATION SHOWN IS ATTIC FLOOR WHERE FURNA	D. WALLS ARE GARAGE A -520 INSTALLED 400 SF) SQ. INCH	MANUFACT. CEF	TIFIES EACH ONE COVERS 200 DUGH OPENINGS OF 8" x 16"
PRELIMINARY FIRM 34025C0333G DATED 1-30-2015 SH			

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ELEVATION CERTIFICATE			OMB No. 1660-0008 Expiration Date: November 30, 2018		
IMPORTANT: In these spaces, copy the corres	sponding information	from Section A.	FOR INSURANCE COMPANY USE		
Building Street Address (including Apt., Unit, Sui 9 RIVERVIEW COURT	te, and/or Bldg. No.) or	P.O. Route and Box No.	Policy Number:		
City NEPTUNE TOWNSHIP	State New Jersey	ZIP Code 07753	Company NAIC Number		
		RMATION (SURVEY NOT E A (WITHOUT BFE)	REQUIRED)		
For Zones AO and A (without BFE), complete Ite complete Sections A, B,and C. For Items E1–E4, enter meters.	ms E1–E5. If the Certifi , use natural grade, if a	icate is intended to support i vailable. Check the measure	a LOMA or LOMR-F request, ement used. In Puerto Rico only,		
E1. Provide elevation information for the following the highest adjacent grade (HAG) and the log a) Top of bottom floor (including basement,			er the elevation is above or below		
crawlspace, or enclosure) is b) Top of bottom floor (including basement,		[] feet [] mete			
crawlspace, or enclosure) is E2. For Building Diagrams 6–9 with permanent		feet mete			
the next higher floor (elevation C2.b in the diagrams) of the building is		feet i mete			
E3. Attached garage (top of slab) is		feet [] mete	rs 🔲 above or 🗋 below the HAG.		
E4. Top of platform of machinery and/or equipm servicing the building is	ent	feet [] mete	rs 🔲 above or 🗋 below the HAG.		
E5. Zone AO only: If no flood depth number is a floodplain management ordinance?			cordance with the community's certify this information in Section G.		
SECTION F - PROPERT	Y OWNER (OR OWNE	R'S REPRESENTATIVE) C	ERTIFICATION		
The property owner or owner's authorized repres community-issued BFE) or Zone AO must sign h	entative who completes ere. The statements in	s Sections A, B, and E for Zo Sections A, B, and E are co	one A (without a FEMA-issued or rrect to the best of my knowledge.		
Property Owner or Owner's Authorized Represen	perty Owner or Owner's Authorized Representative's Name				
Address	(	City Si	ate ZIP Code		
Signature		Date Te	elephone		
Comments					
			Check here if attachments.		
	· · · · · · · · · · · · · · · · · · ·	······			

ELEVATION CERTIFICATE	- 		OMB No. 1660-0008 Expiration Date: November 30, 2018
IMPORTANT: In these spaces, copy the corn	esponding information	from Section A.	FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, St 9 RIVERVIEW COURT	uite, and/or Bldg. No.) or	P.O. Route and Box N	lo. Policy Number:
City NEPTUNE TOWNSHIP	State New Jersey	ZIP Code 07753	Company NAIC Number
SECTIO	ON G - COMMUNITY INI	FORMATION (OPTIOI	NAL)
engineer, or architect who is authoriz	Certificate. Complete the ter meters. en from other documenta	e applicable item(s) an ation that has been sig	
G2. A community official completed Section Zone AO.	on E for a building locate	ed in Zone A (without a	FEMA-issued or community-issued BFE)
G3. The following information (Items G4-	G10) is provided for com	munity floodplain man	agement purposes.
G4. Permit Number	G5. Date Permit Issue	d	G6. Date Certificate of Compliance/Occupancy Issued
G7. This permit has been issued for:	New Construction	Substantial Improveme	nt
G8. Elevation of as-built lowest floor (including of the building:	g basement)	[_	] feet 🔲 meters Datum
G9. BFE or (in Zone AO) depth of flooding at	the building site:		feet 🔲 meters Datum
G10. Community's design flood elevation:			] feet []] meters Datum
Local Official's Name		Title	
Community Name		Telephone	
Signature		Date	
Comments (including type of equipment and loc	pation ner C2(e) if applic	vahla)	
		· · · ·	
	"		
			Check here if attachments.

•

## **ELEVATION CERTIFICATE**

## **BUILDING PHOTOGRAPHS**

See Instructions for Item A6.

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

IMPORTANT: In these spaces, copy the corresponding information from Section A.			FOR INSURANCE COMPANY USE
Building Street Address (including Apt., I 9 RIVERVIEW COURT	Jnit, Suite, and/or Bldg. No.) or	P.O. Route and Box No.	Policy Number:
City	State	ZIP Code	Company NAIC Number
NEPTUNE TOWNSHIP	New Jersey	07753	

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 Caption 11-29-2018 FRONT

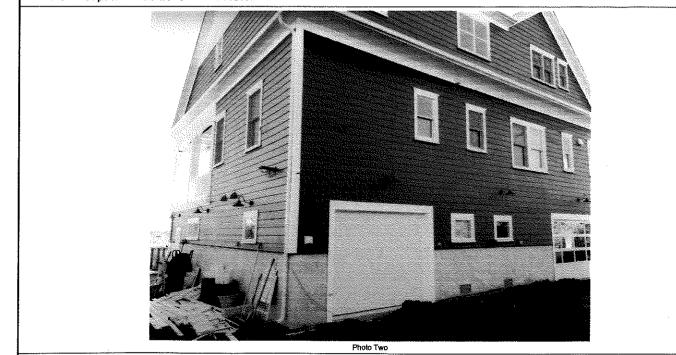


Photo Two Caption 11-29-2018 LEFT REAR

## **ELEVATION CERTIFICATE**

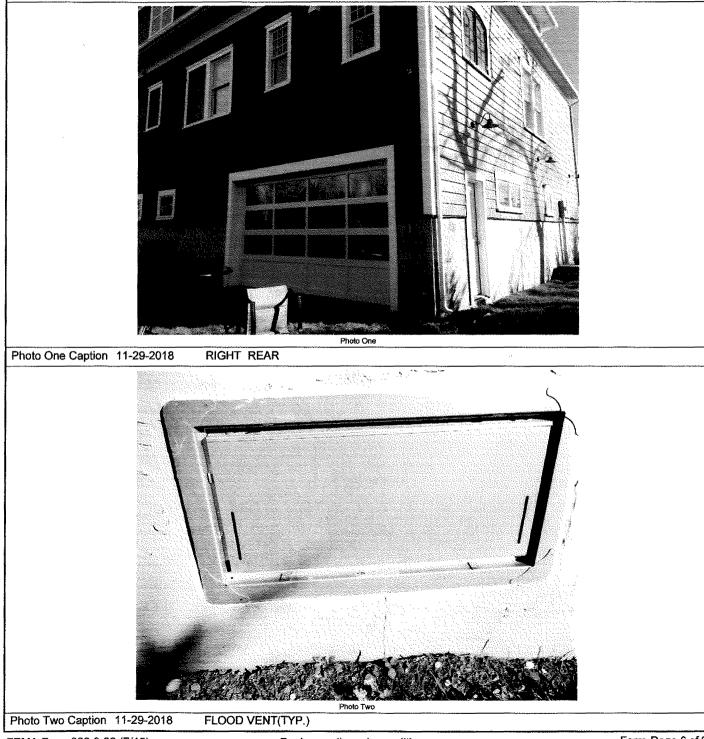
## BUILDING PHOTOGRAPHS

Continuation Page

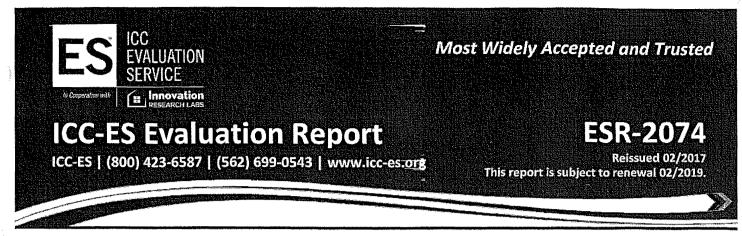
OMB No. 1660-0008 Expiration Date: November 30, 2018

		-	-
IMPORTANT: In these spaces, copy the corresponding information from Section A.			FOR INSURANCE COMPANY USE
Building Street Address (including Apt., 9 RIVERVIEW COURT	Unit, Suite, and/or Bldg. No.) or	P.O. Route and Box No.	Policy Number:
City	State	ZIP Code	Company NAIC Number
NEPTUNE TOWNSHIP	New Jersev	07753	

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.



FEMA Form 086-0-33 (7/15)



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<sup>®</sup> 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<sup>®</sup> (IBC)
- 2015, 2012, 2009 and 2006 International Residential Code<sup>®</sup> (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<sup>®</sup> 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,

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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<sup>®</sup> Automatic Foundation Flood Vents are available in various models and sizes as described in Table 1. The SmartVENT<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> 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<sup>®</sup> Model #1540-510 and SmartVENT<sup>®</sup> Overhead Door Model #1540-514 both have screen covers with  $^{1}$ /<sub>4</sub>-inch-by- $^{1}$ /<sub>4</sub>-inch (6.35 by 6.35 mm) openings, yielding 51 square inches (32 903 mm<sup>2</sup>) of net free area to supply natural ventilation. The SmartVENT<sup>®</sup> Stacking Model #1540-511 consists of two Model #1540-510 units in one assembly, and provides 102 square inches (65 806 mm<sup>2</sup>) 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<sup>®</sup> and FloodVENT<sup>®</sup> 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<sup>®</sup> 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<sup>2</sup>) of enclosed area, except that the SmartVENT<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> Stacking Model #1540-521 must be

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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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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 <sup>3</sup> / <sub>4</sub> " X 7 <sup>3</sup> / <sub>4</sub> "	200
SmartVENT®	1540-510	15 <sup>3</sup> /4" X 7 <sup>3</sup> /4"	200
FloodVENT <sup>®</sup> Overhead Door	1540-524	15 <sup>3</sup> /4" X 7 <sup>3</sup> /4"	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

TABLE 1-MODEL SIZES

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

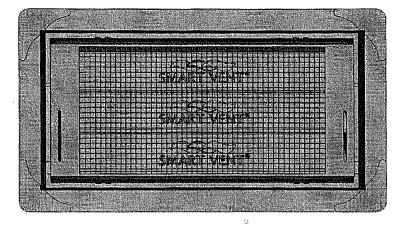


FIGURE 1-SMART VENT: MODEL 1540-510

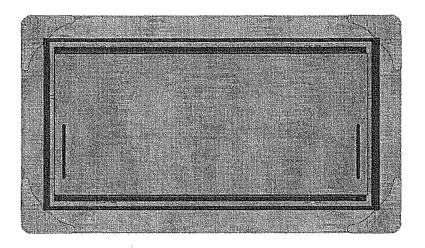


FIGURE 2-SMART VENT MODEL 1540-520

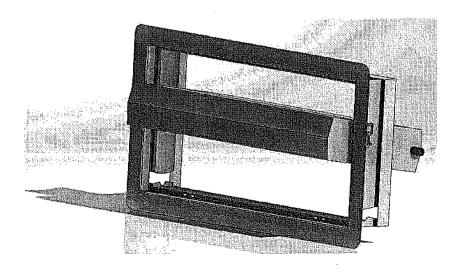


FIGURE 3-SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN



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## ESR-2074 CBC and CRC Supplement

Issued 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<sup>®</sup> AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

### 1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, recognized in ICC-ES master evaluation report ESR-2074, have also been evaluated for compliance with codes noted below.

#### Applicable code edition:

- 2016 California Building Code (CBC)
- 2016 California Residential Code (CRC)

## 2.0 CONCLUSIONS

#### 2.1 CBC:

The Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2074, comply with 2016 CBC Chapter 12, provided the design and installation are in accordance with the 2015 *International Building Code*<sup>®</sup> (IBC) provisions noted in the master report and the additional requirements of CBC Chapters 12, 16 and 16A, as applicable.

The products recognized in this supplement have not been evaluated under CBC Chapter 7A for use in the exterior design and construction of new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area.

#### 2,2 CRC:

The Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2074, comply with the 2016 CRC, provided the design and installation are in accordance with the 2015 *International Residential Code*<sup>®</sup> (IRC) provisions noted in the master report.

The products recognized in this supplement have not been evaluated under 2016 CRC Chapter R337, for use in the exterior design and construction of new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas or any Wildland-Urban Interface Fire Area.

The products recognized in this supplement have not been evaluated for compliance with the International Wildland–Urban Interface Code<sup>®</sup>.

This supplement expires concurrently with the master report, reissued February 2017 and revised November 2017.

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REPORT HOLDER:

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#### **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 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, recognized in ICC-ES master report ESR-2074, have also been evaluated for compliance with the codes noted below.

#### Applicable code editions:

- 2017 Florida Building Code—Building
- 2017 Florida Building Code—Residential

## 2.0 CONCLUSIONS

The Smart Vent<sup>®</sup> Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-2074, comply with the *Florida Building Code*—*Building* and the FRC, provided the design and installation are in accordance with the 2015 *International Building Code*<sup>®</sup> provisions noted in the master report.

Use of the Smart Vent<sup>®</sup> Automatic Foundation Flood Vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential*.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

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