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

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

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

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner,

A1 Ruilding O		ECTION A - PROPE	KTY INF	ORMATION		FOR IN	SURANCE COMPANY USE
PATRICIA & CI	A1. Building Owner's Name PATRICIA & CHARLES SOFIA				Number:		
A2. Building Str Box No. 2906 SUNSET		(including Apt., Unit, s	Suite, ar	nd/or Bldg. No.) or	P.O. Route and	Compa	ny NAIC Number:
City LONGPORT				State New Jerse	еу	ZIP Cod 08403	е
BLOCK 45 LO	scription (Lot 7	and Block Numbers,	Tax Par	rcel Number, Lega	I Description, etc.)		
A5. Latitude/Lon A6. Attach at lea A7. Building Diag A8. For a building a) Square for b) Number o c) Total net a d) Engineere A9. For a building a) Square for b) Number of	gitude: Lat. st 2 photogram Number g with a crawl otage of crawl f permanent force of flood openion with an attactage of attact permanent floed of flood openioned flood openi	space or enclosure(subspace or enclosure(subspace or enclosure(subspace or enclosure(subspace or enclosure(subspace or enclosure(subspace or enclosure(subspace)) Spenings in A8.b 1 Spenings in A9.b 1 Spenings in A9.b 1	Long the Certi): s) crawlspa 1,200 No	. 74 31' 33.6" ificate is being use 1,155 sq iface or enclosure(s sq in	Horizontal Dated to obtain flood insets ft) within 1.0 foot abo	tum: NA	D 1927 X NAD 1983
	SE	CTION B - FLOOD	INSUR <i>A</i>	NCF RATE MAI	P /EIDM\ INCODM	TION	
B1. NFIP Communi LONGPORT	ty Name & C	ommunity Number		B2. County Nam ATLANTIC		ATION	B3. State New Jersey
4. Map/Panel Number \$5302/0001	B5. Suffix	B6. FIRM Index Date 08/12/1970	Ef	IRM Panel ffective/ evised Date /1983	B8. Flood Zone(s	(Zo	se Flood Elevation(s) ne AO, use Base od Depth)
10. Indicate the so	urce of the B	ase Flood Elevation (Community Determ	BFE) da	ata or base flood d	epth entered in Item	B9:	
11. Indicate elevat	ion datum us	ed for BFE in Item B9): 🔀 NO	GVD 1929 🔲 NA	AVD 1988 🔲 Oth	ner/Source:	
12. Is the building Designation Da	ocated in a (stem (CBRS) area	or Otherwise Prote	cted Area (C	PA)? Yes 🗵 No

ELEVATION CERTIFICATE

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

SOB SUNSET AVENUE State ZIP Code (Company NAIC Number 2008 SUNSET AVENUE SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED) C1. Building elevations are based on: Construction Drawings* Building Under Construction* Finished Construction An away Elevation Cartificate will be required when construction of the building to complete. C2. Elevations - Zones AI-A30, AE, AH, A (with BFE), VE, VI-V30, V (with BFE), AR, AR/A, AR/AE, AR/AI-A30, AR/AH, AR/AO. Camplete Items C2. a-h below according to the building diagram specified in them A? In Puerto Ricc only, enter meters. Benchmark Utilized: Vertical Datum: MGVD 1929 Indicate elevation datum used for the elevations in items a) through h) below. Signature of building elevations must be the same as that used for the BFE. Datum used for building elevations must be the same as that used for the BFE. Datum used for building elevations must be the same as that used for the BFE. OF the next higher floor OF the	IMPORTANT: In these spaces, copy the corre	FOR INSURANCE COMPANY US		
SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED) C1. Building elevations are based on:	2906 SUNSET AVENUE	te, and/or Bldg. No.) or F	P.O. Route and Box No.	
C1. Building elevations are based on:	# APPLIA *			Company NAIC Number
C1. Building elevations are based on:	SECTION C - BUILD	OING ELEVATION INFO	ORMATION (SURVEY R	EQUIRED)
Datum used for building elevations must be the same as that used for the BFE. Check the measurement used. a) Top of bottom floor (including basement, crawlspace, or enclosure floor) b) Top of the next higher floor c) Bottom of the lowest horizontal structural member (V Zones only) d) Attached garage (top of slab) c) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments) f) Lowest adjacent (finished) grade next to building (LAG) g) Highest adjacent (finished) grade next to building (LAG) b) Lowest adjacent (finished) grade next to building (LAG) feet meters g) Highest adjacent (finished) grade next to building (LAG) f) Lowest adjacent (finished) grade next to building (LAG) f) Lowest adjacent (finished) grade next to building (LAG) f) Lowest adjacent fraction is to be signed at lowest elevation of deck or stairs, including structural support SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. In this Certificate progressins my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001. Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Edition Name RITHUR W. PONZIO, JR. GS28314 State Telephone The CITY New Jersey OB401 Date Telephone 11/01/2016 (609) 344-8194	C1. Building elevations are based on: *A new Elevation Certificate will be required. C2. Elevations – Zones A1–A30, AE, AH, A (will Complete Items C2.a–h below according to Benchmark Utilized: Indicate elevation datum used for the elevation.	onstruction Drawings* d when construction of th th BFE), VE, V1–V30, V the building diagram spe Vertical I tions in items a) through	Building Under Construe building is complete. (with BFE), AR, AR/A, AR/ecified in Item A7. In Puerton Datum: NGVD 1929	uction* X Finished Construction
a) Top of bottom floor (including basement, crawlspace, or enclosure floor) b) Top of the next higher floor c) Bottom of the lowest horizontal structural member (V Zones only) Attached garage (top of slab) 5. 84	Datum used for building elevations must be	the same as that used for	or the DEC	
g) Highest adjacent (finished) grade next to building (HAG) b) Lowest adjacent grade at lowest elevation of deck or stairs, including control by the information of this Certificate represents my best efforts to interpret the data available. I understand that any false that may be punishable by fine or imprisorment under 18 U.S. Code, Section 1001. Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Certifier's Name ARTHUR W. PONZIO, JR. Company Name RTHUR W. PONZIO CO. & ASSOC., INC. Company Name R	 a) Top of bottom floor (including basement, b) Top of the next higher floor c) Bottom of the lowest horizontal structural d) Attached garage (top of slab) e) Lowest elevation of machinery or equipm 	member (V Zones only)	e floor)5. 6413. 37	
g) Highest adjacent (finished) grade next to building (HAG) b) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. It is certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001. Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Check here if attachments. Certifier's Name License Number GS28314 Eitle AND SURVEYOR Company Name RTHUR W. PONZIO CO. & ASSOC., INC. GREAT WERSEN State Date 11/01/2016 State Telephone (609) 344-8194 Date Telephone (609) 344-8194	f) Lowest adjacent (finished) grade next to l	ouilding (LAG)	5. 33	X feet meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. It is Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001. Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Check here if attachments. Certifier's Name License Number GS28314 Itle AND SURVEYOR Company Name RTHUR W. PONZIO, JR. GS28314 Flace STHUR W. PONZIO CO. & ASSOC., INC. Seal Here Date TLANTIC CITY New Jersey Date Telephone 11/01/2016 (609) 344-8194	g) Highest adjacent (finished) grade next to	building (HAG)	5. 81	
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This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. It is certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001. Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section A provided by a licensed land surveyor? Were latitude and longitude in Section 1001. Were	SECTION D - SURV	EYOR, ENGINEER, OF	R ARCHITECT CERTIFIC	ATION
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AND SURVEYOR Company Name RTHUR W. PONZIO CO. & ASSOC., INC. ddress 00 NORTH DOVER AVENUE ity TLANTIC CITY State New Jersey 08401 ggature Date 11/01/2016 (609) 344-8194 opy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner. omments (including type of equipment and location, per C2(e), if applicable)	ARTHUR W. PONZIO, JR.		r	
ARTHUR W. PONZIO CO. & ASSOC., INC. Seal Here ON NORTH DOVER AVENUE Ity TLANTIC CITY State New Jersey 08401 Date 11/01/2016 Telephone (609) 344-8194 Date 11/01/2016 Opy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner. Demments (including type of equipment and location, per C2(e), if applicable)	Title _AND SURVEYOR			
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11/01/2016 (609) 344-8194 ppy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner. promisents (including type of equipment and location, per C2(e), if applicable)	CITY CITY			
omments (including type of equipment and location, per C2(e), if applicable)	diggature /			3
omments (including type of equipment and location, per C2(e), if applicable)	opy all pages of this Elevation Certificate and all atta	achments for (1) communi	ty official, (2) insurance age	nt/company and (3) building owner
ROJECT #32756 BOTTOM DUCT WORK ELEV = 12.82' SMART VENT MODEL #1540-510	omments (including type of equipment and location	n, per C2(e), if applicable	e)	The state of standing owner.
	ROJECT #32756 BOTTOM DUCT WORK EL	.EV = 12.82' S	MART VENT MODEL #154	10-510

ELEVATION CERTIFICATE

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

IMPORTANT: In these spaces, copy the correspond	FOR INSURANCE COMPANY USE			
Building Street Address (including Apt., Unit, Suite, and 2906 SUNSET AVENUE	d/or Bldg. No.) or P.(O. Route and Box No.	Policy Num	The state of the s
10110000	State New Jersey	ZIP Code 08403	Company N	NAIC Number
SECTION E – BUILDING EL FOR ZONE	EVATION INFORM AO AND ZONE A	A (WITHOUT BFE)	OT REQUIRED))
For Zones AO and A (without BFE), complete Items E1 complete Sections A, B,and C. For Items E1–E4, use nuenter meters.	atural grade, if avail	able. Check the measu	irement used. Ir	n Puerto Rico only,
E1. Provide elevation information for the following and the highest adjacent grade (HAG) and the lowest a a) Top of bottom floor (including basement,	check the appropria djacent grade (LAG	te boxes to show whet).	her the elevatio	n is above or below
crawlspace, or enclosure) is b) Top of bottom floor (including basement,		feet _ me	ters 🗌 above	e or below the HAG.
crawlspace, or enclosure) is		feet me		e or Delow the LAG.
E2. For Building Diagrams 6–9 with permanent flood op the next higher floor (elevation C2.b in the diagrams) of the building is	enings provided in s	Section A Items 8 and/		1–2 of Instructions), or ☐ below the HAG.
E3. Attached garage (top of slab) is		feet _ met		or below the HAG.
E4. Top of platform of machinery and/or equipment servicing the building is			ers 🗌 above	or below the HAG.
E5. Zone AO only: If no flood depth number is available floodplain management ordinance? Yes	is the top of the bo No Unknown.	ttom floor elevated in a The local official mus	accordance with t certify this info	the community's rmation in Section G.
SECTION F - PROPERTY OWNE	R (OR OWNER'S I	REPRESENTATIVE) C	ERTIFICATION	١
The property owner or owner's authorized representative community-issued BFE) or Zone AO must sign here. The	who completes Sec statements in Sect	ctions A, B, and E for Z ions A, B, and E are co	one A (without berect to the bes	a FEMA-issued or t of my knowledge.
Property Owner or Owner's Authorized Representative's				, ,
Address	City	S	tate	ZIP Code
Signature	Date	- T	elephone	
Comments				
				9
			☐ Check	here if attachments.

ELEVATION CERTIFICATE

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

IMPORTANT: In these spaces, copy			FOR INSURANCE COMPANY USE
Building Street Address (including Apt. 2906 SUNSET AVENUE	, Unit, Suite, and/or Bldg. No.)	or P.O. Route and Box No.	Policy Number:
City LONGPORT	State New Jersey	ZIP Code 08403	Company NAIC Number
	SECTION G - COMMUNITY I	INFORMATION (OPTIONAL)
engineer, or architect who is	ilevation Certificate. Complete only, enter meters. was taken from other document authorized by law to certify elev	the applicable item(s) and signature items that has been signed.	anagement ordinance can complete gn below. Check the measurement and sealed by a licensed surveyor, the source and date of the elevation
data in the Comments area b	elow.)		MA-issued or community-issued BFE)
	ms G4–G10) is provided for co	mmunity floodplain managen	nent purposes.
G4. Permit Number	G5. Date Permit Issue		Date Certificate of Compliance/Occupancy Issued
G7. This permit has been issued for:	New Construction	Substantial Improvement	
G8. Elevation of as-built lowest floor (ir of the building:	cluding basement)	feet	t meters Datum
G9. BFE or (in Zone AO) depth of flood	ling at the building site:	feet	meters Datum
G10. Community's design flood elevation	n:	feet	meters Datum
Local Official's Name		Title	
Community Name		Telephone	
Signature		Date	
Comments (including type of equipment a	and location, per C2(e), if applic	cable)	
		Delication of the second	
			Check here if attachments.

BUILDING PHOTOGRAPHS

ELEVATION CERTIFICATE

See Instructions for Item A6

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

IMPORTANT: In these spaces, co	FOR INSURANCE COMPANY USE		
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 2906 SUNSET AVENUE			Policy Number:
City LONGPORT	State New Jersey	ZIP Code 08403	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.

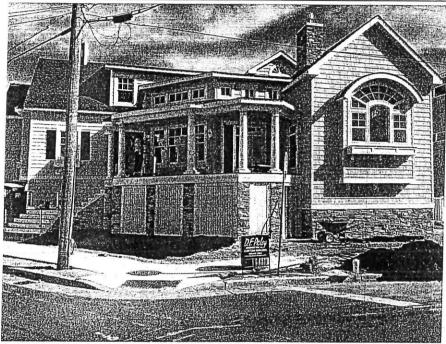


Photo One Caption

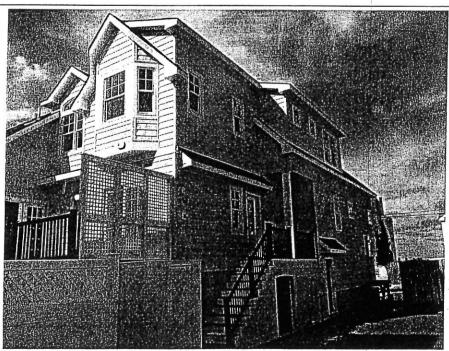


Photo Two Caption

BUILDING PHOTOGRAPHS

ELEVATION CERTIFICATE

Continuation Page

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

IMPORTANT: In these spaces, co	FOR INSURANCE COMPANY USE		
Building Street Address (including 2906 SUNSET AVENUE	Policy Number:		
City	State	ZIP Code	Company NAIC Number
LONGPORT			

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.

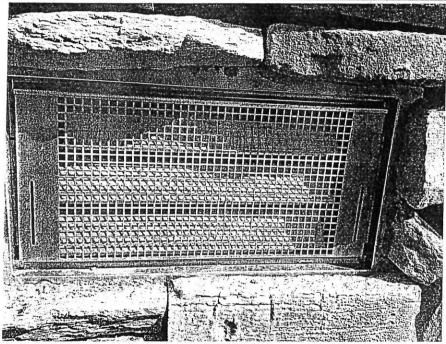


Photo One

Photo One Caption



Photo Two



ICC-ES Evaluation Report

ESR-2074*

Reissued December 2012

This report is subject to renewal February 1, 2015.

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

A Subsidiary of the International Code Council®

DIVISION: 08 00 00-OPENINGS

Section: 08 95 43—Vents/Foundation Flood Vents

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: **FLOODVENT™** MODEL #1540-520; FLOODVENT™ STACKING MODEL #1540-521; SMARTVENT™ MODEL #1540-510; SMARTVENT™ STACKING MODEL #1540-511; WOOD WALL FLOOD MODEL #1540-570; WOOD WALL **OVERHEAD** DOOR MODEL #1540-574; FLOODVENT™ OVERHEAD DOOR MODEL #1540-524; SMARTVENT™ OVERHEAD DOOR MODEL #1540-514

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 and 2006 International Building Code® (IBC)
- 2009 and 2006 International Residential Code® (IRC)

Properties evaluated:

- Physical operation
- Water flow

2.0 USES

The Smart Vent® units are automatic foundation flood vents (AFFVs) employed to equalize hydrostatic pressure on nonfire-resistance-rated foundation walls, rolling-type overhead doors and building walls subject to rising or falling flood waters. The Smart Vent® units are intended for use where flood hazard areas have been established in accordance with IBC Section 1612.3 or IRC Section R3222.1. Certain models also allow natural ventilation in accordance with Section 1203 of the IBC or Section 408.1 of the IRC.

3.0 DESCRIPTION

3.1 General:

When subjected to pressure from rising water, the Smart Vent® AFFVs disengage, 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 AFFV 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 plate to rotate out of the way and allow flow. The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. The SmartVENT™ Stacking Model #1540-511 FloodVENT™ Stacking Model #1540-521 units each contain two vertically arranged openings per unit.

3.2 Engineered Opening:

The AFFVs comply with the design principle noted in Section 2.6.2.2 of ASCE/SEI 24 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 AFFVs must be installed in accordance with Section 4.0.

3.3 Model Sizes:

The FloodVENT™ Model #1540-520, SmartVENT™ Model #1540-510, FloodVENT™ Overhead Door Model #1540-524, and SmartVENT™ Overhead Door Model #1540-514 units measure $15^3/_4$ inches wide by $7^3/_4$ inches high (400 by 196.9 mm). The Wood Wall Flood Model #1540-570 and Wood Wall Flood Overhead Door Model #1540-574 units measure 14 inches wide by 83/4 inches high (355.6 by 222.25 mm). The SmartVENT™ Stacking Model #1540-511 and FloodVENT™ Stacking Model #1540-521 units measure 16 inches wide by 16 inches high (406.4 by 406.4 mm).

3.4 Ventilation:

The SmartVENT® Model #1540-510 and SmartVENT® Overhead Door Model #1540-514 both have screen covers with $\frac{1}{4}$ -inch-by- $\frac{1}{4}$ -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 AFFVs recognized in this report do not offer natural ventilation.

4.0 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. The mounting straps allow mounting in wood, masonry and

*Revised June 2014



concrete walls up to 12 inches (305 mm) thick. In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Smart Vent® AFFVs must be installed as follows:

- With a minimum of two openings on different sides of each enclosed area.
- With a minimum of one AFFV 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 AFFV for every 400 square feet (37.2 m²) of enclosed area.
- Below the base flood elevation.
- With the bottom of the AFFV located a maximum of 12 inches (305.4 mm) above grade.

5.0 CONDITIONS OF USE

The Smart Vent® AFFVs 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® AFFVs 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® AFFVs 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 Automatic Foundation Flood Vents (AC364), dated October 2013 (editorially revised May 2014).

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).

Engineered Flood Openings Certificate To satisfy requirements of the National Flood Insurance Program

This certification must be submitted to, and kept on file by, the local jurisdiction's permit authority. A copy should be retained by the owner to demonstrate compliance in order to receive the best flood insurance rating.

The Smart VENT® and Flood VENT™ Foundation Flood Vent is certified as meeting the flood opening requirements for engineered openings as set forth in the Federal Emergency Management Agency's National Flood Insurance Program regulations (44 CFR 60.3(c)(5)) and ASCE 24-98, provided it is installed according to the those references, as summarized below. Flood openings are required in enclosures below elevated buildings, attached and detached garages, and accessory structures that meet the required limitations. For a copy of the report documenting this certification dated June 21, 2002, and a copy of the National Evaluation Service report NER 624, contact Smart VENT, Inc., at 877/441-8368 or resistive.

www.smartvent.com

I do hereby certify that the Smart VENT® Louvered Foundation Flood Vent and the FloodVENT™ Insulated Foundation Flood Vent opening (s) is designed for installation in buildings, will allow for the automatic equalizing of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater during floods up to and including the base (100-year) flood. One Smart VENT® or one FloodVENT™ for every 200 Sq.Ft. Of enclosed area will provide sufficient hydrostatic pressure equalization during a flood provided the installation limitations and instructions are followed as listed below. To Calculate the required number of Smart VENTS® or FloodVENTS™ divide the Square Feet of enclosed area by 200.

Example: A 2000 Sq.Ft. enclosed area requires 10 vents. 2000 Sq.Ft / 200 = 10 Vents

LIME PARTY IN THE		
Signature Cole Ju	5.	OF NEW JOHN
Title Professional Engineer		A STATE OF THE STA
Type of License Professional Engineering		19 Hou. 2
License Number NJPE GE26637 J		68 46617
*Project Name		
*Project Address		THE THE
*Date Submitted		"Office all the
* Required Fields*		Professional Seal
Applicated August described August 1		

Installation Limitations and Instructions

- The Smart VENT® or FloodVENT™ unit provides sufficient automatic equalization of hydrostatic pregsure on walls and foundations of buildings located in flood hazard areas where the rate of rise is expected to be less than or approximately 5 feet per hour.
- Enclosed areas below otherwise elevated buildings, non-elevated attached and detached garages, and certain non-elevated accessory structures located in flood hazard areas are to be used solely for parking of vehicles, building access, or storage.
- Each enclosed area shall have at least two flood openings, installed on different sides of the enclosed area.
- 4. The bottom of the flood openings shall be no more than one foot above the adjacent finished ground level.
- Installation must be in accordance with manufacturer's instructions.

"REFERENCE ONLY" From FEMA TB 1-93 Guidance for Engineered Openings

Openings in Foundation Walls

National Flood Insurance Program (NFIP) Technical Bulletin TB 1-93

"In situations where it is not feasible or desirable to meet the openings criteria stated previously, a design professional (registered engineer or architect) may design and certify openings. This section provides guidance for such engineered designs. For openings not meeting all four requirements for non-engineered openings listed on page 2 and 3 of TB 1-93, certification by a registered professional engineer or architect is required. Such certification must be submitted to, and kept on file by, the community. These certifications must assure community officials that the openings are designed in accordance with accepted standards of practice. A certification may be affixed to the design drawings or submitted separately. It must include appropriate certification language, and the name, title, address, signature, type of license, license number, and professional seal of the certifier." (TB 1-93 is available through Smart VENT® or online at www.fema.gov)

Form: SMRT100 Rev.A July 2002

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ICC-ES Evaluation Report

ESR-2074*

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

A Subsidiary of the International Code Council®

DIVISION: 08 00 00-OPENINGS

Section: 08 95 43-Vents/Foundation Flood Vents

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: FLOODVENT™ MODEL #1540-520; FLOODVENT™ STACKING MODEL #1540-521; SMARTVENT™ MODEL #1540-510; SMARTVENT™ STACKING MODEL #1540-511; WOOD WALL FLOOD MODEL #1540-570; WOOD WALL FLOOD OVERHEAD DOOR MODEL #1540-574; FLOODVENT™ OVERHEAD DOOR MODEL #1540-524; SMARTVENT™ OVERHEAD DOOR MODEL #1540-514

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 and 2006 International Building Code® (IBC)
- 2009 and 2006 International Residential Code® (IRC)

Properties evaluated:

- Physical operation
- Water flow

2.0 USES

The Smart Vent® units are automatic foundation flood vents (AFFVs) employed to equalize hydrostatic pressure on nonfire-resistance-rated foundation walls, rolling-type overhead doors and building walls subject to rising or falling flood waters. The Smart Vent® units are intended for use where flood hazard areas have been established in accordance with IBC Section 1612.3 or IRC Section R3222.1. Certain models also allow natural ventilation in accordance with Section 1203 of the IBC or Section 408.1 of the IRC.

3.0 DESCRIPTION

3.1 General:

When subjected to pressure from rising water, the Smart Vent® AFFVs disengage, 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 AFFV 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 plate to rotate out of the way and allow flow. The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. The SmartVENT™ Stacking Model #1540-521 and FloodVENT™ Stacking Model #1540-521 units each contain two vertically arranged openings per unit.

3.2 Engineered Opening:

The AFFVs comply with the design principle noted in Section 2.6.2.2 of ASCE/SEI 24 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 AFFVs must be installed in accordance with Section 4.0.

3.3 Model Sizes:

The FloodVENT™ Model #1540-520, SmartVENT™ Model #1540-510, FloodVENT™ Overhead Door Model #1540-524, and SmartVENT™ Overhead Door Model #1540-514 units measure 15³/₄ inches wide by 7³/₄ inches high (400 by 196.9 mm). The Wood Wall Flood Model #1540-570 and Wood Wall Flood Overhead Door Model #1540-574 units measure 14 inches wide by 8³/₄ inches high (355.6 by 222.25 mm). The SmartVENT™ Stacking Model #1540-511 and FloodVENT™ Stacking Model #1540-521 units measure 16 inches wide by 16 inches high (406.4 by 406.4 mm).

3.4 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 AFFVs recognized in this report do not offer natural ventilation.

4.0 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. The mounting straps allow mounting in wood, masonry and

*Revised June 2014

