

DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
ELEVATION CERTIFICATE

IMPORTANT: FOLLOW THE INSTRUCTIONS ON PAGES 9-16

OMB Control Number: 1660-0008
Expiration: 11/30/2018

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.					
SECTION A - PROPERTY INFORMATION				FORM INSURANCE COMPANY USE	
A1. Building Owner's Name Matthew Grady DeSoto				Policy Number: 1	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 20 S. Thurlow Ave.				Company NAIC Number:	
City CITY OF MARGATE		State NJ		Zip Code 08402	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Lot 20 and Block 121					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL					
A5. Latitude/Longitude: Lat. N 39.3235 Long. W 074.5088 Horizontal Datum: ☐ NAD 1927 ☒ NAD 1983					
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.					
A7. Building Diagram Number 8					
A8. For a building with a crawlspace or enclosure(s):			A9. For a building with an attached garage:		
a) Square footage of crawlspace or enclosure(s) 1502* sq. ft.			a) Square footage of attached garage N/A sq ft		
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 13*			b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade N/A		
c) Total net area of flood openings in A8.b 6,460* sq in			c) Total net area of flood openings in A9.b N/A sq in		
d) Engineered flood openings? ☒ Yes ☐ No			d) Engineered flood openings? ☐ Yes ☒ No		
SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number CITY OF MARGATE & 345304			B2. County Name ATLANTIC COUNTY		B3. State NJ
B4. Map/Panel Number 345304 / 0001	B5. Suffix C	B6. FIRM Index Date No index printed	B7. FIRM Panel Effective/Revised Date 10/18/1983	B8. Flood Zone(s) A8**	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 10**
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: ☐ FIS Profile ☒ FIRM ☐ Community Determined ☐ Other/Source: _____					
B11. Indicate elevation datum used for BFE in Item B9: ☒ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source: _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No Designation Date: ☐ CBRS ☐ OPA					
SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)					
C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☒ Finished Construction					
C2. Elevations - Zones A1 - A30, AE, AH, A (with BFE), VE, V1 - V30, V (with BFE), AR, AR/A, AR/AE, AR/A1 - A30, AR/AH, AR/AO. Complete Items C2.a - h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters. * A new Elevation Certificate will be required when construction of the building is complete.					
Benchmark Utilized: private Vertical Datum: NGVD29					
Indicate elevation datum used for the elevations in items a) through h) below. ☒ NGVD 1929 ☐ NAVD 1988 ☐ Other/Source: _____					
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)	9.8***	-		☒ feet ☐ meters	
b) Top of the next higher floor	13.4***	-		☒ feet ☐ meters	
c) Bottom of the lowest horizontal structural member (V Zones only)	N/A	-		☒ feet ☐ meters	
d) Attached garage (top of slab)	N/A	-		☒ feet ☐ meters	
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	10.7****	-		☒ feet ☐ meters	
f) Lowest adjacent (finished) grade next to building (LAG)	9.7*****	-		☒ feet ☐ meters	
g) Highest adjacent (finished) grade next to building (HAG)	10.1	-		☒ feet ☐ meters	
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	9.7	-		☒ feet ☐ meters	

ELEVATION CERTIFICATE

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20 S. Thurlow Ave.

CITY OF MARGATE

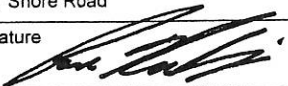
NJ

08402

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. I certify that the information on this 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?
☒ Check here if attachments. ☒ Yes ☐ No

Certifier's Name Paul M. Koelling, PLS, CFM		License Number NJ24GS 04328800	
Title Licensed Land Surveyor		Company Name Paul Koelling&AssocLLC-COA24GA28256300	
Address 2161 Shore Road	City Linwood	State NJ	Zip Code 08221
Signature 	Date 6/21/2016	Telephone +1 (609) 927-0279	

PLACE
SEAL
HERE

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including type of equipment and location, per C2(e), if applicable)"

*A8b.) 1127 sf crawlspace vented with seven (7) Smart Vents Model #1540-510 engineered for 200 square inches of net area each (1127 sf crawlspace inclusive of 25 sf elevator shaft).....55 s.f. utility room.....320 sf porch enclosure vented with six fixed louver vents calculated 20 inches from grade as 5,060 sq. inches of net free area.....

**B8 & B9.) FEMA Pre-FIRM Zone "AE".....Base Flood Elevation 10 ft. (NAVD88) converted = 11.3 ft. (NGVD29)

***C2a.) crawlspace enclosure (elev 9.8).....utility room (elev 10.0).....elevator shaft (elev 12.4).....main living floor (elev 13.4)

****C2e.) exterior air unit (elev. 13.6)..... ductwork (elev. 10.7)..... furnace (elev 13.7)..... elevator equipment (elev. 13.7)..... electrical outlet (elev. 12.8)

*****C2f.) dwelling is a possible LOMA candidate

Signature  Date 6/21/2016

SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1 -E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1 -E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).

a) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ - _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

b) Top of bottom floor (including basement, crawlspace, or enclosure) is _____ - _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.

E2. For Building Diagrams 6 -9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8 -9 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is _____ - _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E3. Attached garage (top of slab) is _____ - _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

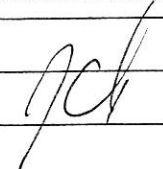
E4. Top of platform of machinery and /or equipment servicing the building is _____ - _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown. The local official must certify this information in Section G.

SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. The statements in Sections A, B, and E are correct to the best of my knowledge.

Property Owner or Owner's Authorized Representative's Name:

Address	City	State	ZIP Code
Signature 	Date 6/28/16	Telephone	

Comments

☐ Check here if attachments.



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ICC-ES Evaluation Report

ESR-2074

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Reissued 02/2017

This report is subject to renewal 02/2019.

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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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)[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Physical operation
- Water flow

2.0 USES

The Smart Vent® units are engineered mechanically operated flood vents (FVs) employed to equalize hydrostatic pressure on walls of enclosures subject to rising or falling flood waters. Certain models also allow natural ventilation.

3.0 DESCRIPTION
3.1 General:

When subjected to rising water, the Smart Vent® FVs internal floats are activated, then pivot open to allow flow in either direction to equalize water level and hydrostatic pressure from one side of the foundation to the other. The FV pivoting door is normally held in the closed position by a buoyant release device. When subjected to rising water,

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 square feet (37.2 m²) of enclosed area.

- Below the base flood elevation.
- With the bottom of the FV located a maximum of 12 inches (305.4 mm) above the higher of the final grade or floor and finished exterior grade immediately under each opening.

5.0 CONDITIONS OF USE

The Smart Vent® FVs described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The Smart Vent® FVs must be installed in accordance with this report, the applicable code and the manufacturer's installation instructions. In the event of a conflict, the instructions in this report govern.

- 5.2** The Smart Vent® FVs must not be used in the place of "breakaway walls" in coastal high hazard areas, but are permitted for use in conjunction with breakaway walls in other areas.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated August 2015.

7.0 IDENTIFICATION

The Smart VENT® models recognized in this report must be identified by a label bearing the manufacturer's name (Smartvent Products, Inc.), the model number, and the evaluation report number (ESR-2074).

TABLE 1—MODEL SIZES

MODEL NAME	MODEL NUMBER	MODEL SIZE (in.)	COVERAGE (sq. ft.)
FloodVENT®	1540-520	15 ³ / ₄ " X 7 ³ / ₄ "	200
SmartVENT®	1540-510	15 ³ / ₄ " X 7 ³ / ₄ "	200
FloodVENT® Overhead Door	1540-524	15 ³ / ₄ " X 7 ³ / ₄ "	200
SmartVENT® Overhead Door	1540-514	15 ³ / ₄ " X 7 ³ / ₄ "	200
Wood Wall FloodVENT®	1540-570	14" X 8 ³ / ₄ "	200
Wood Wall FloodVENT® Overhead Door	1540-574	14" X 8 ³ / ₄ "	200
SmartVENT® Stacker	1540-511	16" X 16"	400
FloodVent® Stacker	1540-521	16" X 16"	400

For SI: 1 inch = 25.4 mm; 1 square foot = m²

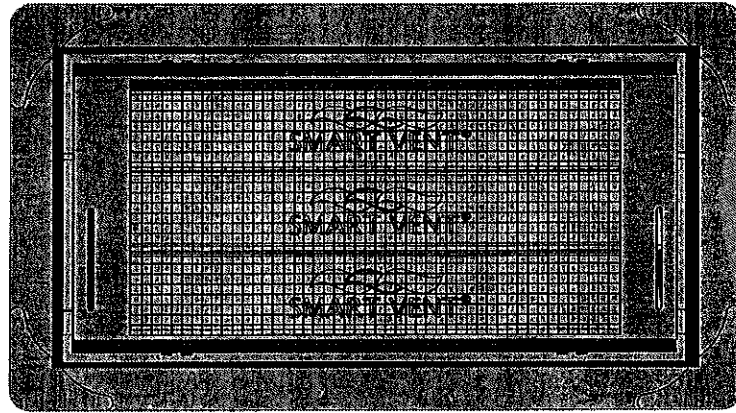


FIGURE 1—SMART VENT: MODEL 1540-510

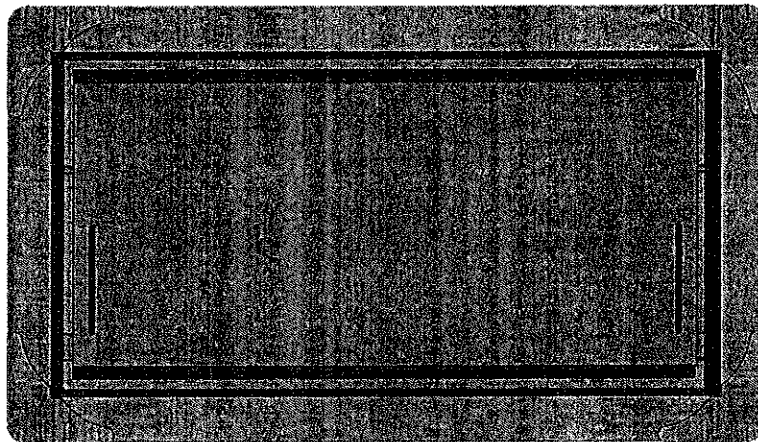


FIGURE 2—SMART VENT MODEL 1540-520

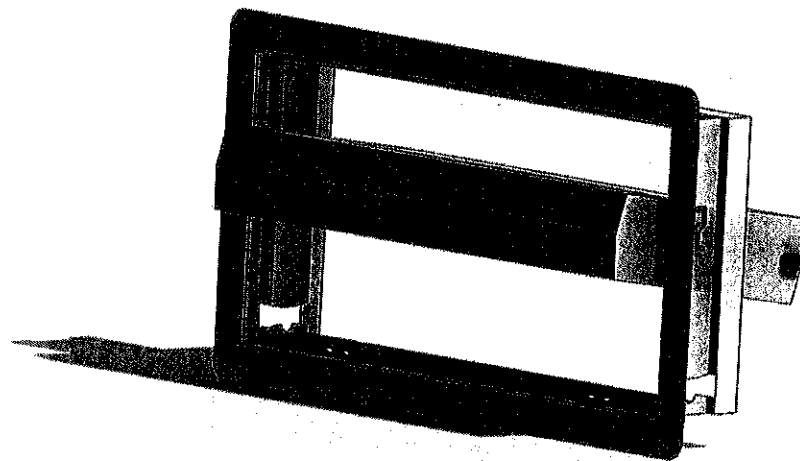


FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN