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

ELEVATION CERTIFICATE

IMPORTANT: Follow the instructions on pages 1-9.

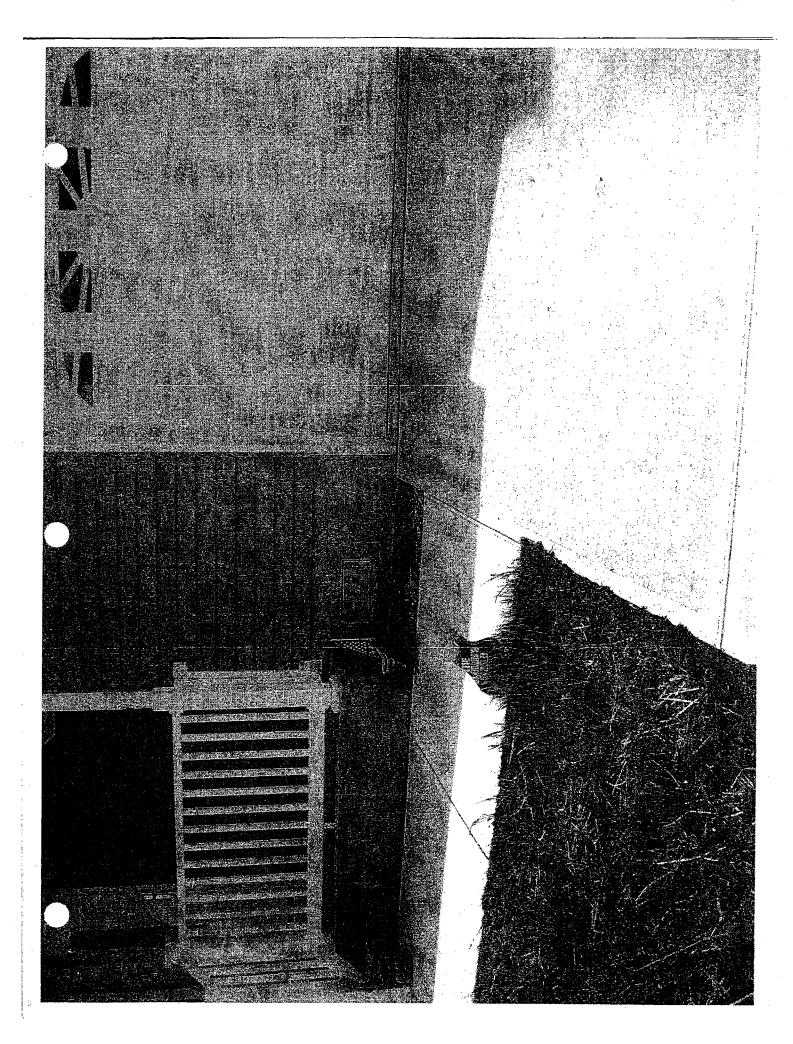
OMB No. 1660-0008 Expiration Date: July 31, 2015

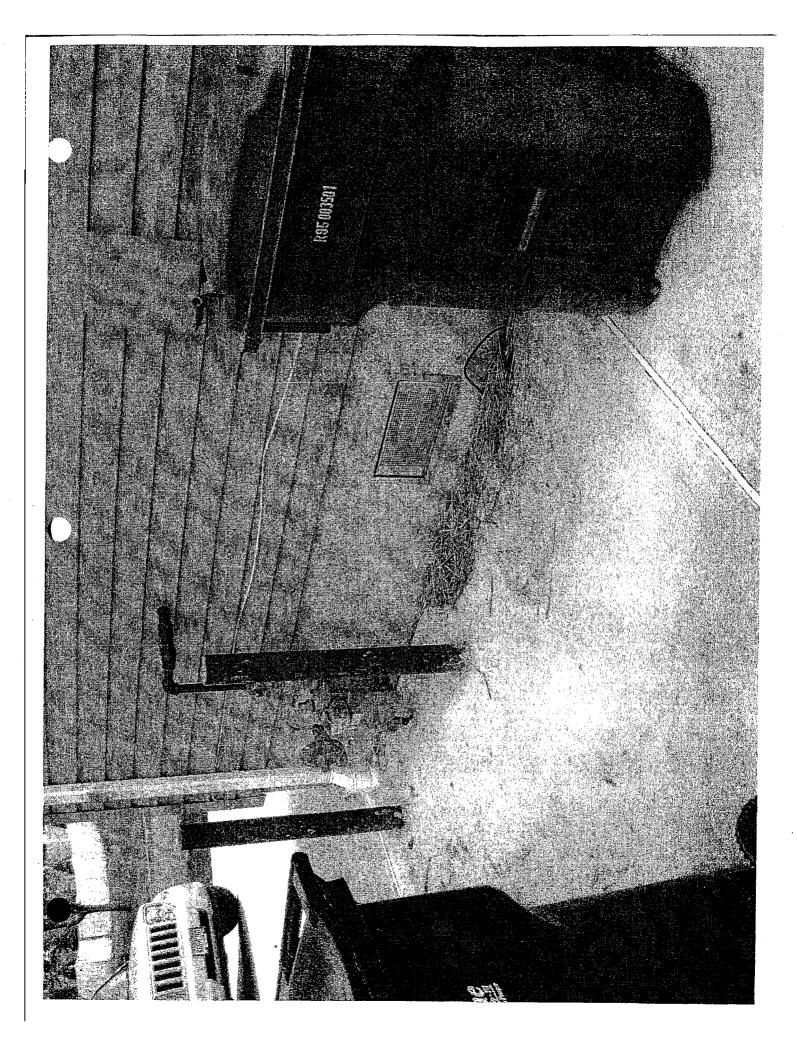
| 7 - 97 | • | SECTION | N A – PROPERT | • | | WATER WAY TO STATE OF SAME | NCE COMPANY USE |
|--|--|---|--|--|--|---|----------------------------------|
| 1. Building Owner's Nar | KOSE MI | | ANO | | | olicy Number | |
| 2. Building Street Addre NO. 51 | ss (Including Apt., | , Unit, Suite, and/or | Bldg. No.) or P.O. F | Route and Box No |). | ompany NAIC | Number |
| City NEPTUNE | | | | StateNEW JE | | P Code O | 7753 |
| 3. Property Description LOTS 42.4 | (Lot and Block Nu 3, 44 AND | mbers, Tax Parcel No. | umber, Legal Desc | nption, etc.) | EPTUNE TO | WNSHIP | MAP PG. 43. |
| 4. Building Use (e.g., Ro | esidential. Non-Re | sidential. Addition. A | ccessory, etc.) | RESIDENTIA | NEW BUIL | |) (3 |
| 5. Latitude/Longitude: 1 6. Attach at least 2 pho | Lat. 40° II | | Long. = 74° | | Horizontal Da | | |
| 7. Building Diagram Nui | | | AB -ON- GRA | DE WITH | ATTACHED | GARAGE | • |
| For a building with a a) Square footage o | • | | N/A sq | | ouilding with an atta ware footage of atta | | EUU . |
| b) Number of perma | nent flood openin | gs in the crawlspace | • | b) Nů | mber of permanent | flood openia | ngs in the attached ga |
| or enclosure(s) w c) Total net area of | ithin 1.0 foot abov flood openings in / | • • | N/A sq | | hin 1.0 foot above a al net area of flood | | |
| d) Engineered flood | | Yes 📜 No | | , | gineered flood oper | | Yes ILNo4 |
| | SECT | TION B - FLOOD I | INSURANCE RA | TE MAP (FIRM | M) INFORMATION | N , | 11 40 |
| . NFIP Community Nam | ne & Community N | umber 340317 | B2, County | Name ONMOUTH | COUNTY | | B3. State NEW JERSE |
| 1. Map/Panel Number | B5. Suffix | B6. FIRM Index Dat | | anel Effective/ | B8. Flood Zone(s) | B9. Base | Flood Elevation(s) (Zo |
| 1025C0333F | F | 01/11/200 | Revised | Date 5 / 2009 | ΑE | AO, L | use base flood depth) |
| O. Indicate the source of | of the Base Flood I | | | | 1 | EL.J | ; |
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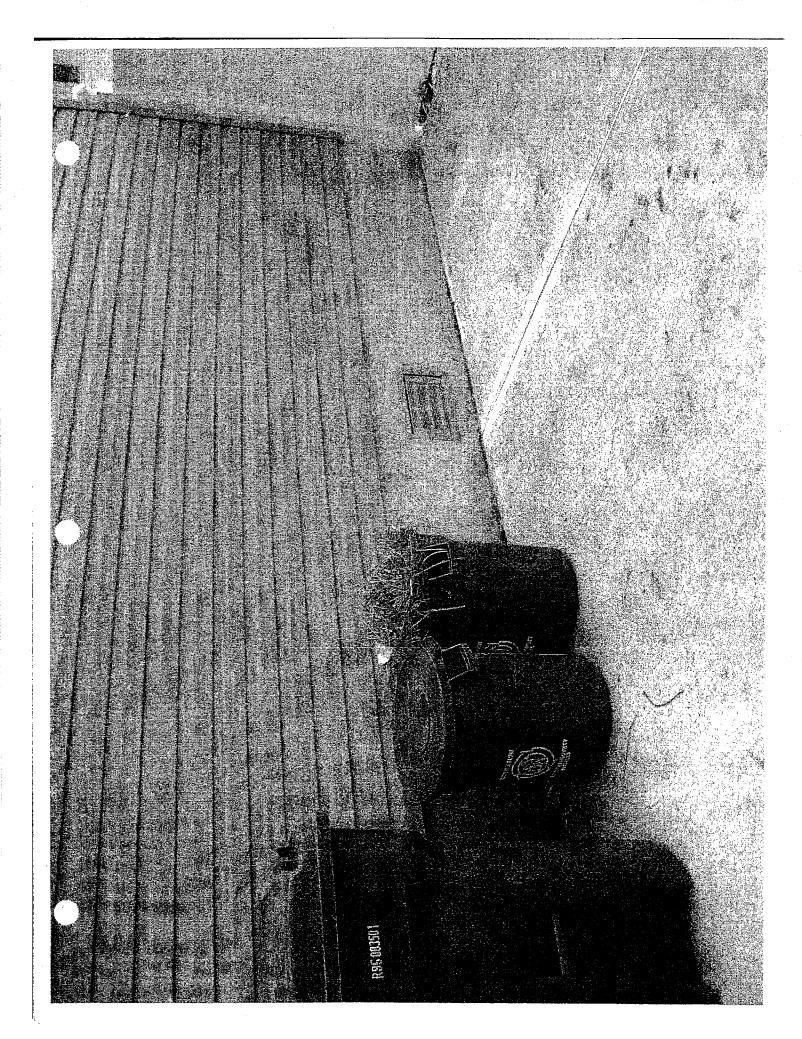
| ELEVATION CERTIFICATE, page 2 | | | | | <u> </u> |
|---|--------------------------------|-------------------|----------------|-----------------|-------------------------|
| IMPORTANT: In these spaces, copy the corresponding infor | | | Ĵ | ORANSURANCE | COMPANYUSE |
| Building Street Address (including Apt., Unit, Suite, and/or Bl | dg. No.) or PO. Route and Bo | x No. | 1. | oficy Numbers | |
| City N | State ZIP Code | | C | ompany NAIC Nui | nber |
| SECTION D - SURVEYOR, E | NGINEER, OR ARCHITE | CT CERTIFICA | ATION (CON | ITINUED) | |
| Copy both sides of this Elevation Certificate for (1) communit | y official, (2) Insurance agen | t/company, and | (3) building o | wner. | |
| Comments | | | | | |
| | | • | | | |
| <u> </u> | * | | | | |
| · | | | | | · |
| Signature | Date | • | | | |
| SECTION E - BUILDING ELEVATION INFORMAT | ION (SURVEY NOT REQ | UIRED) FOR 2 | ZONE AO AI | ND ZONE A (| WITHOUT BFE) |
| For Zones AO and A (without BFE), complete Items E1–E5. If t For Items E1–E4, use natural grade, if available. Check the m | | | | equest, complet | te Sections A, B,and C |
| E1. Provide elevation information for the following and check t grade (HAG) and the lowest adjacent grade (LAG). | he appropriate boxes to sho | w whether the e | levation is ab | ove or below th | e highest adjacent |
| a) Top of bottom floor (including basement, crawlspace, or | • | | t meters | = | below the HAG. |
| b) Top of bottom floor (including basement, crawlspace, or | • | | t 🗆 meters | | below the LAG. |
| E2. For Building Diagrams 6–9 with permanent flood openings | • | | · <u> </u> | | |
| the next higher floor (elevation C2.b in the diagrams) of the | e building is | = | t meters | | below the HAG. |
| 3. Attached garage (top of slab) is | | . — | tmeters | _ | below the HAG. |
| 4. Top of platform of machinery and/or equipment servicing | the building is | fee | t 🗆 meters | above or | Delow the HAG. |
| 5. Zone AO only: If no flood depth number is available, is the ordinance? Yes No Unknown. The local office. | | | | ommunity's floo | dplain management |
| SECTION F - PROPERTY OW | NER (OR OWNER'S RE | PRESENTATI\ | /E) CERTIF | ICATION | , . |
| The property owner or owner's authorized representative who Zone AO must sign here. The statements in Sections A, B, and | completes Sections A, B, and | d E for Zone A (v | | | nmunity-issued BFE) o |
| Property Owner or Owner's Authorized Representative's Name | • | | | | |
| Address | City | | State | ZIP Co | ode |
| Signature | Date | | Teleph | none | |
| Comments | ·. | | | | |
| | | <u> </u> | | | · · |
| | | | | Check | here if attachments. |
| SECTION G - | COMMUNITY INFORMA | TION (OPTIO | NAL) | | |
| the local official who is authorized by law or ordinance to admin a of this Elevation Certificate. Complete the applicable item(s) a | | | | | |
| 61. The information in Section C was taken from other d who is authorized by law to certify elevation information. | ocumentation that has been | n signed and se | aled by a lice | nsed surveyor, | engineer, or architect |
| • | | | | | |
| G2. A community official completed Section E for a building. | - | | - | ussued BFE) or | Zone AU. |
| G3. The following information (Items G4–G9) is provided . | for community floodplain m | | | | 6 |
| G5. Date Perm | it Issued | G6. Date Cert | ificate Of Con | npliance/Occup | ancy Issued |
| 67. This permit has been issued for: New Construction | ☐ Substantial Improver | nent | | | |
| 68. Elevation of as-built lowest floor (including basement) of | the building: | | ☐ meters | Datum | |
| 69. BFE or (in Zone AO) depth of flooding at the building site: | | feet | ☐ meters | Datum | |
| 310. Community's design flood elevation: | . | | ☐ meters | Datum | |
| ocal Official's Name | Title | • | 44 | • | |
| Community Name | Telephor | ne | | * | |
| Signature | Date | | * | | |
| Comments. | | | | | |
| | | | | | |
| 78.0 · | | | | | have life assortion and |
| | | | | 🔟 Check | here if attachments. |

FEMA Form 086-0-33 (7/12)

Replaces all previous editions.









ESR-2074*

Reissued December 1, 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 FLOOD 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 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 lipches 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 July 2013



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 (¹18.6 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 2007.

7.0 IDENTIFICATION

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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).

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

ELEVATION CERTIFICATE

IMPORTANT: Follow the instructions on pages 1-9.

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

| | | RTY INFORMAT | ION | FOR INSURA | NCE COMPANY USE |
|---|-----------------------|--------------------------------------|-----------------------------|----------------|--|
| A1. Building Owner's Name BERNARD & MARLENE | ZARRO | | | Policy Number: | |
| A2. Building Street Address (including Apt., Unit, Suite, and 105 MILFORD ROAD | i/or Bidg. No.) or R | | | Company NAIC | |
| City NEPTUNE | | State NJ | Z | IP Code 077 | 53 |
| A3. Property Description (Lot and Block Numbers, Tax Parc BLOCK 427 - LOT 6 | | | | | |
| A4. Building Use (e.g., Residential, Non-Residential, Addition A5. Latitude/Longitude: Lat. 40 - 11 - 19.721 | | | | Datum: N | AD 1927 |
| A5. Latitude/Longitude: Lat. 40 - 11 - 19.721 A6. Attach at least 2 photographs of the building if the Cer | | | | Jatum; 🔲 N | 4D 1921 MAD 1963 |
| A7, Building Diagram Number 8 | J | | | | |
| A8. For a building with a crawlspace or enclosure(s): | 1,372 | _ | building with an att | | |
| a) Square footage of crawlspace or enclosure(s)b) No. of permanent flood openings in the crawlspace | or | • | uare footage of att | | esq fl ngs in the attached garage |
| enclosure(s) within 1.0 foot above adjacent grade | 7 896* | wi | thin 1.0 foot above | adjacent gra | de |
| c) Total net area of flood openings in A8.b | 090 | • | tal net area of flood | · | |
| d) Engineered flood openings? ✓ Yes No | | d) En | gineered flood ope | enings? L | Yes No |
| SECTION B FLOO | | RATE MAP (FIRI | M) INFORMATIO | N | B3. State |
| B1. NFIP Community Name & Community Number TOWNSHIP OF NEPTUNE / 340317 | MONM | OUTH | 1 | | NEW JERSEY |
| B4. Map/Panel Number B5. Suffix B6. FIRM Index | | A Panel Effective/ ised Date | B8. Flood Zone(s | ' I | Flood Elevation(s) (Zone ise base flood depth) |
| 34025C0333F / 0333 F 09/25/20 | 009 | 9/25/2009 | AE | 1.0,1 | 9' |
| B10. Indicate the source of the Base Flood Elevation (BFE) d | | • | n B9: | | |
| ☐ FIS Profile ☑ FIRM ☐ Community Determined | , | | | | |
| | ☐ NGVD 1929 | NAVD 1988 | Other/Source: | | |
| B12. Is the building located in a Coastal Barrier Resources S Designation Date: / CBI | | a or Otherwise Prote | cted Area (OPA)? | ∐ tes [| ☑ No |
| | | | | | |
| SECTION C - BUILDI | | | | (ED) | |
| C1. Building elevations are based on: ☐ Construction *A new Elevation Certificate will be required when const | | ☐ Building Under Coding is complete. | onstruction* | Finished (| Construction |
| C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V C2.a–h below according to the building diagram specifi | | | | H, AR/AO. Co | mplete Items |
| Benchmark Utilized; C.O.R.S. | | Vertical Datum: <u>NA</u> | VD 1988 | | |
| Indicate elevation datum used for the elevations in iter Datum used for building elevations must be the same | | | 9 NAVD 1988 Check the me | | |
| a) Top of bottom floor (including basement, crawlspace | e. or enclosure floor | 7.3 | Fleet | | |
| b) Top of the next higher floor | ., | 12 3 | — ≝feet | | |
| c) Bottom of the lowest horizontal structural member (| V Zones only) | <u>n/a</u> | feet | meters | ; |
| d) Attached garage (top of slab) | | n/a | feet | | |
| e) Lowest elevation of machinery or equipment servicing (Describe type of equipment and location in Comment | | <u>12</u> .3 | Ifeet | ☐ meters | • |
| f) Lowest adjacent (finished) grade next to building (L4 | • | 6.9 | × feet | ☐ meters | • |
| g) Highest adjacent (finished) grade next to building (H | • | 7.3 | Ideat | meters | |
| h) Lowest adjacent grade at lowest elevation of deck of structural support | • | <u>6</u> .9 | Feet | meters | |
| SECTION D - SURV | EYOR, ENGINEE | R, OR ARCHITEC | T CERTIFICATION | ON | |
| This certification is to be signed and sealed by a land survey information. I certify that the information on this Certificate related that any folio statement may be surjustable by 6 | presents mybest e | forts to interpret the | data available. | ion | |
| l understand that any false statement may be punishable by fil ☐ Check here if comments are provided on back of form. ☐ Check here if attachments. | - | d i ongitude in Sectio | • | | |
| | | | | [| PLACE |
| Certifier's Name | | 1432223 | | | OF 4: |
| GEORGE W. EDWARDS | Company Name | License N 24GS01 | 900200 | | SEAL HERE |
| GEORGE W. EDWARDS Title PROFESSIONAL LAND SURVEYOR Address | City | URVEYING State | | | |
| GEORGE W. EDWARDS Title PROFESSIONAL LAND SURVEYOR | EDWARDS S | URVEYING State | ZIP Code 08742 | | |

| orresponding information from | Section A. | FOR INSURANCE COMPANY | / USE |
|------------------------------------|----------------------|-----------------------|-------------------------------------|
| it, Suite, and/or Bldg. No.) or P. | D. Route and Box No. | Policy Number: | |
| State NJ | ZIP Code 07753 | Company NAIC Number: | |
| | State | | State ZIP Code Company NAIC Number: |

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner. Comments A8b) PHYSICAL AREA OF ALL 7 VENTS IS 896 SQ.IN.; HOWEVER EACH VENT IS RATED FOR 200 SQ.FT. OF AREA, TOTALING 1,400 SQ.FT. MODEL 1540-510. C2a) MAIN PORTION OF CRAWL SPACE (1,012 S.F.+/-) IS AT 7.2' ELEVATION; WHILE THE EASTERLY PORTION OF CRAWL SPACE (360 S.F.+/-) IS AT 8.9' ELEVATION (NAVD 1988). Date 04/05/2014 Signature SECTION E $^{\prime\prime}$ 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 ☐ 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. operty Owner or Owner's Authorized Representative's Name Address City State ZIP Code Signature Date Telephone Comments ☐ Check here if attachments. SECTION G - COMMUNITY INFORMATION (OPTIONAL) The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8-G10. In Puerto Rico only, enter meters. G1, The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.) G2. A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO. G3.

The following information (Items G4–G9) is provided for community floodplain management purposes. G5. Date Permit Issued G6. Date Certificate Of Compliance/Occupancy Issued G4. Permit Number G7. This permit has been issued for: ■ New Construction ☐ Substantial Improvement G8. Elevation of as-built lowest floor (including basement) of the building: ☐ feet ☐ meters Datum G9. BFE or (in Zone AO) depth of flooding at the building site: ☐ feet ☐ meters Datum ☐ feet ☐ meters G10.Community's design flood elevation: Datum Local Official's Name Title **Community Name** Telephone Signature Date

Comments

☐ Check here if attachments.

FEMA Form 086-0-33 (7/12)

Replaces all previous editions.

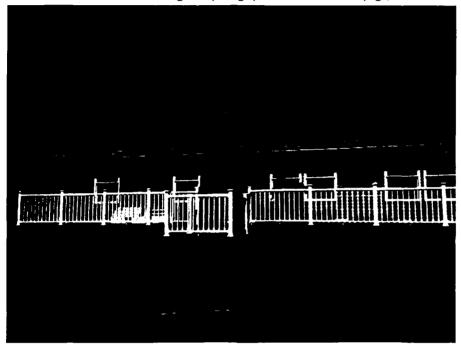
ELEVATION CERTIFICATE, page 3

BUILDING PHOTOGRAPHS

See Instructions for Item A6.

| IMPORTANT: In these spaces, copy the corres | FOR INSURANCE COMPANY USE | | |
|---|---------------------------------|-------------------|----------------------|
| Building Street Address (including Apt., Unit, St 105 MILFORD ROAD | uite, and/or Bldg. No.) or P.O. | Route and Box No. | Policy Number: |
| City NEPTUNE | State NJ | 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.



FRONT VIEW 105 MILFORD ROAD NEPTUNE, NJ 07753 MARCH 8, 2014



REAR VIEW 105 MILFORD ROAD NEPTUNE, NJ 07753 MARCH 8, 2014

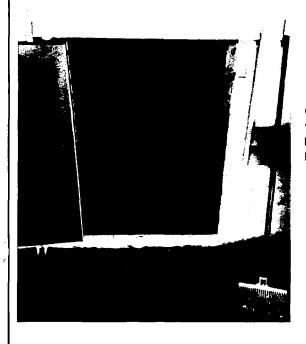
ELEVATION CERTIFICATE, page 4

BUILDING PHOTOGRAPHS

Continuation Page

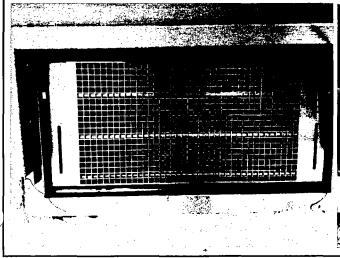
| IMPORTANT: In these spaces, copy the corre | FOR INSURANCE COMPANY USE | | |
|--|--------------------------------|----------------------|----------------------|
| Building Street Address (including Apt., Unit, S 105 MILFORD ROAD | Suite, and/or Bldg. No.) or PC |). Route and Box No. | Policy Number: |
| City NEPTUNE | State N J | ZIP Code 07753 | Company NAIC Number: |

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.



CRAWL SPACE ACCESS 105 MILFORD ROAD NEPTUNE, NJ 07753 MARCH 8, 2014

VENT (TYPICAL) 105 MILFORD ROAD NEPTUNE, NJ 07753 MARCH 8, 2014 VENT DETAILS 105 MILFORD ROAD NEPTUNE, NJ 07753 MARCH 8, 2014







ESR-2074*

Reissued December 1, 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 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

to any linding or other matter in this report, or as to any product covered by the report.

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 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 lipches 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 mm²) openings, yielding 51 square inches (32 903 mm²) of net free area to supply natural ventilation. The SmartVENTTM 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 July 2013



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 (¹18.6 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 2007.

7.0 IDENTIFICATION

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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).

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 offici | |
|---|--|
| SECTION A - PROPERTY INFORMATION | FORM INSURANCE COMPANY USE |
| A1. Building Owner's Name ROBERT G. REGAN | Policy Number: |
| A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Box No. 105 PROSPECT AVENUE | Company NAIC Number: |
| City NEPTUNE TOWNSHIP | State NEW JERSEY Zip Code 07753 |
| A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Des LOT 15, BLOCK 5412 | cription, etc.) |
| A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) | ESIDENTIAL |
| A5. Latitude/Longitude: Lat. 40.189575° Long74.039721° Horizonta | 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 N umber # 6 | |
| 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) 985 sq ft a) | Square footage of attached garage N/A sq ft |
| crawlspace or enclosure(s) within 1.0 foot | Number of permanent flood openings n the attached garage within 1.0 foot sbove adjacent grade N/A |
| c) Total net area of flood openings in A8.b 1200 sg in c) | otal net area of flood openings in A9.b N/A sq in |
| Sq III Sy | |
| SECTION B - FLOOD INSURANCE RATE MA | |
| B1. NFIP Community Name & Community Number B2. County N | ame B3 State |
| NEPTUNE TOWNSHIP 340317 | MONMOUTH NJ |
| B4. Map/Panel Number B5. Suffix B6. FIRM index Date B7. FIRM Panel E Revised Date | (Zone AO, use base flood |
| 34025C0333 F 09/25/2009 09/25/2009 | AE depth 9 FEET |
| © FIS Profile (★FIRM © Community Determined © Other/Source: B11. Indicate elevation datum used for BFE in Item B9: © NGVD 1929 ★ NAV B12. Is the building located in a Coastal Barrier Resources System (CBRS) area Designation Date: © CBRS © OPA | |
| SECTION C - BUILDING ELEVATION INFORMA | TION (SURVEY REQUIRED) |
| C2. Elevations - Zones A1 - A30, AE, AH, A (with BFE), VE, V1 - V3, V (with BF Complete Items C2.a-h below according to the building diagram specified in Item A new Elevation Certificate will be required when construction of the building is | A7. In Puerto Rico only, enter meters. complete. NAVD'88 |
| C 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) | 6 - 80 K feet C meters |
| b) Top of the next higher floor | 15 - 60 X 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 - C feet C meters |
| e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments) | 13 _ 10 |
| f) Lowest adjacent (finished) grade next to building (LAG) | 6 - 30 |
| g) Highest adjacent (finished) grade next to building (HAG) | 6 - 60 (Xfeet (*) meters |
| h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support | 6 - 40 (X feet (meters |
| | fini E. Miles |

ELEVATION CERTIFICATE

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

| SECTION D - S | SURVEYOR, ENGI | NEER, OR A | CHITECT CER | TIFICATION |
|---|---|---------------------------|---------------------|--|
| This certification is to be signed and sealed by a that the information on this Certificate represents nunishable by fine or imprisonment under 18 U.S. | my best efforts to | interpret the d | | • |
| punishable by the #1 http://dointen.under 16 0.5 | Were latitude and | | Continu A | |
| Check here if attachments. | provided by a lice | | | |
| Certifier's Name | | License Num | ber | |
| WILLIAM E. McGRATH | | GS24194 | , | 2 2 8 |
| Title PROFESSIONAL LAND SURVEYOR | Company Name & WATERFRO | | | fision E. Mita |
| Address 321 MANTOLOKING ROAD | City BRICK | State NJ | Zip Code 08723 | ∂ |
| Signature | Date 06/06/2016 | Teleph (848) | one 232-3820 | |
| Copy beth sides of this Elevation Certificate for | (1) community offic | iai, (2) insurar | nce agent/compa | any, and (3) building owner. |
| Comments (including type of equipment and loc | · · · · · · · · · · · · · · · · · · · | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| HOUSE IN ZONE AE, BASE FLOOD ELE DATED 01/30/2015 (NOT OFFICIALLY A LOWEST EQUIPMENT SERVICING THE AIR COND. UNIT ON A PLATFORM AT I THERE ARE SIX ENGINEERED FLOOD ICC CERTIFICATION ATTACHED. | DOPTED AS AF BUILDING IS A ELEV. 14.8 | FIRM AS YET N ELECTRIC | T). CMETER (BOT | TTOM ELEV. 13.1) |
| M | | THE CHARLES | | 06/06/2016 |
| | i Day Adesir | P . | <u> </u> | |
| Signature SECTION E - BUILDING ELEVATION INF | OPMATION (SUR | VEY NOT BE | OLIBED/ FOR | Date ZONE AO AND ZONE A (WITHOUT REE) |
| For Zones AO and A (without BFE), complete It | | | | |
| Sections A, B,and C. For Items E1 -E4, use nat E1. Provide elevation information for the following | - | | | • |
| highest adjacent grade (HAG) and the lowe | | | | |
| a) Top of bottom floor (including basement, or enclosure) is | crawlspace, | - | | meters above or below the HAG. |
| b) Top of bottom floor (including basement, or enclosure) is | crawispace, | | _ (feet () | meters above or below the LAG, |
| E2. For Building Diagrams 6 -9 with permanent higher floor (elevation C2.b in the diagrams) of | | ovided in Sect | | nd/or 9 (see pages 8 -9 of Instructions), the next |
| E3. Attached garage (top of slab) is | | | _ (feet (| meters above or below the HAG. |
| E4. Top of platform of machinery and /or equip servicing the building is | ment — | | (feet (| meters above or below the HAG. |
| E5. Zone AO only: If no flood depth number is | | | | |
| management ordinance? (~Yes (~No | Unknown. The l | ocal official m | ust certify this in | formation in Section G. |
| SECTION F - PROP | ERTY OWNER (O | ROWNER'S | REPRESENTA | IVE) CERTIFICATION |
| The property owner or owner's authorized repr community-issued BFE) or Zone AO must sign | here. The stateme | | | |
| Property Owner or Owner's Authorized Repre | sentative's Name: | | | |
| Address | City | | State | ZIP Code |
| Signature | Date | | Telepho | ne |
| Comments | | | | |
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OMB Contrel Number: 1660-0008 Expiration: 11/30/2018

| SECT | ION G - CO | MMUNITY INFORMA | TION (OPTIONAL) | |
|--|--|--|--|--|
| The local official who is authorized by law or ord A, B, C (or E), and G of this Elevation Certificate G10. In Puerto Rico only, enter meters. | linance to adr e. Complete t | ninister the commun he applicable Item(s) | ity's floodplain mana and sign below. Che | gement ordinance can complete Sections eck the measurement used in Items G8 - |
| G1. The information in Section C was taked or architect who is authorized by law to Comments area below.) | | | | sealed by a licensed surveyor, engineer, d date of the elevation data in the |
| G2. A community official completed Section | n E for a buil | ding located in Zone | A (without a FEMA-I | issued or community-issued BFE) or Zone |
| G3. The following information (Items G4 - G | 310) is pro v id | led for community flo | odplain managemen | t purposes. |
| G4. Permit Number | G5. Date F | Permit Issued | G6. Date Certifica | te of Compliance/Occupancy issued |
| G7. This permit has been issued for: (New C | Construction | C Substantial Impr | ovement | |
| G8. Elevation of as-built lowest floor (including of the building: | basement) | | C feet C meters | Datum |
| G9. BFE or (in Zone AO) depth of flooding at the site: | e building | <u> </u> | ↑ feet ← rmeters | Datum |
| G10. Community's design flood elevation: | · | _ | ○ feet ○ meters | Datum |
| Local Official's Name | | Title | | |
| Community Name | - | Telephor | e | |
| Signature | | Date | | |
| Comments | | **** | | |
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BUILDING PHOTOGRAPHS

See instructions for Item A6

OMB Control Number: 1660-0008

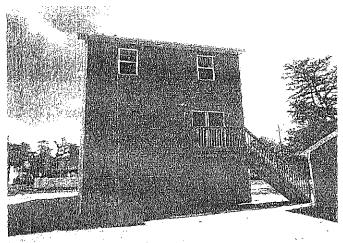
Expiration: 11/30/2018

| IMPORTANT: in these spaces, copy the correspondent | FOR INSURANCE COMPANY USE | |
|---|---|-------------------------|
| Building Street Address (including Apt., Unit, Suite, 105 PROSPECT AVE. | and/or Bidg. No.) or P.O. Route and Box No. | Policy Number: |
| City NEPTUNE TOWNSHIP | State NJ Zip Code 07753 | Company NAIC Number: |

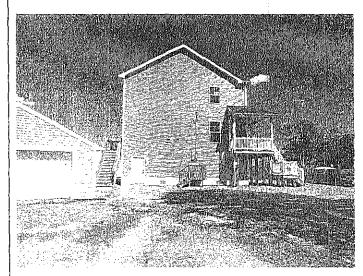
If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A6. Identify all photographs with date taken; "Front view" and Rear view", and, if required, "Right Side View" and "Left Side View." When applicable, photographs 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.



FRONT OF 105 PROSPECT AVENUE



REAR OF 105 PROSPECT AVENUE



WEST SIDE OF 105 PROSPECT AVENUE



EAST SIDE OF 105 PROSPECT AVENUE



ESR-2074

Reissued February 2015 Revised May 2016

This report is subject to renewal February 2017.

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

A Subsidiary of the International Code Council®

DIVISION: 8 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) 441-8.368 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:

- **a** 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 A●IBC 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 the applicable code and this report. instructions, 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.

EC-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 of as to any product covered by the report.





ESR-2074

Reissued February 2015 Revised May 2016

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A Subsidiary of the International Code Council®

DIVISION: 08 00 00-OPENINGS

Section: 08 95 43—Vents/Foundation Flood Vents

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 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:

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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 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 m 2) of enclosed area, except that the SmartVENT $^{\otimes}$ 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.

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ICCES 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.



- 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 | 1540574 | 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 = m^2

ELEVATION CERTIFICATE U.S. DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY OMB No. 1660-0008 Nationa: Eliza Insurance Program Expiration Date: July 31, 2015 Important; Read the instructions on pages 1-9. SECTION A - PROPERTY INFORMATION FOR INSURANCE COMPANY USE Building Owner's Name PAMELA CALLENDER Policy Number: Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. Company NAIC Number. 209 NORTH RIVERSIDE DRIVE City NEPTUNE TOWNSHIP State NJ ZIP Code 07753 Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) BLOCK 502.01 LOT 1388 A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL A5. Latitude/Longitude: Lat. <u>40 11 59</u> Long. <u>-7 4 02 40</u> 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. Building Diagram Number 6 Α7 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) a) Square footage of attached garage 44<u>8</u> sa ft sa ft b) Number of permanent flood openings in the crawlspace or b) Number of permanent flood openings in the attached garage enciosure(s) within 1.0 foot above adjacent grade within 1.0 foot above adjacent grade Total net area of flood openings in A8.b **600**. <u>0</u> Total net area of flood openings in A9.b sq in sq in Yes □ No d) Engineered flood openings? Engineered flood openings? Yes ☐ **N**o SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION B1. NFIP Community Name & Community Number B2. County Name **NEPTUNE** 340317 MONMOUTH N.I B7. FIRM Panel B4 Man/Panel Number B6. FIRM Index Date B9. Base Flood Elevation(s) (Zone AO, use base flood depth) **9 B5. Suffix B8. Flood Effective/Revised Date 9-25-2009 34025C0333 9-25-2009 B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9 ☐ Community Determined ☐ Other/Source: B11. Indicate elevation datum used for BFE in Item B9: 🔲 NGVD 1929 ☑ NAVD 1988 ☐ Other/Source: Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☑ No ☐ CBRS ☐ OPÁ SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED) ☐ Building Under Construction ☐ Construction Drawings* Building elevations are based on: A new Elevation Certificate will be required when construction of the building is complete. Elevations - Zones A1-A30, AE, AH, A (with BFE), V1-V31, 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. Benchmark Utilized: KV0806 Vertical Datum: NAVD 88 Indicate elevation datum used for the elevations in items a) through h) below. \square NGVD 1929 \boxtimes NAVD 1988 \square 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) ⊠ feet [] meters 6.28 b) Top of the next higher floor <u> 16.04</u> meters N/A.c) Bottom of the lowest horizontal structural member (1/Zones only) [7] feet meters d) Attached garage (top of slab) 5.28 meters e) Lowest elevation of machinery or equipment servicing the building AC13. meters (Describe type of equipment and location in Comments) f) Lowest adjacent (finished) grade next to building (LAG) <u>6.0</u> □ meters g) Highest adjacent (finished) grade next to building (HAG) <u>6.6</u> ☐ meters h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support 64 ☐ meters 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. Check here if comments are provided on back of form. · Were latitude and longitude in Section A provided by a PLACE Check here if attachments. licensed land surveyor? □ No SEAL FIERE Certifier's Name WILLIAM J. FIORE License Number GS-35362

Company Name WILLIAM J. FIORE, INC.

State NJ

See reverse side for continuation.

Telephone

ZIP Code 08723

Replaces all previous editions

732-920-5100

Title PRESIDENT

FEMA Form 086-0-33.(7/12)

Signature

Address 263 BRICK BOULEVARD, UNIT & City BRICK

Date

1-11-2016

| IONIL, page A | | | | |
|--|---|--|---|--|
| nese spaces, copy the corres | onding information from | Section A. | FOR | INSURANCE COMPANY USE A |
| et Address (including Apt., Unit, Suite, and/o | or Bldg. No.) or P.O. Route and | 30x N o. | Polic | by Number: - II |
| , NEPTUNE TOWNSHIP | State NJ Z | ZIP Code 07753 | Con | ipany NAIC Number |
| SECTION D - SURVEYO | R, ENGINEER, OR ARCHIT | ECT CERTIFICAT | ON (CONT | NUED) |
| Copy both sides of this Elevation Certificate for (1) comm | inity official, (2) insurance ager | it/company, and (3) b | uilding owner | f. |
| Comments **REFERENCE: PRELIMINARY FLOOD IN ELEVATION 10. GARAGE AREA IS INCLUDED IN TOTAL ENCLOSED GARAGE WALLS. Signature SECTION E - BUILDING ELEVATION INFOR | ARE A IN A8a. THERE ARE | (3) "SMART VENT" | 'FLOOD VEN | NTS (MODEL #1540-520) iN |
| E4. Top of platform of machinery and/or equipment set E5. Zone AO only: If no flood depth number is available ordinance? ☐ Yes ☐ No ☐ Unknown. The !! | Check the measurement used. check the appropriate boxes to pace, or enclosure) is pace, or enclosure) is penings provided in Section A It feet meters above vicing the building is e, is the top of the bottom floor | In Puerto Rico only, e show whether the ele feet n ems 8 and/or 9 (see p ers above or or below the HAU feet mete elevated in accordance rmation in Section G. | nter meters. vation is above meters above pages 8–9 of below the HA G. ers above ee with the co | ve or below the highest adjacent ove or below the HAG. ove or below the LAG. Instructions), the next higher floor AG. or below the HAG. mmunity's floodplain management |
| The property owner or owner's authorized representative or Zone AO must sign here. The statements in Sections | A, B, and E are correct to the be | • | nout a FEMA- | issued or community-issued BFE) |
| Property Owner's or Owner's Authorized Representative | 's Name | | | |
| Address | City | | State | ZIP Code |
| Signature | Date | | Telephone | |
| Comments . | | | | Check here if attachments. |
| | G - COMMUNITY INFORM | | | |
| The local official who is authorized by law or ordinance to act this Elevation Certificate. Complete the applicable item(s) and the information in Section C was taken from other is authorized by law to certify elevation information. A community official completed Section E for a Edge. The following information (Items G4—G10) is proceed the section of the section | and sign below. Check the meas per documentation that has been on. (Indicate the source and dat building located in Zone A (witho | surement used in Items signed and sealed by te of the elevation dat ut a FEMA-issued or | s G8-G10. In y a licensed s a in the Comr community-is | Puerto Rico only, enter meters. urveyor, engineer, or architect who ments area below.) |
| G4. Permit Number G5. Date Perm | t Issued | G6. Date Certificate | of Complian | nce/Occupancy Issued |
| 67. This permit has been issued for: New Constr 68. Elevation of as-built lowest floor (including basement 69. BFE or (in Zone AO) depth of flooding at the building 610. Community's design flood elevation: | of the building: | rovement | ers Dat | um um um |
| Local Official's Name | Title | | | |

Telephone

Check here if attachments.

Replaces all previous editions.

Date

Community Name

FEMA Form 086-0-33 (7/12)

Signature Comments .: FICATE, page 3

Building Photographs See Instructions for Item A6.

TANT: In these spaces, copy the corresponding information from Section A.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 9 NORTH RIVERSIDE DRIVE

City NEPTUNE TOWNSHIP

State NJ

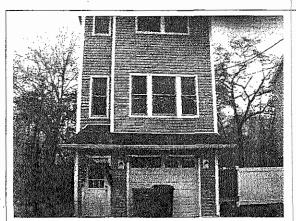
ZIP Code 07753

FOR INSURANCE COMPANY USE

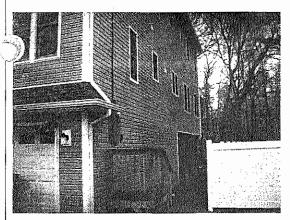
Policy Number:

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.



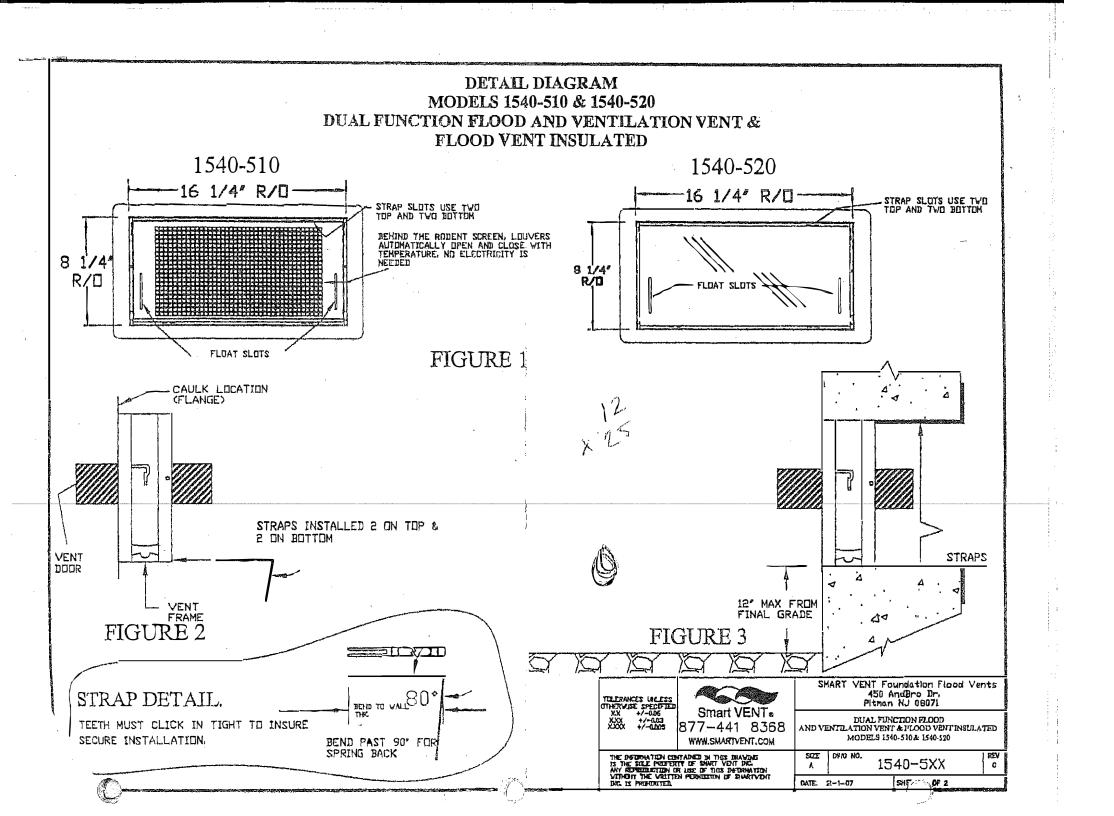








L PICTURES TAKEN 12-2-2015.





www.smartvent.com

INSTALLATION INSTRUCTIONS

& DETAILS

MODELS 1540-510 & 1540-520 DUAL FUNCTION FLOOD AND VENTILATION VENT & FLOOD VENT INSULATED

REV. C 05-01-09

INSTALLATION INSTRUCTIONS

- 1. Remove vent door from vent frame, (Turn upside down, rotate bottom of door outward and slide out)
- 2. Prepare a CLEAN 16,25" wide by 8.25" high rough opening (approx. 1 block wide X 1 block high) for each vent. Ensure the bottom of the rough opening is no more than 12" above the finished inside or outside grade whichever is higher
- 3. Apply a bead of polyurethane caulk around the back of the flange on the vent frame. (FIG. 2)
- 4. Bend the 4 steel straps to the thickness of the wall measuring from the end with the teeth see STRAP DETAIL
- 5. Insert the top straps into the top two strap slots about two clicks.
- 6. Insert the vent frame in the cut opening. The bent strap ends go in then up behind the inside of the wall, Push the frame tight against the face of the wall. Ensure the frame is flush and square in the opening. (FIG. 3)
- 7. Reach through the vent opening and click the two straps in while holding the front of the vent against the wall face. The sharp point of the straps should not extend past the front of the vent face. Install the two remaining bottom straps,
- 8. Re-check that frame is square and slots are clear of debris, and caulk.
- 9. Install the door into frame by grasping the bottom of door (with float pins down) and front (small screen in front). Slide door into frame and rotate until it is latched.
- 10. To open the door insert two credit cards into the float slots as shown in the diagram. This will unlatch the door for removal and cleaning.

MODEL 1540-510

DETAILED SPECIFICATIONS:

OPERATION ARE AUTOMATIC LOUVERS FULLY OPEN AT 75 MEG, FULLY CLOSED AT 35 DEG. NO POWER REQUIRED

INSTALLATION:
SECURED W/ 4 STAINLESS STEEL STRAPS SUPPLIED
MYDROSTATIC RELIEF: 200 Sq. Ft. per Vent
VENTILATION: 51 Sq. In. per Vent NOTE: VAPOR BARRIER ALLOWS FOR REDUCED VENTILATION REQUIREMENTS FLOOD; MINIMUM OF 2 VENTS PER ENCLOSED AREA MOUNTED ON AT LEAST TWO DIFFERENT WALLS COLDRS: STAINLESS (STANDARD) EXTERIOR POWDER COATED WHITE, WHEAT, GRAY, AND BLACK (AVAILABLE)

MODEL 1540-520

DETAILED SPECIFICATIONS

MATERIAL: STAINLESS STEEL OPERATION, AUTOMATIC NON-POWERED ACTIVATION AND OPERATION

INSTAURATION:
SECURED W/ 4 STAINLESS STEEL STRAPS SUPPLIED
HYDROSTATIC RELIEF: 200 Sq. Ft por vont
REQUIREMENTS: MINIMUM OF 2 VENTS PER ENCLOSED AREA MOUNTED ON AT LEAST TWO DIFFERENT WALLS

COLORS: STAINLESS (STANDARD)
EXTERIOR POWDER COATED WHITE, WHEAT, GRAY, AND BLACK (AVAILABLE)

MEETS THE REQUIREMENTS FOR ENGINEERED OPENINGS AS SET FORTH BY:

FEMA, NFIP, ICC, & ASCE

SUPPORTIVE DOCUMENTS, TB 1-08, 44CFR 60.3(C)(5), ASCE 24-05 ICC EVALUATION # ESR-2074 EVALUATED UNDER AC-364

SHEET 2 OF 2





ESR-2074 FBC Supplement

Issued July 1, 2013

This report is subject to renewal February 1, 2015.

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A Subsidiary of the International Code Council®

DIVISION: 08 00 00-OPENINGS

Section: 08 95 43-Vents/Foundation Flood Vents

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: FLOODVENT™ MODEL #1540-520; FLOODVENT™ STACKING MODEL #1540-521; SMARTVENT™ MODEL #1540-510; SNIARTVENT™ 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 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent[®] Autematic 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:

- 2010 Florida Building Code—Building (FBC)
- 2010 Flerida Building Code—Residential (FRC)

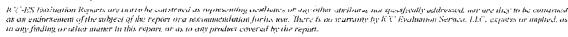
2.0 CONCLUSIONS

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

Use of the Smart Vert[®] Automatic Foundation Flood Vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the FBC and the FRC for structures not subject to FBC Section 2326.3.1 or FRC Section 4409.13.3.1, as applicable.

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 December 1, 2012, revised July 2013.







Objective:

When we set out to design our flood vent products, a comprehensive study was conducted to determine the most important design attributes that would be needed to insure that our customers received the best product available. Because our company started on the shores of the East Coast of New Jersey, everyone placed durability as their number one concern.

Durability:

After extensive research, including review of many less expensive materials, we choose to make the bulk of the components for our vents from stainless steel. Salt will pit stainless steel unless it is rinsed with water. We recommend that the vent be washed with fresh water twice a year. Any red rust or minor surface pitting can be removed with "commercial de-rusting solutions."

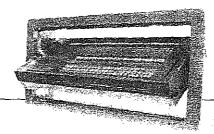
The mechanism that operates the automatic louvers on models 1540-510, 1540-511, 1540-514 and 1540-550 is also entirely made from stainless steel, and water rinsing will reduce corrosion and dirt build-up. Prior to final inspection and testing, the louver mechanism is lubricated with a dry film lubricant. This over the counter lubricant should be applied at minimum one time per year, or when needed. Rinse the louver mechanism, let dry, then spray all of the moving parts. Note: Wet lubricants or grease will allow dirt and sand to accumulate on the moving parts. Use only dry film lubricants.

The bi-metal coil is made from highly engineered materials. The composite contains a large portion of Nickel and the finished coil is secondarily heat-treated, which forms a protective barrier to protect it from the elements. A squirt of dry film lubricant into the coil chamber during maintenance will extend its life.

The floats are manufactured from engineered plastics. An ultra-violet inhibitor was blended into the raw material before molding to insure that the sun does not degrade the functional or dimensional characteristics of the material. Insert a thin blade or a credit card into each side of the vent door's float slot, and the door will easily push open. Rinse the float cavity, then apply a small amount of dry film lubricant on the float, where it contacts the frame.

Like any product, the care one gives will determine its life. We have used the best American materials, along with the best engineering and manufacturing professionals to build our products. With just a little care, your vents will function carefree for many years.





ONE YEAR LIMITED WARRANTY LIMITED, NON-PRORATED AND TRANSFERABLE

Any and all product(s) as manufactured by SMART VENT® are subject to a one year limited warranty in accordance with the following, provided that the products covered by this warranty have been installed in strict accordance with the SMART VENT® written installation instructions and in accordance with all local codes and standards. Cleaning and lubrication may be required, and is not covered by this warranty. SMART VENT® warrants to the original purchaser or a subsequent owner of the property that parts are free from manufacturing defects for 1 (one) year from the date of purchase. Security Clips must be installed to validate warranty.

Should any defect occur during the one-year period following the date of purchase, SMARTVENT® will provide a replacement for that part deemed to be defective (but not including labor costs incurred in removing the part, installing the replacement part, or shipping). In the event of replacement according to the terms of this warranty, the warranty on the replacement part will extend for the balance of the original warranty period, which is in effect at the time the part proves defective.

LIMITATIONS

SMART VENT® shall not be liable for, and this warranty does not apply to, any failure, defect or damage resulting from or connected with painting, misuse, abuse, neglect or improper handling or storage, or installation not in strict adherence to SMART VENT® written instructions. SMART VENT® reserves the right to discontinue or modify any of its products, including color, and shall not be liable as a result of such discontinuance or modification. If SMART VENT® replaces any part under this warranty, it may substitute parts designated by SMART VENT® to be of comparable quality or price range in the event the product initially installed has been discontinued or modified.

OTHER CONDITIONS

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER ORAL OR WRITTEN WARRANTIES, LIABILITIES OR OBLIGATIONS OF SMART VENT®, PERTINENT STATE LAW SHALL CONTROL FOR WHAT PERIOD OF TIME SUBSEQUENT TO SALE A CONSUMER/HOMEOWNER MAY SEEK A REMEDY PURSUANT TO THE IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL SMART VENT® BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND, INCLUDING ANY DAMAGE TO THE BUILDING, ITS CONTENTS OR ANY PERSONS THEREIN, RESULTING FROM THE BREACH OF ANY WARRANTY SET FORTH HEREIN. NO REPRESENTATIVE OF SMART VENT® OR ITS DISTRIBUTORS OR DEALERS IS AUTHORIZED TO MAKE ANY CHANGE OR MODIFICATION TO THIS WARRANTY.

Lit-006



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ESR-2074

Reissued February 2015 Revised **M**ay 2016

This report is subject to renewal February 2017.

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A Subsidiary of the International Code Council®

DIVISION: 08 00 00—OPENINGS

Section: 08 95 43—Vents/Foundation Flood Vents

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012, 2009 and 2006 International Building Code® (IBC)
- 2015, 2012, 2009 and 2006 International Residential Code[®] (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)[†]

 $^{\dagger}\text{The ADIBC}$ 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.

ICCES 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.



- 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 = m^2



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ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

DIVISION: 08 00 00—OPENINGS SECTION: 08 95 43—VENT5/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; #1540-571; #1540-570; #1540-574; #1540-524; #1540-514



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ESR-2074*

Reissued February 2015

This report is subject to renewal February 2017.

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A Subsidiary of the International Code Council®

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

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code® (IBC)
- 2012, 2009 and 2006 International Residential Code[®] (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)^T

[†]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 2.6.2.2 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 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. The mounting straps allow mounting in masonry and 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® 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

*Revised July 2015

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 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).

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

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

ELEVATION CERTIFICATE

IMPORTANT: Follow the instructions on pages 1-9.

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

| SECTION A – PROPERTY INFORMATION | FOR INSURANCE COMPANY USE |
|---|--|
| A1. Building Owner's Name Lisa Scholnick | Policy Number: |
| A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or PO. Route and Box No. 127 Central Avenue | Company NAIC Number: |
| City Neptune (Ocean Grove) State NJ | ZIP Code 07756 |
| A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Tax Lot 2 in Block 282 | |
| A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential A5. Latitude/Longitude: Lat. 40d 12m 26 80 N Long. 74d 00m 3240 W Horizont 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): a) Square footage of crawlspace or enclosure(s): b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade c) Total net area of flood openings in A8.b c) Total net area of flood openings? Yes \(\) No SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMA B1. NFIP Community Name & Community Number Township of Neptune / 340317 B4. Map/Panel Number B5. Suffix B6. FIRM Index Date A4025C0334 F 09/25/2009 09/25/2009 AE B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item 89: B11. Indicate elevation datum used for BFE in Item B9: \(\) NGVD 1929 \(\) NAVD 1988 \(\) Other/Source: | f attached garage n/a sq ft nent flood openings in the attached garage ove adjacent grade lood openings in A9.b openings? Yes No TION B3. State NJ ne(s) B9. Base Flood Elevation(s) (Zone A0, use base flood depth) 9 |
| 812.Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA Designation Date:/ CBRS |)? LiYes ⊠No |
| SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQ | LIBED) |
| C1. Building elevations are based on: Construction Drawings* Building Under Construction* *A new Elevation Certificate will be required when construction of the building is complete. C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V 1–V30, V (with BFE), AR, AR/A, AR/AE. AR/A1–A30, AF C2.a–h below according to the building diagram specified in Item A7. In Puerto Ricco only, enter meters. | ☑ Fir:Ished Construction R/AH, AR/AO. Complete items |
| Benchmark Utilized: <u>DM7178</u> Vertical Datum: <u>NAVD 1988</u> Indicate elevation datum used for the elevations in items a) through h) below. □ NGVD 1929 ☒ NAVD 198 | 20 Dother/Course |
| Datum used for building elevations must be the same as that used for the BEF. | e measurement used. eet |
| SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICA | ATION |
| This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify element on this Certificate represents my best efforts to interpret the data available. Understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001. Check here if comments are provided on back of form. Check here if attachments. Were latitude and longitude in Section A provided by licensed land surveyor? | evation |
| Certifier's Name License Number | PLACE |
| Michael J. Williams NJ GS25800 Title Company Name Aliabert Milliams Land Surveying | SEAL HERE |
| 'and Surveyor Michael J. Williams Land Surveying \(\text{Address}\) \(\text{City}\) \(\text{State}\) \(\text{ZIP Code}\) \(\text{State}\) \(\text{Ocean Grove}\) \(\text{NJ}\) \(\text{O7756}\) | e |
| Signature Date Telephone (732) 988-6440 | |

| , on CERTIFICATE, page 2 | | | |
|---|--|--|--|
| PORTANT: In these spaces, copy the corresponding information from Sec | tion A. | FOR IN | SURANCE COMPANY USE |
| Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or PO. R 127 Central Avenue | oute and Box No. | Policy N | |
| City State . Neptune (Ocean Grove) NJ | ZIP Code 07756 | Compan | NAIC Number: |
| SECTION D - SURVEYOR, ENGINEER, OR | ARCHITECT CE | RTIFICATION (CONTINU | ED) |
| Copy both sides of this Elevation Certificate for (1) community official, (2) insu | urance agent/com | any, and (3) bullding owner. | |
| Comments Furnace and Hot Water Heater are located on the first floor | or or above eleva | ition 12.9. There is a Air | Conditioner Unit adjacent to |
| the building at elevation 1∠.5. | | | |
| SmartVent Model No. 1540-510 | | | |
| Signature Mallflull | Date 01/28/ | | |
| SECTION E - BUILDING ELEVATION INFORMATION (SURVEY | NOT REQUIRE |) FOR ZONE AO AND Z | ONE A (WITHOUT BFE) |
| For Zones AO and A (without BFE), complete Items E1.—E5. If the Certificate is For Items E1.—E4, use natural grade, if available. Check the measurement use | intended to suppo d. In Puerto Rico o | rt a LOMA or LOMR-F request aly, enter meters. | , complete Sections A, B, and C. |
| E1. Provide elevation information for the following and check the appropriate be grade (HAG) and the lowest adjacent grade (LAG). | - | | |
| a) Top of bottom floor (including basement, crawlspace, or enclosure) is b) Top of bottom floor (including basement, crawlspace, or enclosure) is | | | above or Delow the HAG. above or Delow the LAG. |
| E2. For Building Diagrams 6–9 with permanent flood openings provided in Sec | tion A Items 8 and | | |
| the next higher floor (elevation C2.b in the diagrams) of the building is | | | bove or Delow the HAG. |
| E3. Attached garage (top of slab) is | | | bove or Delow the HAG. |
| E4. Top of platform of machinery and/or equipment servicing the building is | | ☐feet ☐ meters ☐ a | bove or Delow the HAG. |
| E5. Zone AO only: If no flood depth number is available, is the top of the botto ordinance? \square Yes \square No \square Unknown. The local official must certify to | | | nity's floodplain management |
| SECTION F - PROPERTY OWNER (OR OW | | | |
| The property owner or owner's authorized representative who completes Sectione AO must sign here. The statements in Sections A, B, and E are correct to the statement of the st | ons A, B, and E for the best of my k | Zone A (without a FEMA-issuowledge. | ed or community issued BFE) or |
| Property Owner or Owner's Authorized Representative's Name | | | |
| Address | City | State | ZIP Code |
| Signature | Date | Telephone | |
| Comments | | | · |
| | | | ☐ Check here if attachments. |
| SECTION G – COMMUNITY | INFORMATION | (OPTIONAL) | |
| The local official who is authorized by law or ordinance to administer the commu G of this Elevation Certificate. Complete the applicable item(s) and sign below. Complete the applicable item(s) and sign below. | nity's floodplain ma Check the measurer | nagement ordinance can com neat used in Items G8–G10. I | plete Sections A, B, C (or E), and n Puerto Rico only, enter meters. |
| G1. The information in Section C was taken from other documentation t who is authorized by lawto certify elevation information. (Indicate the content of | ne source and date | of the elevation data in the | Comments area below.) |
| G2. A community official completed Section E for a building located in Zor | • | • | ed BFE) or Zone AO. |
| G3. The following information (Items G4–G10) is provided for community | | | |
| G4. Permit Number G5. Date Permit Issued | G6. | Date Certificate Of Complian | ce/Occupancy Issued |
| G7. This permit has been issued for: New Construction Substar | itial Improvement | | |
| G8. Elevation of as-built lowest floor (including basement) of the building: $_$ | | ☐ feet ☐ meters Dat | Jm |
| G9. BFE or (in Zone AO) depth of flooding at the building site: | | <u> </u> | Jm m_ |
| G10. Community's design flood elevation: | | ☐ feet ☐ meters Date | JM |
| Local Official's Name | Title | | |
| Community Name | Telephone | | |
| Signature | Date | | |
| Comments | | | |
| | | | |
| | | | Check here if attachments. |
| EMA Form 086-0-33 (Revised 7/12) | | | Replaces all previous editions. |

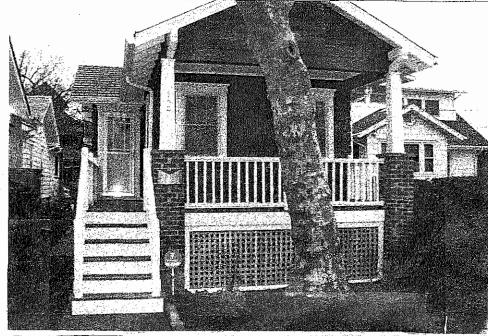
ATION CERTIFICATE, page 3

BUILDING PHOTOGRAPHS

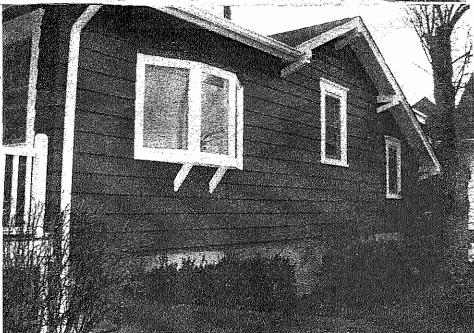
See Instructions for Item A6.

| IMPORTANT: In these spaces, copy the corresponding information from Section A. | | | FOR INSURANCE COMPANY USE | |
|--|---------------------|----------------------------|---------------------------|----------------------|
| Building Street Address (including Apt., Unit, Suite, and/or Bidg. No.) or RO. Route and Box No. 127 Central Avenue | | Policy Number: | | |
| City Neptune (Ocean Grove) | State N J | ZIP Code 0 77 56 | | 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.



FRONT VIEW 1/28/16



RIGHT SIDE VIEW
1/28/16

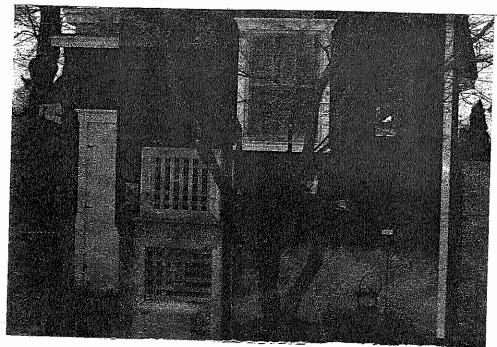
√ION CERTIFICATE, page 4

BUILDING PHOTOGRAPHS

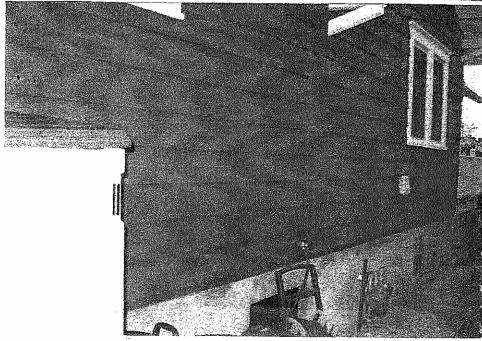
Continuation Page

| IMPORTANT: In these spaces, copy the corre | FOR INSURANCE COMPANY USE | | |
|--|---------------------------|----------|----------------------|
| Building Street Address (including Apt., Unit, S 127 Central Avenue | Policy Number: | | |
| City | State | ZIP Code | Company NAIC Number: |
| Neptune (Ocean Grove) | NJ | 07756 | |

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.



REAR VIEW



LEFT SIDE VIEW



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ESR-2074

Reissued 02/2015
This report is subject to renewal 02/2017.

DIVISION: 08 00 00—OPENINGS
SECTION: 08 95 43—VENT5/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; #1540-571; #1540-570; #1540-574; #1540-524; #1540-514



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ICC-ES Evaluation Report

ESR-2074*

Reissued February 2015

This report is subject to renewal February 2017.

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A Subsidiary of the International Code Council®

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

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code® (IBC)
- 2012, 2009 and 2006 International Residential Code[®] (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)^T

[†]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 2.6.2.2 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 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. The mounting straps allow mounting in masonry and 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® 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

*Revised July 2015

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 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).

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

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

ELEVATION CERTIFICATE

Important: Read the instructions on pages 1-9.

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

| | | | HON A | - PROPERTY INF | ORIVIA HUN | | INSURANCE DUMPANT USE |
|--|---|--|---|--|--|--|---|
| A1. Building Owner's Nam | e MR. CHRIS V | VIRTH | | | | Polic | / Number: |
| A2. Building Street Addres 100 FAIRVIEW PLACE | | , Unit, Suite, and/or | Bldg. No | .) or P.O. Route and | Box No. | 100000 | oany NAIC Number: |
| City NEPTUNE TOWN | NSHIP | _ | | State NJ ZIP C | Code 07753 | | |
| A3. Property Description (LOTS 21&22 - BLOCK 474 | | ımbers, Tax Parcell | Number, | Legal Description, el | c.) | | |
| A4. Building Use (e.g., Re A5. Latitude/Longitude; La A6. Attach at least 2 photo A7. Building Diagram Num A8. For a building with a c a) Square footage of b) Number of perman or enclosure(s) with | t. 40.1931 Long graphs of the bulber 7 rawlspace or encorawlspace or encorawlspace or entitlood opening hin 1.0 foot abov | g. 74.0397 Ho illding if the Certifica closure(s): nclosure(s) gs in the crawlspace e adjacent grade | orizontal [te is bein 1054 e 6 | Datum: | 27 ⊠ NAD 1983 Id insurance. For a building with an a) Square footage of b) Number of perma within 1.0 foot ab | of attached of anent flood of nove adjacer | garage <u>NA</u> sq ft oppenings in the attached garage of the proof of the |
| c) Total net area of flood of the control of the co | penings? | ⊠ Yes □ No | <u>1200</u> | | c) Total net area ofd) Engineered flood | d openings? | |
| | SEC | TION B - FLOOD | INSUR | ANCE RATE MAF | (FIRM) INFORMA | ATION | |
| B1. NFIP Community Name TOWNSHIP OF NEPTUNE | | Number | B2. Cou MONM | unty Name OUTH | | B3. S NJ | tate |
| B4. Map/Panel Number 34025 C 0333 | B5. Suffix F | B6. FIRM Index I 9-25-2009 | Date | B7. FIRM Panel Effective/Revised D 9-25-2009 | | | 9. Base Flood Elevation(s) (Zone AO, use base flood depth) 9.0 |
| FIS Profile B11. Indicate elevation datu B12. Is the building located Designation Date: | in a Coastal Bar | rier Resources Syst | VD 1929 em (CBR □ C | NAVD 19 S) area or Otherwise CBRS | 088 | 'A)? | ☐ Yes |
| O4 B ## | | | | | · · · · · · · · · · · · · · · · · · · | | Finish (O) 1 " |
| C1. Building elevations are land *A new Elevation Certification Certification Elevations - Zones A1 – below according to the land Benchmark Utilized: SN Indicate elevation datum Datum used for building | cate will be requi A30, AE, AH, A puilding diagram IART NET GPS n used for the ele | (with BFE), VE, V1– specified in Item A7 evations in items a) | ion of the V30, V (v 7. In Puerl Vertio through h | building is complete with BFE), AR, AR/A to Rico only, enter m cal Datum: NAVD 80 below. | , AR/AE, AR/A1A30 neters. <u>8</u> |), AR/AH, AF | Finished Construction R/AO. Complete Items C2.a-n Source: |
| | | | | | | | neasurement used. |
| a) Top of bottom floor (i b) Top of the next highe c) Bottom of the lowest d) Attached garage (top e) Lowest elevation of next. | r floor horizontal structo of slab) nachinery or equ | ural member (V Zone | €s only) | · | 6.0 13.4 NA. NA. 12.4 | ☑ fee ☑ fee ☐ fee ☑ fee | et meters ; et meters ; et meters ; |
| (Describe type of equ f) Lowest adjacent (finis g) Highest adjacent (fini h) Lowest adjacent grad | shed) grade next shed) grade nex | to building (LAG) t to building (HAG) | s, includi | ng structural support | 5. <u>5</u> 6.1 6.5 | ⊠ fee ⊠ fee ⊠ fee | et meters |
| · | SECTIO | ON D - SURVEYO | DR, ENG | INEER, OR ARCI | HITECT CERTIFIC | ATION | |
| This certification is to be sign information. I certify that the I understand that any false | gned and sealed e information on | by a land surveyor, this Certificate repre | engineer esents my | r, or architect authorize best efforts to interp | zed by law to certify e oret the data available | elevation e. | , |
| □ Check here if comment □ | ts are provided o | | Were la | atitude and longitude | in Section A provide | | |
| Check here if attachme | | | license | d land surveyor? | ☐ Yes ☐ No | | SEAL HERE |
| Certifier's Name KENNETH | | | WEGE | | mber 36727 | | 1 1 km 25 50 |
| Title OWNER/PRESIDENT | | | | ROFESSIONAL LAN | | | |
| Address P.O. BOX 521 Signature | 1 | City COLTS NEC Date 5-19-16 | ·N | State NJ Telephone | ZIP Code 07722 908-692-7853 | | |
| Oignature X | - H2 1 | Date 3-13-10 | | releptione | 330-032-1030 | | 1 |

. ₁⊏, page 2 ese spaces, copy the corresponding information from Section A. FOR INSURANCE COMPANY USE Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. Policy Number .∢**√**IEW PLACE Lity NEPTUNE TOWNSHIP Company NAIC Number: State NJ ZIP Code 07753 SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED) Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner. Comments LOWEST ELEVATION OF MACHINERY SERVICING THE DWELLING IS THE AC UNIT ON A WOODEN PLATFORM AT ELEVATION 12.4'. THE FLOOD VENT MODEL IS # 1540-510 CERTIFIED TO PROTECT 200 SQUARE FEET OF ENCLOSED AREA. THE ABFE: A 1% EL 10 & 0.2% EL 12. Signature Date 5-13-16 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. feet meters above or below the LAG. b) Top of bottom floor (including basement, crawlspace, or enclosure) is For Puilding 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. E2. Attached garage (top of slab) is Top of platform of machinery and/or equipment servicing the building is ☐ feet ☐ meters ☐ above or ☐ below the HAG. 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 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's or Owner's Authorized Representative's Name Address City ZIP Code State Signature Date Telephone Comments ☐ Check here if attachments. SECTION G - COMMUNITY INFORMATION (OPTIONAL)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8–G10. In Puerto Rico only, enter meters.

- G1. The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2. A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.
- G3. The following information (items G4–G10) is provided for community floodplain management purposes.

G5. Date Pennit Issued

| G7. This permit has been issued for: New Construction | Substantial Improvement | | | |
|--|-------------------------|----------|----------|--------------|
| G8. Elevation of as-built lowest floor (including basement) of the building: | | ☐ 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 | | <u> </u> | - |
| Community Name | Telephone | | | |
| Signature | Date | | | |
| Comments | | | | |
| | • | | | |

FEMA Form 086-0-33 (7/12)

G4. Permit Number

Replaces all previous editions.

G6. Date Certificate Of Compliance/Occupancy Issued

age 3ہر

Building Photographs

See Instructions for Item A6.

an these spaces, copy the corresponding information from Section A.

street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. rÁÍRVIEW PLACE ity NEPTUNE TOWNSHIP

State NJ

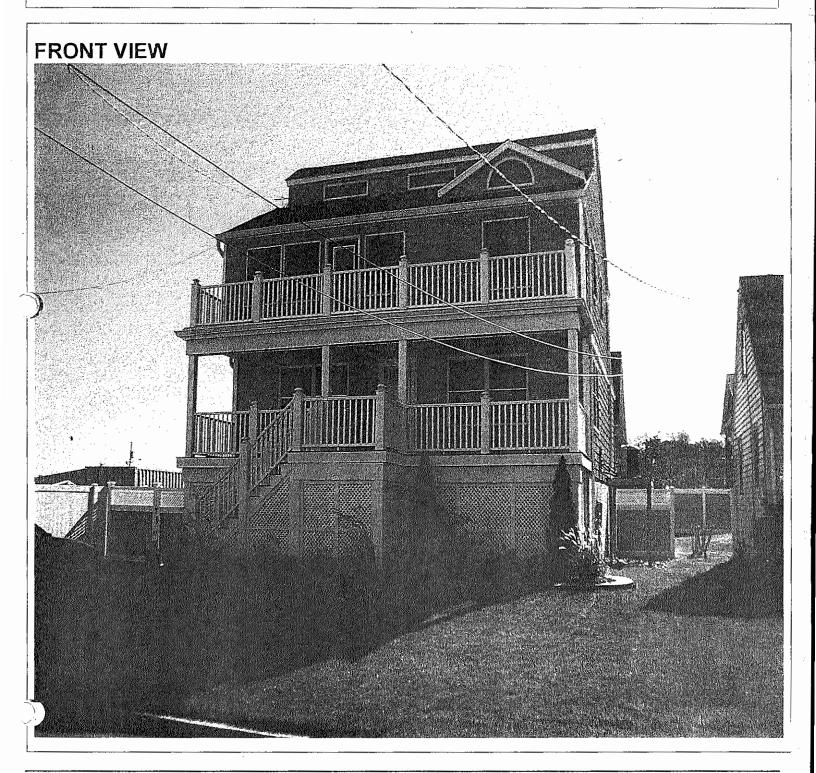
ZIP Code 07753

FOR INSURANCE COMPANY USE

Policy Number:

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.



FEMA Form 086-0-33 (7/12)

Replaces all previous editions.

, page 4

Building Photographs Continuation Page

... these spaces, copy the corresponding information from Section A.

FOR INSURANCE COMPANY USE

street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.

Policy Number:

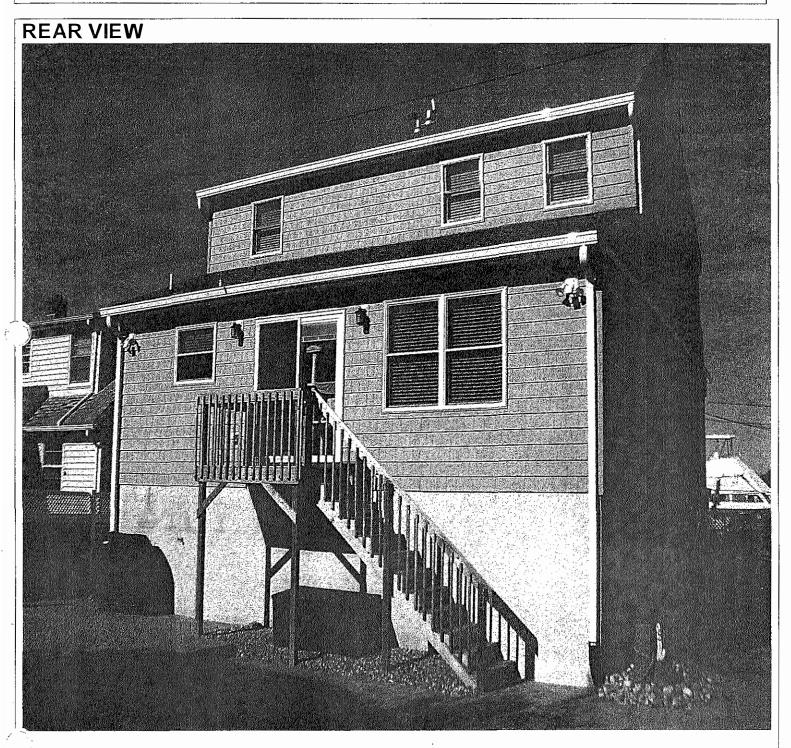
ity NEPTUNE TOWNSHIP

State NJ

ZIP Code 07753

Company NAIC Number:

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.





ICC-ES Evaluation Report

ESR-2074

Reissued February 2015 Revised May 2016 This report is subject to renewal February 2017.

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A Subsidiary of the International Code Council®

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

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012, 2009 and 2006 International Building Code® (IBC)
- 2015, 2012, 2009 and 2006 International Residential Code® (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)[†]

[†]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 m 2) of enclosed area, except that the SmartVENT 8 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.

ICCES 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.



- 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 NUMBER | MODEL SIZE (in.) | COVERAGE (sq. ft.) |
| 1540-520 | 15 ³ / ₄ " X 7 ³ / ₄ " | 200 |
| 1540-510 | 15 ³ / ₄ " X 7 ³ / ₄ " | 200 |
| 1540-524 | 15 ³ / ₄ " X 7 ³ / ₄ " | 200 |
| 1540-514 | 15 ³ / ₄ " X 7 ³ / ₄ " | 200 |
| 1540-570 | 14" X 8 ³ / ₄ " | 200 |
| 1540-574 | 14" X 8 ³ / ₄ " | 200 |
| 1540-511 | 16" X 16" | 400 |
| 1540-521 | 16" X 16" | 400 |
| | 1540-520 1540-510 1540-524 1540-514 1540-570 1540-574 | 1540-520 |

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



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ICC-ES Report

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ESR-2074

Reissued 02/2015
This report is subject to renewal 02/2017.

DIVISION: 08 00 00—OPENINGS
SECTION: 08 95 43—VENT5/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; #1540-571; #1540-570; #1540-574; #1540-524; #1540-514



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ICC-ES Evaluation Report

ESR-2074*

Reissued February 2015

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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:

- 2012, 2009 and 2006 International Building Code® (IBC)
- 2012, 2009 and 2006 International Residential Code[®] (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)^T

[†]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 2.6.2.2 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 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. The mounting straps allow mounting in masonry and 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® 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

*Revised July 2015

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 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).

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

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency ELEVATION CERTIFICATE IMPORTANT: FOLLOW THE INSTRUCTIONS ON PAGES 9-16

| OMB | Control | Number: | 1660-0008 |
|-----|---------|------------|------------|
| | E | coiration: | 11/30/2018 |

| SECTION A DEODEDTY INFORMATION | | | | | | | | | | | |
|---|-----------------|------------------------|-----------------|-----------------------------------|--------------|--------------|----------------|--|---------------|-------|-------------|
| SECTION A - PROPERTY INFORMATION A1. Building Owner's Name TO ACTUME TO ACCUMENT OF A CONTROL | | | | | | | FO | FORM INSURANCE COMPANY USE | | | |
| A 1. Building Owner's Na | TIM(| OTHY FA | GAN & | KIM WE | LLE | | Po | licy Number: | | | |
| A2. Building Street Addr Box N o. | ess (includin | g Apt., Unit, S | uite, and/o | r Bidg. N o.) | or P.O. Ro | ute and | Co | mpany N AIC | ; | | |
| 506 S | OUTH RI | VERSIDE | DRIVE | _ | | | | ımber: | | | |
| City NEPTUNE | | | | | Sta | ate N | EW. | JERSEY | Zip Code | 07 | 753 |
| A3. Property Description | • | • | | • | • | ption, e | tc.) | | | | |
| BLOCK 5213 | • | | | | _ | : - : - | 4:1 | | | | |
| A4. Building Use (e.g., F | | | 74000 | i, Accessory '52.9" V Ų | r, etc.) K | eside | nuai | | | | |
| A5. Latitude/Longitude: | Lat. 40°11 | 20.4" N | Long. | | nonzoniai c | atum. | \bigcirc N | IAD 1927 | ● NAD 198 | 33 | |
| A6. Attach at least 2 pho | otographs of | he building if | the Certific | ate is being | used to ob | tain floo | od insu | гапсе. | | | |
| A7. Building Diagram N | | | | | | | | | | | |
| A8. For a building with a | crawlspace | or enclosure(| s): | | A9. F | or a bui | Iding w | vith an attach | ed garage: | | |
| a) Square footage o | f crawlspace | or enclosure(| s) <u>809</u> | sq f | t a) Sqı | uare foo | otage o | f attached ga | arage | 934 | sq |
| b) Number of perma crawlspace or end above adjacent gi | closure(s) wit | | 6 | | in t | | hed ga | anent flood op arage within rade | - | 7 | |
| c) Total net area of t | dood opening | s in A8.b | 768 | sq i | in c) Tot | al net a | rea of | flood opening | gs in A9.b | 896 | sq |
| d) Engineered flood | openings? | (XYes | ON _o | | d) En | aineere | d flood | l openings? | OX(Yes | ON | |
| 1 | | CTION B - F | LOOD INS | URANCE F | | | | | | | |
| B1. NFIP Community N | | • | | | County Nam | | | | | ì | State |
| TOWNSHIP Of B4. Map/Panel Number | | | | | | | 8 Ele | ood Zone(s) | B9. Base Fl | ٠,١ | lovetion(s) |
| | | | | | ed Date | .uve/ D | | 000 2011e(3) | (Zone A | | e base floo |
| 34025C0333 | F | 9-25-2 | 2009 | 9-25 | 5-2009 | | AE | | depth | 9 | |
| B10. Indicate the source | | | , . | | - | entered | d in Ite | m B9: | | | |
| B11. Indicate elevation of | datum used fo | or BF E in Item | B9: ○ N | IG V D 1929 | NAVD 1 | 1988 (|) Othe | r/Source: | | | |
| B12. Is the building local | ted in a Coas | tal Barrier Re | sources Sy | stem (CBR | S) area or (| Otherwi | se Prot | ected Area (| OPA)? ()` | es/ | ⊚ N∘ |
| Designation Date: | | Oci | |) OPA | • | | | · | | | |
| | SEC | TION C - BUIL | DING ELI | EVATION IN | NFORMATI | ON (SU | RVEY | REQUIRED) |) | | |
| C1. Building elevations | | _ | | - | | | | _ | Finished Co | | |
| C2. Elevations - Zones Complete Items C2.a -h | | | | | | | | | | H, AR | AO. |
| * A new Elevation Certific | cate will be re | equired when | construction | on of the bui | lding is com | piete. | | | | | |
| Benchmark Utilized: | G.P.S. | | | • | Vertical Da | atum: | NΑ\ | / D 1988 | | | |
| Indicate elevation datum | used for the | elevations in | items a) th | rough h) be | elow. ON | - SVD 19 | 29 🧿 |) NAVD 1988 | | | |
| | Other | /Source: | | | | | | | _ | | |
| Datum used for building | elevations m | Just be the sai | me as that | used for the | e BFE | | | | Check the r | neası | rement use |
| a) Top of bottom floor (i | | | | | , |) | _ | 9 | fee | | meters |
| b) Top of the next highe | • | | , pass, s. s. | | , | 4 | - | 1 | © ∫fe∂ | | meters |
| c) Bottom of the lowest | | ructural memb | per (V Zone | es only) | <u></u> | | | | Ofee | | meters |
| d) Attached garage (top | of slab) | | | • | | } | | 9 | (fee | et (| meters |
| e) Lowest elevation of a (Describe type of eq | - | • • | - | building | _1 | 3 | - - | 7 | • fee | et (| meters |
| f) Lowest adjacent (fin | ished) grade | next to buildin | ng (LAG) | | _6 |) | - - | 2 | • fee | et (| meters |
| g) Highest adjacent (fir | nished) grade | next to buildin | ng (HAG) | | _1 | 0 | | 2 | • fee | et (| meters |
| h) Lowest adjacent gra structural support | de at lowest (| elevation of de | eck or stair | s, including | _9 |) | - - | 6 | • fe | et (| meters |
| | • | | | | | | | | | | |
| | | | | | | | | | | | |

ELEVATION CERTIFICATE

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

| • | SECTION D - S | SURVEYOR, ENGINEE | ER, OR ARCHITECT CER | RTIFICATION |
|--|--|--|---|---|
| that the infor m ation on | e signed and sealed by a | land surveyor, enginees my best efforts to inte | er, or architect authorized appret the data available. I | by law to certify elevation information. <i>I certify</i> understand that any false statement may be |
| X Check here if attac | | Were latitude and lon provided by a license Yes No | gitude in Section A d land surveyor? | |
| Certifier's Name | | | ense Number | |
| Robert H. Mor | rris | 2. | 4GE030090 | |
| Title Professional | Land Surveyor | Company Name Nelson Engine | eering Assoc. Inc. | PLACE SEAL HERE |
| Address 1750 Bloomsb | ury A v enue | City Ocean | State Zip Code NJ 07712 | |
| Signature Copy both sides of this | Elevation Certificate for | Date 8-11-2016 | Telephone 732-918-2180 2) insurance agent/compa | any, and (3) building owner. |
| | type of equipment and loc | | | · · · · · · · · · · · · · · · · · · · |
| AC conden | ser on platform at | north si∎e of hou | use. Smart Vent M | odel N o. 1540-510 |
| | | A Comment of the Comm | | 8-11-2016 |
| Signature | | | | Date |
| For Zones AO and A (| without BFE), complete It | ems E1 -E5. If the Cert | ificate is intended to supp | ONE AO AND ZONE A (WITHOUT BFE) ort a LOMA or LOMR-F request, complete used. In Puerto Rico only, enter meters. |
| | information for the following rade (HAG) and the lower | | | ether the elevation is above or below the |
| a) Top of bottom f or enclosure) is | loor (including basement, | crawlspace, | | meters above or below the HAG. |
| b) Top ofbottom f or enclosure) is | loor (including basement, | crawlspace, | | neters above or below the LAG. |
| 1 | ams 6 -9 with permanent C2.b in the diagrams) of | | | d/or 9 (see pages 8 -9 of Instructions), the next meters above or below the HAG. |
| E3. Attached garage (| top of slab) is | | | meters above or below the HAG. |
| E4. Top of platform of servicing the building i | machinery and /or equipr is | ment | | neters above or below the HAG. |
| E5. Zone AO only: If n | • | | he bottom floor elevated Ir official must certify this inf | n accordance with the community's floodplain ormation in Section G. |
| | SECTION F - PROPI | ERTY OWNER (OR O | WNER'S REPRESENTAT | IVE) CERTIFICATION |
| community-issued BF | E) or Zone AO must sign | here. The statements i | | or Zone A (without a FEMA-issued or e correct to the best of my knowledge. |
| Property Owner or Ov | wner's Authorized Repres | | | |
| Address | | City | State | ZIP Code |
| Signature | | Date | Telephor | ie |
| Comments | | | | |
| | | ····· | | Check here if attachments |

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

| SEC (1) | ION G - CO | INIINIOINELY | 1:VF OR IVIA | TION (O | PTIONAL) | · | | |
|---|--|---------------------------|------------------------------|------------------------|----------------------------|-------------------------------------|-------------------------------------|-----------------|
| The local official who is authorized by law or ord A, B, C (or E), and G of this Elevation Certificate G10. In Puerto Rico only, entermeters. | | | | | | | | |
| G1. The information in Section C was taken or architect who is authorized by law to Comments area below.) | n from other o certify ele v | documenta ation inform | ition that h nation. (Ind | as been s icate the | signed and s source and | ealed by a lice date of the elev | nsed surveyor, ⁄aṫion data in tl | engineer, ne |
| G2. A community official completed Section AO. | n E for a bui | lding locate | d in Zone | A (withou | ta FEMA-is | sued or commi | unityissued BF | E) or Zone |
| G3. The following information (Items G4 -G | 310) is provi | ded for com | munity flo | odplain m | anagement | purposes. | | • |
| G4. Permit Number | G5. Date I | Permit Issu | ed | G6. Dat | e Certificate | of Compliance | e/Occupancy is | sued |
| G7. This permit has been issued for: | onstruction | Substa | intial !mpro | vement | | | | |
| G8. Elevation of as-built lowest floor (including of the building: | basement) | | - | ◯ feet | ○ meters | Datum | | , |
| G9. BFE or (in Zone AO) depth of flooding at the site: | e building | | - | Ofeet | Ometers | Datum | | |
| G10. Community's design flood elevation: | | | - | O feet | Ometers | Datum | | |
| Local Official's Name | | | Title | | | | , | |
| Community Name | · | <u></u> | Telephone | е . | | · | | |
| Signature | · | | Date | | | | vidanda — universal | |
| Comments | | | ·· | | | | | , |
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BUILDING PHOTOGRAPHS

See instructions for Item A6

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

IMPORTANT: In these spaces, copy the corresponding information from Section A.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.

506 SOUTH RIVERSIDE DRIVE

City State Zip Code NUMBER:

NEPTUNE

NUMBER

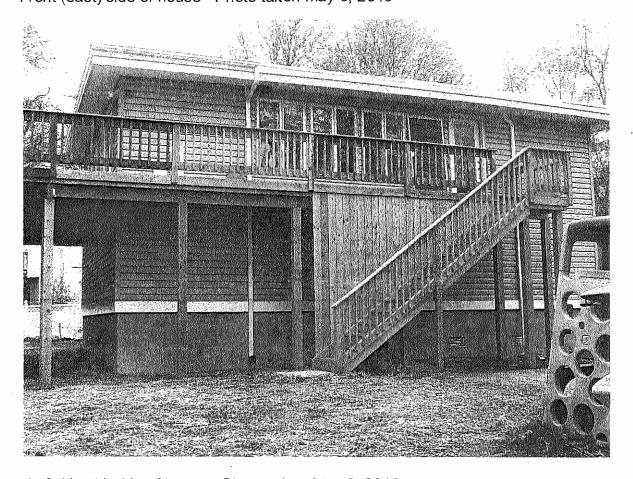
FOR INSURANCE COMPANY USE

Policy 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.



Front (east) side of house - Photo taken May 6, 2016



Left (south) side of house - Photo taken May 6, 2016



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ICC-ES Report

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ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

DIVISION: 08 00 00—OPENINGS
SECTION: 08 95 43—VENT5/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; #1540-571; #1540-570; #1540-574; #1540-524; #1540-514



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ANSI

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ICC-ES Evaluation Report

ESR-2074*

Reissued February 2015

This report is subject to renewal February 2017.

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A Subsidiary of the International Code Council®

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

REPORT HOLDER:

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

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2012, 2009 and 2006 International Building Code® (IBC)
- 2012, 2009 and 2006 International Residential Code[®] (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)^T

[†]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 2.6.2.2 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 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. The mounting straps allow mounting in masonry and 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® 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

*Revised July 2015

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 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).

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

| O.S. DEPATMENT OF HOMELA FEDERAL EMERGENCY MANAG National Flood Insurance Progra | SEMENT AGENCY | ATION CERTI Read the instruction | | | MB No. 1660-0008 piration Date: July 31, 2015 |
|---|---|---|--|---|--|
| | SE | CTION A - PROPERT | YINFORMATION | FOF | R INSURANCE COMPANY USE |
| A1. Building Owner's Name | Niskoch | | | Poli | cy Nurnber: |
| A2. Building Street Address 111 Melrose Ave | (including Apt., Unit, Suite, and/o | or Bldg. No.) or P.O. Rout | e and Box No. | Con | npany NAIC Number: |
| City Neptune | | State NJ | ZIP Code 07753 | | |
| A3. Property Description (Lo Lot 9 - Block 5317, Formerly | ot and Block Numbers, Tax Parce Lot 43-45, Block 4 7 1 | el Number, Legal Descript | ion, etc.) | | |
| A5. Latitude/Longitude: Lat. A6. Attach at least 2 photog A7. Building Diagram Numb A8. For a building with a cra a) Square footage of cr b) Number of permaner | wlspace or enclosure(s): awlspace or enclosure(s) nt flood openings in the crawlspa n 1.0 foot above adjacent grade od openings in A8.b | cate is being used to obta 986 sq ft ce 5 1000 sq in | Horizo in flood insurance. A9. For a building v a) Square foo b) Number of within 1.0 f c) Total net a | with an attached otage of attached permanent flood oot above adjac | garage <u>252</u> sq ft d openings in the attached garage ent grade <u>2</u> nings in A9.b <u>400</u> sq in |
| ************************************** | SECTION B - FLOO | D INSURANCE RATE | MAP (FIRM) INFO | ORMATION | 0// |
| B1. NFIP Community Name Twp. of Neptune- 340317 | & Community Number | B2. County Name Monmouth | | | State v Jersey |
| B4. Map/Panel Number 34025C0333 | B5. Suffix B6. FIRM Index 9-25-09 | B7. FIRM Effective/Rev 9-25- | ised Date Z | 8. Flood Zone(s) AE | B9. Base Flood Elevation(s) (Zone AO, use base flood depth) |
| | n used for BFE in Item B9: Note a Coastal Barrier Resources Sy SECTION C - BUILDIN | stem (CBRS) area or Oth | erwise Protected Are OPA | | Yes ⊠ No |
| C2. Elevations – Zones A1–A below according to the busenchmark Utilized: GPS | ased on: Construction ate will be required when constru 30, AE, AH, A (with BFE), VE, V uilding diagram specified in Item. | Drawings* Betion of the building is cor 1–V30, V (with BFE), AR, A7. In Puerto Rico only, e | uilding Under Construnter Construnter Construction (Construction Construction Const | uction* [2 1–A30, AR/AH, / | ☐ Finished Construction AR/AO. Complete Items C2.ah |
| | elevations must be the same as t | | | | measurement used. |
| b) Top of the next higher c) Bottom of the lowest h d) Attached garage (top of e) Lowest elevation of ma (Describe type of equip f) Lowest adjacent (finish g) Highest adjacent (finish | orizontal structural member (V Z | nes only) he building) | 6.85 13.90 n.a 6.98 13.1 6.8 7.0 upport 6.7 | ⊠ f ⊠ f ⊠ f ⊠ f ⊠ f ⊠ f | eet |
| | SECTION D - SURVE | YOR, ENGINEER, OR | ARCHITECT CER | TIFICATION | |
| information. I certify that the I understand that any false s Check here if comments Check here if attachments Certifier's Name John W. Lo | rd, PE, PLS Company Name | oresents my best efforts to ine or imprisonment unde Were latitude and lon licensed land surveyo Licen e KTP Consulting, LLC | o interpret the data at r 18 U.S. Code, Sect gitude in Section A p or? ⊠ Yes □ se Number 32455 | vailable. tion 1001. provided by a | |
| Address 28 V ayside Dr | City Brick | State | | | _ |
| Signatur | Date 12-25-15 | ı elep | hone 609-276-4445 | J | |

See reverse side for continuation.

Replaces all previous editions.

FEMA Form 086-0-33 (7/12)

_ペTIFICATE, page 2 ANT: In these spaces, copy the corresponding information from Section A. FOR INSURANCE COMPANY USE duilding Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 111 Melrose Ave City Neptune State NJ ZIP Code 07753 Company NAIC Number: SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED) Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner. Lowest Mechanical EL=13.1 (Elec Met), Heat/Hot Water EL=13.9, Smartvent 1540-510 200 sq in each. Also shown on FEMA Prelim Firm 34025C0 33G, AE(10) Zone Signatu Date 12-25-15 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. ☐ feet ☐ meters ☐ above or ☐ below the LAG. b) Top of bottom floor (including basement, crawispace, or enclosure) is _ 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 ☐ feet ☐ meters ☐ above or ☐ below the HAG. (elevation C2.b in the diagrams) of the building is Attached garage (top of slab) is \square feet \square meters \boxtimes above or \square below the HAG. Top of platform of machinery and/or equipment servicing the building is _ ☐ feet ☐ meters ☐ above or ☐ below the HAG. E4. 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's or Owner's Authorized Representative's Name ddress State ZIP Code City Telephone Signature Date Comments Check here if attachments. SECTION G - COMMUNITY INFORMATION (OPTIONAL) The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8-G10. In Puerto Rico only, enter meters. The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who

- is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2. □ A community official completed Section E for a building located in Zone A (without a FEMA issued or community issued BFE) or Zone AO.
- G3. 🗆 The following information (Items G4--G10) is provided for community floodplain management purposes.

| G4. Permit Number | G5. Date Permit Issued | | G6. Date (| Certificate Of C | Compliance/Occupancy Issued |
|---------------------------------------|---------------------------------------|-----------------|------------|---|-----------------------------|
| G7. This permit has been issued for | : New Construction S | ubstantial Impr | ovement | | |
| G8. Elevation of as-built lowest floo | (including basement) of the building: | · | ☐ feet | ☐ meters | Datum |
| G9. BFE or (in Zone AO) depth of fl | ooding at the building site: | | ☐ feet | ☐ meters | Datum |
| G10. Community's design flood eleva | ation: | | ☐ feet | ☐ meters | Datum |
| Local Official's Name | | Title | | | |
| Community Name | | Tele | hone | | |
| Signature | | Date | | , | |
| omments | | , | | | · |
| | | · | | | Check here if attachments. |

FEMA Form 086-0-33 (7/12)

Replaces all previous editions.

ℳION CERTIFICATE, page 3

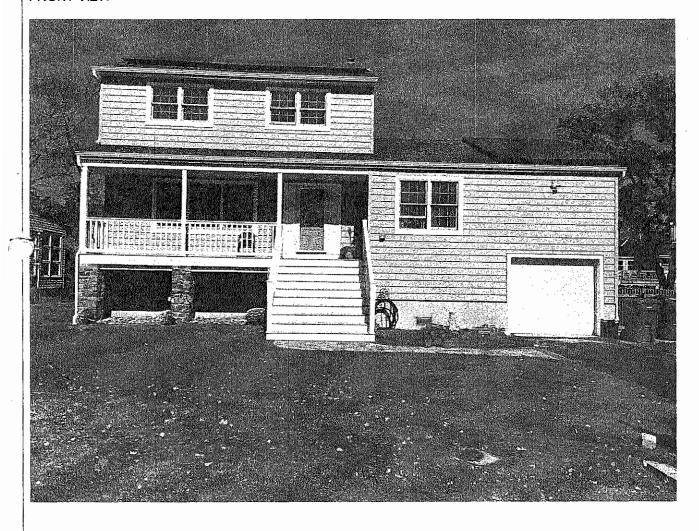
Building Photographs

See Instructions for Item A6.

| IMPORTANT: In these spaces, copy the correspon | nding information fro | m Section A. | FOR INSURANCE COMPANY | YUSE |
|---|---------------------------|----------------|-----------------------|------|
| Suilding Street Address (including Apt., Unit, Suite, and/or B 111 Melrose Ave | ldg. No.) or P.O. Route a | nd Box No. | Policy Number: | |
| City Neptune | State NJ | 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.

FRONT VIEW

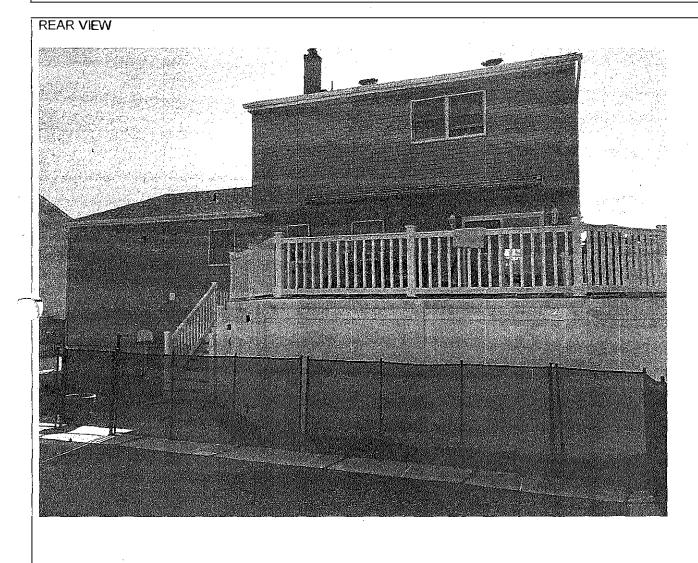


...ON CERTIFICATE, page 4

Building Photographs Continuation Page

| | IMPORTANT: In these spaces, copy the corresponding inf | ormation fro | m Section A. | FOR INSURANCE COMPANY USE | |
|---|--|-----------------|----------------|---------------------------|---|
| | Suilding Street Address (including Apt., Unit, Suite, and/or Bldg. No.) of 11 MelroseAve | or P.O. Route a | nd Box No. | Policy Number: | |
| , | City Neptune | State NJ | ZIP Code 07753 | Company NAIC Number: | ŀ |

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.



Building Photographs See Instructions for Item A6.

ANT: In these spaces, copy the corresponding information from Section A. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 111 Melrose Ave

) Neptune

State NJ

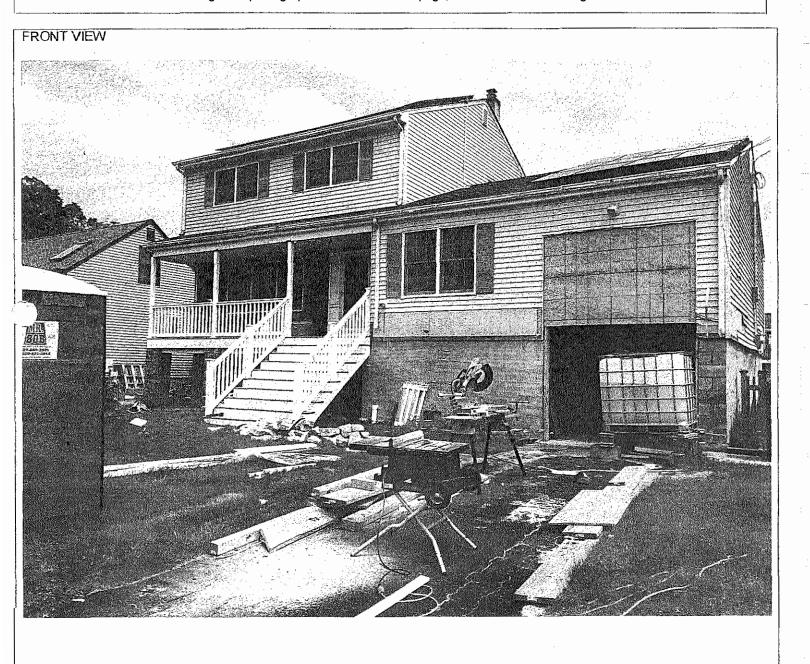
ZIP Code 07753

FOR INSURANCE COMPANY USE

Policy Number:

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.



FEMA Form 086-0-33 (7/12)

Replaces all previous editions.

Building Photographs Continuation Page

...ese spaces, copy the corresponding information from Section A.

Policy Number:

Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.

Neptune

State NJ

ZIP Code 07753

Company NAIC Number:

FOR INSURANCE COMPANY USE

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 (7/12)

Replaces all previous editions,



ICC-ES Evaluation Report

ESR-2074

Reissued February 2015 Revised May 2016

This report is subject to renewal February 2017.

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: 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)[†]

 $^{\rm t}$ 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.

ICCES 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



- 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. $\,\cdot\,$

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 | $15^3/_4$ " $\times 7^3/_4$ " | 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 = m^2

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

ELEVATION CERTIFICATE

see Notes - Reverses a

OMB No. 1660-0008

| SECT | TION A - PROPER | TY INFORMAT | FION | - March mark Harating | |
|---|---|---|---|--|--|
| | | CTT IN CICINA | IIUN . | FOR INS | URANCE COMPANY USE |
| A1. Building Owner's Name Frank & Anna Gualario | | | | Policy No | imber: |
| Building Street Address (including Apt., Unit, Suite, and/or to 103 Milford Road | Bldg. No.) or P.O. Ro | oute and Box No. | | Compan | y NAIC Number |
| City Neptune | State NJ | ZIP Code 077 | 753 | Maral and American | MICHAEL AND |
| A3. Property Description (Lot and Block Numbers, Tax Parcel N Lot 9, 10 & 11 Block 427 | Number, Legal Desci | iption, etc.) | | | |
| A4. Building Use (e.g., Residential, Non-Residential, Addition, A A5. Latitude/Longitude: Lat. N 40° 11' 19.26" Long. W 74° 02' A6. Attach at least 2 photographs of the building if the Certifical A7. Building Diagram Number 8/2 A8. For a building with a crawlspace or enclosure(s): a) Square footage of crawlspace or enclosure(s) b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade c) Total net area of flood openings in A8.b d) Engineered flood openings? | 22.17" te is being used to ol 1393 sq ft | A9. For a bui a) Squa b) Numl within c) Total | nce. Iding with an atta re footage of atta | ached gara ached gara t flood ope adjacent gi d openings | age sq ft nings in the attached garage rade <u>0</u> |
| SECTION B - FLOOD | INSURANCE RA | TE MAP (FIRM) | INFORMATIC | ON . | The state of the s |
| B1. NFIP Community Name & Community Number Township of Neptune / 340317 | B2. County Name Monmouth County | | | B3. State |) · · · |
| B4. Map/Panel Number B5. Suffix B6. FIRM Index E 9/25/2009 | Effective/F | RM Panel Revised Date 6/2009 | B8. Flood Zone(s) AE | | ase Flood Elevation(s) (Zone IO, use base flood depth) |
| □ FIS Profile ☑ FIRM □ Community Det B11. Indicate elevation datum used for BFE in Item B9: □ NG\ B12. Is the building located in a Coastal Barrier Resources System Designation Date: □ □ | √D 1929 ⊠ | | Other/Source: | | ☐ Yes |
| SECTION C BUILDING | ELEVATION INFO | ORMATION (SI | JRVEY REQUI | RED) | |
| C1. Building elevations are based on: *A new Elevation Certificate will be required when construction Dr *C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1– below according to the building diagram specified in Item A7 Benchmark Utilized: Smart Net Indicate elevation datum used for the elevations in items a) | ion of the building is -V30, V (with BFE), A 7. In Puerto Rico only Vertical Datum: through h) below. □ | AR, AR/A, AR/AE, , enter meters. NAVD 88 | AR/A1-A30, AR | R/AH, AR/A | |
| Datum used for building elevations must be the same as tha | it used for the BFE. | | Chec | k the mea | surement used. |
| a) Top of bottom floor (including basement, crawlspace, or e b) Top of the next higher floor c) Bottom of the lowest horizontal structural member (V Zoned) Attached garage (top of siab) e) Lowest elevation of machinery or equipment servicing the (Describe type of equipment and location in Comments) | es only) | CS7.2 FF13. N.A N.A 12.9 | | ☐ feet☐ feet☐ feet☐ feet☐ feet | meters, meters meters meters meters meters |
| f) Lowest adjacent (finished) grade next to building (LAG) | | <u>7</u> .0 | | ∫ feet | meters |
| g) Highest adjacent (finished) grade next to building (HAG) | | <u>7.6</u> | | ⊠ feet | meters |
| h) Lowest adjacent grade at lowest elevation of deck or stair | rs, including structura | aisupport <u>7.3</u> | | ⊠ feet | meters . |
| SECTION D - SURVEYO | OR, ENGINEER, C | R ARCHITECT | CERTIFICAT | ION | |
| This certification is to be signed and sealed by a land surveyor, information. I certify that the information on this Certificate represent understand that any false statement may be punishable by fine Check here if comments are provided on back of form. Check here if attachments. | esents my best effort e or imprisonment ur Were latitude and licensed land surve | s to interpret the o nder 18 U.S. Code longitude in Secti | data available. e, Section 1001. on A provided by s | | PLACE SEAL HERE |

FEMA Form 086-0-33 (7/12)

Address 1010 Commons Way

ritle Land Surveyor

Signature

Certifier's Name Robert Vallee PLS

See reverse side for continuation.

State NJ

Company Name Vallee Surveying, Inc.

City Toms River

Date 12/30/15

License Number 43276

Telephone 732-244-2373

ZIP Code 08755

Replaces all previous editions.

| Signature Date 12/30/15 | | - / ♥ | | | |
|--|---|---|---|---|---|
| Signature Section D - Surveyor, Engineer, Or Architect Certification (Continuer) Section D - Surveyor, Engineer, Or Architect Certification (Continuer) Ay both side of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner. Comments A've subtocated audiate a leve, 12.0" Smarther Model 1954,6510 (200 sq. in.) ""Preliminary Updated FEMA Flood Hazard Data BFE-AET Release date 1/30/15" This information is to be used for insurance purposes only. Signature Date 12/30/15 Section E - Bull. Ding 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, To replace the several on information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent a) Too of bottom floor (including basement, crawlspace, or enclosure) is | . • | py the corresponding information from | om Section A. | For | YSÜRÄNGE COMPANY USE |
| SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED) Any both sides of this Elevation Certificate for (1) community official, (2) insurance agent (company, and (3) building owner. Comments AC unit boarded outside at elev. 12.9. SmartVern Model 195-016-10 (200 sq. in.) "Preliminary Updated FEMA Flood Hazard Data BFE-AET Release date 1970." This information is to be used for insurance pupposes only Signature Date 12/30/15 SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE), For Zones AO and A (without BFE), complete times E1-E5, if the Certificate is intended to support a LOMA or LOMA: Froquest, complete Sections A, B, and C, For Items E1-E4, use natural grade (1446), and the lowest adjacent grade gra | .g Apt., | Unit, Suite, and/or Bldg. No.) or P.O. Route | and Box No. | Policy | Number |
| Apy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner. Comments A'C unit located outside at elev 1.29" Smart/vert Model #1540.510 (200 sq. in.) "*Preliminary Updated FEMA Flood Hazard Data BFE=AET (Necesses data 10/15" his information is to be used for insurance purposes only. Signature Data FEMA Flood Hazard Data BFE=AET (Necesses data 10/15" his information is to be used for insurance purposes only. SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE), For Zones AO and A (without BFE), complete lems E1=E6. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, 8, and 5. For Irens E1=4, use natural grade [14A] and the lowest algarent grade [14A], and the lowest algarent grade [14A] and the lower grade [14A] and the lower grade [14A] and the lower grade | | State NJ | ZIP Code 07753 | Comp | iny NAIC Number: |
| Section Provided | SECTION | D – SURVEYOR, ENGINEER, OR ARC | HITECT CERTIFICA | TION (CONTIN | UED) |
| Signature Date 12/30/15 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 Cetificate is intended to support a LOMA or LOMA-F request, complete Sections A, 8, and C, For Items E1-E4, use natural grade, Flavalisation Check the measurement used. In Peter Ricco only, either meters. E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest diagoent grade (14.63), a) Top of bottom floor (including) basement, crawlapace, or enclosure) is | ρίν both sides of this Elevation Certifi | cate for (1) community official, (2) insurance | agent/company, and (3 | building owner. | |
| 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 \$1-ES. If the Celtificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C, For Items &-E-E4, use natural grade (Favallable, Check the measurement used. In Puerto Rico only, enter meters. E1. Provide elevation information for the following and check the encourage in the puerto Rico only, enter meters. E1. Provide elevation foot (including basement, crawispace, or enclosure) is | | | | ary Updated FEMA | Flood Hazard Data BFE=AE10 |
| SECTION E — BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE), For Zones AO and A (without BFE), complete lems 51—55. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C, For Items El—64, use natural grade(*f available. Check the measurement used. In Puerto Rico only, enter meters. E1. Provide elevation information for the following and check the perpopriate 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, cravispace, or enclosure) is feet | Signature | Da | ate 12/30/15 | | |
| 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, "a valiable. Check the measurement used. In Puerto Rico only, enter meters. E1. Provide devotation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (IAC6), a). Top of bottom floor (including bassement, crawispace, or enclosure) is | • | | | | |
| and C. For Items E1-E4, use natural grade \$\frac{\psi}{\psi}\$ available. Check the measurement used. In Puerto Rico only, enter meters. E1. Provide deveation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (IAG) and the lowest adjacent grade (IAG). a) Top of bottom floor (including basement, crawispace, or enclosure) is | SECTION E - BUILDING ELEV | 'ATION INFORMATION (SURVEY NOT | REQUIRED) FOR | ZONE AO AND | ZONE A (WITHOUT BFE), |
| 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's or Owner's Authorized Representative's Name | and C. For Items E1–E4, use natural g E1. Provide elevation information for grade (HAG) and the lowest adja a) Top of bottom floor (including lb) Top of bottom floor (including lc) For Building Diagrams 6–9 with p (elevation C2.b in the diagrams) E3. Attached garage (top of slab) is E4. Top of platform of machinery and E5. Zone AO only: If no flood depth is | rade, if available. Check the measurement us the following and check the appropriate boxe cent grade (LAG). basement, crawlspace, or enclosure) is basement, crawlspace, or enclosure) is bermanent flood openings provided in Section of the building is feet feet meters at lor equipment servicing the building is number is available, is the top of the bottom f | sed. In Puerto Rico only es to show whether the feet feet feet he A Items 8 and/or 9 (se meters above or below the I feet m | y, enter meters. elevation is above meters above ee pages 8–9 of in below the HAG HAG. eters above o ance with the com | or below the highest adjacent ve or ☐ below the HAG. ve or ☐ below the LAG. structions), the next higher floor G. r ☐ below the HAG. |
| 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's or Owner's Authorized Representative's Name Gity State ZIP Code | , | • | | | TION |
| Signature Date Telephone Comments Check here if attachm. | or Zone AO must sign here. The staten | nents in Sections A, B, and E are correct to the | • | | sued or community-issued BFE) |
| Signature Date Telephone Comments Check here if attachm. | 12 | | | State | 7IP Code |
| SECTION G – COMMUNITY INFORMATION (OPTIONAL) he local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8–G10. In Puerto Rico only, enter meters. The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect we is authorized by law to certify elevation information. (Indicate the source and date of the elevation date in the Comments area below) A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO. The following information (Items G4–G10) is provided for community floodplain management purposes. G4. Pennit Number G5. Date Permit Issued G6. Date Certificate Of Compliance/Occupancy Issued This permit has been issued for: New Construction Substantial Improvement S8. Elevation of a sbuilt lowest floor (including basement) of the building: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: BFE or (in Zone AO) depth of flooding at the building site: B | | | | | Zii Gode |
| SECTION G – COMMUNITY INFORMATION (OPTIONAL) he local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8–G10. In Puerto Rico only, enter meters. The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect we is authorized by law to certify elevation information. (Indicate the source and date of the elevation date in the Comments area below) A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO. The following information (Items G4–G10) is provided for community floodplain management purposes. G4. Pennit Number G5. Date Permit Issued G6. Date Certificate Of Compliance/Occupancy Issued G7. This permit has been issued for: New Construction Substantial Improvement G8. Elevation of a sbuilt lowest floor (including basement) of the building: Get meters Datum G99. BFE or (in Zone AO) depth of flooding at the building site: G90. Community's design flood elevation: Title Community Name Telephone Telephone Telephone | | | | | |
| SECTION G – COMMUNITY INFORMATION (OPTIONAL) the local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8 – G10. In Puerto Rico only, enter meters. The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect wis authorized by law to certify elevation information. (Indicate the source and date of the elevation date in the Comments area below.) A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO. The following information (Items G4—G10) is provided for community floodplain management purposes. G4. Pennit Number | Comments | | | | |
| he local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and fithis Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8-G10. In Puerto Rico only, enter meters. The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect we is authorized by law to certify elevation information. (Indicate the source and date of the elevation date in the Comments area below.) A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO. The following information (Items G4—G10) is provided for community floodplain management purposes. G4. Pennit Number G5. Date Permit Issued G6. Date Certificate Of Compliance/Occupancy Issued G7. This permit has been issued for: New Construction Substantial Improvement G8. Elevation of a sbuilt lowest floor (including basement) of the building: G9. BFE or (in Zone AO) depth of flooding at the building site: G9. BFE or (in Zone AO) depth of flooding at the building site: G9. Date Title Community's design flood elevation: Community Name Telephone Telephone | | | | · | Check here if attachment |
| fithis Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8-G10. In Puerto Rico only, enter meters. The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect w is authorized by law to certify elevation information. (Indicate the source and date of the elevation date in the Comments area below) A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO. The following information (Items G4-G10) is provided for community floodplain management purposes. G4. Pennit Number G5. Date Permit Issued G6. Date Certificate Of Compliance/Occupancy Issued G7. This permit has been issued for: New Construction Substantial Improvement G8. Elevation of a s-built lowest floor (including basement) of the building: 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 | , | SECTION G - COMMUNITY INF | ORMATION (OPTIO | NAL) | |
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| A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO. The following information (Items G4–G10) is provided for community floodplain management purposes. G4. Pennit Number G5. Date Permit Issued G6. Date Certificate Of Compliance/Occupancy Issued G7. This permit has been issued for: New Construction Substantial Improvement B8. Elevation of a s-built lowest floor (including basement) of the building: G9. BFE or (in Zone AO) depth of flooding at the building site: G10. Community's design flood elevation: Local Official's Name Title Community Name Telephone Community Name Date | 1. The information in Section C v | vas taken from other documentation that has | been signed and seale | d by a licensed su | rveyor, engineer, or architect who |
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| G4. Pennit Number G5. Date Permit Issued G6. Date Certificate Of Compliance/Occupancy Issued G7. This permit has been issued for: New Construction Substantial Improvement G8. Elevation of a s-built lowest floor (including basement) of the building: 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 Canature Date Date | | , | | | ued BFE) or Zone AO. |
| 67. This permit has been issued for: New Construction Substantial Improvement 68. Elevation of a s-built lowest floor (including basement) of the building: feet meters Datum 69. BFE or (in Zone AO) depth of flooding at the building site: feet meters Datum 610. Community's design flood elevation: feet meters Datum 610. Community Name Title Community Name Telephone Cignature Date | | | | | re/Occupancy Issued |
| S8. Elevation of a s-built lowest floor (including basement) of the building: S9. BFE or (in Zone AO) depth of flooding at the building site: S10. Community's design flood elevation: Local Official's Name Title Community Name Telephone Date | G4. Ferrit Number | Co. Date i entiti i saued | Go, Date Gertin | | |
| Sep. BFE or (in Zone AO) depth of flooding at the building site: Get | 7. This permit has been issued for: | ☐ New Construction ☐ Substantia | il Improvement | | · · |
| Local Official's Name Title Community Name Telephone Date | · | · · · · · · · · · · · · · · · · · · · | | | |
| Local Official's Name Title Community Name Telephone Community Name Date | | | | | |
| Community Name Telephone Consture Date Comments | 610. Community's design flood elevation | 1: | Li feet Li | meters Dati | ım |
| Cignature Date Di Comments | Local Official's Name | | Title | | |
| omments | Community Name | | Telephone | | |
| | nature | | Date | | |
| ☐ Check here if attachm | comments | | | | |
| | , | | | | ☐ Check here if attachment |
| | | | | | |

Replaces all previous editions.

FEMA Form 086-0-33 (7/12)

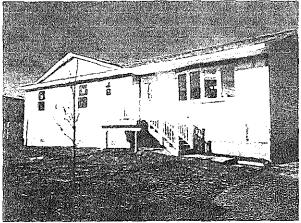
_, page 3

Building Photographs See Instructions for Item A6.

AT: In these spaces, copy the corresponding information from Section A. FOR INSURANCE COMPANY USE anding Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 103 Milford Road Policy Number: City Neptune State NJ 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.

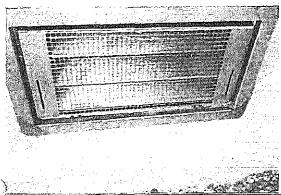
Front View (11/27/15)



Rear View (11/27/15)

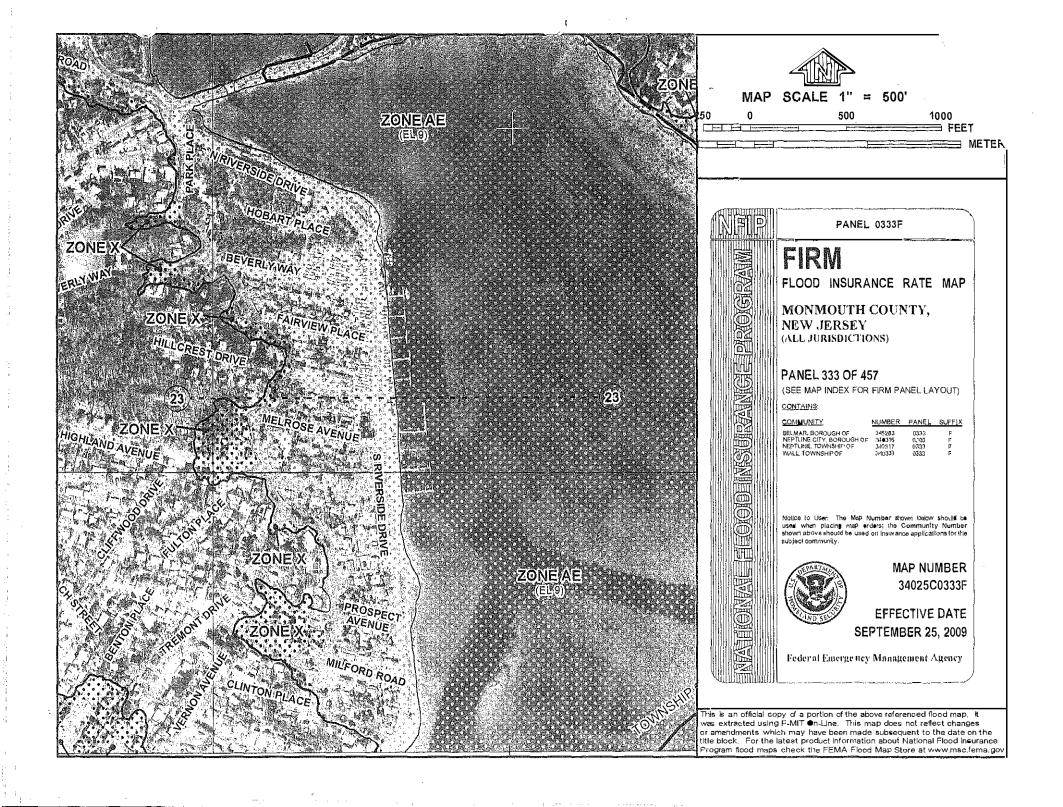


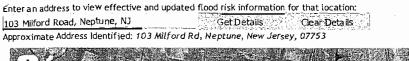
Flood Opening (11/27/15)



FEMA Form 086-0-33 (7/12)

Replaces all previous editions.







Updated FEMA Flood Hazard Data

FEMA flood hazard data currently available for coastal areas of New York and New Jersey is provided below to help you understand the current flood risk to your property and to guide Sandy recovery and rebuilding efforts.

Note: This tool provides flood zone and Base Flood Elevation (BFE) information for areas affected by coustal flood risk. However, riverine flood zone information will also be returned by the tool in communities where preliminary FIRMs have been released.

Attribute Name

Attribute Value

What is the most recent FEMA flood hazard data source available for this location?

Preliminary Flood Insurance Rate Map (FIRM)

What is my property's Base Flood Elevation (BFE)? For AO Zones, the flood depth will be shown instead of an elevation; For N/A results, please contact your local floodplain administrator for more information.)

10 ft (NAVD88)

What is my property's Flood Zone? (For N/A results, please contact your local floodplain administrator for more information.)

ΑE

What is the estimated ground elevation at this location? (See licensed

N/A

surveyor for actual elevation of your building)

Link to Preliminary FIRM PDF

What does my FEMA Flood Hazard Map Panel Look Like? 🕏

Link to Web Tool (Note: You will need to enter your address again to zoom to your location in the Web Tool.)

View your property on our Interactive Web Tool

Where can I get the GIS data for my property area?

Link to Preliminary FIRM CIS files

Effective Flood Insurance Data

This information is from the effective Flood Insurance Rate Map for your community. It is used to determine who must buy flood insurance and how much it costs. It may also be used by your community to regulate development in flood prone areas.

Attribute Name

Attribute Value

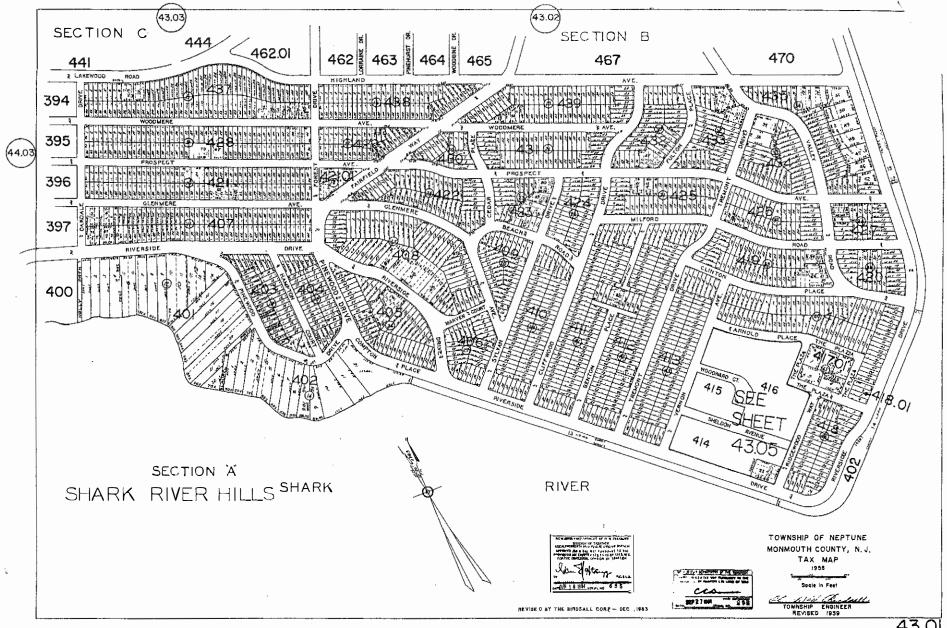
What is my property's current effective Base Flood Elevation?

9 ft (NAVD88)

What is my property's current effective Flood Zone?

ΑE

DISCLAIMER: The information generated for each report is dependent on the point location of the marker. The address locator is not 100% accurate in identify



43.0



ICC-ES Evaluation Report

ESR-2074

Reissued February 2015 Revised May 2016

This report is subject to renewal February 2017.

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: 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)[†]

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 \text{ by } 6.35 \text{ mm})$ openings, yielding 51 square inches (32 903 mm*^2) 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 mm*^2) 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.

ICCES 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.



Page 1 of 3

 $^{^{\}dagger}\text{The ADIBC}$ is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

- 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 = m^2



Most Widely Accepted and Trusted

ICC-ES Report

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

ESR-2074

Reissued 02/2015 This report is subject to renewal 02/2017.

DIVISION: 08 00 00—OPENINGS
SECTION: 08 95 43—VENT5/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 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.







ICC-ES Evaluation Report

ESR-2074*

Reissued February 2015

This report is subject to renewal February 2017.

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: 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:

- 2012, 2009 and 2006 International Building Code® (IBC)
- 2012, 2009 and 2006 International Residential Code[®] (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)^T

[†]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 2.6.2.2 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 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. The mounting straps allow mounting in masonry and 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® 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

*Revised July 2015

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 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).

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

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

FEMA Form 086-0-33 (7/12)

ELEVATION CERTIFICATE

Important: Read the instructions on pages 1-9.

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

Replaces all previous editions.

| SECTION A - PROPERTY INFORMATION | FOR INSURANCE COMPANY USE | | | | | |
|---|---|--|--|--|--|--|
| A1. Building Owner's Name MR. VINCE VYZAS | Policy Number | | | | | |
| .2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 104 NORTH RIVERSIDE DRIVE | Company NAIC Number | | | | | |
| City NEPTUNE TOWNSHIP State NJ ZIP Code 07753 | , | | | | | |
| A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) LOTS 12-14 & 17-19 BLOCK 20 AKA LOT 6 BLOCK 4814 | | | | | | |
| a) Square footage of crawlspace or enclosure(s) 491 sq ft a) Square footage of atta b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 8 within 1.0 foot above according to the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 8 within 1.0 foot above according to the crawlspace of the crawlspace or enclosure(s) within 1.0 foot above according to the crawlspace of the crawlspace or enclosure(s) and the crawlspace of atta by the crawlspace of | A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL A5. Latitude/Longitude: Lat. 40.1968 | | | | | |
| SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATIO | N | | | | | |
| B1. NFIP Community Name & Community Number TOWNSHIP OF NEPTUNE 340317 B2. County Name MONMOUTH | B3. State NJ | | | | | |
| B4. Map/Panel Number 34025 C 0333 B5. Suffix F B6. FIRM Index Date 9-29-2009 B7. FIRM Panel Effective/Revised Date 9-25-2009 B8. Flood Zone(s) AE | B9. Base Flood Elevation(s) (Zone AO, use base flood depth) | | | | | |
| 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: 742. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Designation Date: OPA | Yes ⊠ N o | | | | | |
| SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIF | RED) | | | | | |
| C1. Building elevations are based on: Construction Drawings* Building Under Construction* *A new Elevation Certificate will be required when construction of the building is complete. C2. Elevations Zones A1A30, AE, AH, A (with BFE), VE, V1V30, V (with BFE), AR, AR/A, AR/AE, AR/A1A30, AR/below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters. Benchmark Utilized: GPS OBS. SMART NET Vertical Datum: NAVD '88 Indicate elevation datum used for the elevations in items a) through h) below. NGVD 1929 NAVD 1988 | • | | | | | |
| | 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) e) Lowest elevation of machinery or equipment servicing the building 13.4 | ☑ feet ☐ meters ☑ feet ☐ meters ☑ feet ☐ meters ☑ feet ☐ meters ☑ feet ☐ meters | | | | | |
| (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 (HAG) h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support 7.2 7.2 | feet | | | | | |
| SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION | ON | | | | | |
| This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevate 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. Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Pertifier's Name KENNETH P. FRANK License Number 36727 Company Name KF2T PROFESSIONAL LAND SURVEYORS Address P.O. BOX 521 City COLTS NECK State NJ ZIP Code 07722 | ion | | | | | |

See reverse side for continuation.

| ATION CERTIFICAT | E nage 2 | | |
|---|---|--|--|
| , a <u></u> | ces, copy the corresponding information for | rom Section A. | FOR INSURANCE COMPANY USE |
| | ng Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route | e and Box No. | Policy Number: |
| 104 NORTH RIVERSIDE DRIV | State NJ | ZIP Code 07753 | Company NAIC Number: |
| 950 | CTION D SURVEYOR, ENGINEER, OR AR | CUITECT CERTIEIC | ATION (CONTINUED) |
| | n Certificate for (1) community official, (2) insurance | | · · · · · · · · · · · · · · · · · · · |
| | ON OF MACHINERY SERVICING THE DWELLIN | . , ,, , | , <u> </u> |
| AT ELEVATION 13.4. | VENT MODEL 1540-520 (8 X 16). BASED ON F | | |
| Signature Kunneth | . P. Frank | Date 12-14-15 | |
| SECT!ON E - BUILDING | ELEVATION INFORMATION (SURVEY NO | T REQUIRED) FOR | ZONE AO AND ZONE A (WITHOUT BFE) |
| and C. For Items E1–E4, use n E1. Provide elevation informa grade (HAG) and the lowe a) Top of bottom floor (inc b) Top of bottom floor (inc E2. For Building Diagrams 6- (elevation C2.b in the diag E3. Attached garage (top of s E4. Top of platform of machin E5. Zone AO only: If no flood ordinance? Yes SEC The property owner or owner's or Zone AO must sign here. The | cluding basement, crawlspace, or enclosure) is cluding basement, crawlspace, or enclosure) is 9 with pennanent flood openings provided in Section grams) of the building is feet [lab) is feet meters a lab) is are provided in Section feet meters a lab) is feet a lab) is feet meters a lab) is feet feet a lab) is feet feet feet feet | used. In Puerto Rico onlines to show whether the est to show whether the feet feet feet feet above or below the feet in accordance feet in accordance feet in accordance from the feet feet feet feet feet feet feet | y, enter meters. elevation is above or below the highest adjacent meters above or below the HAG. meters above or below the LAG. ee pages 8–9 of Instructions), the next higher floor below the HAG. HAG. meters above or below the HAG. lance with the community's floodplain management G. WE) CERTIFICATION (without a FEMA-issued or community-issued SFE) |
| | | | |
| The local official who is authorized | SECTION G – COMMUNITY INF | • | rdinance can complete Sections A, B, C (or E), and G |
| of this Elevation Certificate, Comp G1. The information in Sec is authorized by law to G2. A community official co | lete the applicable item(s) and sign below. Check the | e measurement used in hes been signed and seale and date of the elevation (without a FEMA-issued | tems G8-G10. In Puerto Rico only, enter meters. In disconsed surveyor, engineer, or architect who data in the Comments area below.) If or community issued BFE) or Zone AO. |
| G4. Pennit Number | G5. Date Pennit Issued | G6. Date Certif | icate Of Compliance/Occupancy Issued |
| | floor (including basement) of the building: of flooding at the building site: | feet _ | meters Datum meters Datum meters Datum |
| Local Official's Name | | Title | |
| Community Name | | Telephone | |
| Signature | | Date | |

Check here if attachments.

Replaces all previous editions.

Comments

FEMA Form 086-0-33 (7/12)

LEVATION CERTIFICATE, page 3

Building Photographs

See Instructions for Item A6.

IMPORTANT: In these spaces, copy the corresponding information from Section A.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.

104 NORTH RIVERSIDE DRIVE

City NEPTUNE TOWNSHIP

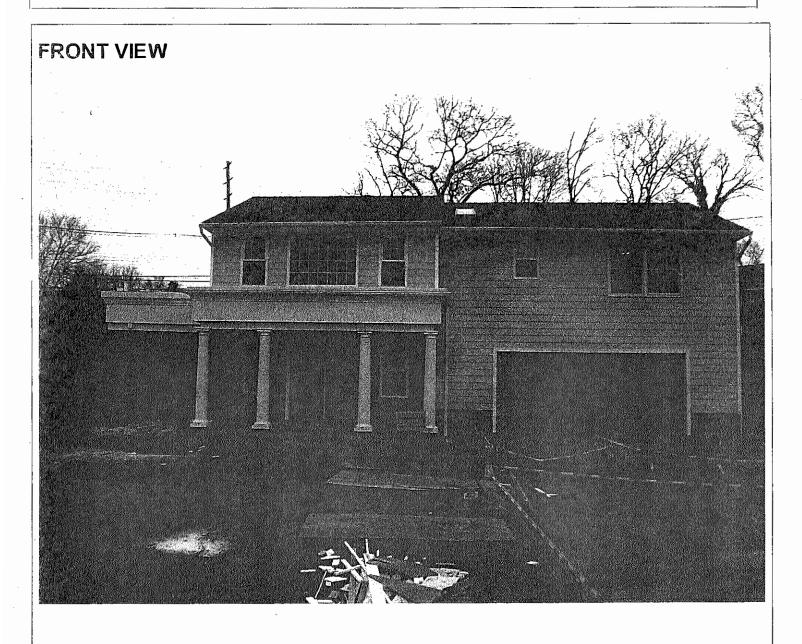
State NJ ZIP Code 07753

FOR INSURANCE COMPANY USE

Policy Number:

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.

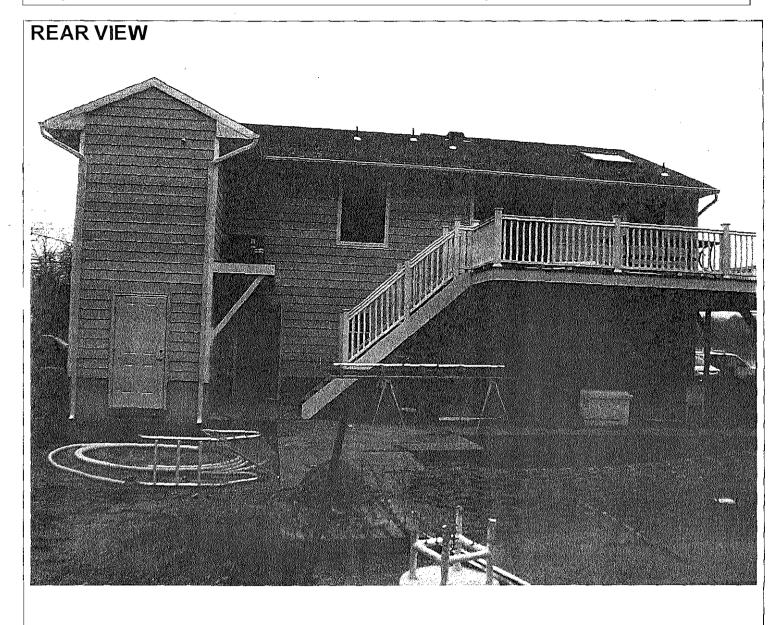


¿LEVATION CERTIFICATE, page 4

Building Photographs Continuation Page

| | Continuation | ugc | |
|--|---------------------------|---------------------|----------------------|
| IMPORTANT: In these spaces, copy the corresponding | FOR INSURANCE COMPANY USE | | |
| Building Street Address (including Apt., Unit, Suite, and/or Bldg. N 104 NORTH RIVERSIDE DRIVE | o.) or P.O. Route a | and Box N o. | Policy Number: |
| City NEPTUNE TOWNSHIP | State NJ | ZIP Code 07753 | Company NAIC Number: |

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.





ICC-ES Evaluation Report

ESR-2074

Reissued February 2015 Revised May 2016

This report is subject to renewal February 2017.

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: 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)[†]

 $^{\dagger}\text{The ADIBC}$ 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.

ICCES 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



- 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 goven.

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 = m^2

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

2 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 SECTION A - PROPERTY INFORMATION A1. Building Owner's Name Policy Number: Robbin Gilbert A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg, No.) or P.O. Route and Company NAIC Number: 103 Wilson Road City Neptune State NJ Zip Code 07753 A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Lot 13 Block 4808 A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential A5. Latitude/Longitude; Lat. 40°11'57:85" Long. 74°02'41.88" Horizontal Datum: ONAD 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 7 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) 846 a) Square footage of attached garage 0 sq ft sq ft b) Number of permanent flood openings in the b) Number of permanent flood openings In the attached garage within 1.0 foot rawlspace or enclosure(s) within 1.0 foot above adjacent grade above adjacent grade c) Total net area of flood openings in A8.b c) Total net area of flood openings in A9.b 1000 sain sa in d) Engineered flood openings? •Yes ONo d) Engineered flood openings? ○Yes ONo SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION B1. NFIP Community Name & Community Number B2. County Name B3. State Township of Neptune/340317 Monmouth County NJ B4. Map/Panel Number B5. Suffix B6. FIRM Index Date B7. FIRM Panel Effective/ B8, Flood Zone(s) B9. Base Flood Elevation(s) Revised Date (Zone AO, use base flood depth 34025C0333 9/25/2009 9/25/2009 9.0 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: ONGVD 1929 ONAVD 1988 Other/Source: B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Oyes Designation Date: OCBRS OOPA SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED) C1. Building elevations are based on: Oconstruction Drawings* OBuilding 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. Vertical Datum: NAVD 88 Benchmark Utilized: Smart Net Indicate elevation datum used for the elevations in items a) through h) below. ONGVD 1929 ONAVD 1988 Other/Source: Datum used for building elevations must be the same as that used for the BFE. Check the measurement used, ENCL -0.8 a) Top of bottom floor (including basement, crawlspace, or enclosure floor) •feet • meters FF -16.1 feet O meters b) Top of the next higher floor N/A Ofeet Ometers c) Bottom of the lowest horizontal structural member (V Zones only) 7.**7** GF d) Attached garage (top of slab) e) Lowest elevation of machinery or equipment servicing the building A/C -15.4 feet Ometers (Describe type of equipment and location in Comments) f) Lowest adjacent (finished) grade next to building (LAG) LAG -7.4 feet O meters 7.6 g) Highest adjacent (finished) grade next to building (HAG) HAG -Ofeet Ometers h) Lowest adjacent grade at lowest elevation of deck or stairs, including DECK -7.4 feet O meters structural support

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

Replaces all previous editions.

Page 3 of 15

ELEVATION CERTIFICATE

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

103 Wilson Road

Neptune

N.

07753

| 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 ion | gitude in : | Section A | |
| Check here if attachments. | provided by a license Yes No | d land sur | veyor? | |
| Certifier's Name | | nse Num | ber | |
| Robert L. Vallee, PLS | 432 | | | |
| Title | Company Name | | | |
| Land Surveyor Address | Vallee Surveying, Inc | State | Zip Code | |
| 1010 Commons Way | Toms River | NJ | 08755 | |
| Signature / Kolentelle | Date JUL 29, 2016 | Telepho 732-24 | | |
| | | | | |
| Copy both sides of this Elevation Certificate for (| · | | ce agent/compa | any, and (3) building owner. |
| Comments (including type of equipment and local A/C located on platform at elev. 15.4'. Smar\/er BFE of 9.0'. ***Preliminary Updated FEMA Flocinformation is to be used for insurance purposes | nt Model #1540-520 (2) nd Hazard Data BFE=F | 00 sq. (n.) | | |
| Robert VI | · | | | h H 00 2046 |
| Signature | DIAA TION (CLIDNEY | NOT DE | 2) (IDE6) COD 3 | Date JUL 29, 2016 |
| SECTION E - BUILDING ELEVATION INFO For Zones AO and A (without BFE), complete Ite | · · · · · · · · · · · · · · · · · · · | | | , |
| Sections A, Band C. For Items E1 -E4, use natu | | | | |
| E1. Provide elevation information for the followin highest adjacent grade (HAG) and the lowes | | | es to show whe | ther the elevation Is above or below the |
| a) Top of bottom floor (including basement, crawlspace, or enclosure) is | | | | |
| b) Top of bottom floor (including basement, crawlspace, or enclosure) is | | | | |
| E2. For Building Diagrams 6 -9 with permanent f higher floor (elevation C2.b in the diagrams) of the | | in Section | | /or 9 (see pages 8 -9 of Instructions), the next Dmeters above or below the HAG. |
| E3. Attached garage (top of slab) is | | - | Ofeet Om | eters above or below the HAG. |
| E4. Top of platform of machinery and /or equipm servicing the building is | ent | - | Ofeet Om | eters above or below the HAG. |
| E5. Zone AO only: If no flood depth number is a | vailable is the top of th | e bottom | | |
| | Unknown. The local of | | | · · · |
| SECTION F - PROPE | RTY OWNER (OR OW | NER'S R | EPRESENTATI | VE) CERTIFICATION |
| The property owner or owner's authorized repres community-issued BFE) or Zone AO must sign h Property Owner or Owner's Authorized Represe | ere. The statements in | | | |
| Address | City | | State | ZIP Code |
| Signature | Date | | Telephone | } |
| Comments | | | | |
| S. Milano | | | | |
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| | | | | Check here if attachments |

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

| SECTION G - COMMUNITY INFORMATION (OPTIONAL) | | | | | | | |
|---|---------------|--------------|-------------|---------------------------------------|----------------|-------------------------------|----------|
| The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Cettiflicate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8 - G10. In Puerto Rico only, enter meters. | | | | | | | |
| G1. The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.) | | | | | | | |
| G2. A community official completed Section AO. | E for a buil | ding locate | d in Zone A | A (withou | ıt a FEMA-is: | sued or community-issued BFE) | or Zone |
| G3. The following information (Items G4 -G | 10) is provid | ded for com | munity floo | odplain m | nanagement | purposes. | |
| G4. Permit Number | G5. Date F | Permit Issue | ed | G6. Da | te Certificate | of Compliance/Occupancy Issu | ied |
| G7. This permit has been issued for: New Co | onetruction | | ntial Impro | vement | | | |
| G8. Elevation of as-built lowest floor (including bof the building: | | Coussis | | | Ometers | Datum · | |
| G9. BFE or (in Zone AO) depth of flooding at the site: | building | | | Ofeet | Ometers | Datum | |
| G10. Community's design flood elevation: | | | - | Ofeet | Ometers | Datum | |
| Local Official's Name | | | Title | | | | |
| Community Name | • | | Telephone | • | | | |
| | | | | | | | |
| Signature | | | Date | | | • | |
| Comments | | • | | | | | Ì |
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FEMA Form 086-0-33 (7/15)

Replaces all previous editions.

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Page 5 of 15

BUILDING PHOTOGRAPHS

See instructions for Item A6

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

MPORTANT: h these spaces, copy the corresponding information from Section A.

Building Street Address (including Apt., Unit, Suite. and/or Bldg. No.) or P.O. Route and Box No.

103 Wilson Road

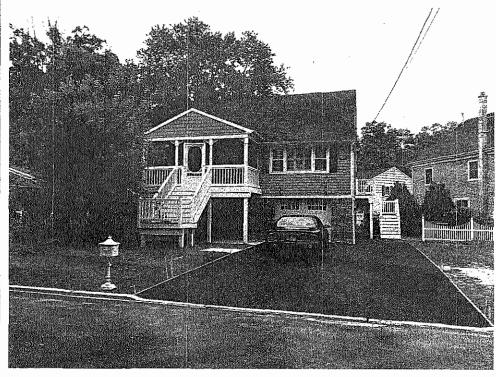
City

State

Zip Code
Number:

Company NAIC
Number:

fusing 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; "Frontview" 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.



Front View (6/28/16)



Rear View (6/28/16)

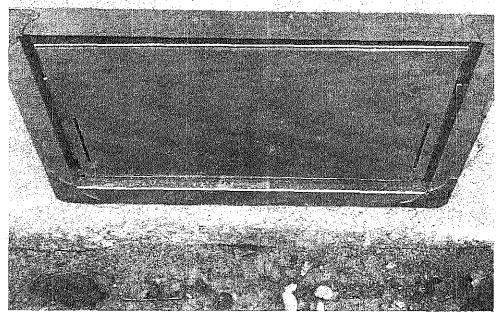
BUILDING PHOTOGRAPHS

Centinuation Page

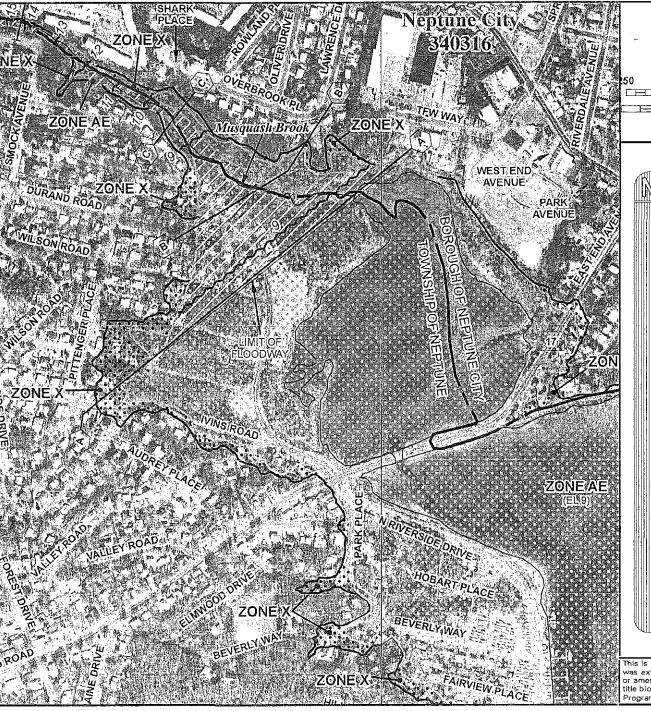
OMB Control Number: 1660-0008 Expiration: 11/30/2018

| MPORTANT: In these spaces, copy the correspond | ing information fro | om Section A. | FORM INSURANCE COMPANY USE |
|---|----------------------|-------------------|----------------------------|
| Building Street Address (Including Apt., Unit,Suite, and/ | or Bldg. No.) or P.O | Route and Box No. | Policy Number: |
| 103 Wilson Road | | | |
| City | State | Zip Code | Company NAIC Number: |
| Neptune | NJ | 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.



Flood Vent (6/28/16)





MIAP SCALE 1" = 500'

500 1000 == FEET

> NFR FIRM

PANEL 0333F

FLOOD INSURANCE RATE MAP

MONMOUTH COUNTY, NEW JERSEY (ALL JURISDICTIONS)

PANEL 333 OF 457

(SEEMAP INDEX FOR FIRM PANEL LAYOUT)

| Ш | COMMUNITY BELMAR, BOROUGH OF NEPTUNE CITY, BOROUGH OF NEPTUNE, TOWNSHIP OF WALL TOWNSHIP OF | NUMBER | PANEL | SUFFIX |
|------|--|--------|-------|--------|
| Ш | SELMAR, BOROUGH OF | 345283 | 0333 | F |
| | NEPTUNE CITY, BOROUGH OF | 340316 | 0333 | F |
| 11 | NEPTUNE, TOWNSHIP OF | 340317 | 0333 | F |
| 1111 | WALL TOWNSHIP OF | 340333 | 0333 | E |

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the

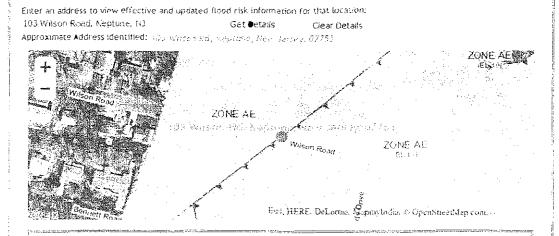


MAP NUMBER 34025C0333F

EFFECTIVE DATE **SEPTEMBER 25, 2009**

Federal Emergency Management Agency

was extracted using F-MIT On-Line. This map does not reliect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Updated FEMA Flood Hazard Data

FEMA flood hazard data currently available for constal areas of New York and New devisey is provided below to help you understand the current flood risk to your property and to guide Sandy recovery and rebuilding efforts.

Note. This tool provides floodzone and Base Flood Elevation (BFE) information for areas affected by constal flood risk. However, riverine flood zone information will also be returneedly the tool in communities where preliminary FIRMs have been released.

| Attribute Name | Attribute Varie |
|--|--|
| What is the most renew REMA fillood hazard data source available for this location? | Promorphing Englid Institutions Rate (सम्बद (स्वरहरू) |
| What is my property's Base flood floration (RFE)? Wiffer AO Zones, the flood depth will be shown intread at an elecation, for NYA results, please contact your local floodplain administrator for more information.) | |
| Angt it m <u>s. protestros fir po Zono?</u> For N. 4 results, pligige contact sum local finodylam administrator for more information : | A.E. |
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| What most my 61 Va. Flood Hazard Map Panel Look Like? 🍑 | LuA ro thebernary (r§st PD) |
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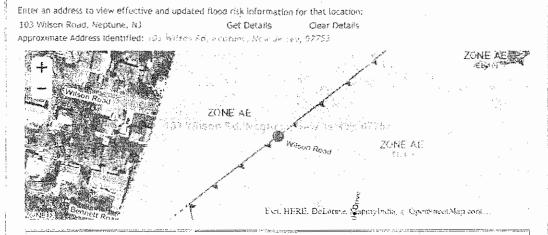
Effective Flood Insurance Data

This information is from the effective Flood Insurance Rate Map for your community. It is used to determine who must buy flood insurance and how much it costs. It may also be used by your community to regulate development in flood prone areas.

| Attribute Non.e | Attribuse Value |
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DISCIAIMER: The information generated for each report is dependent on the point location of the marker. The undress locator is not 100% occurate in identifying addresses and results are not considered an official determination. Property Connect their local flocal plain administrator for more information and

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Updated FEMA Flood Hazard Data

FEMA flood hazard data currently available for constal areas of New York and New Jersey is provided. below to help you understand the current fluod visk to your property and to guide Sandy recovery and remailding enforts.

Note. This mol provides flood zone and Base Flood Elevation (BFE) information for areas affected by constal flood risk. However, rivering flood zone information will also be returned by the tool in communities where preliminary FIRMs have been released.

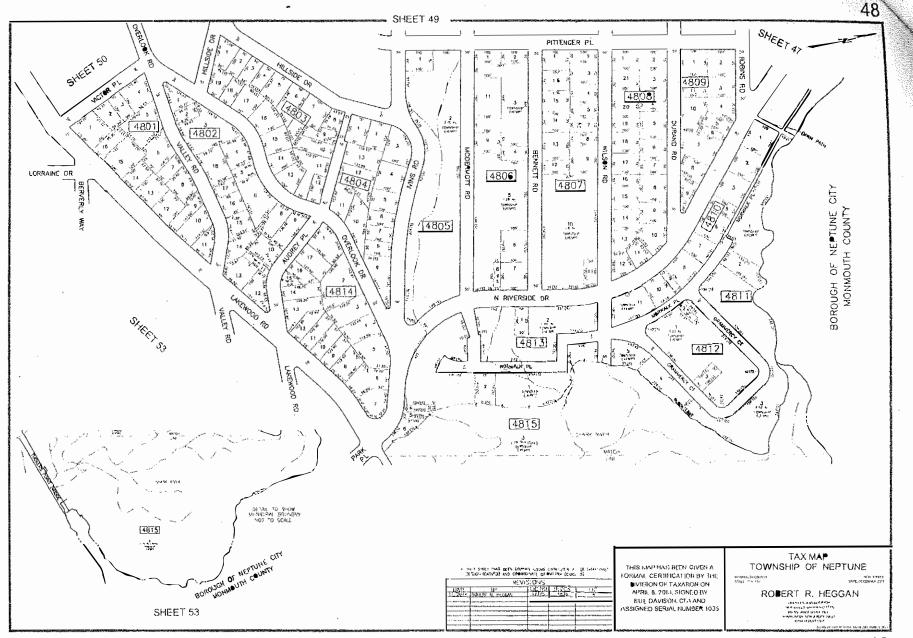
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Effective Flood Insurance Data

This information is from the effective Flood insurance Rate May for your community. It is used to determine who must have flood insurance and how much it costs. It may also be used by your community to regulate development in finod prone areas.

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DISCLAIMERS: The information generated for each report is dependent on the plant togetion of the interfer. The interest location is not 100% accurate in identifying addresses and results are not considered on official determination. Property owners should contact their local flandblain administrator for more information and



ICC-ES Evaluation Report

ESR-2074

Reissued February 2015 Revised May 2016 This report is subject to renewal February 2017.

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: 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)[†]

 $^{\dagger}\text{The ADIBC}$ 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.

ICCES 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.



- 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 = m^2