

# ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1-9.

AUG 17 2020

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					FOR INSURANCE COMPANY USE	
A1. Building Owner's Name TCW Construction					Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 9913 Sunset Drive					Company NAIC Number:	
City Stone Harbor		State New Jersey		ZIP Code 08247		
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Block 200.01 Lots 303, 304, 305 & 306						
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential						
A5. Latitude/Longitude Lat. N 39°03'14.66" Long. W 074°45'58.14" Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> 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):						
a) Square footage of crawlspace or enclosure(s) 1200.00 sq ft						
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 6						
c) Total net area of flood openings in A8.b 1200.00 sq in						
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
A9. For a building with an attached garage:						
a) Square footage of attached garage 576.00 sq ft						
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade 3						
c) Total net area of flood openings in A9.b 900.00 sq in						
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION						
B1. NFIP Community Name & Community Number Borough of Stone Harbor #345323				B2. County Name Cape May		B3. State New Jersey
B4. Map/Panel Number 34009C242	B5. Suffix F	B6. FIRM Index Date 10-05-2017	B7. FIRM Panel Effective/ Revised Date 10-05-2017	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 9	
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input type="checkbox"/> FIS Profile <input checked="" type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other/Source:						
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source:						
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input type="checkbox"/> No Designation Date: <input type="checkbox"/> CBRS <input type="checkbox"/> OPA						

# ELEVATION CERTIFICATE

OMB No. 1660-0008  
Expiration Date: November 30, 2022

<b>IMPORTANT: In these spaces, copy the corresponding information from Section A.</b>			<b>FOR INSURANCE COMPANY USE</b>
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P O. Route and Box No. 9913 Sunset Drive			Policy Number.
City Stone Harbor	State New Jersey	ZIP Code 08247	Company NAIC Number

## SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings\* ☐ Building Under Construction\* ☒ Finished 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, 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.

Benchmark Utilized: PID# DP1524

Vertical Datum: NAVD 1988

Indicate elevation datum used for the elevations in items a) through h) below.

☐ NGVD 1929 ☒ NAVD 1988 ☐ Other/Source: \_\_\_\_\_

Datum used for building elevations must be the same as that used for the BFE.

Check the measurement used

a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	5.0	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
b) Top of the next higher floor	13.9	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
c) Bottom of the lowest horizontal structural member (V Zones only)	11.8	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
d) Attached garage (top of slab)	5.0	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	11.0	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
f) Lowest adjacent (finished) grade next to building (LAG)	4.6	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
g) Highest adjacent (finished) grade next to building (HAG)	5.1	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	4.6	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> 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.

Were latitude and longitude in Section A provided by a licensed land surveyor? ☒ Yes ☐ No ☒ Check here if attachments.

Certifier's Name  
Steven C. Woodrow

License Number  
27514

Title  
Professional Land Surveyor

Company Name  
Dante Guzzi engineering Associates

Address  
418 Stokes Road

City  
Medford

State  
New Jersey

ZIP Code  
08055

Signature



Date  
08-12-2021

Telephone  
(609) 654-4440

Ext.

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

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

The lowest equipment visible at the time of the Survey was heater located inside the building. The vents are "SMART VENT" Model# 1540-520 certified to provide 200 SF of flood protection each

Proj# M2100324.01

# ELEVATION CERTIFICATE

OMB No. 1660-0008  
Expiration Date: November 30, 2022

<b>IMPORTANT: In these spaces, copy the corresponding information from Section A.</b>			<b>FOR INSURANCE COMPANY USE</b>
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No 9913 Sunset Drive			Policy Number:
City Stone Harbor	State New Jersey	ZIP Code 08247	Company NAIC Number

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

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

- E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
- a) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the HAG
- b) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the LAG.
- E2. For Building Diagrams 6–9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 1–2 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the HAG
- E3. Attached garage (top of slab) is \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
- E4. Top of platform of machinery and/or equipment servicing the building is \_\_\_\_\_ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
- E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance? ☐ Yes ☐ No ☐ Unknown. The local official must certify this information in Section G.

## SECTION F – PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION

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

Property Owner or Owner's Authorized Representative's Name

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ ZIP Code \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_ Telephone \_\_\_\_\_

Comments

☐ Check here if attachments.

# ELEVATION CERTIFICATE

OMB No. 1660-0008  
Expiration Date: November 30, 2022

<b>IMPORTANT: In these spaces, copy the corresponding information from Section A.</b>			<b>FOR INSURANCE COMPANY USE</b>
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P O Route and Box No 9913 Sunset Drive			Policy Number:
City Stone Harbor	State New Jersey	ZIP Code 08247	Company NAIC Number

## 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.

G4. Permit Number <u>19-13564</u>	G5. Date Permit Issued <u>12/20/19</u>	G6. Date Certificate of Compliance/Occupancy Issued <u>8/24/21</u>
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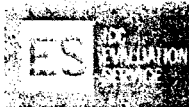
- G7. This permit has been issued for: ☐ New Construction ☒ Substantial Improvement
- G8. Elevation of as-built lowest floor (including basement) of the building: 13.9 ☒ feet ☐ meters Datum NAVD88
- G9. BFE or (in Zone AO) depth of flooding at the building site: AE 9 ☒ feet ☐ meters Datum NAVD88
- G10. Community's design flood elevation: Higher of +2 or 11 ☒ feet ☐ meters Datum NAVD88

Local Official's Name <u>Raymond Poudrier</u>	Title <u>Construction Official / Flood Plain Manager</u>
Community Name <u>Stone Harbor</u>	Telephone <u>(609) 368-6814</u>
Signature <u>[Signature]</u>	Date <u>8/20/21</u>

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

Building is in a Coastal A Zone.

☐ Check here if attachments



# ICC-Evaluation Report

ESR-2074

Reissued February 2021

This report is subject to renewal February 2023

ICC Evaluation Service | (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:

SMART VENT PRODUCTS, INC.

## EVALUATION SUBJECT:

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

## 1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012, 2009 and 2006 *International Building Code*® (IBC)
- 2018, 2015, 2012, 2009 and 2006 *International Residential Code*® (IRC)
- 2018 *International Energy Conservation Code*® (IECC)
- 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.

### 3.4 Flood Vent Sealing Kit:

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

## 4.0 DESIGN AND INSTALLATION

### 4.1 SmartVENT® and FloodVENT®:

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

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feet (16.6 m<sup>2</sup>) of enclosed area except that the SmartVENT<sup>®</sup> Stacking Model #1540-511 and FloodVENT<sup>®</sup> Stacking Model #1540-521 must be installed with a minimum of one FV for every 400 square feet (37.2 m<sup>2</sup>) of enclosed area.

a. Below the base flood elevation.

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

#### 4.2 Flood Vent Sealing Kit

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

#### 5.0 CONDITIONS OF USE

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

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

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

#### 6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC3084) dated August 2015 (editorially revised October 2017).

6.2 Test report on air infiltration in accordance with ASTM E283.

#### 7.0 IDENTIFICATION

7.1 The Smart VENT<sup>®</sup> models and the Flood Vent Sealing Kit recognized in this report must be identified by a label bearing the manufacturer's name (Smartvent Products, Inc.), the model number, and the evaluation report number (ESR-2074).

7.2 The report holder's contact information is the following:

**SMART VENT PRODUCTS, INC.**  
430 ANDBRO DRIVE, UNIT 1  
PITMAN, NEW JERSEY 08071  
(877) 441-8368  
[www.smartvent.com](http://www.smartvent.com)  
[info@smartvent.com](mailto:info@smartvent.com)

TABLE 1—MODEL SIZES

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

For SI: 1 inch = 25.4 mm; 1 square foot = m<sup>2</sup>

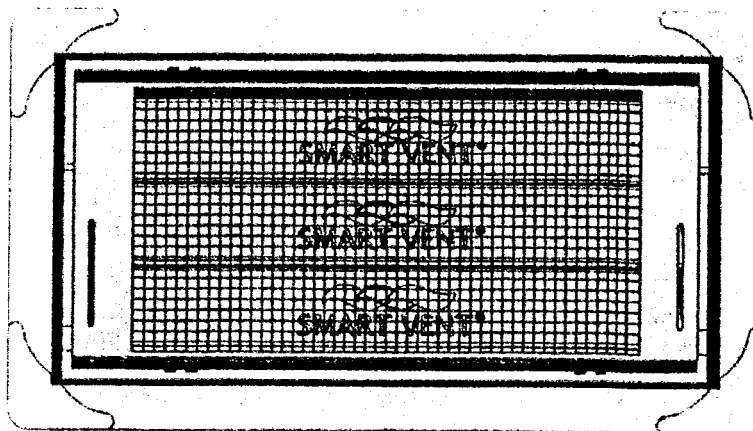


FIGURE 1—SMART VENT: MODEL 1540-510



**Note:** The V Zone design certificate is not a substitute for the NFIP Elevation Certificate (see Fact Sheet No. 1.4, *Lowest Floor Elevation*), which is required to certify as-built elevations needed for flood insurance rating.

### V ZONE DESIGN CERTIFICATE

Name Kennedy Residence Policy Number (Insurance Co. Use) \_\_\_\_\_  
Building Address of Other Description 9913 Sunset Drive  
Permit No. \_\_\_\_\_ City Stone Harbor State NJ Zip Code 08247

#### SECTION I: Flood Insurance Rate Map (FIRM) Information

Community No. 345323 Panel No. 34009C242 Suffix FIRM Date 10/05/17 FIRM Zone(s) V

#### SECTION II: Elevation Information Used for Design

**[NOTE: This section documents the elevations/depths used or specified in the design – it does not document surveyed elevations and is not equivalent to the as-built elevations required to be submitted during or after construction.]**

- |  |            |
|--|------------|
| 1. FIRM Base Flood Elevation (BFE).....                                      | 9.0 feet*  |
| 2. Community's Design Flood Elevation (DFE).....                             | 11.0 feet* |
| 3. Elevation of the Bottom of Lowest Horizontal Structure Member.....        | 11.9 feet* |
| 4. Elevation of Lowest Adjacent Grade.....                                   | 4.6 feet*  |
| 5. Depth of Anticipated Scour/Erosion used for Foundation Design.....        | 4.0 feet   |
| 6. Embedment Depth of Pilings of Foundation Below Lowest Adjacent Grade..... | 10.0 feet  |

\* Indicate elevation datum used in 1-4: ☐ NGVD29 ☐ NAVD88 ☐ Other \_\_\_\_\_

#### SECTION III: V Zone Design Certification Statement

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice\*\* for meeting the following provisions:

- The bottom of the lowest horizontal structural member of the lowest floor (excluding piles and columns) is elevated to or above the BFE.
- The pile and column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of the wind and water loads acting simultaneously on all building components. Water loading values used are those associated with the base flood\*\*\*. Wind loading values used are those required by the applicable State or local building code. The potential for scour and erosion at the foundation has been anticipated for conditions associated with the base flood, including wave action.

#### SECTION IV: Breakaway Wall Design Certification Statement

**[NOTE: This section must be certified by a registered engineer or architect when breakaway walls are designed to have a resistance of more than 20 psf (0.96 kN/m<sup>2</sup>) determined using allowable stress design]**

I certify that: (1) I have developed or reviewed the structural design, plans, and specifications for construction of breakaway walls to be constructed under the above-referenced building and (2) that the design and methods of construction specified to be used are in accordance with accepted standards of practice\*\* for meeting the following provisions:

- Breakaway wall collapse shall result from a water load less than that which would occur during the base flood\*\*\*.
- The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (see Section III).

#### SECTION V: Certification and Seal

This certification is to be signed and sealed by a registered professional engineer or architect authorized by law to certify structural designs. I certify the V Zone Design Certification Statement (Section III) and ☒ the Breakaway Wall Design Certification Statement (Section IV, check if applicable).

Certifier's Name B. Scott March License Number 24GE05397400  
Title Associate Owner & Project Manager Company Name Mulhem & Kulp Structural Engineering, Inc.  
Address 300 Brookside Avenue, Building 4  
City Ambler State PA Zip Code 19002  
Signature B. Scott March Date 08/13/21 Telephone (215) 646-8001

