

FD-04-418E

P04CP07764

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

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires February 28, 2009

Important: Read the instructions on pages 1-8.

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name BROWNEE, CLVIN AND LEANN

For Insurance Company Use:

Policy Number

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
11935 E. BARBARY COAST RD.

Company NAIC Number

City TUCSON State AZ ZIP Code 85749

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)

TAX CODE 205-50-0740 SECTION 5, T14 S, R16E OF THE GILA AND SALT RIVER MERIDIAN, PIMA COUNTY, AZ

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) accessory; ATTACHED GARAGE WEST (LEFT VIEW)

A5. Latitude/Longitude: Lat. 32.2436 Long. -110.7354

Horizontal Datum: ☐ NAD 1927 ☐ NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number 1

A8. For a building with a crawl space or enclosure(s), provide

a) Square footage of crawl space or enclosure(s) N/A sq ft

b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade N/A

c) Total net area of flood openings in A8.b N/A sq in

A9. For a building with an attached garage, provide:

a) Square footage of attached garage 650 sq ft

b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade 6

c) Total net area of flood openings in A9.b 1200 sq in

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number
Pima County /040073

B2. County Name
PIMA COUNTY

B3. State
AZ

B4. Map/Panel Number
04019C 2280

B5. Suffix
K

B6. FIRM Index
Date 2/8/99

B7. FIRM Panel
Effective/Revised Date 2/8/99

B8. Flood
Zone(s) AE

B9. Base Flood Elevation(s) (Zone
AO, use base flood depth)
2626.0

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 (Describe) _____

B11. Indicate elevation datum used for BFE in Item B9: ☒ NGVD 1929 ☐ NAVD 1988 ☐ Other (Describe) _____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? ☐ Yes ☒ No
Designation Date N/A ☐ CBRS ☐ OPA

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-g below according to the building diagram specified in Item A7.

Benchmark Utilized RM251 Vertical Datum NGVD29

Conversion/Comments _____

Check the measurement used.

- | | | | |
|--|---------------|--|--|
| a) Top of bottom floor (including basement, crawl space, or enclosure floor) | <u>2626.5</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| b) Top of the next higher floor | <u>N/A</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| c) Bottom of the lowest horizontal structural member (V Zones only) | <u>N/A</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| d) Attached garage (top of slab) | <u>2626.5</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| e) Lowest elevation of machinery or equipment servicing the building
(Describe type of equipment in Comments) | <u>N/A</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| f) Lowest adjacent (finished) grade (LAG) | <u>2525.7</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| g) Highest adjacent (finished) grade (HAG) | <u>2626.1</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |

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.

Certifier's Name RICHARD M. PEARSON

License Number AZ. REG NO. 26929

Title LAND SURVEYOR

Company Name ALL TERRAIN SURVEYING

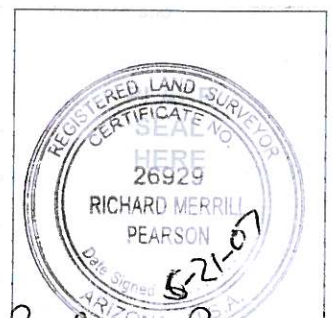
Address 4380 N. CAMINO DE CARRILLO

City TUCSON

State AZ ZIP Code 85750

Signature [Signature] Date 5/21/07

Telephone 520 299-5803



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

For Insurance Company Use:

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
11935 E. BARBARY COAST RD.

Policy Number

City TUCSON State AZ ZIP Code 85749

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.

Comments MEASURED 0.63'x1.1'x144sq.in. =100 sq.in. PER VENT being door rated as 200 sq.in. see engineered flood openings certificate by Steven M. Ulrich R.P.E.

USED 200 SQ. IN. FOR CALCULATIONS PER VENT :

C2e there is no servicing equipment for the garage.

Signature

Date 5-21-07

☒ Check here if attachments**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, crawl space, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.b) Top of bottom floor (including basement, crawl space, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.E2. For Building Diagrams 6-8 with permanent flood openings provided in Section A Items 8 and/or 9 (see page 8 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's 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, and G9.

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.

G4. Permit Number

G5. Date Permit Issued

G6. Date Certificate Of Compliance/Occupancy Issued

G7. This permit has been issued for: ☐ New Construction ☐ Substantial ImprovementG8. Elevation of as-built lowest floor (including basement) of the building: _____ ☐ feet ☐ meters (PR) Datum _____G9. BFE or (in Zone AO) depth of flooding at the building site: _____ ☐ feet ☐ meters (PR) Datum _____

Local Official's Name

Title

Community Name

Telephone

Signature

Date

Comments

☐ Check here if attachments

Building Photographs

See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 11935 E. BARBARY COAST RD.	For Insurance Company Use: Policy Number
City TUCSON State AZ ZIP Code 85749	Company NAIC Number
<p>If using the Elevation Certificate to obtain NFIP flood insurance, affix at least two 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." If submitting more photographs than will fit on this page, use the Continuation Page, following.</p>	



FRONT
VIEW



LEFT
SIDE
VIEW

Building Photographs

Continuation Page

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 11935 E. BARBARY COAST RD.	For Insurance Company Use:
City TUCSON State AZ ZIP Code 85749	Policy 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."	
Company NAIC Number	



REAR
VIEW



LEFT
SIDE
VIEW

Engineered Flood Openings Certificate

To satisfy requirements of the National Flood Insurance Program

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

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

www.smartvent.com

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

Example: A 2000 Sq.Ft. enclosed area requires 10 vents. $2000 \text{ Sq.Ft} / 200 = 10 \text{ Vents}$

Signature St. M. Zil
Title SENIOR PROJECT ENGINEER
Type of License REGISTERED PROFESSIONAL ENGINEER
License Number 056171-E

*Project Name Small Brownlee Resid.
*Project Address 11935 E. BARBARA COURT RD.
*Date Submitted 6.8.07
* Required Fields*



Professional Seal

Installation Limitations and Instructions

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

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

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

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

Form: SMRT100 Rev.A

This form is the property of Smart VENT Inc. Modification or Duplication is Strictly Prohibited without authorization.



FEMA

NOV 21 2003

Michael Graham
General Manager, SmartVENT
200 Warrick Avenue
Glassboro, NJ 080208

Dear Mr. Graham:

I am writing in response to your letter of August 11, 2003 to Paul Tertell, an engineer on my staff. Your letter concerns the use of engineered openings in foundation walls in Special Flood Hazard Areas and the use of the SmartVENT product. Your letter states that there is a lack of awareness that flood openings can be engineered and certified. In addition, you make specific suggestions concerning: 1) the elevation certificate, 2) NFIP Insurance Agents Manual, and 3) a Broadcast Advisory to NFIP Stakeholders. Enclosed in your letter is an evaluation report, NER-624, that addresses the flood vents that your company manufactures. With the transition to the International Building Codes, the International Code Council (ICC) Evaluation Services now issues evaluation reports. NER-624 is a legacy report from the transition from the National Evaluation Service to the ICC Evaluation Service.

Concerning your suggestions about increasing the awareness of engineering openings, FEMA will consider your suggestions, but may determine that another course of action is more appropriate. We will keep you apprised as to our decision in this matter but please understand that we are prohibited from promoting or helping to market specific products. However, I would like to discuss the information you have provided about the SmartVENT products.

Evaluation reports are often used by building officials as evidence of the compliance of a specific product or material with the requirements of a model building code or standard. As with all evaluation reports, the local building official, or the authority having jurisdiction, makes the final determination as to the appropriateness and acceptability of using the material or product in a specific application.

Communities that participate in the National Flood Insurance Program (NFIP) must adopt and enforce ordinances that meet or exceed requirements described in 44 CFR. The NFIP regulations require that all enclosures below the Base Flood Elevation (BFE) in A zones be designed to allow for the automatic equalization of hydrostatic forces during a flood event. Section 60.3(c)(5) of the NFIP regulations states that a community shall:

Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are used solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

More detailed guidance on meeting this requirement is provided in FEMA NFIP Technical Bulletin 1-93, Openings in Foundation Walls.

The Federal Emergency Management Agency (FEMA) has determined that this evaluation report, NER-624, is sufficient to demonstrate the following:

If determined appropriate by the authority having jurisdiction and when used under the conditions of use described in NER-624, the two products, Model #1540-520 and #1540-510, meet the minimum NFIP floodplain management requirements (CFR 60.3 (c)(5)) with respect to flood openings for enclosed areas for the purpose of equalizing hydrostatic pressure resulting from flooding. Specifically, the jurisdiction may use this report to determine that the flood flow rate permits one vent to vent up to 200 square feet of enclosed area. This acceptance, on the part of FEMA in no way alters other conditions required for flood openings as called for in the NFIP regulations, local floodplain ordinances and building codes, as well as applicable national standards (such as ASCE 24-98), and model building codes, such as the International Code Council Building Code Series. These requirements include, but are not limited to, having at least two flood opening vents for every enclosed area and placing the bottom of such vents no more than 12 inches above grade.

Thank you for sending us information concerning this new evaluation report and for your commitment to developing products intended to reduce future exposure to flood damage.

Sincerely,

A handwritten signature in dark ink, appearing to read "Clifford E. Oliver", written in a cursive style.

Clifford E. Oliver
Special Assistant to the Director
Mitigation Division

prt

PUP 04-418E

P04CP07764

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

ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires February 28, 2009

Important: Read the instructions on pages 1-8.

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name BROWNEE, CLVIN AND LEANN	For Insurance Company Use:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 11935 E. BARBARY COAST RD.	Policy Number
City TUCSON State AZ ZIP Code 85749	Company NAIC Number
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) TAX CODE 205-50-0740 SECTION 5, T14 S, R16E OF THE GILA AND SALT RIVER MERIDIAN, PIMA COUNTY, AZ	
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>accessory: ATTACHED GARAGE EAST (RIGHT VIEW)</u>	
A5. Latitude/Longitude: Lat. 32.2438 Long. -110.7354	Horizontal Datum: <input type="checkbox"/> NAD 1927 <input 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 1	
A8. For a building with a crawl space or enclosure(s), provide: a) Square footage of crawl space or enclosure(s) <u>N/A</u> sq ft b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade <u>N/A</u> c) Total net area of flood openings in A8.b <u>N/A</u> sq in	A9. For a building with an attached garage, provide: a) Square footage of attached garage <u>870</u> sq ft b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade <u>7</u> c) Total net area of flood openings in A9.b <u>1400</u> sq in

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number Pima County /040073		B2. County Name PIMA COUNTY		B3. State AZ	
B4. Map/Panel Number 04019C 2280	B5. Suffix K	B6. FIRM Index Date 2/8/99	B7. FIRM Panel Effective/Revised Date 2/8/99	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 2626.0
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 (Describe) _____					
B11. Indicate elevation datum used for BFE in Item B9: <input checked="" type="checkbox"/> NGVD 1929 <input type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other (Describe) _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Designation Date <u>N/A</u> <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					

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-g below according to the building diagram specified in Item A7.

Benchmark Utilized RM251 Vertical Datum NGVD29

Conversion/Comments _____

Check the measurement used.

a) Top of bottom floor (including basement, crawl space, or enclosure floor)	<u>2626.5</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
b) Top of the next higher floor	<u>N/A</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
c) Bottom of the lowest horizontal structural member (V Zones only)	<u>N/A</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
d) Attached garage (top of slab)	<u>2626.5</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment in Comments)	<u>N/A</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
f) Lowest adjacent (finished) grade (LAG)	<u>2525.7</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)
g) Highest adjacent (finished) grade (HAG)	<u>2626.1</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters (Puerto Rico only)

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.

Certifier's Name RICHARD M. PEARSON License Number AZ. REG NO. 26929

Title LAND SURVEYOR Company Name ALL TERRAIN SURVEYING

Address 4380 N. CAMINO DE CARRILLO City TUCSON State AZ ZIP Code 85750

Signature [Signature] Date 5/21/07 Telephone 520 299-5808



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.
11935 E. BARBARY COAST RD.

City TUCSON State AZ ZIP Code 85749

For Insurance Company Use:

Policy Number

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.

Comments MEASURED 0.63'x1.1'x144sq.in. =100 sq.in. PER VENT being door rated as 200 sq.in. see engineered flood openings certificate by Steven M. Urich R.P.E.

USED 200 SQ. IN. FOR CALCULATIONS PER VENT

C2e there is no servicing equipment for the garage.

Signature

Date 5-21-07

☒ Check here if attachments**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, crawl space, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the HAG.
- b) Top of bottom floor (including basement, crawl space, or enclosure) is _____ ☐ feet ☐ meters ☐ above or ☐ below the LAG.
- E2. For Building Diagrams 6-8 with permanent flood openings provided in Section A Items 8 and/or 9 (see page 8 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's 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. and G9.

- 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.

G4. Permit Number

G5. Date Permit Issued

G6. Date Certificate Of Compliance/Occupancy Issued

G7. This permit has been issued for: ☐ New Construction ☐ Substantial ImprovementG8. Elevation of as-built lowest floor (including basement) of the building: _____ ☐ feet ☐ meters (PR) Datum _____G9. BFE or (in Zone AO) depth of flooding at the building site: _____ ☐ feet ☐ meters (PR) Datum _____

Local Official's Name

Title

Community Name

Telephone

Signature

Date

Comments

☐ Check here if attachments

Building Photographs

See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 11935 E. BARBARY COAST RD.	For Insurance Company Use: Policy Number
City TUCSON State AZ ZIP Code 85749	Company NAIC Number
<p>If using the Elevation Certificate to obtain NFIP flood insurance, affix at least two 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." If submitting more photographs than will fit on this page, use the Continuation Page, following.</p>	



FRONT
VIEW



RIGHT
SIDE
VIEW

Building Photographs

Continuation Page

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 11935 E. BARBARY COAST RD.	For Insurance Company Use:
City TUCSON State AZ ZIP Code 85749	Policy 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."	
Company NAIC Number	



REAR
VIEW



LEFT
SIDE
VIEW

Engineered Flood Openings Certificate

To satisfy requirements of the National Flood Insurance Program

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

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

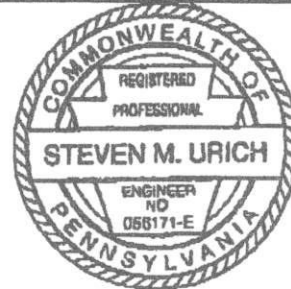
www.smartvent.com

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

Example: A 2000 Sq.Ft. enclosed area requires 10 vents. $2000 \text{ Sq.Ft} / 200 = 10 \text{ Vents}$

Signature St. M. Zil
Title SENIOR PROJECT ENGINEER
Type of License REGISTERED PROFESSIONAL ENGINEER
License Number 056171-E

*Project Name SMALL BROWNLEE RESID.
*Project Address 11935 E. BARBARA COURT RD.
*Date Submitted 6.8.07
* Required Fields*



Professional Seal

Installation Limitations and Instructions

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

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

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

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

Form: SMRT100 Rev.A

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FEMA

NOV 21 2003

Michael Graham
General Manager, SmartVENT
200 Warrick Avenue
Glassboro, NJ 080208

Dear Mr. Graham:

I am writing in response to your letter of August 11, 2003 to Paul Tertell, an engineer on my staff. Your letter concerns the use of engineered openings in foundation walls in Special Flood Hazard Areas and the use of the SmartVENT product. Your letter states that there is a lack of awareness that flood openings can be engineered and certified. In addition, you make specific suggestions concerning: 1) the elevation certificate, 2) NFIP Insurance Agents Manual, and 3) a Broadcast Advisory to NFIP Stakeholders. Enclosed in your letter is an evaluation report, NER-624, that addresses the flood vents that your company manufactures. With the transition to the International Building Codes, the International Code Council (ICC) Evaluation Services now issues evaluation reports. NER-624 is a legacy report from the transition from the National Evaluation Service to the ICC Evaluation Service.

Concerning your suggestions about increasing the awareness of engineering openings, FEMA will consider your suggestions, but may determine that another course of action is more appropriate. We will keep you apprised as to our decision in this matter but please understand that we are prohibited from promoting or helping to market specific products. However, I would like to discuss the information you have provided about the SmartVENT products.

Evaluation reports are often used by building officials as evidence of the compliance of a specific product or material with the requirements of a model building code or standard. As with all evaluation reports, the local building official, or the authority having jurisdiction, makes the final determination as to the appropriateness and acceptability of using the material or product in a specific application.

Communities that participate in the National Flood Insurance Program (NFIP) must adopt and enforce ordinances that meet or exceed requirements described in 44 CFR. The NFIP regulations require that all enclosures below the Base Flood Elevation (BFE) in A zones be designed to allow for the automatic equalization of hydrostatic forces during a flood event. Section 60.3(c)(5) of the NFIP regulations states that a community shall:

Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are used solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

More detailed guidance on meeting this requirement is provided in FEMA NFIP Technical Bulletin 1-93, Openings in Foundation Walls.

The Federal Emergency Management Agency (FEMA) has determined that this evaluation report, NER-624, is sufficient to demonstrate the following:

If determined appropriate by the authority having jurisdiction and when used under the conditions of use described in NER-624, the two products, Model #1540-520 and #1540-510, meet the minimum NFIP floodplain management requirements (CFR 60.3 (c)(5)) with respect to flood openings for enclosed areas for the purpose of equalizing hydrostatic pressure resulting from flooding. Specifically, the jurisdiction may use this report to determine that the flood flow rate permits one vent to vent up to 200 square feet of enclosed area. This acceptance, on the part of FEMA in no way alters other conditions required for flood openings as called for in the NFIP regulations, local floodplain ordinances and building codes, as well as applicable national standards (such as ASCE 24-98), and model building codes, such as the International Code Council Building Code Series. These requirements include, but are not limited to, having at least two flood opening vents for every enclosed area and placing the bottom of such vents no more than 12 inches above grade.

Thank you for sending us information concerning this new evaluation report and for your commitment to developing products intended to reduce future exposure to flood damage.

Sincerely,

A handwritten signature in black ink, appearing to read "Clifford E. Oliver", written over a horizontal line.

Clifford E. Oliver
Special Assistant to the Director
Mitigation Division

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