

Important: Read the instructions on pages 1-9.

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

RWP JOB NO. 140493 (FINAL)	SECTION A - PROPERTY INFORMATION	FOR INSURANCE COMPANY USE
A1. Building Owner's Name TCB ASSOCIATES, LLC.		Policy Number:
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 632 HARBOR ROAD		Company NAIC Number:
City BRICK	State NJ	ZIP Code 08724
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) LOT: 17 BLOCK: 982		

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) RESIDENTIAL

A5. Latitude/Longitude: Lat. 40D 3' 46.9"N Long. 74D 4' 46.8"W Horizontal Datum: NAD 1927 NAD 1983

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

A7. Building Diagram Number 8 ✓

A8. For a building with a crawlspace or enclosure(s):

a) Square footage of crawlspace or enclosure(s)	<u>1400</u> ✓ sq ft
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade	<u>6 USA</u> ✓
c) Total net area of flood openings in A8.b	<u>1578</u> ✓ sq in
d) Engineered flood openings?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No

A9. For a building with an attached garage:

a) Square footage of attached garage	<u>328</u> ✓ sq ft
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade	<u>2 SV</u> ✓
c) Total net area of flood openings in A9.b	<u>400</u> ✓ sq in
d) Engineered flood openings?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number BRICK TOWNSHIP 345285		B2. County Name OCEAN	B3. State NJ
B4. Map/Panel Number 34029 C 0204	B5. Suffix F	B6. FIRM Index Date 09/29/2006	B7. FIRM Panel Effective/Revised Date SEPT. 29, 2006
B8. Flood Zone(s) X/AE		B9. Base Flood Elevation(s) (Zone AO, use base flood depth) NO BFE/5.0'	

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: NGVD 1929 NAVD 1988 Other/Source: _____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Yes No
 Designation Date: _____ CBRS OPA

SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: Construction Drawings* Building Under Construction* Finished Construction ✓
 *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: KV 0846 (EL 13.86) Vertical Datum: NAVD1988
 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.

a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	<u>CF 6.63</u> ✓	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
b) Top of the next higher floor	<u>FF 11.0</u> ✓	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
c) Bottom of the lowest horizontal structural member (V Zones only)	<u>NA</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
d) Attached garage (top of slab)	<u>GF 8.8</u> ✓	<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)	<u>AC 9.6</u> ✓	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
f) Lowest adjacent (finished) grade next to building (LAG)	<u>6.3</u> ✓	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
g) Highest adjacent (finished) grade next to building (HAG)	<u>8.3</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	<u>6.2</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters

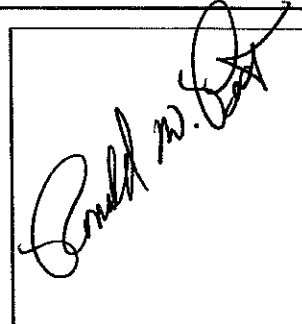
SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

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.

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

Check here if attachments.

Certifier's Name RONALD W. POST	License Number 24GS02853400
Title LIC. LAND SURVEYOR	Company Name RONALD W. POST SURVEYING, INC.
Address 1792 HINDS ROAD	City TOMS RIVER State NJ ZIP Code 08753
Signature <i>Ronald W. Post</i>	Date 10/27/2015 Telephone 732-255-9050



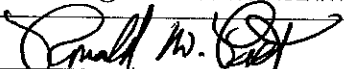
ELEVATION CERTIFICATE, page 2

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. 632 HARBOR ROAD	Policy Number:
City BRICK State NJ ZIP Code 08724	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 PRELIMINARY FIRM FLOOD ZONE AE-7' (DATED MARCH 28, 2014)
2 1/2 STORY FRAMED DWELLING ON CONCRETE BLOCK FOUNDATION
(6) USA FLOOD VENTS IN CRAWL @ 1576 SQ. IN. TOTAL / MODEL FO-316
(2) SMART VENT ENGINEERED FLOOD VENTS IN GARAGE @ 400 SQ. IN. TOTAL / MODEL # 1540-510
HOT WATER ON FF @ EL 11.0 / FURNACE IN ATTIC / AC @ EL 9.6 ✓

Signature 

Date 10/27/2015

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

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

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

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

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

Property Owner'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–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 _____	G5. Date Permit Issued _____	G6. Date Certificate Of Compliance/Occupancy Issued _____
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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: _____ 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 _____

Signature _____ Date _____

Comments _____

Check here if attachments.

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 Bldg. No.) or P.O. Route and Box No.
632 HARBOR ROAD

Policy Number:

City BRICK

State NJ

ZIP Code 08724

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 – 10/27/2015



REAR VIEW – 10/27/2015

Building Photographs

Continuation Page

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.
632 HARBOR ROAD

City BRICK

State NJ

ZIP Code 08724

FOR INSURANCE COMPANY USE

Policy Number:

Company NAIC Number:

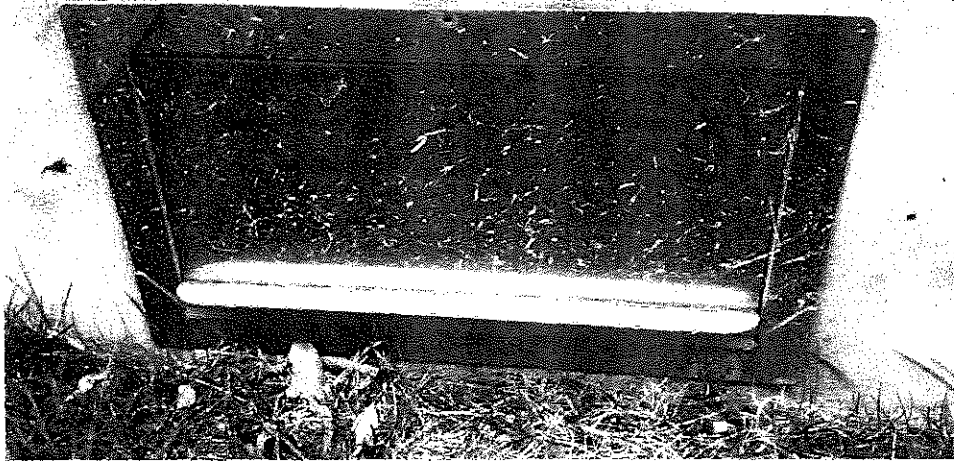
If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8.



RIGHT SIDE VIEW – 10/27/2015



LEFT SIDE VIEW – 10/27/2015



USA FLOOD VENT MODEL # FO-316 10/27/2015



Certification of Engineered Flood Openings

In accordance with NFIP, FEMA Technical Bulletin 1-08 and ASCE/SEI 24-05

Certification Statement

I hereby certify that the flood vents manufactured by USA Foundation Flood Air Vents (Model No's FO-316, FA-316, FOAL, FAAL, RFPC and RFSS) are designed in accordance with the requirements of the 2011 NFIP "Flood Insurance Manual" to provide automatic equalization of hydrostatic flood loads on exterior walls by allowing the automatic entry and exit of floodwaters during floods up to and including the base 100-year flood. The flood vents must be installed and sized properly as set forth by the requirements below. This certification follows the design requirements and specifications that are established in FEMA Technical Bulletin 1-08 and ASCE/SEI 24-05.

Design Characteristics

I hereby certify that I have measured the flood vent models listed below. I have also calculated the maximum total enclosed area that can be served by each individual model based on the net area of the opening using the equation taken from ASCE/SEI 24-05, Section 2.6.2.2 and the following design assumptions listed below.

Design Assumptions:

1. The rates of rise and fall have been assumed to be 5 feet per hour.
2. The maximum difference between the exterior and interior floodwater levels have been assumed to be 1 foot during base flood conditions.
3. A factor of safety of 5 has been used in the design.

Area of Engineered Openings per ASCE 24, Section 2.6.2.2

$$A_o = (0.0333)[1/c]R(A_e) \rightarrow A_e = A_o / [(0.0333)[1/c]R]$$

Where:

$A_o =$	Total Net Area of Openings Required (in^2)
0.0333 =	Coefficient Corresponding to a Factor of Safety of 5.0 ($\text{in}^2 \cdot \text{hr}/\text{ft}^3$)
$c =$	Opening Coefficient (Non-Dimensional; see ASCE 24, Table 2-2)
$R =$	Worst Case Rate of Rise and Fall (ft/hr)
$A_e =$	Total Enclosed Area (ft^2)

Maximum Area Coverage in Square Feet per Vent for each Model

Model	Height (in.)	Width (in.)	A_o (in^2)	Constant ($\text{in}^2 \cdot \text{hr}/\text{ft}^3$)	c	R (ft/hr)	A_e (ft^2)
FO-316	7.00	15.50	108.50	0.0330	0.400	5	263
FA-316	7.00	15.50	108.50	0.0330	0.400	5	263
FOAL-W	7.00	15.50	108.50	0.0330	0.400	5	263
FOAL-B	7.00	15.50	108.50	0.0330	0.400	5	263
FOAL-G	7.00	15.50	108.50	0.0330	0.400	5	263
FAAL-W	7.00	15.50	108.50	0.0330	0.400	5	263
FAAL-B	7.00	15.50	108.50	0.0330	0.400	5	263
FAAL-G	7.00	15.50	108.50	0.0330	0.400	5	263
RFPC	7.00	13.75	96.25	0.0330	0.398	5	232
RFSS	7.00	13.75	96.25	0.0330	0.398	5	232

*Note: (A_e) is the maximum total enclosed area that can be served for each individual model based on the net area of the opening (A_o)

Limitations and Installation Requirements

This certification will be voided in its entirety if the following installation requirements and limitations are not enforced. USA Foundation Flood Air Vents and Conn Engineering Consultants, Inc. do not recommend or authorize any modifications to the flood vents and will not be held liable for improper installation or modification of the flood vents.

FEMA/NFIP Limitations and Installation Requirements:

1. 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.
2. The bottom of all openings shall be no higher than one foot above grade that is immediately under each opening.
3. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
4. It is recommended that openings be reasonably distributed around the perimeter of the enclosed area unless there is clear justification for putting all openings on just one or two sides (such as in townhouses or buildings set into sloping sites).
5. Where analysis indicates rates of rise and fall greater than 5 feet per hour, the total enclosed area shall be reduced accordingly.

Design Professional

Name / Title: Jason M. Conn, P.E. President, Conn Engineering Consultants, Inc.
 Address: 107 N. Bridge St., Linden, MI 48451
 License Type: Professional Engineer
 State: New Jersey
 License Number: 24GE04573000

Installation Address

Customer and installation Address:

632 Harbor Road
 Brick, NJ 08724

Model Installed

Model Number: FO-316
 Maximum total enclosed area that can be served for EACH individual vent: 263 Square Feet

Professional Engineering Seal

9/10/15

of