

ELEVATION CERTIFICATE

Important: Read the instructions on pages 1-9.

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

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name Tom Peters Construction, Inc.	FOR INSURANCE COMPANY USE
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 900 Kensington Court	Policy Number:
City Carson City State NV ZIP Code 89703	Company NAIC Number:
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) APN 007-351-19	

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

A5. Latitude/Longitude: Lat. 39 DEGREES 10' 12" Long. 119 DEGREES 47' 53"

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 9

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

- a) Square footage of crawlspace or enclosure(s) 3499 sq ft
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 14
c) Total net area of flood openings in A8.b 3682 sq in
d) Engineered flood openings? ☒ Yes ☐ No

A9. For a building with an attached garage:

- a) Square footage of attached garage 1972 sq ft
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade 9
c) Total net area of flood openings in A9.b 2088 sq in
d) Engineered flood openings? ☒ Yes ☐ No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number Carson City 320001		B2. County Name Carson City		B3. State NV	
B4. Map/Panel Number 320001/0091	B5. Suffix F	B6. FIRM Index Date 2/19/2014	B7. FIRM Panel Effective/Revised Date 2/19/2014	B8. Flood Zone(s) AO	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 1 ft
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 checked="" type="checkbox"/> No Designation Date: _____ <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-h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.
Benchmark Utilized: _____ Vertical Datum: _____

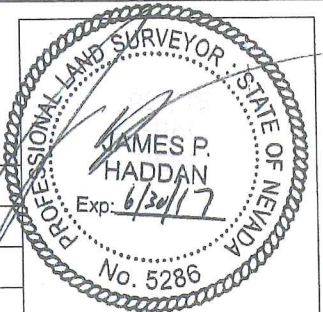
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
b) Top of the next higher floor	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
c) Bottom of the lowest horizontal structural member (V Zones only)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
d) Attached garage (top of slab)	_____	<input 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)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
f) Lowest adjacent (finished) grade next to building (LAG)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
g) Highest adjacent (finished) grade next to building (HAG)	_____	<input type="checkbox"/> feet <input type="checkbox"/> meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	_____	<input 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 JAMES P. HADDAN C.E., P.L.S. License Number 5286
Title PRESIDENT Company Name HADDAN ENGINEERING INC.
Address P.O. BOX 2300 City DAYTON State NV ZIP Code 89403
Signature JAMES P. HADDAN C.E., P.L.S. Date 06/29/2015 Telephone 775-883-6595



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. 900 Kensington Court		Policy Number:
City Carson City	State NV ZIP Code 89703	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 The Air Conditioning Condenser is the lowest machinery servicing the building. Duct work in crawl space was installed in accordance with Uniform Mechanical Code 2012, Section 603.6, Protection Against Flood Damage (see attached letter from Olson Heating and Air Conditioning, Inc.) Natural grade elevations (prior to construction) are used for HAG and LAG in Section E, except for Item E3, where the highest adjacent grade (HAG) used was the pre-construction grade adjacent to the garage (this grade was used for the HAG in E3 at the direction of Robb Fellows, P.E., Carson City Flood Manager).

Signature JAMES P. HADDAN

Date 06/29/2015

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 1.4 ☒ feet ☐ meters ☐ above or ☒ below the HAG.
- b) Top of bottom floor (including basement, crawlspace, or enclosure) is 3.6 ☒ 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 3.0 ☒ feet ☐ meters ☒ above or ☐ below the HAG.
- E3. Attached garage (top of slab) is 2.83 ☒ feet ☐ meters ☒ above or ☐ below the HAG.
- E4. Top of platform of machinery and/or equipment servicing the building is 3.0 ☒ 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 JAMES P. HADDAN C.E., P.L.S.

Address P.O. BOX 2300 City DAYTON State NV ZIP Code 89403

Signature JAMES P. HADDAN C.E., P.L.S. Date 06/29/2015 Telephone 775-883-6595

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
G7. This permit has been issued for: <input type="checkbox"/> New Construction <input type="checkbox"/> Substantial Improvement		
G8. Elevation of as-built lowest floor (including basement) of the building: _____ <input type="checkbox"/> feet <input type="checkbox"/> meters Datum		
G9. BFE or (in Zone AO) depth of flooding at the building site: _____ <input type="checkbox"/> feet <input type="checkbox"/> meters Datum		
G10. Community's design flood elevation: _____ <input type="checkbox"/> feet <input type="checkbox"/> 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 900 Kensington Pl.			Policy Number:	
City Carson City	State NV	ZIP Code 89703	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.



IMPORTANT: In these spaces, copy the corresponding information from Section A.			FOR INSURANCE COMPANY USE	
Building Street Address 900 Kensington Pl.			Policy Number:	
City Carson City	State NV	ZIP Code 89703	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.





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-W, FOAL-B, FAAL, RFPC and RFSS) are designed in accordance with the requirements of the 2011 NFIB "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)

0.033 =

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
FAAL	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: NEVADA
License Number: 0 17258

Installation Address

Customer and Installation Address:

Address: 900 Kensington Court
City, State, Zip: Carson City, NV 89703

Model Installed

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

Professional Engineering Seal





2884 Mac Dr.
Minden NV 89423
NV Lic. # 0048780

June 25, 2015

Dear Tom,

This letter is in regards to the residence at 900 Kensington Court in Carson City, NV and per Uniform Mechanical Code 2012 Section 603.6, Protection against flood damage.

All under floor ducting is rigid 26 gauge ducting sealed water tight and supported with rigid supports. This both meets Mechanical Code requirements and FEMA specifications.

Regards,

Brent Olson
President/Owner