

ELEVATION CERTIFICATE

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

Important: Read the instructions on pages 1-9.

SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name Quay E. + Gail M. Brocius		FOR INSURANCE COMPANY USE	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 8180 Lagoon Rd.		Policy Number:	
City Fort Myers Beach State FL ZIP Code 33931		Company NAIC Number:	
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) LOT 7, BLK 5, PB 9/PG 29, Laguna Shores Unti 1 STRAP: 03-47-24-W3-00105.0070			
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>Residential</u>			
A5. Latitude/Longitude: Lat. <u>26.405906</u> Long. <u>-81.88963899999999</u>		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 <u>6</u>			
A8. For a building with a crawlspace or enclosure(s):		A9. For a building with an attached garage:	
a) Square footage of crawlspace or enclosure(s) <u>1861</u> sq ft		a) Square footage of attached garage <u>N/A</u> sq ft	
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>10</u>		b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade <u>N/A</u>	
c) Total net area of flood openings in A8.b <u>2050</u> sq in		c) Total net area of flood openings in A9.b <u>N/A</u> sq in	
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		d) Engineered flood openings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number Town of Fort Myers Beach + 120673		B2. County Name Lee		B3. State FL	
B4. Map/Panel Number 12071C0569/0569	B5. Suffix F	B6. FIRM Index Date 08/28/2008	B7. FIRM Panel Effective/Revised Date 08/28/2008	B8. Flood Zone(s) VE	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) 14'(NAVD88)
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: San. sewer MH @ CL Int. Vertical Datum: (NAVD88)
 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)	<u>5.55</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
b) Top of the next higher floor	<u>16.95</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
c) Bottom of the lowest horizontal structural member (V Zones only)	<u>14.20</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
d) Attached garage (top of slab)	<u>N/A</u>	<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)	<u>16.90</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
f) Lowest adjacent (finished) grade next to building (LAG)	<u>5.10</u>	<input checked="" type="checkbox"/> feet <input type="checkbox"/> meters
g) Highest adjacent (finished) grade next to building (HAG)	<u>5.40</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>5.40</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 <u>R.L. Schumann</u>	License Number <u>RLS 2239</u>
Title <u>Reg. Land Surveyor</u>	Company Name <u>LIS Surveying, LLC(JOB#20879)</u>
Address <u>21430 Palm Beach Blvd.</u>	City <u>Alva</u> State <u>FL</u> ZIP Code <u>33920</u>
Signature <u>R.L. Schumann</u>	Date <u>1/6/2015</u> Telephone <u>(239)693-9244</u>

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. 8180 Lagoon Rd.	Policy Number:
City Fort Myers Beach State FL ZIP Code 33931	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 BENCHMARK UTILIZED: N. RIM SANITARY SEWER MANHOLE AT CENTERLINE INTERSECTION.
C2(b)=Living Area with an elevation of 16.95'
C(2)e refers to the elevated HVAC compressor located on a elevated stand with an elevation of 16.9'.

R.L. Schumann

1/6/15

Signature R.L. Schumann

Date 1/6/2015

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 <i>BLD14-0016</i>	G5. Date Permit Issued <i>ADD #22 4-1-2014</i>	G6. Date Certificate Of Compliance/Occupancy Issued <i>1-15-2015</i>
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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.



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PAGE TWO

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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.
8180 Lagoon Rd.

Policy Number:

City Fort Myers Beach

State FL

ZIP Code 33931

Company NAIC Number:

If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A6. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.

FRONT VIEW 1/6/2015



REAR VIEW 1/6/2015



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.
8180 Lagoon Rd.

City Fort Myers Beach

State FL

ZIP Code 33931

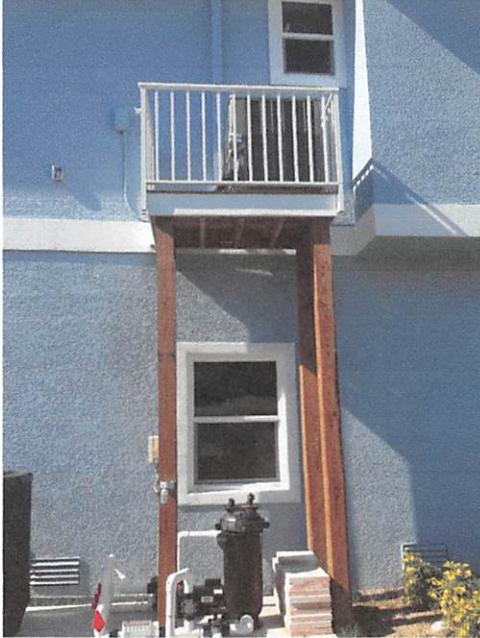
FOR INSURANCE COMPANY USE

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.

ELEVATED EQUIPMENT VIEW 1/6/2014



Certification of Engineered Flood Openings

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

I hereby certify that the Crawl Space Door Systems flood vents 816CS, 1220CS, 1232CS, 1616CS, 1624CS, 1632CS, 2032CS, 2424CS, and 2436CS are designed in accordance with the requirements of the NFIP "Flood Insurance Manual" (2011) to provide automatic equalization of hydrostatic flood forces by allowing for the entry and exit of floodwaters, when properly installed and sized as set forth below. This certification follows the design requirements and specifications established in FEMA Technical Bulletin 1-08, "Openings in Foundation Walls and Walls of Enclosures Below Elevated Buildings in Special Flood Hazard Areas", and the ASCE Standard for "Flood Resistant Design and Construction" (ASCE/SEI 24-05). The actual vent opening measurements were determined and certified by Mr. Christopher Mark Loney, Virginia PE No. 029000. Calculations are based on the spreadsheet formulas, and "Review of certification of Engineered Flood Openings, dated January 16, 2012" prepared by Dr. Georg Reichard, Associate Professor of Building Construction, Virginia Tech.

Design Characteristics

Section 2.6.2.2 of ASCE 24 provides an equation to determine the required net area of engineered openings (A_o) for a given enclosed area (A_e). This equation is based on the hydraulic formula for the flow rate across sharp edged orifices. I have utilized this equation to calculate 1) the respected flow rate through the individual openings between louvers; 2) the flow rate through the main frame opening in case the louver is blown out during a flood event; and 3) the flow rate of water flowing through louver blades following hydraulic short tube theory. The ultimate maximum total enclosed area (A_e) that can be serviced by a single vent has then been determined by utilizing the lowest flow rate of the three assessed scenarios for each vent and is listed in Table 1.

These values are based on the following assumptions:

- In absence of reliable data, the rates of rise and fall have been assumed with 5 feet/hour;
- The (maximum) difference between the exterior and interior floodwater levels has been assumed with 1 foot during base flood conditions;
- A factor of safety of 5 has been assumed, which is consistent with design practices related to protection of life and property;
- The net area of openings (A_o) as provided by the manufacturer.

*)	Model	H x W [in]	A_o [in ²]	A_e [ft ²]
<input checked="" type="checkbox"/>	816CS	8 x 16	106	205
<input type="checkbox"/>	1220CS	12 x 20	237	500
<input type="checkbox"/>	1232CS	12 x 32	306	645
<input type="checkbox"/>	1616CS	16 x 16	184	395
<input type="checkbox"/>	1624CS	16 x 24	312	670
<input type="checkbox"/>	1632CS	16 x 32	408	835
<input type="checkbox"/>	2032CS	20 x 32	630	1240
<input type="checkbox"/>	2424CS	24 x 24	570	1230
<input type="checkbox"/>	2436CS	24 x 36	852	1765

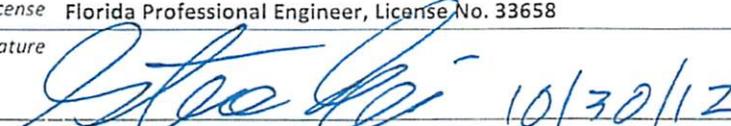
Table 1 Maximum total enclosed area (A_e) that can be served by each individual model openings based on the given net area of engineered openings (A_o)

Installation Requirements and Limitations

This certification will be voided if the following installation requirements and limitations are not enforced:

- There shall be a minimum of two openings on different sides of each enclosed area;
- The bottom of each required opening shall be no more than 1ft above the adjacent ground level;
- No temporary (e.g. during cold weather) or permanent solid cover may be placed into or over the flood vent that would block the automatic entry or exit of floodwaters at any time;
- Where analysis indicates rates of rise and fall greater than 5 ft/hr, the total enclosed area as given in Table 1 shall be reduced accordingly to account for the higher rates of rise and fall.

Certifying Design Professional

Name, Title	Steve A. Geci, President, Geci & Associates Engineers, Inc.
Address	2950 N 12 th Avenue, Pensacola, FL 32503
License	Florida Professional Engineer, License No. 33658
Signature	 10/30/12



Identification of the Building and Installed Flood Vents (By Others)

The flood vent models marked in Table 1*) are being installed at the following building:

Building Address 8180 Lagoon Rd Ft. Myers Beach, FL 33931



Reviewed by: RLS

V-Zone Building Design and Performance Certificate

For new Construction and substantial improvements in Coastal High Hazard Areas

(To be completed by a Licensed Professional Engineer or Architect, authorized to certify such information by State)

Section 1: Structure Location and Ownership Information

Structure Owner Quay AND Gail Brocius

Mailing Address 211 Mount Tom Lane

City WELLSBORO PA. 16901 State PA Zip Code 16901

Structure Location 8180 Lagoon Rd. Fort Myers Beach, FL 33931

Latitude - Longitude - County Lee

Other Legal Description _____

Section 2: Flood Insurance Rate Map (FIRM) Data

NOTE: This Certificate is NOT a substitute for an Elevation Certificate.

Community Name Fort Myers Beach Community ID Number 120673 FIRM Panel Number 0569

Panel Suffix F FIRM Zone VE-14 Date of FIRM Panel 8/28/2008 Date of Index 8/28/2008

Located within the Coastal Barriers Resource Act (CBRA) Zone or Otherwise Protected Areas: Yes ___/No X/

Section 3: Elevation Information

Record elevations to one tenth of a foot.

Check one: New Building X / Substantial Improvement ___/

Date of Construction 03/01/14

Elevation of the bottom of the Lowest Horizontal Structural Member..... 14.1 feet

Base Flood Elevation (BFE)..... 14.0 feet

Elevation of Lowest Adjacent Grade (LAG)..... 5.0 feet

Elevation of Highest Adjacent Grade (HAG)..... 5.3 feet

Foundation type: Pilings X / Columns ___/

Foundation Description: Precast Piles To 1st Floor T.B.'s; Block Shearwalls Around Sewer

Elevation at Bottom of Foundation 2.8 feet

Depth of scour/erosion used for foundation design..... 5.0 feet

Embedment depth of pilings or foundation below LAG..... 15.0 feet

Datum used: NGVD 29 ___/ NAVD 88 X/ other _____

Section 4: V Zone Certifying Statement

I certify that I have developed or reviewed the structural design, plans, and specifications for construction and that the proposed design and methods of construction are in accordance with accepted standards of engineering practice for meeting the following provisions:

1. The bottom of the lowest horizontal structural member of the lowest floor (excluding pilings or columns) is elevated to above the BFE; and
2. The pile or column foundation and structure attached thereto are anchored to resist floatation, collapse, lateral movement, or other structural damage from the effects of wind and water loads acting simultaneously on all structure 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 standards. The scour and erosion at the foundation have been estimated for conditions associated with the base flood, including wave action.

Section 5: Breakaway Walls Certifying Statement

I certify that I have developed or reviewed the structural design, plans, and specifications for construction and that the proposed design and methods of construction are in accordance with accepted standards of engineering practice for meeting the following provisions:

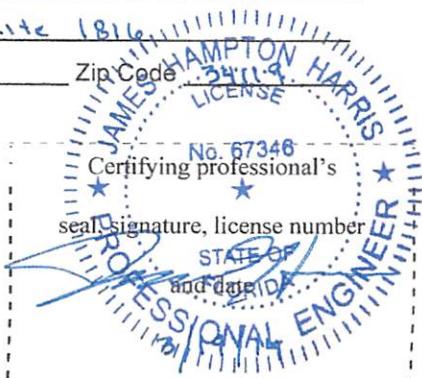
1. Breakaway walls will collapse from a water load less than that which would occur during the base flood.
2. The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural).
3. The space below the lowest floor is designed to be used solely for parking of vehicles, building access, and/or storage.
4. The wind loading values used shall be those required by applicable State or local standards.

Section 6: Certification

Check one: Sections 4 and 5 / Section 4 only / Section 5 only /

Name (please print) James Harris
Title Professional Engineer License number 67346
Phone Number 239-287-8575 EMAIL HarrisEG@Hotmail.com
Company Harris Engineering Group LLC
Address 2145 Malibu Lake Circle, Suite 1816
City Naples State FL Zip Code 34119

Reviewed by: RLS



ACKNOWLEDGEMENT OF FLOODPLAIN REGULATIONS

This ACKNOWLEDGEMENT OF FLOODPLAIN REGULATIONS is made this 4TH day of FEBRUARY, 2014 by Quay Brocius ("Owner") of the property legally described in Exhibit A, attached hereto and made a part hereof.

WHEREAS, the owner in the record owner of all the real property described in Exhibit A, located in the Town of Fort Myers Beach in Lee County, Florida.

WHEREAS, the Owner has applied for a building permit on this property to place or improve a residential structure in a way that will fully enclose space below the base flood elevation (permit reference number BLD 14-0016).

WHEREAS, the owner agrees to the recording of this acknowledgement in the public records of Lee County and acknowledges that the following floodplain regulations are legally in force to the affected property, and that these floodplain regulations, as they may be amended from time to time, will affect the rights and obligations of the Owner and shall be binding on the Owner, their heirs, personal representatives, successors, or assigns.

I (WE) HEREBY ACKNOWLEDGE THE FOLLOWING:

- 1. The structure or part thereof to which these regulations apply, whose legal description is attached as Exhibit A, is located at: 8180 LAGOON RD, Fort Myers Beach, Florida 33931, and is currently identified By Lee County as STRAP # 03 47 24 W3 00105 -0070
2. The base flood elevation established for this site by the Fort Myers Beach Land Development Code is 14 feet above mean sea level as of this 4th day of FEBRUARY, 2014.
3. The floodplain regulations of the Town of Fort Myers Beach require that fully enclosed space below the base flood elevation may be used only for parking, building access, and storage; electrical, plumbing, and other utility connections are permitted below the base flood elevation per Land Development Code § 6-472; the interior shall not be partitioned or finished into separate habitable rooms; all structural and non-structural components must use materials that are resistant to flood forces and deterioration caused by repeated inundation; and walls must be designed to allow for the entry and exit of floodwaters to equalize hydrostatic flood forces.
4. Any unauthorized alterations or changes from the permitted improvements shall constitute a violation of the Fort Myers Beach Land Development Code, and may also render the structure uninsurable. The Town of Fort Myers Beach may take any legal action authorized by its Land Development Code, including but not limited to the forced removal of said alterations, to correct any violation.

In witness whereof, I (we) set our hands this 7th day of February, 2014.

Signature of Quay Brocius, Owner

Signature of Gail Brocius, Owner

INSTR # 2015000010370, Pages 1
Doc Type AFF, Recorded 01/16/2015 at 02:30 PM.
Linda Doggett, Lee County Clerk of Circuit Court
Rec. Fee \$10.00
Deputy Clerk JMILLER
#2

STATE OF Florida, COUNTY OF Lee; Sworn to and subscribed before me this 7th day of February, 2014, by [Signature], who has produced Pennsylvania Identification

Signature of Notary Public: Jasena Pearsey-Dawson

Printed name of Notary Public: Jasena Pearsey-Dawson Stamp:

FEID:
Pennsylvania- 17 463 818 -Gail Brocius
Pennsylvania- 14 932044 -G Brocius

