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

OMB No. 1660-0008 Expiration Date: November 30, 2018

# **ELEVATION CERTIFICATE**

Important: Follow the instructions on pages 1-9.

	SECTION A - PROPERTY			Jai, (2) modrance a		ny, and (3) building owner. RANCE COMPANY USE
A1. Building Owner's Nar Bashir and Karen Nejdaw	ne				Policy Num	
A2. Building Street Addre Box No. 551 Ranger Lane	ss (including Apt., Unit, Suit	te, and/o	or Bldg. No.) or P.O.	Route and	Company N	NAIC Number:
City Longboat Key			State Florida	•	ZIP Code 34228	
A3. Property Description Lot 10, Block D, Country (	(Lot and Block Numbers, Ta Club Shores, Unit 4	x Parce	l Number, Legal De	scription, etc.)		
<ul> <li>A5. Latitude/Longitude:</li> <li>A6. Attach at least 2 phot</li> <li>A7. Building Diagram Nun</li> <li>A8. For a building with a canon and a second and</li></ul>	ographs of the building if the nber18	Long. When the Certific services and the Certific services are considered as the Certific services and the Certific servic	cate is being used to  output  output	o obtain flood insur	ance.	1927 🔀 NAD 1983  ade
	openings? X Yes N		sq in		9000	
	SECTION B - FLOOD I	NSURA	NCE RATE MAP	(FIRM) INFORMA	TION	
B1. NFIP Community Nam Longboat Key 125126	ne & Community Number		B2. County Name Sarasota			B3. State Florida
B4. Map/Panel B5. S Number 125126 010 D	B6. FIRM Index Date 05/18/1992	E:	IRM Panel ffective/ evised Date i/1983	B8. Flood Zone(s	(Zo	se Flood Elevation(s) ne AO, use Base od Depth)
☐ FIS Profile ☒ F	of the Base Flood Elevation IRM	mined [ 9: 🗵 N ources Sy	Other/Source:	.VD 1988 ☐ Ot	her/Source:	OPA)? ☐ Yes ☑ No

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IMPORTANT: In these spaces, copy the correspon			FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, ar 551 Ranger Lane	nd/or Bldg. No.) or P.O. R	oute and Box No.	Policy Number:
City Longboat Key		P Code 4228	Company NAIC Number
SECTION C - BUILDING	ELEVATION INFORM	ATION (SURVEY RI	EQUIRED)
	en construction of the builfE), VE, V1–V30, V (with building diagram specifie Vertical Datur is in items a) through h) be her/Source: same as that used for the twispace, or enclosure flowers (V Zones only)  It servicing the building Comments)  Iding (LAG)	uilding Under Constru Iding is complete. BFE), AR, AR/A, AR/ d in Item A7. In Puert m: 8.78 elow.	uction* X Finished Construction  /AF AR/A1—A30 AR/AH AR/A0
SECTION D SURVEY	OR ENGINEER OR A	POHITECT CERTIF	ICATION
This certification is to be signed and sealed by a land I certify that the information on this Certificate repres statement may be punishable by fine or imprisonment Were latitude and longitude in Section A provided by	d surveyor, engineer, or a sents my best efforts to int nt under 18 U.S. Code, Se	rchitect authorized by erpret the data availa ection 1001.	law to certify elevation information
Certifier's Name James Burchett Title President	License Number LS 5701		960 metal
Company Name Sampey, Burchett and Knight, Inc. Address 1570 Global Court			Place 16 Seal Here
City Sarasota	State Florida	ZIP Code 34240	
Signature Surchith	Date 11/11/2016	Telephone (941) 379-6926	
Copy all pages of this Elevation Certificate and all attac	hments for (1) community	official, (2) insurance a	agent/company, and (3) building owner.
Comments (including type of equipment and location C2.e) Water Heater on Landing in Garage.  A/C unit elevated to second floor level.	, per C2(e), if applicable)		

### **ELEVATION CERTIFICATE**

OMB No. 1660-0008 Expiration Date: November 30, 2018

ELLIATION OF CHILDRIC			Expiration Da	ate: November 30, 2018
IMPORTANT: In these spaces, copy the corresponding in			FOR INSUR	ANCE COMPANY USE
Building Street Address (including Apt., Unit, Suite, and/or BI 551 Ranger Lane	dg. No.) or P.O. Route	and Box No.	Policy Numb	per:
City State	ZIP Co	ode	Company N	AIC Number
Longboat Key Florida				
SECTION E – BUILDING ELEVAT FOR ZONE AO	TON INFORMATION AND ZONE A (WITH	(SURVEY NO OUT BFE)	T REQUIRED)	
For Zones AO and A (without BFE), complete Items E1–E5. complete Sections A, B,and C. For Items E1–E4, use natural enter meters.	f the Certificate is inter grade, if available. Ch	nded to support eck the measur	a LOMA or LO rement used. In	MR-F request, Puerto Rico only,
E1. Provide elevation information for the following and check the highest adjacent grade (HAG) and the lowest adjace a) Top of bottom floor (including basement,	the appropriate boxes nt grade (LAG).	to show wheth	ner the elevation	is above or below
crawlspace, or enclosure) is		feet met	ers 🗌 above	or Delow the HAG.
b) Top of bottom floor (including basement, crawlspace, or enclosure) is		feet met	ers 🗌 above	or Delow the LAG.
E2. For Building Diagrams 6–9 with permanent flood opening the next higher floor (elevation C2.b in	gs provided in Section,	A Items 8 and/o	or 9 (see pages	1–2 of Instructions),
the diagrams) of the building is		feet met	ers 🗌 above	or Delow the HAG,
E3. Attached garage (top of slab) is		feet met	ers 🗌 above	or Delow the HAG.
E4. Top of platform of machinery and/or equipment servicing the building is	Γ	feet met	ers 🗆 above	or below the HAG.
E5. Zone AO only: If no flood depth number is available, is the	_			
floodplain management ordinance?  Yes No	Unknown. The lo	cal official mus	t certify this info	rmation in Section G.
SECTION F - PROPERTY OWNER (	OR OWNER'S REPRE	SENTATIVE)	ERTIFICATION	N
The property owner or owner's authorized representative who community-issued BFE) or Zone AO must sign here. The state	completes Sections A ements in Sections A,	, B, and E for Z B, and E are co	Zone A (without	a FEMA-issued or it of my knowledge.
Property Owner or Owner's Authorized Representative's Nam	nė.	**************************************		A
Address	City		State	ZIP Code
Signature	Date	Т	elephone	
Comments	West of the second seco			
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		Plan	OWN OF LONG Ining, Zening (	BOAT KEY and Building
				k here if attachments

# **ELEVATION CERTIFICATE**

OMB No. 1660-0008 Expiration Date: November 30, 2018

			Expiration Date. November 30, 2016
IMPORTANT: In these spaces, copy the corr			FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, S 551 Ranger Lane		P.O. Route and Box	No. Policy Number:
City	State	ZIP Code	Company NAIC Number
Longboat Key	Florida	34228	
SECTK	ON G - COMMUNITY IN	FORMATION (OPTIO	NAL)
The local official who is authorized by law or or Sections A, B, C (or E), and G of this Elevation used in Items G8–G10. In Puerto Rico only, en	Certificate. Complete th	e community's floodplate applicable item(s) a	ain management ordinance can complete nd sign below. Check the measurement
G1. The information in Section C was tak engineer, or architect who is authoriz data in the Comments area below.)	en from other documentated by law to certify elevated	ation that has been sig ation information. (Indi	gned and sealed by a licensed surveyor, cate the source and date of the elevation
G2. A community official completed Sect or Zone AO.	ion E for a building locate	ed in Zone A (without	a FEMA-issued or community-issued BFE)
G3. The following information (Items G4-	-G10) is provided for com	nmunity floodplain mai	nagement purposes.
G4. Permit Number	G5. Date Permit Issue	d	G6. Date Certificate of Compliance/Occupancy Issued
G7. This permit has been issued for:	New Construction	Substantial Improveme	ent
G8. Elevation of as-built lowest floor (including of the building:	g basement)	[	feet meters
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 (including type of equipment and log	nation nor C2(a) if anni	and to	· · · · · · · · · · · · · · · · · · ·
Total and the second se	Sation, per C2(e), if applic	cable)	
- 20 " - 3w - 5			RECEIVED
et and any tener are			NOV 1 8 2016
		T( Pla	OVN OF LONGBOAT KEY nning, Zening and Building
			Check here if attachments.

### **BUILDING PHOTOGRAPHS**

# **ELEVATION CERTIFICATE**

See Instructions for Item A6.

OMB No. 1660-0008 Expiration Date: November 30, 2018

IMPORTANT: In these spaces, copy	the corresponding information	on 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	. Policy Number:
551 Ranger Lane			
City	State	ZIP Code	Company NAIC Number
Longboat Key	Florida	34228	

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.



Photo One

Photo One Caption

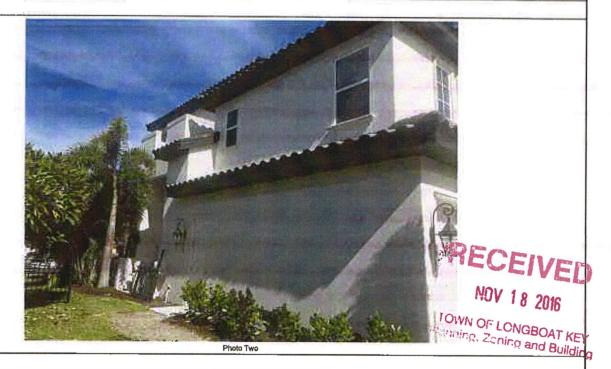


Photo Two Caption

# **BUILDING PHOTOGRAPHS**

### **ELEVATION CERTIFICATE**

Continuation Page

OMB No. 1660-0008

Expiration Date: November 30, 2018

IMPORTANT: In these spaces, copy the corres	ponding information	on from Section A.	FOR INSURANCE COMPANY USE
Building Street Address (including Apt., Unit, Sui 551 Ranger Lane	te, and/or Bldg. No.)	or P.O. Route and Box No.	Policy Number:
City Longboat Key	State Florida	ZIP Code 34228	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.

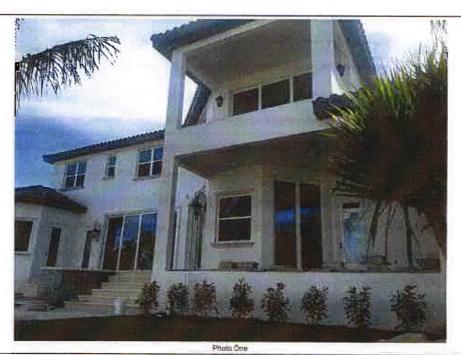


Photo One Caption

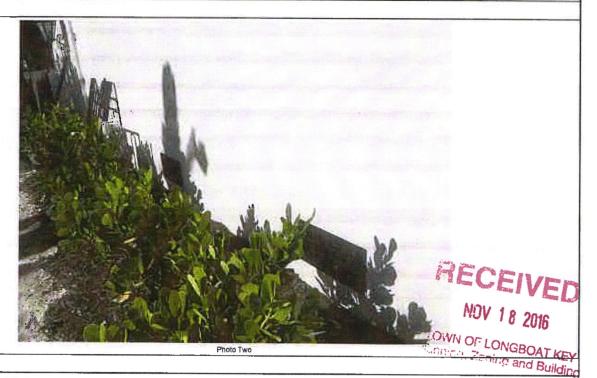


Photo Two Caption



### Flood Flap Vent Installation Guide

For Models: FFWF12 FFWF08 FFWF05 FFNF12 FFNF08 FFNF05

### FOLLOW ALL LOCAL BUILDING CODES AND ENGINEERED BLUEPRINTS

READ INSTRUCTIONS CAREFULLY BEFORE INSTALLATION | BE SURE TO INSPECT ALL VENTS FOR SHIPPING DAMAGE BEFORE INSTALLING

#### Sealed Series Vents (FFWF12 | FFWF08 | FFWF05)

### NEW CONSTRUCTION (See specifics for Stucco, Brick Skirt, and Block Pier installations below)

Leave rough openings of 8"x16" for each vent

Blocks over the vent must be positioned as half blocks. The vent is not designed to support weight.

When installing the vent, be sure the side marked "top" is facing up and the vent grill is facing the outside of the foundation. The rubber flaps should be on the crawl space side of the foundation. 0 0

To install the vent,

Apply several large beads of construction adhesive on the bottom of the rough opening. Insert the vent on top of the adhesive. 0

Apply several large beads of construction adhesive on the bottom of the rough opening. Insert the vent on top of the adhesive.

Apply two large beads of adhesive on the top-front (grill side) of the left and right sides of the vent.

Secure the vent in place with plastic shims by pushing them through the adhesive on the top of the vent until the shims are snug and in place between the top of the vent and the foundation block opening. In order to secure the grill within the security tabs on the bottom of the vent, the shims MUST be positioned over the top-front of the vent where the grill hinge inter-locks with the vent housing.

Be sure the security tabs engage the grill by shimming around the vent as necessary.

DO NOT OVER-TIGHTEN SHIMS AROUND THE VENT.

Verify ent is level and straight.

The vent grill MUST be clear of all construction debris, adhesive or other installation materials.

Use exterior caulik to fill in any cracks or gaps remaining around the vent.

Position the grill between the security tabs. If the grill cannot swing freely, the shims around the vent are too tight and need to be adjusted.

Position both flaps into channels on the bottom of the vent's interior.

0

### STUCCO INSTALLATIONS - Models FFWF08 and FFWF05 suggested for this application

Note: Exterior wall systems like Stucco and EIFS must be designed to manage moisture around the flood vent opening.

The front of the vent should be positioned flush with the finished stucco or the outside of the foundation wall. This will allow the stucco to be applied and finished around the vent.

Protect the front of the vent with plastic and tape if stucco is going to be applied after the installation. The plastic MUST be removed after the application of stucco is complete.

# BRICK SKIRT INSTALLATIONS – Model FFWF12 suggested for this application

It is recommended that the vent be installed after the construction of the foundation wall and during the construction of the brick skirt. This will insure the vent is aligned with both the opening in the foundation and the brick skirt.

The front of the vent should be positioned %" of an inch from the front of the brick skirt.

The vent will be placed in the opening of the foundation and the brick will be built up and around the front of the vent.

The front and back of the vent need to be covered in plastic and secured with tape in order to keep any excess mortar off of the moving parts of the vent. Protect the front and rear of the vent with plastic and tape until the brick skirt installation has been completed. The plastic MUST be removed after the 0

0

### BLOCK PIER INSTALLATIONS -- Model FFWF05 suggested for this application

Place a steel lentil over the top of the rough opening to support the upper courses of bricks above the vent. The vent is not designed to support weight. The front of the vent should be %" of an inch from the exterior face of the brick skirt.

Be sure the vent is level

0

### RETRO-FITTING (See specifics for Block Pier retro-fits below)

Gently remove the existing vent.
Blocks over the vent must be positioned as half blocks. The vent is not designed to support weight.
When installing the vent, be sure the side marked "top" is facing up and the vent grill is facing the outside of the foundation. The rubber flaps should be on the crawl space side of the foundation. 0 0

Install the new vent from the interior of the crawlspace. Tip: It may be helpful to have a second person on the exterior of the crawlspace to help line up the

DO NOT force or wedge a vent into an opening. This could deform or damage the vent and could result in a malfunction of the vent. The front of the vent should be placed %"of an inch from the outside of the foundation wall.

To install the vent,

the vent,

Apply several large beads of construction adhesive on the bottom of the rough opening. Insert the vent on top of the adhesive

Apply two large beads of adhesive on the top-front (grill side) of the left and right sides of the vent.

Secure the vent in place with plastic shims by pushing them through the adhesive on the top of the vent until the shims are snug and in place between the top of the vent and the foundation block opening. In order to secure the grill within the security tabs on the bottom of the vent, the shims MUST be positioned over the top-front of the vent where the grill hinge inter-locks with the vent housing.

Be sure the security tabs engage the grill by shimming around the vent as necessary.

DO NOT OVER-TIGHTEN SHIMS AROUND THE VENT. 0

O Verify vent is level and straight.

The vent grill MUST be clear of all construction debris, adhesive or other installation materials.

Use exterior caulk to fill in any cracks or gaps remaining around the vent. Tip: Select a caulk color that matches the stucco/mortar color to make this vent 0

Any opening between the rear of the vent and the foundation block should also be caulked. If using an expanding foam material, be sure not to overfill around the vent because this could cause the vent to be deformed and result in a malfunction of the vent.

Position the grill between the security tabs. If the grill cannot swing freely, the shims around the vent are too tight and need to be adjusted.

Position both flaps into channels on the bottom of the vent's interior. 0

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### BLOCK PIER RETRO-FIT —Model FFWF05 suggested for this application

The front of the vent should be ¾" of an inch from the exterior face of the brick skirt.

0 Be sure the vent is level.

See reverse for additional installation instructions

TOWN OF LONGBOAT KEY Planning, Zoning and Building Rev. 20141001



### Flood Flap Vent Installation Guide

### For Models: FFWF12 | FFWF08 | FFWF05 FFNF12 | FFNF08 | FFNF05

# WOOD STUD WALLS - Models FFWF12, FFWF08 or FFWF05 suggested for this application. Choose flood vent depth to match wall thickness.

Note: Follow the siding manufacturer's requirements for sealing between the siding and any openings.

When installing the vent, be sure the side marked "top" is facing up and the vent grill is facing the outside of the foundation. The rubber flaps should be on 0 install the new vent from the interior of the crawispace. Tip: it may be helpful to have a second person on the exterior of the crawispace to help line up the a

vent.

0 To install the vent,

0

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the vent,

Apply several large beads of construction adhesive on the bottom of the rough opening. Insert the vent on top of the adhesive

Apply two large beads of adhesive on the top-front (grill side) of the left and right sides of the vent.

Secure the vent in place with plastic shims by pushing them through the adhesive on the top of the vent until the shims are snug and in place between the top of the vent and the framing. In order to secure the grill within the security tabs on the bottom of the vent, the shims MUST be positioned over the top-front of the vent where the grill hinge inter-locks with the vent housing.

Be sure the security tabs engage the grill by shimming around the vent as necessary.

DO NOT OVER-TIGHTEN SHIMS AROUND THE VENT.

If desired, screws may also be used to secure the vent to the studs. If screws are used on the interior of the vent, they MUST be placed in locations that will not affect the swinging action of the grill or flaps. Do not over tighten screws. Tip: Use rust resistant screws.

Verify vent is level and straight. 0

0

0

Verify vent is level and straight.

The vent grill MUST be clear of all construction debris, adhesive or other installation materials.

Use exterior caulk to fill in any cracks or gaps remaining around the vent.

Position the grill between the security tabs. If the grill cannot swing freely, the shims around the vent are too tight and need to be adjusted.

Position both flaps into channels on the bottom of the vent's Interior.

# STACKER MODELS (VENT STACKING) - All models may be used for this application

Leave rough openings of 16"x16" for each stacker model vent
Secure the two vents together by placing 3-4 beads of construction adhesive to the top of the bottom vent. Place the second vent on top of the beads of adhesive making sure the ribs fit securely.

Follow applicable installation instructions provided above.

Use exterior caulk to fill in the gap between the top and bottom vent.

### Multi-Purpose Series Vents (FFNF12 | FFNF08 | FFNF05)

# NEW CONSTRUCTION (See specifics for Stucco, Brick Skirt, and Block Pier installations above)

Leave rough openings of 8"x16" for each vent Blocks over the vent must be positioned as half blocks. The vent is not designed to support weight. When installing the vent, be sure the side marked "top" is facing up and the vent grill is facing the outside of the foundation. 0

0 To install the vent.

he vent,
Apply several large beads of construction adhesive on the bottom of the rough opening, insert the vent on top of the adhesive.
Apply two large beads of adhesive on the top-front (grill side) of the left and right sides of the vent.
Secure the vent in place with plastic shims by pushing them through the adhesive on the top of the vent until the shims are snug and in place between the top of the vent and the foundation block opening. In order to secure the grill within the security tabs on the bottom of the vent, the shims MUST be positioned over the top-front of the vent where the grill hinge inter-locks with the vent housing.

Be sure the security tabs engage the grill by shimming around the vent as necessary.

NOT OVER-TIGHTEN SHIMS AROUND THE VENT. 0

O Verify event is level and straight.

The vent grill MUST be clear of all construction debris, adhesive or other installation materials.

Use exterior caulk to fill in any cracks or gaps remaining around the vent.

Position the grill between the security tabs. If the grill cannot swing freely, the shims around the vent are too tight and need to be adjusted.

# RETRO-FITTING

Gently remove the existing vent.
Blocks over the vent must be positioned as half blocks. The vent is not designed to support weight.
When installing the vent, be sure the side marked "top" is facing up and the vent grill is facing the outside of the foundation.
Install the new vent from the interior of the crawlspace. Tip: It may be helpful to have a second person on the exterior of the crawlspace to help line up the

DO NOT force or wedge a vent into an opening. This could deform or damage the vent and could result in a malfunction of the vent. The front of the vent should be placed % of an inch from the outside of the foundation wall.

0

0

Apply several large beads of construction adhesive on the bottom of the rough opening. Insert the vent on top of the adhesive Apply two large beads of adhesive on the top-front (grill side) of the left and right sides of the vent.

Secure the vent in place with plastic shims by pushing them through the adhesive on the top of the vent until the shims are snug and in place between the top of the vent and the foundation block opening. In order to secure the grill within the security tabs on the bottom of the vent, Be sure the security tabs engage the grill by shimming around the vent as necessary.

DO NOT OVER-TIGHTEN SHIMS AROUND THE VENT.

0

O Verify vent is level and straight.

The vent grill MUST be clear of all construction debris, adhesive or other installation materials.

Use exterior caulk to fill in any cracks or gaps remaining around the vent. Tip: Select a caulk color that matches the stuccommercar color to make this vent

swap less nonceage.

Any opening between the rear of the vent and the foundation block should also be caulked. If using an expanding foundation has sure not to overfill around the vent because this could cause the vent to be deformed and result in a malfunction of the vent.

Position the grill between the security tabs. If the grill cannot swing freely, the shims around the vent are too tight and need to be adjusted. 0

TOWN OF LONGBOAT KEY Theorem Zening and Reviding 1001



# ICC-ES Evaluation Report

# ESR-3560 FBC Supplement

Issued September 2014

This report is subject to renewal September 2015.

www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

DIVISION: 08 00 00-OPENINGS

Section: 08 95 43-Vents/Foundation Flood Vents

### REPORT HOLDER:

FLOOD FLAPS®, LLC **2707 WATERPOINTE CIRCLE** MT. PLEASANT, SOUTH CAROLINA 29466 (843) 849-8031 www.floodflaps.com info@floodflaps.com

### **EVALUATION SUBJECT:**

FLOOD FLAPS® FLOOD VENTS: MODELS FFWF12; FFNF12; FFWF08; FFNF08; FFWF05; FFNF05

### 1.0 REPORT PURPOSE AND SCOPE

### Purpose:

The purpose of this evaluation report supplement is to indicate that Flood Flaps flood vents, recognized in ICC-ES master evaluation report ESR-3560, have also been evaluated for compliance with the codes noted below.

### Applicable code editions:

- 2010 Florida Building Code—Building
- 2010 Florida Building Code—Residential

### 2.0 CONCLUSIONS

The Flood Flaps flood vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-3560, comply with the 2010 Florida Building Code—Building and the 2010 Florida Building Code—Residential, provided the design and installation are in accordance with the International Building Code® provisions noted in the master report.

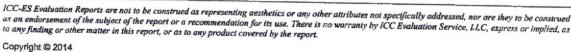
Use of the Flood Flaps flood vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the 2010 Florida Building Code-Building and the 2010 Florida Building Code-Residential for structures not subject to Section 2326.1 of the 2010 Florida Building Code—Building or Section R4409.13.3.1 of the 2010 Florida Building Code-Residential, as applicable.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report issued September 2014.

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TOWN OF LONGBOAT KEY Planning, Zoning and Building







# **ICC-ES Evaluation Report**

ESR-3560

Issued September 2014

This report is subject to renewal September 2015.

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A Subsidiary of the International Code Council®

DIVISION: 08 00 00-OPENINGS

Section: 08 95 43—Vents/Foundation Flood Vents

### REPORT HOLDER:

FLOOD FLAPS®, LLC 2707 WATERPOINTE CIRCLE MT. PLEASANT, SOUTH CAROLINA 29466 (843) 849-8031

www.floodflaps.com info@floodflaps.com

### **EVALUATION SUBJECT:**

FLOOD FLAPS® FLOOD VENTS: MODELS FFWF12; FFNF12; FFWF08; FFNF08; FFWF05; FFNF05

#### 1.0 EVALUATION SCOPE

### Compliance with the following codes:

- 2012 and 2009 International Building Code® (IBC)
- 2012 and 2009 International Residential Code® (IRC)

### Properties evaluated:

- Physical operation
- Water flow
- Weathering

### 2.0 USES

Flood Flaps® are used to provide for the equalization of hydrostatic flood forces on exterior walls.

### 3.0 DESCRIPTION

#### 3.1 General:

Flood Flaps® flood vents are engineered mechanically operated flood vents (FVs) that automatically allow flood waters to enter and exit enclosed areas. The FVs are constructed of ABS plastic which serves as the FV's housing, and a front grill that contains an anodized metal screen imbedded in polypropylene plastic. On contact with rising flood water, the grill will disengage from its secured position, allowing flood water and debris to flow through in either direction.

The sealed series models contain two rubber flaps that close the FV to the passage of air when using with conditioned areas or sealed crawl spaces. In the same manner as the grill, the two rubber flaps are pushed open by water pressure, allowing water and debris to flow

through the FV in either direction. See Figure 1 for an illustration of the Flood Flaps  $^{\oplus}$  FV.

# 3.2 Engineered Opening:

The Flood Flaps® FVs comply with the design principle noted in Section 2.6.2.2 of ASCE/SEI 24 for a rate of rise and fall of 5 feet per hour (0.423 mm/s). In order to comply with the engineered opening requirement of ASCE/SEI 24, Flood Flaps® FVs must be installed in accordance with Section 4.0.

### 3.3 Model Sizes:

The Flood Flaps® FV model designations and sizes are as follows:

MODEL	WIDTH (in)	HIGHT (in)	DEPTH (in)
FFWF12 FFNF12	15 <sup>5</sup> /8	73/4	12
FFWF08 FFNF08	15 <sup>5</sup> / <sub>8</sub>	73/4	8
FFWF05 FFNF05	15 <sup>6</sup> /8	73/4	5

For SI: 1 inch = 25.4 mm.

The FFWF series include two rubber flaps for the prevention of air flow. The FFNF series omit the rubber flaps.

### 3.4 Ventilation:

Flood Flaps® FV models FFNF12, FFNF08, FFNF05, and FFNF02 have metal screens with ¹/-inch-by-¹/₄ inch (6 mm by 6 mm) openings and provide 37 square inches of net free opening to supply natural ventilation for under-floor ventilation. Flood Flaps® FV models FFWF12, FFWF08, and FFWF05 have not been evaluated for use as openings for under-floor ventilation.

# 4.0 DESIGN AND INSTALLATION

Flood Flaps® FVs are designed to be installed into walls of existing or new construction. Installation of the FVs must be in accordance with the manufacturer's instructions, the applicable code and this report. Flood Flaps® FVs can be installed in wood, masonry and concrete walls up to a thickness of 12 inches (305 mm). In order to comply with the engineered opening design principle noted in Section 2.6.2.2 of ASCE/SEI 24, the Flood Flaps® FVs must be installed as follows:

 With a minimum of two openings on different sides of each enclosed area.

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ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, not one they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied as to any finding or other matter in this report, or as to any product covered by the report.



- With a minimum of one FV for every 220 square feet (20 m²) of enclosed area.
- Below the base flood elevation.
- With the bottom of the FV located a maximum of 12 inches (305 mm) above grade.

### 5.0 CONDITIONS OF USE

The Flood Flaps® flood vents described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The Flood Flaps<sup>®</sup> FVs must be installed in accordance with this report, the applicable code and the manufacturer's installation instructions. In the event of a conflict, the instructions in this report govern. 5.2 The Flood Flaps<sup>®</sup> FVs must not be used in place of "breakaway walls" in coastal high hazard areas, but are permitted for use in conjunction with breakaway walls in other areas.

### 6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated October 2013.

### 7.0 IDENTIFICATION

The Flood Flaps models recognized in this report are identified by a label bearing the manufacturer's name, the model number, and the evaluation report number (ESR-3560).

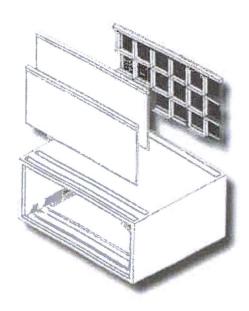


FIGURE 1-FLOOD FLAPS® FLOOD VENT

