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

OMB No. 1660-0008 Expiration Date: November 30, 2022

ELEVATION CERTIFICATE Important: Follow the instructions on pages 1–9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building

		CTION A - PROPER	TY INFO	RMATION		, (-)		JRANCE COMPANY USE
AT Billiono (hungre hame						Policy Nu		
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and								
520 Heather Drive	Box No. 520 Heather Drive					Company	NAIC Number:	
Elkview	Elkview West Virginia 2507			ZIP Code 25071				
A3. Property Des Lot 5, Hoover Pro	A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) Lot 5, Hoover Property on Elk River (DB 1409, P 393 & Elk District TM 37E, P 27)							
A4. Building Use	A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential							
A5. Latitude/Long	itude: Lat. 3	8.407210N.	Long. §	31.521506W,		Horizonta	I Datum: NAD	1927 🔀 NAD 1983
A6. Attach at leas	t 2 photograj	ohs of the building if the	ne Certifi	cate is being	used to	obtain floo	d insurance.	
A7. Building Diagr	am Number	6						
A8. For a building	with a crawls	space or enclosure(s)	:					
a) Square foo	tage of craw	ispace or enclosure(s)		2128.00	sq ft		
b) Number of	permanent fl	ood openings in the c	rawispac	e or enclosur	e(s) with	nin 1.0 fool	above adjacent gr	ade 16
c) Total net ar	ea of flood o	penings in A8.b		2400.00 sq is	n			
d) Engineered	I flood openir	ngs? 🛛 Yes 🔲	No					
A9. For a building	vith an attacl	ned garage:						
a) Square foot	age of attach	ned garage		N/A sq fi	t			
b) Number of p	permanent flo	ood openings in the at	tached o	arage within	1.0 foot	ahove adi:	acent grade 0	
		penings in A9.b		0.00 sq				
d) Engineered			No.		••,•			
			10					
		CTION B - FLOOD	INSURA	NCE RATE	MAP (F	IRM) INF	ORMATION	
B1. NFIP Commun Kanawha County, V		Community Number		B2. County Kanawha	B2. County Name Kanawha			B3. State West Virginia
B4. Map/Panel Number	B5. Suffix	B6. FIRM Index Date	Effe	RM Panel ective/ vised Date	B8. Fit Zone(s		B9. Base Flood E (Zone AO, us	levation(s) e Base Flood Depth)
54039C0270	E	02-06-2008	02-06-2		AE		609.8 NAVD88	
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								
				·				

ELEVATION CERTIFICATE

OMB No. 1660-0008

		A STATE OF THE STA	Expiration Date: November 30, 2022			
IMPORTANT: In these spaces, copy the correspon	nding information from	n Section A.	FOR INSURANCE COMPANY USE			
Suilding Street Address (including Apt., Unit, Suite, a 520 Heather Drive	Policy Number:					
City Elkview	State West Virginia	ZIP Code 25071	Company NAIC Number			
SECTION C - BUILDING	ELEVATION INFOR	MATION (SURVEY F	REQUIRED)			
	ruction Drawings*	Building Under Constr				
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: Survey grade GPS on site Vertical Datum: NAVD88 Indicate elevation datum used for the elevations in items a) through h) below.						
☐ NGVD 1929 ☑ NAVD 1988 ☐ Ot Datum used for building elevations must be the	same as that used for t	he RFF	- 444			
			Check the measurement used.			
 a) Top of bottom floor (including basement, cra 	wispace, or enclosure t	loor)	604.7 🛛 feet 🔲 meters			
 b) Top of the next higher floor 		-	612.4 X feet meters			
c) Bottom of the lowest horizontal structural me	mber (V Zones only)		N/A feet meters			
d) Attached garage (top of slab)		The Control of the Co	N/A feet meters			
e) Lowest elevation of machinery or equipment (Describe type of equipment and location in the second control of the second cont	servicing the building Comments)		612.4 🗵 feet 🦳 meters			
f) Lowest adjacent (finished) grade next to build	ding (LAG)		604.7 🔀 feet 🔲 meters			
g) Highest adjacent (finished) grade next to buil	(A.C.) (A.C.)		605.3 🖾 feet 🗀 meters			
h) Lowest adjacent grade at lowest elevation of structural support		g	605.1 🔀 feet 🗌 meters			
SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION						
This certification is to be signed and sealed by a land I certify that the information on this Certificate repress statement may be punishable by fine or imprisonment	surveyor, engineer, or	architect authorized by				
Were latitude and longitude in Section A provided by	a licensed land surveye	or? ⊠Yes □No	Check here if attachments.			
Certifier's Name	License Number		T			
William R. Gunnoe, RPS	801		WIND ROLL			
Title Registered Professional Surveyor			Place			
Company Name Gunnoe Surveying & Mapping			S S S S S S S S S S S S S S S S S S S			
Address P.O. Box 1172			Hore			
City Clendenin	State West Virginia	ZIP Code 25045	"Thinning"			
Signature William L. Lumae	Date 04-19-2023	Telephone (304) 548-5324	Ext.			
Copy all pages of this Elevation Certificate and all attach	ments for (1) community	official, (2) insurance a	agent/company, and (3) building owner.			
Comments (including type of equipment and location, Item B9 - base flood elevations shown on FIRM appea are used as correct on this certificate. Subject dwelling Floodplain Ordinance.	per C2(e), if applicable	er FIS annears to use	the higher values, therefore they			
FMA Form 086-0-33 (12/19)	anlassa all provious ad					

ELEVATION CERTIFICATE

OMB No. 1660-0008 Expiration Date: November 30, 2022

IMI	PORTANT: In these spaces, copy the correspond	ling information	from Section A		FOR INSURANCE COMP	ANV HEE
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 520 Heather Drive				Box No.	Policy Number:	ANT USE
Cit		Ctata				
	·	State West Virginia	ZIP Code 25071		Company NAIC Number	
	SECTION E – BUILDING EL FOR ZONI	EVATION INFOI E AO AND ZONE	RMATION (SU E A (WITHOUT	RVEY NOT BFE)	REQUIRED)	· · · · · · · · · · · · · · · · · · ·
	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.	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 b) Top of bottom floor (including basement, crawlspace, or enclosure) is			t ☐ meters		
F2.	For Building Diagrams 6_9 with permanent flood of	noningo neovidad				ne LAG.
	For Building Diagrams 6–9 with permanent flood of the next higher floor (elevation C2.b in the diagrams) of the building is	Jenings provided i				
E3.	Attached garage (top of slab) is	***************************************		t ☐ meters		
	Top of platform of machinery and/or equipment					
Es	servicing the building is		[feet	meters	above or below the	ne HAG.
EJ.	Zone AO only: If no flood depth number is available floodplain management ordinance?	No Unknow	bottom floor ele m. The local of	vated in acc ficial must c	ordance with the community ertify this information in Sec	/'s tion G.
	SECTION F - PROPERTY OWN	ER (OR OWNER	S REPRESENT	ATIVE) CE	RTIFICATION	****
The	Droperty owner or owner's authorized representative	a who completes t	Postiona A D a	ad F 4aa 7aa	- 4 / . 10	d or
	munity-issued BFE) or Zone AO must sign here. The perty Owner or Owner's Authorized Representative's	e statements in St	ections A, B, an	E are corre	ect to the best of my knowle	dge.
,		Home				
Add	ress	Cit	У	Stat	e ZIP Code	9
Sigr	nature	Da	ite	Tele	phone	
Con	ments					
						I
						ł
					Check here if attaching	nents
	\ Form 096 0 22 (40(40)	···	·····		- Control of Ottoor	

ELEVATION CERTIFICATE

OMB No. 1660-0008 Expiration Date: November 30, 2022

IMPORTANT: In these spaces, copy the corresponding information from Section A.	EOR INCLIDANCE COMPANY LIGH				
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 520 Heather Drive	FOR INSURANCE COMPANY USE Policy Number.				
O'L					
City State ZIP Code Elkview West Virginia 25071	Company NAIC Number				
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 FEM/or Zone AO.	4-issued or community-issued BFE)				
G3. The following information (Items G4–G10) is provided for community floodplain management	ent purposes.				
G4. Permit Number G5. Date Permit Issued G6. C	Pate Certificate of compliance/Occupancy Issued				
G7. This permit has been issued for: New Construction Substantial Improvement					
G8. Elevation of as-built lowest floor (including basement) of the building:	meters Datum				
G9. BFE or (in Zone AO) depth of flooding at the building site:	meters Datum				
	meters Datum				
Local Official's Name Title					
Community Name Telephone					
Signature Date					
Comments (including type of equipment and location, per C2(e), if applicable)					
	Check here if attachments.				

BUILDING PHOTOGRAPHS

ELEVATION CERTIFICATE

See Instructions for Item A6.

OMB No. 1660-0008 Expiration Date: November 30, 2022

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.

520 Heather Drive

City
State
Elkview
State
West Virginia
25071

FOR INSURANCE COMPANY USE

FOR INSURANCE COMPANY USE

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.



Photo One Caption From left front perspective

Clear Photo One



Photo Two Caption From left rear perspective

Clear Photo Two

FEMA Form 086-0-33 (12/19)

Replaces all previous editions.

Form Page 5 of 6

BUILDING PHOTOGRAPHS

ELEVATION CERTIFICATE

Continuation Page

OMB No. 1660-0008

IMPORTANT: In these spaces, copy	Expiration Bate: November 30, 2022		
Building Street Address (including Apt 520 Heather Drive	FOR INSURANCE COMPANY USE Policy Number:		
City Elkview	State West Virginia	ZIP Code 25071	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 Three

Photo Three Caption From right rear perspective

Clear Photo Three



Photo Four Caption From right front perspective

Clear Photo Four

FEMA Form 086-0-33 (12/19)

Replaces all previous editions.

Form Page 6 of 6











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This report is subject to renewal September 2023.

ICC-ES Evaluation Report

Reissued September 2022

ESR-3851

DIVISION: 08 00 00—OPENINGS

Section: 08 95 43-Vents/Foundation Flood Vents

REPORT HOLDER:

CRAWL SPACE DOOR SYSTEMS, INC.

EVALUATION SUBJECT:

CRAWL SPACE DOOR SYSTEMS FLOOD VENT MODEL #CSBA816 CRAWL SPACE STACKED MODELS: #ICCSTACKED2; #ICCSTACKED4 FLOOD VENT INSULATED KIT #ICCINSULATED

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018 and 2015 International Building Code®
- 2018 and 2015 International Residential Code®

Properties evaluated:

- Physical operation
- Water flow
- Weathering

2.0 USES

Crawl Space Door Systems flood vents are used to provide for the equalization of hydrostatic flood forces on exterior walls.

3.0 DESCRIPTIONs

3.1 General:

Crawl Space Door Systems flood vents are engineered mechanically operated flood vents. Upon contact with flood water, the flood vents automatically open and allow flood water to enter and exit enclosed areas. The vents are constructed of general purpose ABS SP-9010 plastic. The Crawl Space Flood Vent Model #CSBA816 has a faux louver with either a solid plastic plate or wire mesh attached to the back of the louver. The louver is dislodged from the vent upon contact with flood waters. See Figure 1 for an illustration of the flood vent Model #CSBA816.

The Flood Vent Insulated Kit Model #ICCINSULATED is constructed of general purpose ABS SP-9010 plastic. The vent frame opening is filled with a 2-inch thick (51 mm) extruded polystyrene Styrofoam™ Brand Scoreboard Foam

Insulation Board (ESR-2142). The insulation board is dislodged from the vent upon contact with flood waters, allowing flood waters to enter and exit enclosed areas. See Figure 2 for an illustration of the Flood Vent Insulated Kit Model #ICCINSULATED.

The Crawl Space Stacked Model #ICCSTACKED2 contains two vertically arranged Crawl Space Flood Vents (Model #CSBA816) in one assembly. The Crawl Space Stacked Model #ICCSTACKED4 contains four Crawl Space Flood Vents (Model #CSBA816) in one assembly, with two sets of side by side flood vents vertically arranged.

3.2 Engineered Opening:

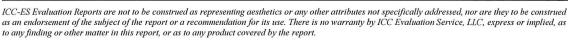
The Crawl Space Door Systems static flood vents comply with the design principle noted in Section 2.7.2.2 of ASCE/SEI 24 for a rate of rise and fall of 5 feet per hour (0.423 mm/s). In order to comply with the engineered opening requirement of ASCE/SEI 24-14, the flood vents must be installed in accordance with Section 4.0 of this report.

3.3 Ventilation:

The Crawl Space Flood Vent Model #CSBA816 and Crawl Stacked Models #ICCSTACKED2 #ICCSTACKED4 are available covered with metal wire mesh with 0.108 inch by 0.108 inch (2.74 mm by 2.74 mm) openings. The mesh is covered by a faux louver with 11/16 inch (17.5 mm) vertical clearance between each blade. The Crawl Space Flood Vent Model #CSBA816 provides 11 square inches (7097 mm²) of net free area to supply natural ventilation when equipped with wire mesh. The Crawl Space Stacked Models #ICCSTACKED2 and #ICCSTACKED4 supply 22 square inches (14,194 mm²) and 44 square inches (28,388 mm²), respectively, of net free area to supply natural ventilation when equipped with wire mesh. The Crawl Space Flood Vent Model #CSBA816 covered with a solid plastic plate, Crawl Space Stacked Models #ICCSTACKED2 and #ICCSTACKED4 covered with a solid plastic plate, and the Flood Vent Insulated Kit Model #ICCINSULATED do not offer natural ventilation.

4.0 DESIGN AND INSTALLATION

The Crawl Space Door Systems flood vents are designed to be installed into walls or doors of existing or new construction from the exterior side. Installation of the vents must be in accordance with the manufacturer's instructions, the applicable code and this report. In order to comply with the engineered opening design principle noted in Sections





2.7.2.2 and 2.7.3 of ASCE/SEI 24-14, the vent must be installed as follows:

- With a minimum of two openings; one on different sides of each enclosed area.
- With a minimum of one vent for the square footage of enclosed area noted in Table 1.
- Below the base flood elevation.
- With the bottom of the vent located a maximum of 12 inches (305 mm) above grade.

5.0 CONDITIONS OF USE

The Crawl Space Door Systems 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 Crawl Space Door Systems flood vents must be installed in accordance with this report, the applicable code and the manufacturer's published installation instructions. In the event of a conflict, the instructions in this report govern.
- 5.2 The Crawl Space Door Systems flood vents must not be used in the place of "breakaway walls" in coastal high hazard areas but are permitted for use in conjunction with breakaway walls in other areas.

5.3 The Crawl Space Door Systems flood vents are manufactured under a quality control system with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents (AC364), dated August 2015 (Editorially revised October 2017).

7.0 IDENTIFICATION

- 7.1 The Crawl Space Door Systems flood vents recognized in this report must be identified by a label bearing the manufacturer's name (Crawl Space Door Systems), the model number, and the evaluation report number (ESR-3851).
- **7.2** The report holder's contact information is the following:

CRAWL SPACE DOOR SYSTEMS, INC. 3669 SEA GULL BLUFF DRIVE VIRGINIA BEACH, VIRGINIA 23455 (757) 363-0005 www.crawlspacedoors.com

TABLE 1—CRAWL SPACE DOOR SYSTEMS FLOOD VENTS

MODEL	OVERALL VENT SIZE (Width x Height x Depth) (in)	ROUGH OPENING SIZE (Width x Height) (in)	ENCLOSED AREA COVERAGE (ft²)
CSBA816	18 ¹ / ₄ x 10 ¹ / ₂ x 1 ³ / ₄	16 x 8 ¹ / ₄	305
ICCINSULATED	18 ¹ / ₄ x 10 ¹ / ₂ x 1 ³ / ₄	15³/ ₄ x 8	300
ICCSTACKED2	30 x 30 x 2 ³ / ₄	24 x 24	610
ICCSTACKED4	40 ¹ / ₂ x 24 ³ / ₄ x 2 ³ / ₄	35 ¹ / ₄ x 19 ¹ / ₂	1,220

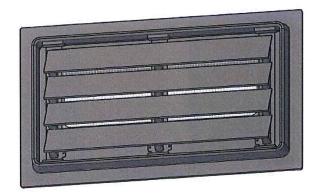


FIGURE 1—CRAWL SPACE DOOR SYSTEMS FLOOD VENT

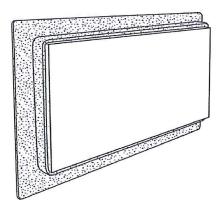


FIGURE 2—FLOOD VENT INSULATED KIT



ICC-ES Evaluation Report

ESR-3851 CBC and CRC Supplement

Reissued September 2022

This report is subject to renewal September 2023.

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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:

CRAWL SPACE DOOR SYSTEMS, INC.

EVALUATION SUBJECT:

CRAWL SPACE DOOR SYSTEMS FLOOD VENT #CSBA816
CRAWL SPACE STACKED MODELS #ICCSTACKED2; #ICCSTACKED4
FLOOD VENT INSULATED KIT #ICCINSULATED

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Crawl Space Door Systems flood vents, described in ICC-ES evaluation report <u>ESR-3851</u>, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

■ 2019 California Building Code (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

■ 2019 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Crawl Space Door Systems flood vents, described in Sections 2.0 through 7.0 of the evaluation report <u>ESR-3851</u>, comply with CBC Chapter 12, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 12 and 16, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections of the CBC are beyond the scope of this supplement.

2.2 CRC

The Crawl Space Door Systems flood vents, described in Sections 2.0 through 7.0 of the evaluation report <u>ESR-3851</u>, comply with 2019 CRC, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued September 2022.





ICC-ES Evaluation Report

ESR-3851 FBC and FRC Supplement

Reissued September 2022

This report is subject to renewal September 2023.

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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:

CRAWL SPACE DOOR SYSTEMS, INC.

EVALUATION SUBJECT:

CRAWL SPACE DOOR SYSTEMS FLOOD VENT #CSBA816
CRAWL SPACE STACKED MODELS #ICCSTACKED2; #ICCSTACKED4
FLOOD VENT INSULATED KIT #ICCINSULATED

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Crawl Space Door Systems flood vents, described in ICC-ES evaluation report ESR-3851, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2020 Florida Building Code—Building
- 2020 Florida Building Code—Residential

2.0 CONCLUSIONS

The Crawl Space Door Systems flood vents, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-3851, comply with the *Florida Building Code—Building and Florida Building Code—Residential*, provided the design requirements are determined in accordance with the *Florida Building Code—Building* and *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-3851 for the 2018 *International Building Code®* meet the requirements of the he *Florida Building Code—Building* and *Florida Building Code—Residential*, as applicable.

Use of the Crawl Space Door Systems flood vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the 2020 Florida Building Code—Building and Florida Building Code—Residential.

For products falling under Florida Rule 61G20-3, 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 evaluation report, reissued September 2022.

