

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 owner.

SECTION A - PROPERTY INFORMATION						FOR INSURANCE COMPANY USE
A1. Building Owner's Name IAN AND HEIDI SHUFF					Policy Number:	
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 715 WEST MOUNTAIN AVENUE					Company NAIC Number:	
City FORT COLLINS		State Colorado		ZIP Code 80521		
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) LOT 5, BLOCK 280, LOOMIS ADDITION, CITY OF FORT COLLINS, COUNTY OF WELD, STATE OF COLORADO.						
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) ACCESSORY - SHOP						
A5. Latitude/Longitude: Lat. 40°35'11.4"N Long. 105°05'19.5"W 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 1A						
A8. For a building with a crawlspace or enclosure(s):						
a) Square footage of crawlspace or enclosure(s) 0 sq ft						
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 0						
c) Total net area of flood openings in A8.b 0 sq in						
d) Engineered flood openings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
A9. For a building with an attached garage:						
a) Square footage of attached garage 600 sq ft						
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade 3						
c) Total net area of flood openings in A9.b 384 sq in						
d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION						
B1. NFIP Community Name & Community Number CITY OF FORT COLLINS, 080102				B2. County Name LARIMER		B3. State Colorado
B4. Map/Panel Number 08069C0979, SH4	B5. Suffix H	B6. FIRM Index Date 05/02/2012	B7. FIRM Panel Effective/ Revised Date 05/02/2012, 07/15/2003	B8. Flood Zone(s) X/100YR	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 5011.1	
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input checked="" type="checkbox"/> FIS Profile <input 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						

ELEVATION CERTIFICATE

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

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. 715 WEST MOUNTAIN AVENUE			Policy Number:	
City FORT COLLINS	State Colorado	ZIP Code 80521	Company NAIC Number	

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: FOCO BM 42-97=4969.93 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) _____	5010.3	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
b) Top of the next higher floor _____	5021.0	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
c) Bottom of the lowest horizontal structural member (V Zones only) _____	N/A	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
d) Attached garage (top of slab) _____	N/A	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments) _____	5021.0	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
f) Lowest adjacent (finished) grade next to building (LAG) _____	5009.7	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
g) Highest adjacent (finished) grade next to building (HAG) _____	5010.0	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support _____	5009.8	<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.

Were latitude and longitude in Section A provided by a licensed land surveyor? Yes No Check here if attachments.

Certifier's Name STEVEN PARKS	License Number PLS 38348	
Title SENIOR PROJECT COORDINATOR		
Company Name KING SURVEYORS		
Address 650 EAST GARDEN DRIVE		
City WINDSOR	State Colorado	
Signature 	Date 5-22-2017	Telephone (970) 686-5011

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

Comments (including type of equipment and location, per C2(e), if applicable)
 SEE ATTACHED FLOOD VENT SPECIFICATION SHEET.
 SEE ATTACHED WATERPROOF MATERIAL SPECIFICATION SHEET.
 AC/HVAC UNIT AND WATER HEATER INSTALLED ON 2ND FLOOR.

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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 1–2 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 or Owner's Authorized Representative's Name			
Address	City	State	ZIP Code
Signature	Date	Telephone	

Comments

Check here if attachments.

ELEVATION CERTIFICATE

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City FORT COLLINS	State Colorado	ZIP Code 80521	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 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 B1605532	G5. Date Permit Issued 11.4.2016	G6. Date Certificate of Compliance/Occupancy Issued 6.2.2017
--------------------------------------	--	--

- G7. This permit has been issued for: New Construction Substantial Improvement
- G8. Elevation of as-built lowest floor (including basement) of the building: **5010 3** feet meters Datum **NAVD88**
- G9. BFE or (in Zone AO) depth of flooding at the building site: **5011 1** feet meters Datum **NAVD88**
- G10. Community's design flood elevation: **5012 1** feet meters Datum **NAVD88**

Local Official's Name Mark Taylor	Title Civil Engineer II
Community Name City of Fort Collins	Telephone 970.416.2494
Signature Mark Taylor	Date 5.25.2017

Comments (including type of equipment and location, per C2(e), if applicable)
Steven Parks PLS 38348 provided survey data, 5.22.2017. Accessory building has been vented in accordance with City floodplain standards.

Check here if attachments.

ELEVATION CERTIFICATE

BUILDING PHOTOGRAPHS

See Instructions for Item A6.

OMB No. 1660-0008

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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.

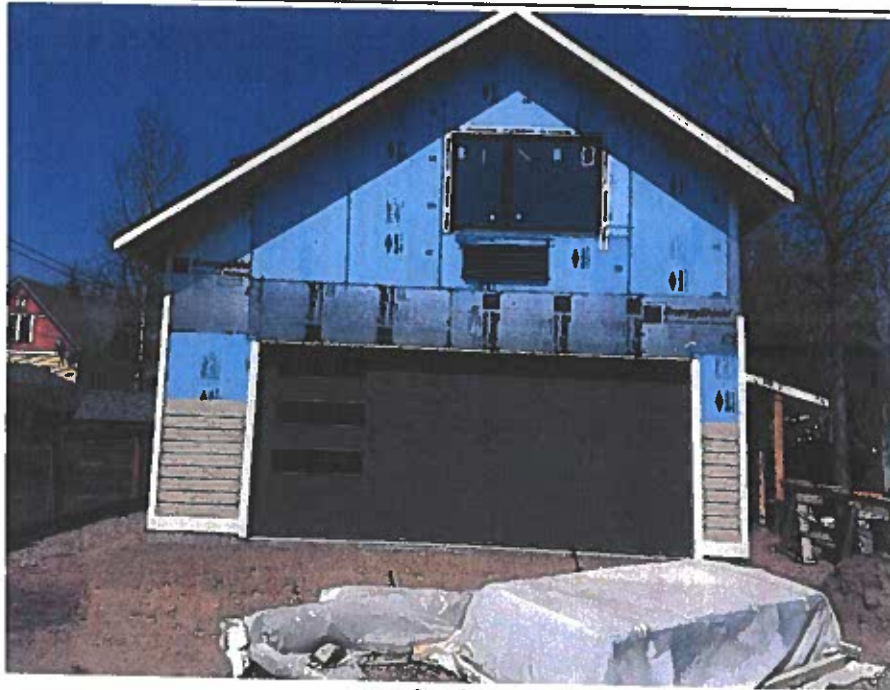


Photo One

Photo One Caption FRONT OF BUILDING, FACING NORTH 4/10/17

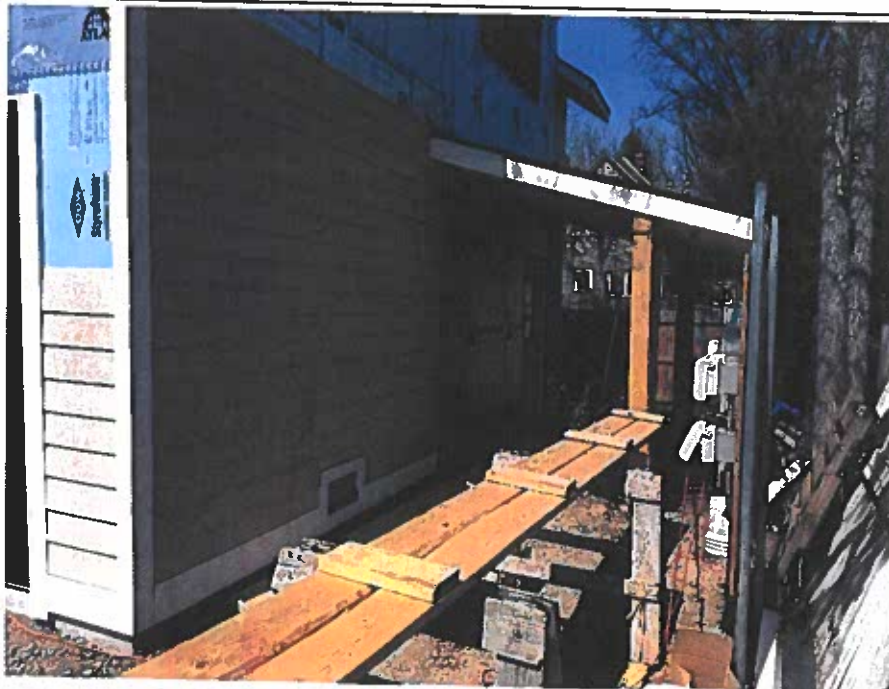


Photo Two

Photo Two Caption RIGHT SIDE OF BUILDING, FACING WEST 4/10/17

ELEVATION CERTIFICATE

BUILDING PHOTOGRAPHS

Continuation Page

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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

Photo One Caption REAR OF BUILDING, FACING SOUTH 4/10/17

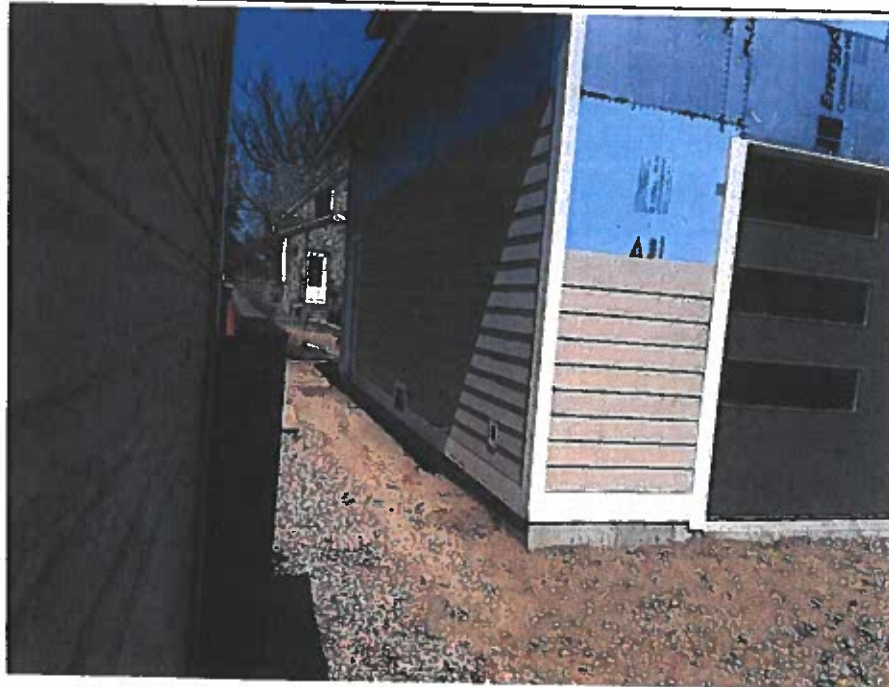


Photo Two

Photo Two Caption LEFT SIDE OF BUILDING, FACING EAST 4/10/17

ELEVATION CERTIFICATE

BUILDING PHOTOGRAPHS

See Instructions for Item A6.

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Photo One

Photo One Caption EAST BUILDING VENT (TYPICAL), 5/4/2017



Photo Two

Photo Two Caption OUTLET ELEVATION, 5/4/2017

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BUILDING PHOTOGRAPHS

Continuation Page

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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

Photo One Caption UPSTAIRS AC UNIT, 5/11/2017



Photo Two

Photo Two Caption UPSTAIRS WATER HEATER, 5/11/2017

USA Foundation Flood Vents

ICC-ES CERTIFICATION REPORT &
INSTALLATION INSTRUCTIONS

100% MADE
IN THE USA
LIFETIME
WARRANTY

The image shows two flood vents. The one on the left is shown from the inside, revealing a fine mesh screen. The one on the right is shown from the outside, showing a dark, textured cap. The background is dark with some white splatters or water droplets.



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ICC-ES Report

ESR-3907

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Issued 10/2016
This report is subject to renewal 10/2017.

DIVISION: 08 00 00—OPENINGS

SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

REPORT HOLDER:

USA FLOOD AIR VENTS, LTD.

**63 PUTNAM STREET, SUITE 202
SARATOGA SPRINGS, NEW YORK 12866**

EVALUATION SUBJECT:

USA FLOOD AIR VENTS: MODELS FOSS; FASS; FOAL; FAAL; ROAL



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ICC-ES Evaluation Report**ESR-3907**

Issued October 2016

This report is subject to renewal October 2017.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:**

USA FLOOD AIR VENTS, LTD.
63 PUTNAM STREET
SUITE 202
SARATOGA SPRINGS, NEW YORK 12866
(631) 269-1872
www.usafloodairvents.com
info@usafloodairvents.com

EVALUATION SUBJECT:**USA FLOOD AIR VENTS: MODELS FOSS; FASS; FOAL;
FAAL; ROAL****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2015 and 2012 *International Building Code*® (IBC)
- 2015 and 2012 *International Residential Code*® (IRC)

Property evaluated:

- Physical operation
- Water flow
- Ventilation

2.0 USES

The USA Flood Air Vents are used to provide for the equalization of hydrostatic flood forces on exterior walls. Certain models also allow natural ventilation.

3.0 DESCRIPTION**3.1 General:**

USA Flood Air Vents are engineered mechanically operated flood vents that automatically allow flood waters to enter and exit enclosed areas. The vents are constructed of stainless steel or aluminum. 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. See Table 1 for vent sizes and Figure 1 for an illustration of the vents.

3.1.1 FOSS: The FOSS is constructed of stainless steel and has a solid flap to prevent the free flow of air into the under-floor space.

3.1.2 FASS: The FASS is constructed of stainless steel and has a flap with $\frac{1}{4}$ inch (6 mm) diameter holes to allow for the ventilation of under-floor spaces.

3.1.3 FOAL: The FOAL is constructed of aluminum and has a solid flap to prevent the free flow of air into the under-floor space.

3.1.4 FAAL: The FAAL is constructed of aluminum and has a flap with $\frac{1}{4}$ inch (6 mm) diameter holes to allow for the ventilation of under-floor spaces.

3.1.5 ROAL: The ROAL is constructed of aluminum and has a solid flap to prevent the free flow of air into the under-floor space. It is intended for retrofit applications.

3.2 Engineered Opening:

The USA Flood Air Vents flood vents comply with the design principle noted in Section 2.7.2.2 of ASCE/SEI 24-14 (Section 2.6.2.2 of ASCE/SEI 24-05) 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, USA Flood Air Vents flood vents must be installed in accordance with Section 4.0.

3.3 Ventilation:

USA Flood Air Vents models FASS and FAAL have $\frac{1}{4}$ inch (6 mm) diameter holes in the flap to supply natural ventilation for under-floor ventilation. See Table 1 for the net free area provided for under-floor ventilation.

4.0 DESIGN AND INSTALLATION

USA Flood Air Vents flood vents are designed to be installed into walls or doors of existing or new construction. Installation of the flood vents must be in accordance with the manufacturer's instructions, the applicable code and this report. USA Flood Air Vents flood vents can be installed in wood, masonry and concrete walls. In order to comply with the engineered opening design principle noted in Section 2.7.2.2 of ASCE/SEI 24-14 (Section 2.6.2.2 of ASCE/SEI 24-05), the USA Flood Air Vents flood vents must be installed as follows:

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

5.0 CONDITIONS OF USE

The USA Flood Air Vents described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The USA Flood Air Vents flood vents 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 USA Flood Air Vents flood vents 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 August 2015.

7.0 IDENTIFICATION

The USA Flood Air Vents models recognized in this report are identified by a label bearing the manufacturer's name, the model designation, and the evaluation report number (ESR-3907).

TABLE 1—USA FLOOD AIR VENTS

MODEL DESIGNATION	VENT SIZE (Width x Height) (in)	ROUGH OPENING SIZE (Width x Height) (in)	ENCLOSED AREA COVERAGE (ft ²)	FLAP NET FREE AREA ¹ (in ²)
FOSS	18 x 10	15 1/2 x 7 1/2	252	None
FASS	18 x 10	15 1/2 x 7 1/2	252	28
FOAL	18 x 10	15 1/2 x 7 1/2	252	None
FAAL	18 x 10	15 1/2 x 7 1/2	252	3%
ROAL	16 1/8 x 10	13 1/8 x 7 1/2	224	None

For SI: 1 inch = 25.4 mm

¹Net free area in the vent flap for under-floor space ventilation.

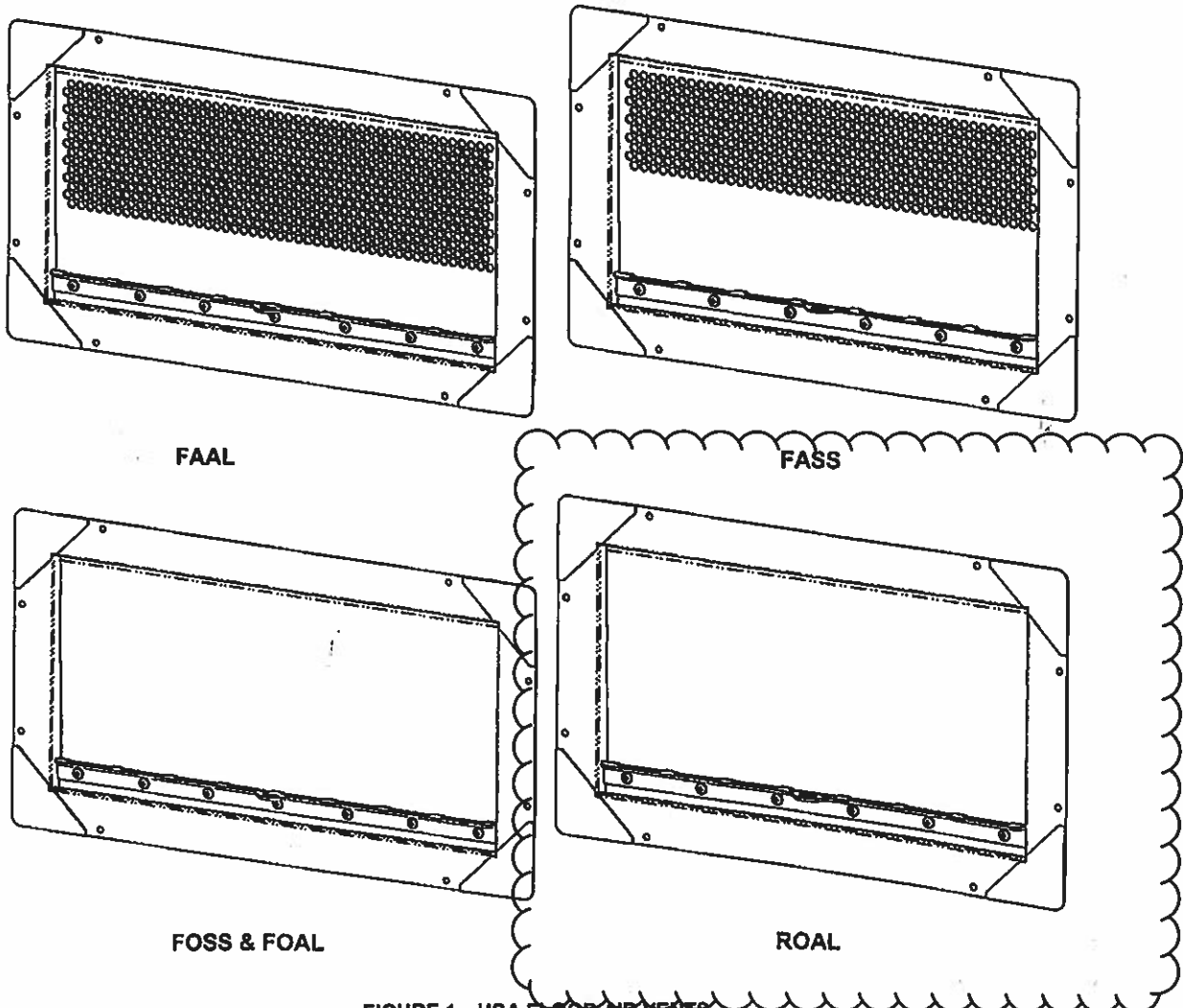


FIGURE 1—USA FLOOD AIR VENTS

ICC-ES Evaluation Report**ESR-3907 CBC and CRC Supplement**

Issued October 2016

*This report is subject to renewal October 2017.***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:****USA FLOOD AIR VENTS, LTD.
63 PUTNAM STREET, SUITE 202
SARATOGA SPRINGS, NEW YORK 12866
(631) 269-1872
www.usafloodairvents.com
info@usafloodairvents.com****EVALUATION SUBJECT:****USA FLOOD AIR VENTS: MODELS FOSS; FASS; FOAL; FAAL; ROAL****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that USA Flood Air Vents, recognized in ICC-ES master evaluation report ESR-3907, have also been evaluated for compliance with flood vent provisions of ASCE 24 referenced in CBC Chapters 16 and 16A and CRC Section R322; and ventilation provisions of CBC Section 1203.3 and CRC Section R408.2.

Applicable code editions:

- 2013 *California Building Code* (CBC)
- 2013 *California Residential Code* (CRC)

2.0 CONCLUSIONS**2.1 CBC:**

The USA Flood Air Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-3907, comply with flood vent provisions of ASCE 24 referenced in CBC Chapters 16 and 16A and ventilation provisions of CBC Section 1203.3, provided the applicable vents are designed and installed in accordance with the 2012 *International Building Code*® (IBC) provisions noted in the master report and the additional requirements of CBC Chapters 16 and 16A and CBC Section 1203.3, as applicable.

2.2 CRC:

The USA Flood Air Vents, described in Sections 2.0 through 7.0 of the master evaluation report ESR-3907, comply with flood vent provisions of ASCE 24 referenced in CRC Section R322; and ventilation provisions of CRC Section R408.2, provided the applicable vents are designed and installed in accordance with the 2012 *International Residential Code*® (IRC) provisions noted in the master report and the additional requirements of CRC Sections R408.2 and R322, as applicable.

This supplement expires concurrently with the master report, issued October 2016.

USA Foundation Flood Vents

RECOMMENDED INSTALLATION INSTRUCTIONS

STANDARD VENTS

1. Provide a clean, square and level rough opening of about 8" x 16" for each vent with the bottom of the opening no more than 12" above the outside finished grade.
2. Unhook the vent door by pushing lower section of door into the frame. Door will unhook once it is 90 degrees perpendicular to the frame.
3. Position the vent frame in the opening with the "V" channel at the bottom. Ensure that the frame is square and level. Apply a small bead of good quality masonry adhesive on the backside of the vent flange; clear adhesive (Lexel® or equivalent) is recommended for best results.
4. **Block wall/CMU installation:** Attach vent frame to block wall using concrete fasteners (not provided with the product). Holes are provided in the flange.
5. Reinstall the door by reversing the procedure in "Step 2". Be sure to reposition the pressure relief flap (rubber strip) on the bottom of the door in the frame channel.
6. For final inspection, check that the door is not binding in the frame. Test to see that it swings in a bidirectional manner.

RETROFIT VENTS

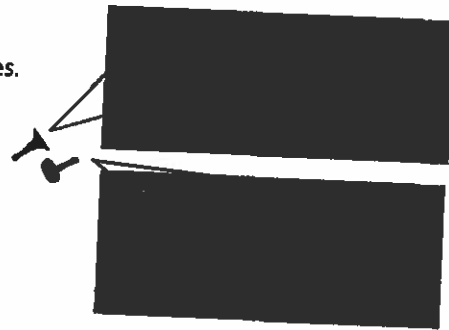
1. Provide a clean, square and level rough opening for each vent with the bottom of the opening no more than 12" above the outside finished grade. **Stud wall installation:** Vent will fit between 16" OC stud opening.
2. Unhook the vent door by pushing lower section of door into the frame. Door will unhook once it is 90 degrees perpendicular to the frame.
3. Position the vent frame in the opening with the "V" channel at the bottom of opening. Ensure that frame is square and level. Apply a small bead of good quality exterior adhesive on the backside of vent flange. The adhesive should hold the vent in place while you proceed to Step 4. **Clear adhesive (Lexel® or equivalent) is recommended for best results.**
4. Insert vent frame into rough opening and secure using stainless steel screws in the holes provided in the flange.
5. Reinstall the door by reversing the procedure in "Step 2". Be sure to reposition the pressure relief flap (rubber strip) on the bottom of the door in the frame channel.
6. For final inspection, check that the door is not binding in the frame. Test to see that it swings in a bidirectional manner.

NOTES

- **Operation:** Operation of vent is based on hydrostatic pressure (see *Certificate of Compliance*).
- **Hydrostatic Relief:** -Each *Standard* vent provides 252 sq. ft. of hydrostatic relief.
-Each *Retrofit* vent provides 224 sq. ft. of hydrostatic relief.
- **Requirements:** A minimum of two bi-directional vents are required for enclosed flood exposed area and should be installed on opposite or adjacent walls.
- Consult with your local code official for compliance.
- Use Lexel® synthetic rubber elastomeric sealant (or equivalent) for best results.

ACCESSORIES—Winter Covers

- **Before installing winter cover:** Insert two pegs (supplied) into grommet holes. Insert peg in hole on grommet head side (1/16" proud of cover) by firmly pushing until flush in grommet. Next, pull peg back 1/8" until it clicks into retracted position.
- Next align the winter cover to sit flush on the vent door face; the two grommets will snap into holes in the third row from the top of vent door.
- The cover must be centrally positioned and not proud of either side of the vent door.
- Press each peg to click flush to the grommet again and the winter cover will be locked in place.
- To remove the winter cover simply reverse the process.

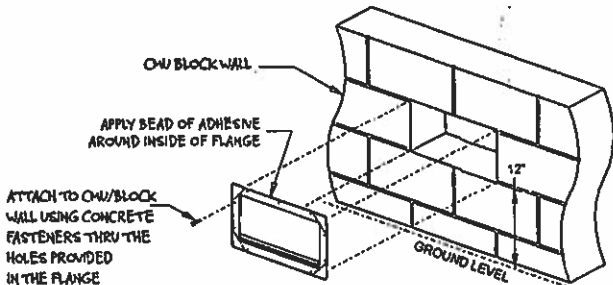
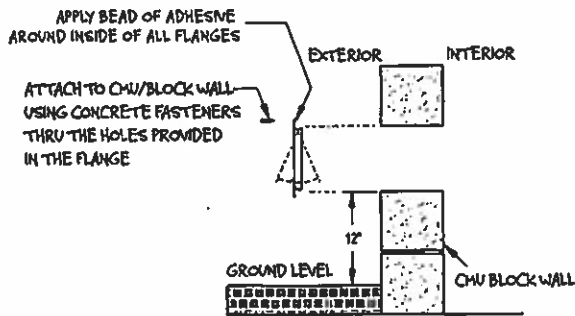
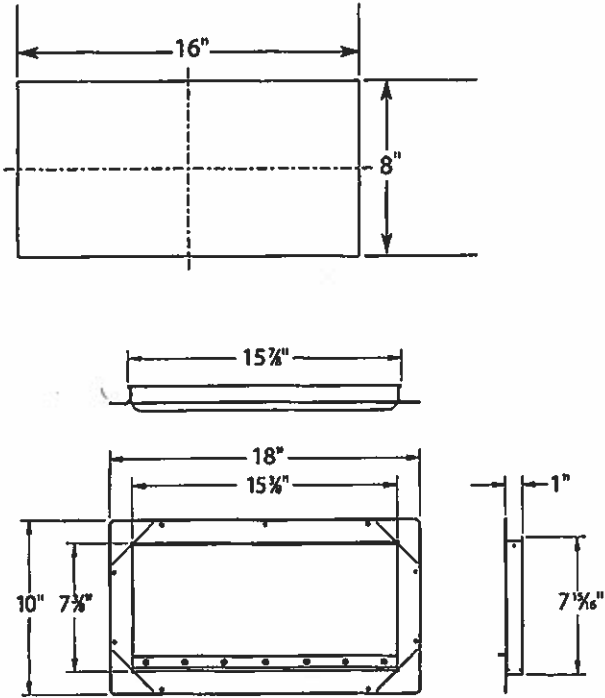


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INSTALLATION

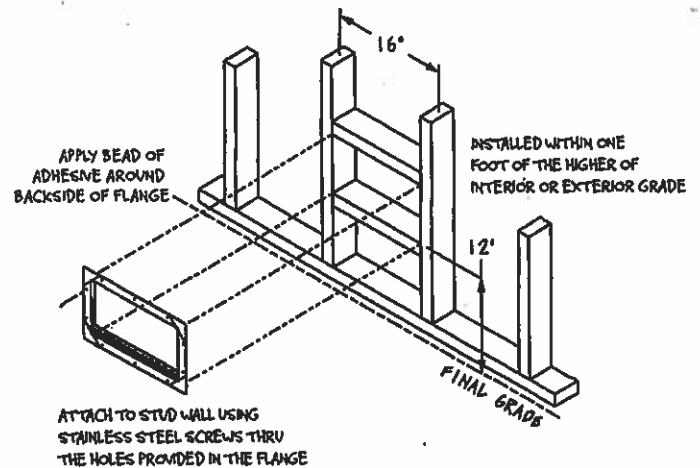
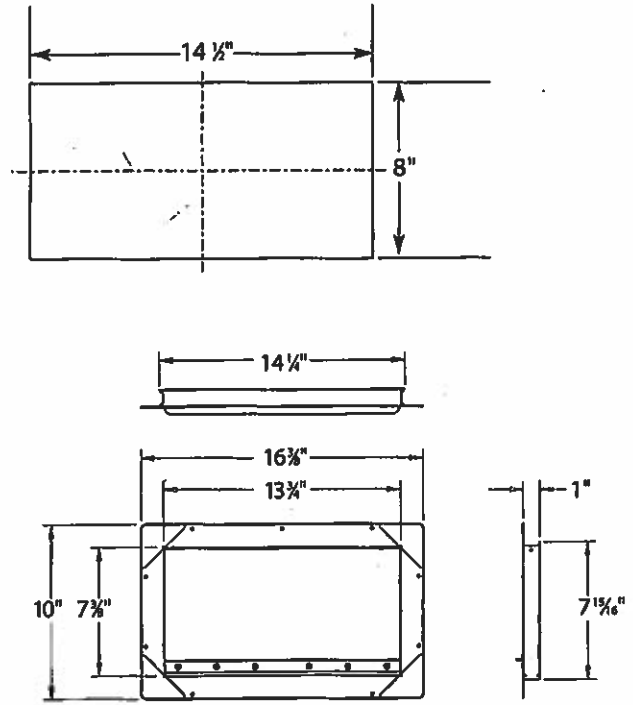
BLOCK WALL-STANDARD WALL

Rough Opening Diagram



STUD WALL-RETROFIT VENT

Rough Opening Diagram



AVAILABLE COLORS FOR POWDER COATING

-  Grey
-  White
-  Black

NOTE: Use Lexel® synthetic rubber elastomeric sealant (or equivalent) for best results.

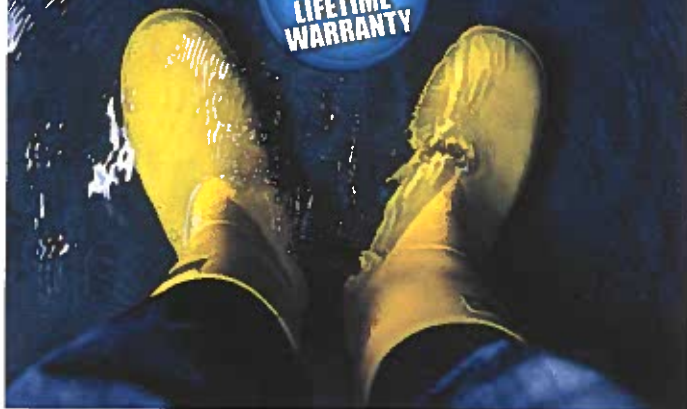
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USA Foundation Flood Vents

SPECIFICATIONS



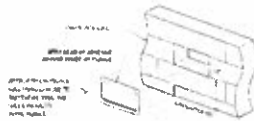
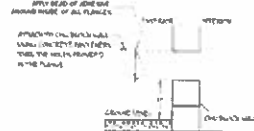
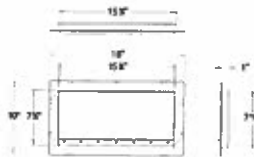
100% MADE IN THE USA LIFETIME WARRANTY



INSTALLATION

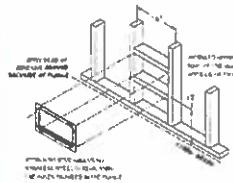
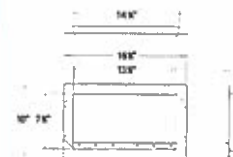
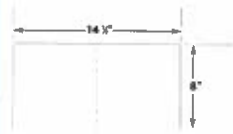
BLOCK WALL-STANDARD WALL

Rough Opening Diagram



STUD WALL-RETROFIT VENT

Rough Opening Diagram



NOTE: Use Lexel® synthetic rubber elastomeric sealant (or equivalent) for best results.

ACCESSORIES

WINTER COVERS

Designed to be used with our Flood & Air vents. For those cold winter months, our covers will keep the cold air out of your crawl space or foundation, and help prevent your pipes from freezing. Available in white, black and grey.



- Before installing winter cover: insert two pegs (supplied) into grommet holes. Insert peg in hole on grommet head side (1/16" proud of cover) by firmly pushing until flush in grommet. Next, pull peg back 1/8" until it clicks into retracted position.
- Next align the winter cover to sit flush on the vent door face; the two grommets will snap into holes in the third row from the top of vent door.
- The cover must be centrally positioned and not proud of either side of the vent door.
- Press each peg to click flush to the grommet again and the winter cover will be locked in place.
- To remove the winter cover simply reverse the process.









63 Putnam St., Suite 202
Saratoga Springs, NY 12866
800-USA-1993 (800-872-1993)
631-269-1872
www.usafloodairvents.com



USA Foundation Flood Vents Specifications



	STANDARD FLOOD		STANDARD FLOOD & AIR		RETROFIT	
	FOSS Flood Only Stainless Steel	FOAL (WHITE/BLACK/GREY) Flood Only Aluminum Powder Coated	FASS Flood & Air Stainless Steel	FAAL (WHITE/BLACK/GREY) Flood & Air Aluminum Powder Coated	ROSS Retrofit Flood Only Stainless Steel	ROAL (WHITE/BLACK/GREY) Retrofit Flood Only Aluminum
						
Marine grade material fabrication	18 Gauge (.048" thick) 316 stainless steel vent frame and door	.050" thick, 5052-H32 aluminum vent frame and door	18 Gauge (.048" thick) 316 stainless steel vent frame; 14 Gauge (.074" thick) 316 stainless steel vent door	.050" thick, 5052-H32 aluminum vent frame; .080" thick, 5052-H32 aluminum vent door	18 Gauge (.048" thick) 316 stainless steel vent frame and door	.050" thick, 5052-H32 aluminum vent frame; .080" thick, 5052-H32 aluminum vent door
Rough opening	8" x 16"				8 1/2" x 14 1/2"	
Outer frame	10" x 18"				10" x 16 1/2"	
Inner frame	7 1/4" x 15 1/4"				7 1/4" x 14 1/4"	
Installation	Ideal for poured and block walls; fits into an opening the size of a regular concrete block				For wood wall construction, fits into an opening for 16" on center stud walls. *Can be used in garage doors.	
Coverage per vent	252 sq. ft. minimum (enclosed area)					
Ventilation	N/A	N/A	USA Flood Air Vent model FASS has X inch diameter openings on the vent doors to provide 28 square inches of net free area	Aluminum perforated door provides 37 sq. inches of net free area	N/A	N/A
Other	N/A	Powder coating provides a smooth and professional long-lasting finish.	Perforated door provides air ventilation in a crawl space to increase air flow while providing flood protection.	Powder coating provides a smooth and professional long-lasting finish.	N/A	Powder coating provides a smooth and professional long-lasting finish.

- Operation of vent is based on hydrostatic pressure.
- Engineered openings are designed to provide the equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters.
- A minimum of two bi-directional vents are required for enclosed flood exposed area and should be installed on opposite or adjacent walls.
- Water/Air/Mold (WAM) protection.

DESIGNED TO MEET THE REQUIREMENTS FOR ENGINEERED OPENINGS AS SET FORTH BY FEMA, NFIP, ICC & ASCE

SUPPORTIVE DOCUMENTS TB 1-08, 44CFR 60.3(C)(5), ASCE 24-14, ICC-ES AC364

TESTING REPORTS (FOR ALL PRODUCTS) certified by Intertek/ATI (Architectural Testing Inc.) and ICC-ES to meet the testing requirements of the ICC-ES-AC364

CCRR-0239 (CODE COMPLIANCE RESEARCH REPORT): <http://tinyurl.com/hbxrgd>

ICC ESR 3907 (CODE COMPLIANCE RESEARCH REPORT): http://www.icc-es.org/Reports/pdf_files/ESR-3907.pdf

www.usafloodairvents.com

Manufacturer

Georgia-Pacific Gypsum
133 Peachtree Street
Atlanta, GA 30303

Georgia-Pacific Canada
2180 Meadowvale Boulevard, Suite 200
Mississauga, ON L5N 5S3

Technical Service Hotline: 1-800-225-6119

Description

DensGlass® Sheathing is a gypsum panel made of a treated, water-resistant core, surfaced with fiberglass mats and a GOLD colored primer coating. Providing superb protection from the elements, DensGlass Sheathing is resistant to delamination and deterioration due to weather exposure—even during construction delays that last as long as twelve months after installation and are backed by a limited warranty against delamination and deterioration for up to 12 months of exposure to normal weather conditions.* DensGlass Sheathing panels are also mold-resistant, and have scored a 10, the highest level of performance for mold resistance under ASTM D3273 test method.

DensGlass Sheathing exhibits a dimensional stability that assures resistance to warping, rippling, buckling and sagging for a flat and even substrate and is noncombustible as defined and tested in accordance with ASTM E136 or CAN/ULC S114. Since DensGlass Sheathing is strong in both directions, it may be installed either parallel or perpendicular to wall framing members (always follow specific assembly installation instructions).

Primary Uses

Because of the superior performance of DensGlass Sheathing, it is specified for exterior walls, ceilings and soffits in a wide variety of applications. These include exterior insulation and finish systems (EIFS); cavity brick or stone veneer applications; cladding such as wood siding, vinyl siding, composition siding, wood shingles, shakes, conventional stucco systems, plywood siding panels; and interior finish systems that require a substrate panel with superior fire and moisture resistance.

For EIFS applications, DensGlass Sheathing is an ideal substrate for adhesive or mechanical application of expanded polystyrene or extruded polystyrene insulation, and is recommended in all climate zones.

Manufacturers of water and air resistive barriers, which include attached flexible membranes, self-adhered membrane and liquid applied, have found DensGlass Sheathing to be a suitable substrate for their systems.

DensGlass Sheathing is an ideal product for exterior ceilings and soffits for both cold and warm climate zones. It resists sagging, even under exceptionally humid conditions. Panels are applied directly to structural framing. Surface and joints may be finished and painted, or surfaced with an exterior finish system.

Limitations

DensGlass Sheathing is resistant to normal weather conditions, but it is not intended for immersion in water. Cascading roof/floor water should be directed away from the sheathing until appropriate drainage is installed.

Avoid any condition that will create moisture in the air and condensation on DensGlass Sheathing. The use of forced air heaters creates volumes of water vapor which, when not properly vented, can condense on building materials. The use of these heaters and any resulting damage is not the responsibility of Georgia-Pacific Gypsum. Consult heater manufacturer for proper use and ventilation.

When DensGlass Sheathing panels are used in slanted wall applications, that portion of the wall must be temporarily protected from the elements. Do not allow water to pond or settle on sheathing. Also, exposed wall ends must be covered to prevent water from infiltrating the cavity.

Georgia-Pacific Gypsum does not warrant and is not responsible or liable for the performance of the cladding or exterior systems applied over DensGlass Sheathing. The suitability and compatibility of any system is the responsibility of the system manufacturer or design authority.

Do not laminate masonry surfaces to DensGlass Sheathing; use furring strips or framing.

DensGlass Sheathing is not intended for roof applications. For roof applications, consult our DensDeck® Roof Board brochure.

DensGlass Sheathing is not intended for interior or exterior tile applications. For interior tile applications, consult our DensShield® Tile Backer brochure.

DensGlass Sheathing should not be used in lieu of plywood where required.

Do not apply DensGlass Sheathing below grade.

For all installations, design details such as fasteners, sealants and control joints per system specifications must be properly installed. Openings and penetrations must be properly flashed and sealed. Failure to do so will void the warranty.

Do not use DensGlass Sheathing as a base for nailing or mechanical fastening. Fasteners should be flush to the face of the board, not countersunk.

Technical Data

DensGlass Sheathing is noncombustible as described and tested in accordance with ASTM E136 or CAN/ULC S114.

DensGlass Sheathing exceeds ASTM C1396 sheathing standards for humidified deflection by a factor of 10 in tests over the standard for regular gypsum sheathing.

5/8" (15.9 mm) DensGlass® Fireguard® Sheathing is UL and ULC classified **Type DGG**.

DensGlass Sheathing is manufactured to meet ASTM C1177.

Flame spread and smoke develop rating of 0/0 when tested in accordance with ASTM E84 or CAN/ULC S102.

Handling and Use—CAUTION

This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

Material Safety Data Sheet (MSDS) is available at www.buildgp.com/safetyinfo or call 1-404-652-5119.

Product Data

Thicknesses: 1/2" (12.7 mm); 5/8" (15.9 mm) is Type X (ASTM C1177)

Width: 4' (1220 mm) standard, tolerance up to ± 1/8" (3.2 mm)

Lengths: 8' (2438 mm), 9' (2743 mm) or 10' (3048 mm) standard

Edges: Square

* For complete warranty details, visit www.gpgypsum.com.

continued →

Submittal Approvals

Job Name _____

Contractor _____

Date _____

Physical Properties

Properties	1/2" (12.7 mm) DensGlass [®] Sheathing	5/8" (15.9 mm) DensGlass [®] Fireguard [®] Sheathing
Width, nominal	4' (1219 mm) ± 1/8" (3 mm)	4' (1219 mm) ± 1/8" (3 mm)
Length, standard	8' (2440 mm), 9' (2743 mm), 10' (3048 mm), ± 1/4" (6 mm)	8' (2440 mm), 9' (2743 mm), 10' (3048 mm), ± 1/4" (6 mm)
Weight, nominal, lbs./sq. ft. (Kg/m ²)	1.9 (9)	2.5 (12)
Edges	Square	Square
Bending radius ⁵	6' (1829 mm)	8' (2438 mm)
Racking strength ⁶ , lbs./ft. (dry) (N/m), Ultimate-not design value	>540 (7878)	>654 (9544)
Flexural strength ^{1,4} , parallel, lbf. (N), 4' weak direction	≥80 (356)	≥100 (445)
Compressive strength	min. 500 psi (3445 kPa)	min. 500 psi (3445 kPa)
Humidified deflection ^{1,4}	<2/8" (6 mm)	<1/8" (3 mm)
Permeance ² , perms (ng/Pa·s·m ²)	>23 (1300)	>17 (970)
R Value ³ , ft ² ·°F·hr/BTU (m ² ·K/W)	.56 (0.099)	.67 (0.118)
Combustibility ⁷	Noncombustible	Noncombustible
Linear expansion with moisture change, in/in %RH (mm/mm %RH) ⁸	6.25 x 10 ⁻⁶	6.25 x 10 ⁻⁶
Surface burning characteristics per ASTM E84 or CAN/ULC S102: flame spread/smoke developed	0/0	0/0
Coefficient of thermal expansion, in/in/°F (mm/mm/°C)	8.5 x 10 ⁻⁶ (15.3 x 10 ⁻⁶) ⁹	8.5 x 10 ⁻⁶ (15.3 x 10 ⁻⁶) ⁹

¹ Tested in accordance with ASTM C473

² Tested in accordance with ASTM E96 (dry cup method)

³ Tested in accordance with ASTM C518 (heat flow meter)

⁴ Specified values per ASTM C1177

⁵ Double fasteners on ends as needed

⁶ Tested in accordance with ASTM E72

⁷ As defined and tested in accordance with ASTM E136 or CAN/ULC S114

⁸ As stated by Gypsum Association GA 235

⁹ Tested in accordance with ASTM E228-85



U.S.A. Georgia-Pacific Gypsum LLC
 Georgia-Pacific Gypsum II LLC
 Canada Georgia-Pacific Canada LP

SALES INFORMATION AND ORDER PLACEMENT

U.S.A. West: 1-800-824-7503
 Midwest: 1-800-876-4746
 South Central: 1-800-231-6060
 Southeast: 1-800-327-2344
 Northeast: 1-800-947-4497

CANADA Canada Toll Free: 1-800-387-6823
 Quebec Toll Free: 1-800-361-0486

TECHNICAL INFORMATION

U.S.A. and Canada: 1-800-225-6119, www.gpgypsum.com

TRADEMARKS Unless otherwise noted, all trademarks are owned by or licensed to Georgia-Pacific Gypsum LLC.

WARRANTIES, REMEDIES AND TERMS OF SALE For current warranty information for this product, please go to www.gpgypsum.com and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at www.gpgypsum.com.

UPDATES AND CURRENT INFORMATION The information in this document may change without notice. Visit our website at www.gpgypsum.com for updates and current information.

CAUTION For product fire, safety and use information, go to www.buildgp.com/safetyinfo or call 1-800-225-6119.

FIRE SAFETY CAUTION Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.

Order USA12393



Date Ordered:
1/30/2017
Order Number:
USA12393

USA FloodAir Vents, LTD.
63 Putnam St.
Suite 202
Saratoga Springs, NY 12866

Billing Address

Ian Shuff
715 W. Mountain Ave
FORT COLLINS, CO 80521 - US
970-481-6201
ianshuff@hotmail.com

SHIPPING ADDRESS

Ian Shuff
715 W. Mountain Ave
FORT COLLINS, CO 80521 - US

Shipping Method:
UPS - Ground (15.00lbs.)
Payment Type:
Online Credit Card

ITEM ID	ITEMS	PRICE	QTY	TOTAL
ROAL - 858515005108	Retrofit Aluminum Powder Coated Vent CHOOSE COLOR: GREY	\$114.00	3	\$342.00
Subtotal:				\$342.00
Discount(s):				\$0.00
Taxes:				\$0.00
Shipping:				\$25.01
TOTAL:				367.01



Invoice: 38499

528 W 67th Street, Loveland, CO 80538
(970) 461-8307

Sold to
Ian Shuff

Ship to
715 West Mountain Ave

<u>Account</u> SHUF	<u>P.O. Num</u>	<u>Ship Via</u>	<u>Ship Date</u>	<u>Terms</u> Net 30	<u>Invoice Date</u> 4/21/17	<u>Page</u> 1
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<u>Item</u>	<u>Quantity</u>	<u>Description</u>	<u>Unit Price</u>	<u>Extended Price</u>
	1	Job # 38499		
		Base Price	4,600.00	4,600.00
	1	Dense gold	290.00	290.00

Subtotal 4,890.00

Total \$4,890.00