



Floodplain Use Permit- Case History

RECORD: P25FC00020

Building/Floodplain Use Permit

Case Name:NHF

Issue: Detached shed 16x32 (no utilities)

1/13/2025 Application Intake - Submitted: Created from RFCD Review ad-hoc

Case Reviewer:Ben Scholl

1/23/2025 Review - Note: Reassigned from SS to assist with workload.

Case Reviewer:Stefanie Matthews

1/23/2025 Review - Note: Property in proposed Zone A of most recent Brawley study. Confirmed with FR that we will regulate as Zone A - 1 ft regardless of Flo-2D showing areas of 0.5 ft. Existing structures are pre-mapping except most recent addition which was permitted under 17-135E.

Case Reviewer:Stefanie Matthews

1/23/2025 Review - Supervisor RFC Review Requested: Plans show incorrect orientation and footer depth. 4 flood vents are shown on opposite walls, but no dimensions given. RFC draft submitted for approval.

Case Reviewer:Stefanie Matthews

1/27/2025 Supervisor RFC Review - Approved: No Comments

Case Reviewer:Francisco Ramirez

1/27/2025 Review - Request for Corrections: RFC letter emailed to applicant and given to Admin to mail.

Case Reviewer:Stefanie Matthews

2/20/2025 Application Intake - Resubmit: Revised plans submitted by applicant. Site plan corrected to show NE-SW orientation, flood hazards, and flood vent dimensions (8"x16"). Foundation details now show 48" u/s, 18" d/s footer.

Case Reviewer:Stefanie Matthews



2/20/2025 Review - Supervisor Approval Review Requested: Completed FPUP submitted for approval.
Case Reviewer:Stefanie Matthews

2/20/2025 Supervisor Approval Review - Approved: Reviewed with FR - D1FC1 uploaded to BP.
Case Reviewer:Stefanie Matthews

2/20/2025 Issuance - Note: FPUP, el cert, and covs emailed to applicant.
Case Reviewer:Stefanie Matthews

3/4/2025 Issuance - Issued - Documents Required: Signed FPUP received by email. Awaiting specific covs and el cert.
Case Reviewer:Stefanie Matthews

5/20/2025 Documents - Documents Received: Covs returned. Awaiting el cert.
Case Reviewer:Stefanie Matthews

8/26/2025 Documents - Note: P2F el-cert received but date when pictures were taken is missing.
Emailed Tracy Bogardus for correction.
Case Reviewer:Irene Castillo

9/16/2025 Documents - Documents Approved: P2F - El-cert reviewed and approved. FFE = 0.0' above BFE. Structure is flood vented. IC 9/16/025
Case Reviewer:Irene Castillo

9/26/2025 Close Out - Complete: No Comments
Case Reviewer:Valerie Gonzales

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

OMB Control No. 1660-0008
Expiration Date: 06/30/2026

FPUP # P25FC00020

DSD # P25BP00227

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 1-11

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: <u>Edward Bounds & Jeffrey Dufford</u>	Policy Number: _____
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: <u>751 N Double T J Ranch Rd</u>	Company NAIC Number: _____
City: <u>Tucson</u> State: <u>Arizona</u> ZIP Code: <u>85743</u>	
A3. Property Description (e.g., Lot and Block Numbers or Legal Description) and/or Tax Parcel Number: Taxcode: <u>21117010A</u> Township <u>14S</u> Range <u>11E</u> Section <u>09</u>	
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.): <u>Accessory: Detached Shed</u>	
A5. Latitude/Longitude: Lat. <u>32.229920</u> Long. <u>-111.225700</u> Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> NAD 1983 <input type="checkbox"/> WGS 84	
A6. Attach at least two and when possible four clear photographs (one for each side) of the building (see Form pages 7 and 8). <small>Pima County Regional Flood Control District requires four (4) photographs</small>	
A7. Building Diagram Number: <u>1B</u>	
A8. For a building with a crawlspace or enclosure(s): a) Square footage of crawlspace or enclosure(s): <u>512</u> sq. ft. b) Is there at least one permanent flood opening on two different sides of each enclosed area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A c) Enter number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade: Non-engineered flood openings: <u>0</u> Engineered flood openings: <u>4</u> d) Total net open area of non-engineered flood openings in A8.c: <u>0</u> sq. in. e) Total rated area of engineered flood openings in A8.c (attach documentation – see Instructions): <u>800</u> sq. ft. f) Sum of A8.d and A8.e rated area (if applicable – see Instructions): <u>800</u> sq. ft.	
A9. For a building with an attached garage: a) Square footage of attached garage: <u>N/A</u> sq. ft. b) Is there at least one permanent flood opening on two different sides of the attached garage? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A c) Enter number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade: Non-engineered flood openings: <u>N/A</u> Engineered flood openings: <u>N/A</u> d) Total net open area of non-engineered flood openings in A9.c: <u>N/A</u> sq. in. e) Total rated area of engineered flood openings in A9.c (attach documentation – see Instructions): <u>N/A</u> sq. ft. f) Sum of A9.d and A9.e rated area (if applicable – see Instructions): <u>N/A</u> sq. ft.	
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION	
B1.a. NFIP Community Name: <u>Pima County</u> B1.b. NFIP Community Identification Number: <u>040073</u>	
B2. County Name: <u>Pima County</u> B3. State: <u>Arizona</u> B4. Map/Panel No.: <u>04019C 2250</u> B5. Suffix: <u>L</u>	
B6. FIRM Index Date: <u>09/28/2012</u> B7. FIRM Panel Effective/Revised Date: <u>6/16/2011</u>	
B8. Flood Zone(s): <u>X</u> B9. Base Flood Elevation(s) (BFE) (Zone AO, use Base Flood Depth): <u>101.0</u>	
B10. Indicate the source of the BFE data or Base Flood Depth entered in Item B9: <input type="checkbox"/> FIS <input type="checkbox"/> FIRM <input checked="" type="checkbox"/> Community Determined <input type="checkbox"/> Other: _____	
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input type="checkbox"/> NAVD 1988 <input checked="" type="checkbox"/> Other/Source: _____ Highest Adjacent Natural Grade (=100.0 ft)	
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: <u>N/A</u> <input type="checkbox"/> CBRS <input type="checkbox"/> OPA	
B13. Is the building located seaward of the Limit of Moderate Wave Action (LiMWA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 1-11

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: <u>754 N Double T J Ranch Rd</u>	FOR INSURANCE COMPANY USE
City: <u>Tucson</u> State: <u>Arizona</u> ZIP Code: <u>85743</u>	Policy Number: _____ 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, AO, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO, A99. Complete Items C2.a–h below according to the Building Diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: N/A Vertical Datum: LOCAL

PCRFC Note: When HANG is used as Datum, fill out "Vertical Datum" as "LOCAL"

Indicate elevation datum used for the elevations in items a) through h) below.

NGVD 1929 NAVD 1988 Other: HIGHEST ADJACENT NATURAL GRADE = 100.0'

Datum used for building elevations must be the same as that used for the BFE. Conversion factor used?

Yes No

If Yes, describe the source of the conversion factor in the Section D Comments area.

Check the measurement used:

- | | | |
|---|---------------|--|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor): | <u>101.00</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| b) Top of the next higher floor (see Instructions): | <u>N/A</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (see Instructions): | <u>N/A</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| d) Attached garage (top of slab): | <u>N/A</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| e) Lowest elevation of Machinery and Equipment (M&E) servicing the building (describe type of M&E and location in Section D Comments area): | <u>N/A</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| f) Lowest Adjacent Grade (LAG) next to building: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Finished | <u>99.95</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| PCRFC Note: Indicate lowest adjacent natural grade (LANG) in Section D. | | |
| g) Highest Adjacent Grade (HAG) next to building: <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Finished | <u>100.30</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| PCRFC Note: Indicate highest adjacent natural grade (HANG) in Section D. | | |
| h) Finished LAG at lowest elevation of attached deck or stairs, including structural support: | <u>N/A</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by state 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 and describe in the Comments area.

Certifier's Name: TRACY A BOGARDUS License Number: 34567

Title: PRESIDENT

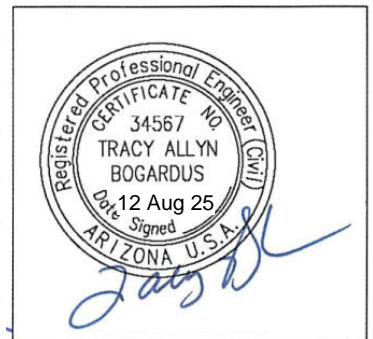
Company Name: BOGARDUS ENGINEERING, LLC

Address: 16618 N AVENIDA DE LA REATA

City: TUCSON State: AZ ZIP Code: 85739

Signature: [Signature] Date: 12 AUG 2025

Telephone: 520-572-6530 Ext.: _____ Email: tracy@bogardusengineering.com



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

Comments (including source of conversion factor in C2; type of equipment and location per C2.e; and description of any attachments):

The lowest service equipment (C2.e) is the N/A.

Highest adjacent natural grade is 100.30 Lowest adjacent natural grade is 99.95.

ELEVATION CERTIFICATE

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Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 754 N Double T J Ranch Rd	FOR INSURANCE COMPANY USE
City: Tucson State: Arizona ZIP Code: 85743	Policy Number: _____
	Company NAIC Number: _____

SECTION E – BUILDING MEASUREMENT INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO, ZONE AR/AO, AND ZONE A (WITHOUT BFE)

For Zones AO, AR/AO, and A (without BFE), complete Items E1–E5. For Items E1–E4, use natural grade, if available. If the Certificate is intended to support a Letter of Map Change request, complete Sections A, B, and C. Check the measurement used. In Puerto Rico only, enter meters.

Building measurements are based on: Construction Drawings* Building Under Construction* Finished Construction
*A new Elevation Certificate will be required when construction of the building is complete.

E1. Provide measurements (C.2.a in applicable Building Diagram) for the following and check the appropriate boxes to show whether the measurement is above or below the natural HAG and the 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 (C2.b in applicable Building Diagram) 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 AUTHORIZED REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without BFE) or Zone AO must sign here. The statements in Sections A, B, and E are correct to the best of my knowledge

Check here if attachments and describe in the Comments area.

Property Owner or Owner's Authorized Representative Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Signature: _____ Date: _____

Telephone: _____ Ext.: _____ Email: _____

Comments: _____

ELEVATION CERTIFICATE

IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 1-11

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: <u>754 N Double T J Ranch Rd</u>	FOR INSURANCE COMPANY USE
City: <u>Tucson</u> State: <u>Arizona</u> ZIP Code: <u>85743</u>	Policy Number: _____ Company NAIC Number: _____

SECTION G – COMMUNITY INFORMATION (RECOMMENDED FOR COMMUNITY OFFICIAL COMPLETION)

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Section A, B, C, E, G, or H of this Elevation Certificate. Complete the applicable item(s) and sign below when:

- 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 state law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2.a. A local official completed Section E for a building located in Zone A (without a BFE), Zone AO, or Zone AR/AO, or when item E5 is completed for a building located in Zone AO.
- G2.b. A local official completed Section H for insurance purposes.
- G3. In the Comments area of Section G, the local official describes specific corrections to the information in Sections A, B, E and H.
- G4. The following information (Items G5–G11) is provided for community floodplain management purposes.
- G5. Permit Number: P25FC00020 G6. Date Permit Issued: _____
- G7. Date Certificate of Compliance/Occupancy Issued: _____
- G8. This permit has been issued for: New Construction Substantial Improvement
- G9.a. Elevation of as-built lowest floor (including basement) of the building: _____ feet meters Datum: _____
- G9.b. Elevation of bottom of as-built lowest horizontal structural member: _____ feet meters Datum: _____
- G10.a. BFE (or depth in Zone AO) of flooding at the building site: 101.0 feet meters Datum: HANG
- G10.b. Community's minimum elevation (or depth in Zone AO) requirement for the lowest floor or lowest horizontal structural member: 102.0 feet meters Datum: HANG
- G11. Variance issued? Yes No If yes, attach documentation and describe in the Comments area.

The local official who provides information in Section G must sign here. *I have completed the information in Section G and certify that it is correct to the best of my knowledge. If applicable, I have also provided specific corrections in the Comments area of this section.*

Local Official's Name: Stefanie Matthews Title: Hydrologist

NFIP Community Name: Pima County

Telephone: 520-724-4600 Ext.: _____ Email: _____

Address: 201 N Stone Ave 9th Fl

City: Tucson State: AZ ZIP Code: 85701

Signature: Stefanie Matthews Date: 2/20/2025

Comments (including type of equipment and location, per C2.e; description of any attachments; and corrections to specific information in Sections A, B, D, E, or H):

ELEVATION CERTIFICATE

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Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: 754 N Double T J Ranch Rd	FOR INSURANCE COMPANY USE
City: Tucson State: Arizona ZIP Code: 85743	Policy Number: _____ Company NAIC Number: _____

SECTION H – BUILDING'S FIRST FLOOR HEIGHT INFORMATION FOR ALL ZONES (SURVEY NOT REQUIRED) (FOR INSURANCE PURPOSES ONLY)

The property owner, owner's authorized representative, or local floodplain management official may complete Section H for all flood zones to determine the building's first floor height for insurance purposes. Sections A, B, and I must also be completed. Enter heights to the nearest tenth of a foot (nearest tenth of a meter in Puerto Rico). **Reference the Foundation Type Diagrams (at the end of Section H Instructions) and the appropriate Building Diagrams (at the end of Section I Instructions) to complete this section.**

H1. Provide the height of the top of the floor (as indicated in Foundation Type Diagrams) above the Lowest Adjacent Grade (LAG):

a) For Building Diagrams 1A, 1B, 3, and 5–8. Top of bottom _____ feet meters above the LAG floor (include above-grade floors only for buildings with subgrade crawlspaces or enclosure floors) is:

b) For Building Diagrams 2A, 2B, 4, and 6–9. Top of next higher floor (i.e., the floor above basement, crawlspace, or enclosure floor) is: _____ feet meters above the LAG

H2. Is all Machinery and Equipment servicing the building (as listed in Item H2 instructions) elevated to or above the floor indicated by the H2 arrow (shown in the Foundation Type Diagrams at end of Section H instructions) for the appropriate Building Diagram?

Yes No

SECTION I – PROPERTY OWNER (OR OWNER'S AUTHORIZED REPRESENTATIVE) CERTIFICATION

The property owner or owner's authorized representative who completes Sections A, B, and H must sign here. *The statements in Sections A, B, and H are correct to the best of my knowledge.* **Note:** If the local floodplain management official completed Section H, they should indicate in Item G2.b and sign Section G.

Check here if attachments are provided (including required photos) and describe each attachment in the Comments area.

Property Owner or Owner's Authorized Representative Name: _____

Address: _____

City: _____ State: _____ ZIP Code: _____

Signature: _____ Date: _____

Telephone: _____ Ext.: _____ Email: _____

Comments:

ELEVATION CERTIFICATE
IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 1-11
BUILDING PHOTOGRAPHS
See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: <u>754 N Double T J Ranch Rd</u>	FOR INSURANCE COMPANY USE
City: <u>Tucson</u> State: <u>Arizona</u> ZIP Code: <u>85743</u>	Policy Number: _____
	Company NAIC Number: _____

Instructions: Insert below at least two and when possible four photographs showing each side of the building (for example, may only be able to take front and back pictures of townhouses/rowhouses). Identify all photographs with the date taken and "Front View," "Rear View," "Right Side View," or "Left Side View." Photographs must show the foundation. When flood openings are present, include at least one close-up photograph of representative flood openings or vents, as indicated in Sections A8 and A9.



Photo One

Photo One Caption: FRONT VIEW	<input type="button" value="Clear Photo One"/>
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Photo Two

Photo Two Caption: RIGHT SIDE VIEW	
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ELEVATION CERTIFICATE
IMPORTANT: MUST FOLLOW THE INSTRUCTIONS ON PAGES 1-11
BUILDING PHOTOGRAPHS

Continuation Page

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.: <u>754 N Double T J Ranch Rd</u>	FOR INSURANCE COMPANY USE
City: <u>Tucson</u> State: <u>Arizona</u> ZIP Code: <u>85743</u>	Policy Number: _____ Company NAIC Number: _____

Insert the third and fourth photographs below. Identify all photographs with the date taken and "Front View," "Rear View," "Right Side View," or "Left Side View." When flood openings are present, include at least one close-up photograph of representative flood openings or vents, as indicated in Sections A8 and A9.

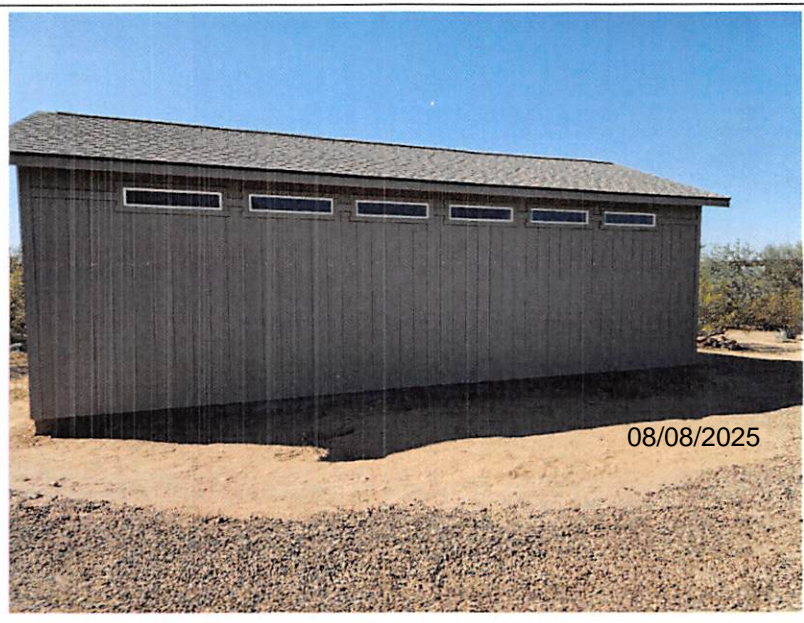


Photo Three

Photo Three Caption: REAR VIEW



Photo Four

Photo Four Caption: LEFT SIDE VIEW



Most Widely Accepted and Trusted

ICC-ES Evaluation Report

ESR-2074

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

Reissued 02/2025
This report is subject to renewal 02/2027.

DIVISION: 08 00 00—OPENINGS

SECTION: 08 95 43—VENTS/FOUNDATION FLOOD VENTS

REPORT HOLDER:

SMART VENT PRODUCTS, INC.

EVALUATION SUBJECT:

**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520,
#1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514
FLOOD VENT SEALING KIT #1540-526**



"2014 Recipient of Prestigious Western States Seismic Policy Council (WSSPC) Award in Excellence"



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ICC-ES Evaluation Report

ESR-2074

Reissued February 2025

This report also contains:


- CA Supplement

Subject to renewal February 2027

- FL Supplement

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<p>DIVISION: 08 00 00— OPENINGS</p> <p>Section: 08 95 43— Vents/Foundation Flood Vents</p>	<p>REPORT HOLDER:</p> <p>SMART VENT PRODUCTS, INC.</p>	<p>EVALUATION SUBJECT:</p> <p>SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540- 520; #1540-521; #1540- 510; #1540-511; #1540- 570; #1540-574; #1540- 524; #1540-514</p> <p>FLOOD VENT SEALING KIT #1540-526</p>	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021, 2018, 2015, 2012, 2009 and 2006 [International Building Code® \(IBC\)](#)
- 2024, 2021, 2018, 2015, 2012, 2009 and 2006 [International Residential Code® \(IRC\)](#)
- 2024, 2021 and 2018 [International Energy Conservation Code® \(IECC\)](#)
- 2013 *Abu Dhabi International Building Code (ADIBC)*[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Physical operation
- Water flow

2.0 USES

The Smart Vent® units are engineered mechanically operated flood vents (FVs) employed to equalize hydrostatic pressure on walls of enclosures subject to rising or falling flood waters. Certain models also allow natural ventilation.

3.0 DESCRIPTION

3.1 General:

When subjected to rising water, the Smart Vent® FVs internal floats are activated, then pivot open to allow flow in either direction to equalize water level and hydrostatic pressure from one side of the foundation to the other. The FV pivoting door is normally held in the closed position by a buoyant release device. When subjected to rising water, the buoyant release device causes the unit to unlatch, allowing the door to rotate out of the way and allow flow. The water level stabilizes, equalizing the lateral forces. Each unit is fabricated from stainless steel. Smart Vent® Automatic Foundation Flood Vents are available in various models and sizes as described in [Table 1](#). The SmartVENT® Stacking Model #1540-511 and FloodVENT® Stacking Model #1540-521 units each contain two vertically arranged openings per unit.

3.2 Engineered Opening:

The FVs comply with the design principle noted in Section 2.7.2.2 and Section 2.7.3 of ASCE/SEI 24-14 [Section 2.6.2.2 of ASCE/SEI 24-05 (2012, 2009, 2006 IBC and IRC)] for a maximum rate of rise and fall of 5.0 feet per hour (0.423 mm/s). In order to comply with the engineered opening requirement of ASCE/SEI 24, Smart Vent FVs must be installed in accordance with Section 4.0.

3.3 Ventilation:

The SmartVENT® Model #1540-510 and SmartVENT® Overhead Door Model #1540-514 both have screen covers with 1/4-inch-by-1/4-inch (6.35 by 6.35 mm) openings, yielding 51 square inches (32 903 mm²) of net free area to supply natural ventilation. The SmartVENT® Stacking Model #1540-511 consists of two Model #1540-510 units in one assembly, and provides 102 square inches (65 806 mm²) of net free area to supply natural ventilation. Other FVs described in this report do not offer natural ventilation.

3.4 Flood Vent Sealing Kit:

The Flood Vent Sealing Kit Model #1540-526 is used with SmartVENT® Model #1540-520. It is a Homasote 440 Sound Barrier® (ESR-1374) insert with 21 – 2-inch-by-2-inch (51 mm x 51 mm) squares cut in it. See [Figure 4](#).

4.0 DESIGN AND INSTALLATION

4.1 SmartVENT® and FloodVENT®:

SmartVENT® and FloodVENT® are designed to be installed into walls or overhead 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. Installation clips allow mounting in masonry and concrete walls of any thickness. In order to comply with the engineered opening design principle noted in Section 2.7.2.2 and 2.7.3 of ASCE/SEI 24-14 [Section 2.6.2.2 of ASCE/SEI 24-05 (2012, 2009, 2006 IBC and IRC)], the Smart Vent® FVs must be installed as follows:

- With a minimum of two openings on different sides of each enclosed area.
- With a minimum of one FV for every 200 square feet (18.6 m²) of enclosed area, except that the SmartVENT® Stacking Model #1540-511 and FloodVENT® Stacking Model #1540-521 must be installed with a minimum of one FV for every 400 square feet (37.2 m²) of enclosed area.
- Below the base flood elevation.
- With the bottom of the FV located a maximum of 12 inches (305.4 mm) above the higher of the final grade or floor and finished exterior grade immediately under each opening.

4.2 Flood Vent Sealing Kit

The Flood Vent Sealing Kit Model 1540-526 is used in conjunction with FloodVENT® Model #1540-520. When installed and tested in accordance with ASTM E283, the FV and Flood Vent Sealing Kit assembly have an air leakage rate of less than 0.2 cubic feet per minute per lineal foot (18.56 l/min per lineal meter) at a pressure differential of 1 pound per square foot (50 Pa) based on 12.58 lineal feet (3.8 lineal meters) contained by the Flood Vent Sealing Kit.

5.0 CONDITIONS OF USE:

The Smart Vent® FVs 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 Smart Vent® 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 Smart Vent® FVs 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.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the [ICC-ES Acceptance Criteria for Mechanically Operated Flood Vents \(AC364\)](#), dated August 2015 (editorially revised February 2024).
- 6.2 Test report on air infiltration in accordance with ASTM E283.

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-2074) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 The Smart VENT® models and the Flood Vent Sealing Kit described in this report must be identified by a label bearing the manufacturer's name (Smartvent Products, Inc.), the model number, and the evaluation report number (ESR-2074).
- 7.3 The report holder's contact information is the following:

SMART VENT PRODUCTS, INC.
19 MANTUA ROAD
MOUNT ROYAL, NEW JERSEY 08061
(877) 441-8368
www.smartvent.com
info@smartvent.com

TABLE 1—MODEL SIZES

MODEL NAME	MODEL NUMBER	MODEL SIZE (in.)	COVERAGE ¹ (ft ²)
FloodVENT [®]	1540-520	15 ³ / ₄ " X 7 ³ / ₄ "	200
SmartVENT [®]	1540-510	15 ³ / ₄ " X 7 ³ / ₄ "	200
FloodVENT [®] Overhead Door	1540-524	15 ³ / ₄ " X 7 ³ / ₄ "	200
SmartVENT [®] Overhead Door	1540-514	15 ³ / ₄ " X 7 ³ / ₄ "	200
Wood Wall FloodVENT [®]	1540-570	14" X 8 ³ / ₄ "	200
Wood Wall FloodVENT [®] Overhead Door	1540-574	14" X 8 ³ / ₄ "	200
SmartVENT [®] Stacker	1540-511	16" X 16"	400
FloodVent [®] Stacker	1540-521	16" X 16"	400

For SI: 1 inch = 25.4 mm; 1 square foot = m²

¹The coverage area in square feet for each model is equivalent to the performance of the same number of square inches of non-engineered openings.

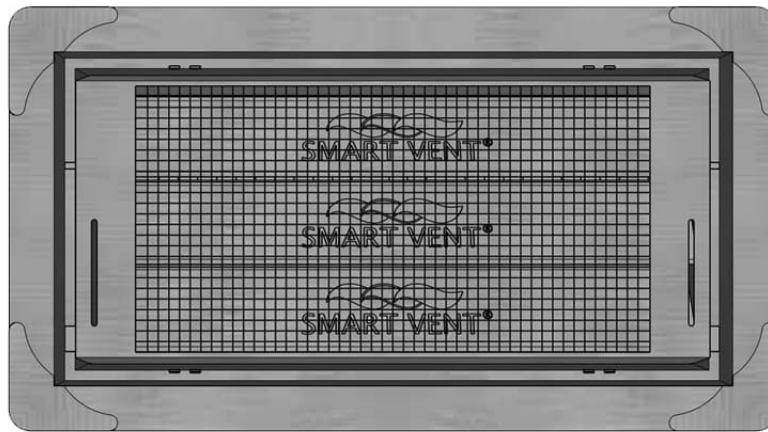


FIGURE 1—SMART VENT: MODEL 1540-510

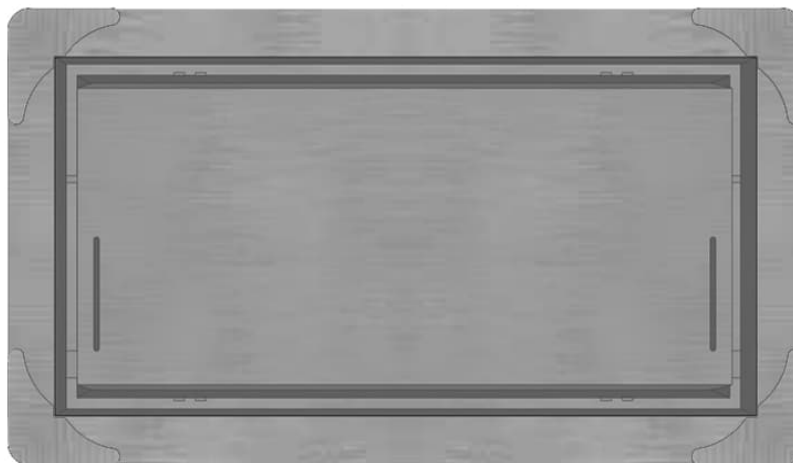


FIGURE 2—SMART VENT MODEL 1540-520



FIGURE 3—SMART VENT: SHOWN WITH FLOOD DOOR PIVOTED OPEN

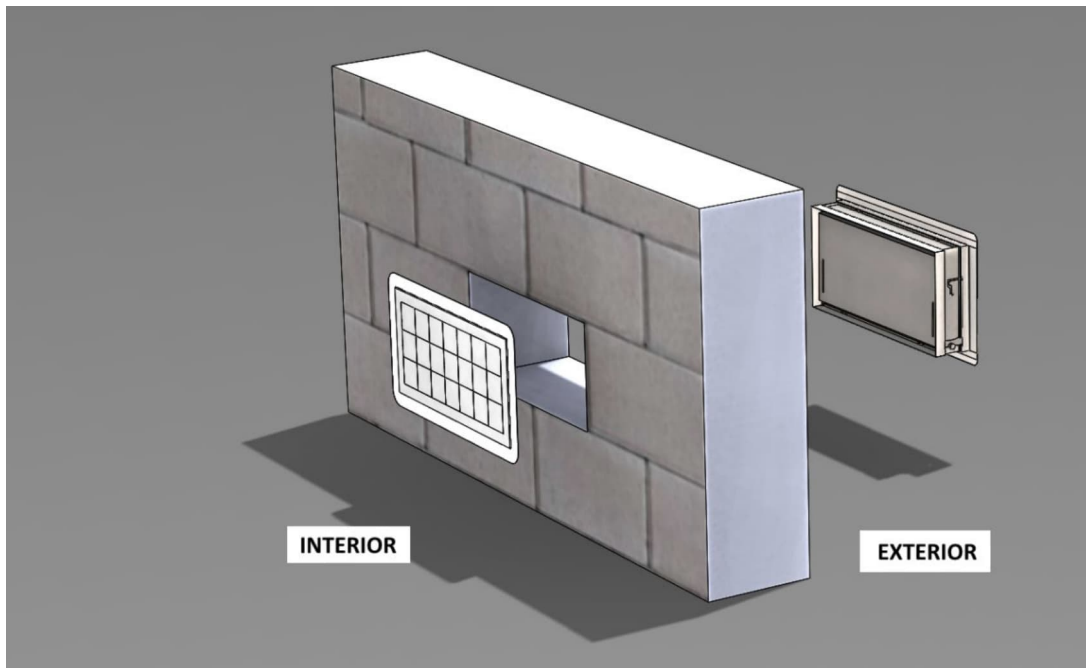


FIGURE 4—FLOOD VENT SEALING KIT

DIVISION: 08 00 00—OPENINGS

Section: 08 95 43—Vents/Foundation Flood Vents

REPORT HOLDER:

SMART VENT PRODUCTS, INC.

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511;
#1540-570; #1540-574; #1540-524; #1540-514
FLOOD VENT SEALING KIT #1540-526

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent® Automatic Foundation Flood Vents, described in ICC-ES evaluation report ESR-2074, have also been evaluated for compliance with codes noted below.

Applicable code editions:

- 2022 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.

- 2022 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Smart Vent® Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the evaluation report ESR-2074, comply with CBC Chapter 12, provided the design and installation are in accordance with the 2021 *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 and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

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

2.2 CRC:

The Smart Vent® Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the evaluation report ESR-2074, comply with the CRC, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued February 2025.

DIVISION: 08 00 00—OPENINGS

Section: 08 95 43—Vents/Foundation Flood Vents

REPORT HOLDER:

SMART VENT PRODUCTS, INC.

EVALUATION SUBJECT:

**SMART VENT® AUTOMATIC FOUNDATION FLOOD VENTS: MODELS #1540-520; #1540-521; #1540-510; #1540-511; #1540-570; #1540-574; #1540-524; #1540-514
FLOOD VENT SEALING KIT #1540-526**

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Smart Vent® Automatic Foundation Flood Vents, described in ICC-ES evaluation report ESR-2074, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2023 *Florida Building Code—Building*
- 2023 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The Smart Vent® Automatic Foundation Flood Vents, described in Sections 2.0 through 7.0 of the evaluation report ESR-2074, comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, provided the design requirements must be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-2074 for 2021 *International Building Code*® meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable.

Use of the Smart Vent® Automatic Foundation Flood Vents has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *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 February 2025.