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February 1, 2010

TO: PARTIES INTERESTED IN ATTIC VENTS

SUBJECT: Proposed Revisions to the Acceptance Criteria for Attic Vents, Subject AC132-0210-R1 (BB/WM)

Dear Madam or Sir:

The revisions proposed to the subject acceptance criteria, as presented in the enclosed criteria draft, are being posted on the ICC-ES web site to allow for public comment.

The revisions include adding provisions specific to the 2009 *International Building Code*[®] and the 2009 *International Residential Code*[®] to allow reports to be written to those editions of the codes. Additionally, ASTM D 256-06a was replaced with ASTM D 638-08 as the standard used to establish a baseline and verify the material characteristics for plastics, because Test Method B of ASTM D 256, currently referenced in AC132, is no longer a part of the ASTM standard.

You are cordially invited to submit written comments, within 30 days of the date of this letter. Please use the comment form on the web site attaching any letters to the form. An explanation of the alternate criteria process can be found on our web site at http://www.icc-es.org/Criteria_Development/alternative_criteria_process.shtml.

All comments received in the 30-day comment period will be considered. During this same 30-day period, however, the draft criteria will be balloted to the Evaluation Committee. If the public comments raise major issues, generate controversy, or require the criteria to be substantially rewritten, then ICC-ES staff may decide to rebalot the criteria; or place a revised draft on the web site for further public comment; or put the criteria on the agenda for a future Evaluation Committee meeting.

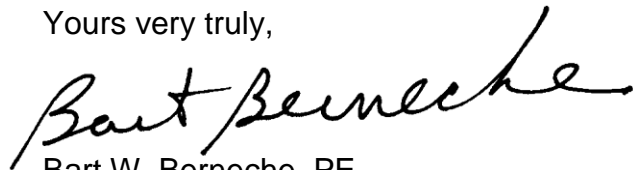
Correspondence received and a memo outlining staff's resolution of the comments in the correspondence will be posted on the web site shortly after the close of the comment period.

Your cooperation is requested in forwarding to the Los Angeles business/regional office all material directed to the Evaluation Committee. Parties interested in the deliberations of the committee should refrain from communicating, whether in writing or verbally, with committee members. The committee reserves the right to refuse communications that do not comply with this request.

Newly approved acceptance criteria may involve test methods or test protocols that are not currently included in the scope of testing services offered by accredited testing laboratories. As noted in the ICC-ES Rules of Procedure for Evaluation Reports, the scope of the laboratory's accreditation must include the type of testing that is to be reported to ICC-ES. We encourage accredited laboratories to expand their scopes of accreditation to include testing under newly approved acceptance criteria. Please note that testing laboratories must be accredited by the International Accreditation Service (IAS) or by another accreditation body that is a signatory to the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement. For further information, please contact IAS at (562) 699-0541, extension 3309, or send an e-mail to pmccullen@iasonline.org.

Please submit all comments using the form on the web site. Attach any letters to the comment form. If you have any questions (not comments), please contact the undersigned at (800) 423-6587, extension 5593, or Woods McRoy, Senior Staff Engineer, at extension 5686. You may also reach us by e-mail at es@icc-es.org.

Yours very truly,



Bart W. Berneche, PE
Staff Engineer

BWB/raf

Enclosure

cc: Evaluation Committee

PROPOSED REVISIONS TO THE ACCEPTANCE CRITERIA FOR ATTIC VENTS

AC132

Proposed February 2010

Previously approved June 2009, December 2008, January 2001,
January 1999, January 1998

PREFACE

Evaluation reports issued by ICC Evaluation Service, Inc. (ICC-ES), are based upon performance features of the International family of codes and other widely adopted code families, including the Uniform Codes, the BOCA National Codes, and the SBCCI Standard Codes. Section 104.11 of the *International Building Code*® reads as follows:

The provisions of this code are not intended to prevent the installation of any materials or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

Similar provisions are contained in the Uniform Codes, the National Codes, and the Standard Codes.

ICC-ES may consider alternate criteria, provided the report applicant submits valid data demonstrating that the alternate criteria are at least equivalent to the criteria proposed in this document, and otherwise meet the applicable performance requirements of the codes. Notwithstanding that a product, material, or type or method of construction meets the requirements of the criteria proposed in this document, or that it can be demonstrated that valid alternate criteria are equivalent to the criteria in this document and otherwise meet the applicable performance requirements of the codes, ICC-ES retains the right to refuse to issue or renew an evaluation report, if the product, material, or type or method of construction is such that either unusual care with its installation or use must be exercised for satisfactory performance, or malfunctioning is apt to cause unreasonable property damage or personal injury or sickness relative to the benefits to be achieved by the use of the product, material, or type or method of construction.

Acceptance criteria are developed for use solely by ICC-ES for purposes of issuing ICC-ES evaluation reports.

PROPOSED REVISIONS TO THE ACCEPTANCE CRITERIA FOR ATTIC VENTS

1.0 INTRODUCTION

1.1 Purpose: The purpose of this acceptance criteria is to establish the basis for recognition of static ventilating attic vents in ICC-ES evaluation reports under Sections 1203.2 and 1203.2.1 of the 2009 International Building Code[®] (2009 IBC) and 2006 International Building Code[®] (2006 IBC), Section R806 of the 2009 International Residential Code[®] (2009 IRC) and 2006 International Residential Code[®] (2006 IRC) and Section 1505.3 of the 1997 Uniform Building Code[™] (UBC).

The reason for this acceptance criteria is to provide requirements for determining compliance with the codes since the codes do not address static ventilating attic vents.

1.2 Scope: The acceptance criteria includes vents in attics and enclosed rafter spaces that rely on natural air circulation to function. Ventilating devices that require energy to operate, such as turbine vents or motor-driven fans, are not addressed.

1.3 Codes and Referenced Standards:

1.3.1 2009 International Building Code[®] (2009 IBC), International Code Council.

1.3.2 2009 International Residential Code[®] (2009 IRC), International Code Council.

1.3.3 ~~1.3.1~~ 2006 International Building Code[®] (2006 IBC), International Code Council.

1.3.4 ~~1.3.2~~ 2006 International Residential Code[®] (2006 IRC), International Code Council.

1.3.5 ~~1.3.3~~ 1997 Uniform Building Code[™] (UBC).

1.3.6 ~~1.3.4~~ ICC-ES Acceptance Criteria for Special Roofing Systems (AC07).

~~1.3.5~~ ASTM D 256-06a, Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics, ASTM International.

1.3.7 ~~1.3.6~~ ASTM D 635-0306, Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position, ASTM International.

1.3.8 ASTM D 638-08, Standard Test Method for Tensile Properties of Plastics, ASTM International.

1.3.9 ~~1.3.7~~ ASTM D 1435-05, Standard Practice for Outdoor Weathering of Plastics, ASTM International.

1.3.10 ~~1.3.8~~ ASTM D 1499-05, Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Plastics, ASTM International.

1.3.11 ~~1.3.9~~ ASTM D 1929 - 96 (2001)^{e1}, Test Method for Determining Ignition Properties of Plastics, ASTM International.

1.3.12 ~~1.3.10~~ ASTM D 2565-99 (2008), Standard Practice for Xenon Arc Exposure of Plastics Intended for Outdoor Applications, ASTM International.

1.3.13 ~~1.3.11~~ ASTM D 4329-05, Standard Practice for (Fluorescent UV Exposure of Plastics, ASTM International.

1.3.14 ~~1.3.12~~ ASTM D 4364-05, Standard Practice for Performing Accelerated Outdoor Weathering Tests of Plastics Using Concentrated Sunlight, ASTM International.

1.3.15 ~~1.3.13~~ ISO 12103.1 (1997), Road Vehicles—Test Duct for Filter Evaluation - Part 1: Arizona Test Dust.

1.3.16 ~~1.3.14~~ ASHRAE 51-1999/AMCA 210-1999, Laboratory Methods of Testing Fans for Aerodynamic Performance Rating, American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.

1.3.17 ~~1.3.15~~ Testing Application Standard (TAS) 100(A)-95.1, Test Procedure for Wind and Wind-Driven Rain Resistance and/or Increased Windspeed Resistance of Soffit Ventilation Strip and Continuous or Intermittent Ventilation System Installed at the Ridge Area, Florida Building Code 2007: Test Protocols for High Velocity Hurricane Zones.

1.3.18 ~~1.3.16~~ Static Product Measurement Procedure, HVI 922, dated June 1992, published by the Home Ventilating Institute[®] Division of AMCA, 1000 North Rand Road, Suite 214, Wauconda, Illinois 60084.

1.4 DEFINITIONS

1.4.1 Mesh: A corrosion-resistant wire mesh of a thickness consistent with standard wire gage, with openings $\frac{1}{4}$ inch (6.46.35 mm) in dimension. The purpose of the mesh is to prevent entry of vermin into the attic.

1.4.2 Vents Incorporating an Opening Cover Other Than Mesh:

1.4.2.1 2009 IBC and 2009 IRC: Attic vents in which the air flow must pass through an opening that has an unobstructed opening size of less than $\frac{1}{4}$ inch (6.35 mm) and no less than $\frac{1}{16}$ inch (1.59 mm) in one dimension, such as wire gage mesh with openings less than $\frac{1}{4}$ inch (6.35 mm) square and plastic tube-type vents. These vents may also incorporate filters.

1.4.2.2 2006 IBC and 2006 IRC: Attic vents in which the air flow must pass through an opening that has an unobstructed opening-size less than $\frac{1}{4}$ inch (6.46.35 mm) and no less than $\frac{1}{8}$ inch (3.2 mm) in one dimension, such as wire gage mesh with openings less than $\frac{1}{4}$ inch (6.46.35 mm) square and plastic tube-type vents. These vents may also incorporate filters.

1.4.3 Fibrous-mesh-type Vents: Attic vents in which the nonwoven mesh itself constitutes the vent.

2.0 BASIC INFORMATION

2.1 General: The following information shall be submitted:

2.1.1 Product Description: Description of vents, including dimensions, and material specifications shall be submitted. Additionally, a description of the critical airways and dimensions of the cross-sectional areas of the airways shall be submitted.

2.1.2 Packaging and Identification: The method of packaging and identifying roof vents shall be submitted. The packaging information shall include the manufacturer's name and/or trademark and address, the model or style of unit, the size, and the ICC-ES evaluation report number.

PROPOSED REVISIONS TO THE ACCEPTANCE CRITERIA FOR ATTIC VENTS

Each vent shall be identified by a manufacturer's mark, logo or product designation, the net free ventilation area and the ICC-ES evaluation report number.

2.1.3 Installation Instructions: Complete installation instructions for vents shall be provided.

2.2 Testing Laboratories:

Testing laboratories shall comply with Section 2.0 of the ICC-ES Acceptance Criteria for Test Reports (AC85) and Section 4.2 of the ICC-ES Rules of Procedure for Evaluation Reports.

2.3 Test Reports: Test reports shall comply with AC85.

2.4 Product Sampling: Material selected for testing shall meet the product sampling requirements of Sections 3.2, 3.3 and 3.4 of AC85.

3.0 TEST AND PERFORMANCE REQUIREMENTS

3.1 Ventilation openings in the attic shall be protected by mesh, by a vent incorporating an opening cover other than mesh, or by a fibrous-mesh-type vent as defined in Section 1.4.1, 1.4.2 or 1.4.3. The attic vent shall be corrosion-resistant and shall prevent the entry of vermin into the attic.

3.2 Net Free Ventilation Area (NFVA): NFVA shall be determined in accordance with Section 4.1. Openings shall be covered with mesh, except as noted in Sections 3.2.1 and 3.2.2.

3.2.1 2009 IBC and 2009 IRC: For vents incorporating a corrosion-resistant metal mesh with mesh openings of less than $\frac{1}{4}$ inch (6.35 mm) but no less than $\frac{1}{16}$ inch (1.59 mm) in one dimension, the ventilation area reported in the evaluation report shall be the NFVA determined in accordance with Section 4.1, reduced by 10 percent to address the effects of clogging.

3.2.2 2006 IBC and 2006 IRC: For vents incorporating a corrosion-resistant metal mesh with mesh openings less than $\frac{1}{4}$ inch (6.35 mm) but no less than $\frac{1}{8}$ inch (3.2 mm) in one dimension, the ventilation area reported in the evaluation report shall be the NFVA determined in accordance with Section 4.1, reduced by 10 percent to address the effects of clogging.

3.2.3 Vents incorporating an opening cover other than mesh and fibrous-mesh-type vents shall be tested and shall meet the conditions of acceptance in Section 4.2. The ventilation area reported in the evaluation report shall be the NFVA determined in accordance with Section 4.1, reduced by the maximum percentage loss in air flow resulting from dust exposure at any of the pressures specified in Section 4.2.3. Net free ventilation area for fibrous-mesh-type vents shall be reduced by 10 percent.

3.3 Materials:

3.3.1 Plastics: Plastics used in attic vents shall be tested in accordance with ASTM D 635 and D 1929 and shall comply with IBC Section 2606.4, or, for recognition under the UBC, UBC Section 217, except that the smoke-developed or smoke-density requirements in the IBC and UBC, respectively, are waived. This section is optional for plastic attic vents that are limited to applications permitted to have a nonclassified (nonrated) roof covering as defined in IBC Section 1505.5 (UBC Section 1504.3).

3.3.2 Metals: Metals used in roof vents shall comply with the applicable standard noted in IBC Table 1507.4.3(1) and IRC Table R905.10.3(1) and be corrosion-resistant as defined in IBC Table 1507.4.3(2) and IRC Table R905.10.3(2). Submission of test reports demonstrating compliance with standards satisfying this requirement is necessary.

3.4 Testing:

3.4.1 Dust Exposure Test: When Section 3.2.2 is applicable, vents shall be tested and shall meet the conditions of acceptance in Section 4.2.

3.4.2 Temperature Cycling: Plastic attic vents shall be tested and shall meet the conditions of acceptance in Section 4.3, except as noted below:

In lieu of temperature cycling tests described in Section 4.3, reports shall be provided of satisfactory field performance, under three different climatic conditions, over a minimum of five years. The reports shall be prepared by a quality control agency or testing laboratory accredited by IAS or as acceptable to ICC-ES, and shall be in sufficient detail to identify the product and the installation. Photographs shall also be included. The observations shall be included in a test report complying with AC85 and prepared by the agency or laboratory. ICC-ES should be consulted for guidance on conducting field performance evaluations.

3.4.3 Weathering Tests: Weathering tests in accordance with Section 4.4 are required for all exposed attic vents, except as noted in Sections 3.4.3.1 and 3.4.3.2.

3.4.3.1 Weathering tests are not required for metal vents or for vents intended to be covered by a roof covering.

3.4.3.2 In lieu of the accelerated weathering test described in Section 4.4, reports shall be provided of satisfactory field performance, under three different climatic conditions, over a minimum of five years. The reports shall be prepared by a quality control agency or testing laboratory accredited by IAS or otherwise acceptable to ICC-ES, and shall be in sufficient detail to identify the product and the installation. Photographs shall also be included. The observations shall be included in a test report complying with AC85 and prepared by the agency or laboratory. ICC-ES should be consulted for guidance on conducting field performance evaluations.

3.4.4 Resistance to Wind-driven Rain and Snow: Evidence shall be submitted to demonstrate that the roof vent will provide protection against the entrance of rain and snow in accordance with IBC Section 1203.2, IRC Section R806.1 and UBC Section 1505.3. Evidence shall be as described in Section 3.4.4.1, 3.4.4.2 or 3.4.4.3.

3.4.4.1 Reports shall be provided of satisfactory field performance, under three different climatic conditions, over a minimum of five years. The reports shall be prepared by a quality control agency or testing laboratory accredited by IAS or otherwise acceptable to ICC-ES, and shall be in sufficient detail to identify the product and the installation. Photographs shall also be included. The observations shall be included in a test report complying with AC85 and prepared by the agency or laboratory. ICC-

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ES should be consulted for guidance on conducting field performance evaluations.

3.4.4.2 Reports shall be provided of testing of the attic vents in accordance with Section 4.10, Wind-driven Rain Test, of the ICC-ES Acceptance Criteria for Special Roofing Systems (AC07), with the following exceptions:

3.4.4.2.1 The attic vent shall be installed in accordance with the manufacturer's instructions.

3.4.4.2.2 The wind velocity shall be determined at the leading edge of the attic vent.

3.4.4.2.3 The conditions of acceptance shall be that leaking on the underside of the roof deck be limited to 0.05 percent of the total water sprayed at the test deck. The test report shall indicate the extent of fluttering of the attic vent during the test periods and whether it was due to oversized nail holes or loosening of fasteners.

3.4.4.2.4 Recognition in the evaluation report will be limited to installations in areas subject to maximum basic wind speeds of 100 miles per hour (160 km/h) (80 miles per hour [129 km/h] for the UBC), on structures a maximum of 40 feet (~~42-192 mm~~ 12.2 m) in height, in Exposure B areas.

3.4.4.3 Reports shall be provided of tests of the attic vents in accordance with TAS No.100(A). The test specimens shall be representative of the assembly for which recognition is sought. Recognition in the evaluation report will be limited to installations in areas subject to maximum basic wind speeds of 100 miles per hour (160 km/h) (80 miles per hour [129 km/h] for the UBC), on structures a maximum of 40 feet (~~42-192 mm~~ 12.2 m) in height, in Exposure D areas.

4.0 TEST METHODS

4.1 Net Free Ventilating Area (NFVA):

4.1.1 The net free area for any airflow pathway (airway) shall be the gross cross-sectional area less the area of any physical obstructions at the smallest or most critical cross-sectional area in the airway. The net free area shall be determined for each airway in the installed device.

4.1.2 The NFVA for the device shall be the sum of the net free areas determined for all airways in the installed device.

4.2 Dust Exposure Test:

4.2.1 General: The purpose of this test is to simulate exposure of attic vents to airborne dust passing over the roof of a building. The vents are exposed to wind speeds varying between 5 and 15 miles per hour (8.0 and 24.1 km/h). The weight of dust collected in the attic vent, and any change in static pressure drop across the vent, is measured.

4.2.2 Test Apparatus: A 24-inch-wide (610 mm) roof deck at a slope of 4:12 (33.3% slope) shall be constructed using minimum ¹⁵/₃₂-inch-thick (11.9 mm) plywood attached to nominal 2-by-4 rafters, and shall be oriented so that the ridge is perpendicular to the air flow. For ridge vents, the roof deck shall incorporate a 1.5-inch-wide (38 mm) slot, cut into the plywood at the ridge. The roof deck shall be covered with three tab asphalt shingles on the windward side and on the top section of the leeward side. Other vents shall be installed in accordance

with the manufacturer's instructions. The attic section shall be sealed except for two 10-inch-diameter (254 mm) openings located in the attic, simulating soffit vents.

The test chamber shall be 2 feet (610 mm) wide and shall be 5 feet (~~4524~~ 1520 mm) high in the area upstream of the test deck. A 24-inch-wide-by-54-inch-long (610 mm by ~~1372~~ 1370 mm) horizontal divider shall be located 24 inches (610 mm) above the bottom of the chamber. The test deck shall be located such that the attic vent is level with the height at which dust is entrained into the airstream. The top of the chamber above the test deck shall transition to a height of 7 feet (~~2134~~ 2130 mm), as shown in Figure 1.

A wind generator shall be used to generate uniform wind velocities varying between 5 and 15 miles per hour (8.0 and 24.1 km/h). The airflow over the test frame shall be directed and smoothed by suitably shaped baffles. The airstream velocity measured on a vertical plane 7.5 feet (~~2286~~ 2290 mm) upstream of the attic vent shall be within the required axial velocity range. The test report shall include the wind velocity profile, developed on the vertical 24-inch (610 mm) grid basis. The test dust shall be ISO 12103-A2 Arizona test dust. The dust shall be entrained, at a single point, into the wind using a dust generator located 7.5 feet (~~2286~~ 2290 mm) upstream of the attic vent and beneath the horizontal divider.

4.2.3 Test Procedure: The initial weight of the attic vent shall be determined prior to installation of the vent. After installation of the roof covering and attic vent, an initial airflow-vs.-static-pressure-drop curve, of the clean vent, shall be determined for the range of 0.02 to 0.15 inch of water (4.98 to 37.4 Pa), using an airflow measurement chamber with an accuracy of ± 2 percent and designed in accordance with ASHRAE 51/AMCA 210. The chamber shall be attached to the attic openings to measure flow rate through the ridge vent. A pitot tube shall be located inside the attic area to measure pressure drop across the ridge vent.

The airflow measurement chamber is then detached from the attic and the two 10-inch-diameter (254 mm) holes in the attic are left open to ambient air. The attic vent shall be exposed to dust-entrained wind for a total of 150 minutes, in accordance with the following sequence: 5 mph (8-~~0~~ km/h) for 20 minutes, 10 mph (16-~~4~~ km/h) for 20 minutes, 15 mph (24-~~4~~ km/h) for 20 minutes, 5 mph (8-~~0~~ km/h) for 20 minutes, 10 mph (16-~~4~~ km/h) for 20 minutes, 15 mph (24-~~4~~ km/h) for 20 minutes, and 5 mph (8-~~0~~ km/h) for 30 minutes. Dust shall be entrained into the airstream at a rate of 1.62 ± 0.07 ounce (46 ± 2 grams) per minute. A total of 15.4 pounds (7.0 kg) of test dust shall be entrained into the airstream over the test period.

Following dust exposure, the airflow measurement chamber shall be used to determine the airflow-vs.-static-pressure-drop curve of the exposed vent at 0.02, 0.04, 0.06, 0.08, 0.10 and 0.15 inch of water (4.98, 9.96, 14.9, ~~44-819.2~~, ~~56-024.9~~ and ~~84-037.4~~ Pa). The vents shall then be removed from the test deck and re-weighed.

4.2.4 Conditions of Acceptance: The pressure drop shall be used to determine the NFVA in accordance with Section 4.2.2. The maximum accumulation of dust permitted is 1.4 grams per square inch of NFVA (2170 g/m^2).

4.3 Temperature-cycling Test:

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4.3.1 Test Procedure: A minimum of five specimens shall be subjected to 25 consecutive cycles of this test, each cycle consisting of one hour of water exposure at room temperature followed by six hours at minus 40°F (-40°C), two hours at 70°F (21.1°C), 14 hours at 180°F (82°C), and one hour at 70°F (21.1°C). Between cycles, such as on weekends and holidays, the specimens may be maintained at 70°F (21.1°C). A plus 5°F (2.8°C) tolerance is allowed for the above temperatures. Each test specimen shall consist of an attic vent attached to a rigid wood frame, simulating the field installation recommended by the manufacturer. Specimens of ridge vents shall be of sufficient size to have at least one joint in the vent. Spray nozzles for the water exposure shall be located approximately 7 feet (2134~~2130~~ mm) from the test specimen, shall deliver 6 inches (152 mm) of water per hour at a temperature of 40°F (4.4°C) to 60°F (15.6°C), and shall ensure that water is directed at the vent. The test decks shall be installed at the lowest slope recommended for field installation. At the conclusion of the 25 cycles, the specimens shall be examined under 5× magnification.

4.3.2 Conditions of Acceptance: The product is considered to have passed this test if, at the end of testing, the test specimens have not crazed or cracked, have no other deleterious surface changes and have no obstructions of the vent openings. Additionally, there shall be no sign of failure or distress at fastener locations.

4.4 Weathering Tests:

4.4.1 ~~Two 3-inch by 9-inch (152 mm by 229 mm) samples~~ Two 3-inch by 9-inch (152 mm by 229 mm) samples are to be excised from the exposed surface(s) of the roof vent. The size of the samples shall be determined in accordance with ASTM D 638 for the thickness of material to be tested. The number of specimens must be in accordance with Section 7 of ASTM D 638, with a portion of the samples ~~One is to be used as a control sample, and the other is~~ remainder to undergo the accelerated weathering test described in Section 4.4.2.

4.4.2 The tested samples ~~is~~ are subjected to one of the following weathering conditions:

4.4.2.1 Accelerated weathering tests for 2,000 hours in accordance with ASTM D 1499, using Type D or DH twin enclosed carbon arcs.

4.4.2.2 ASTM D 2565. The exposure apparatus shall be 6,000 or 6,500 watts, Type B or BH as specified in ASTM G 26. Exposure shall be for 2,900 hours, with 120-minute cycles consisting of 102 minutes of light-only exposure and 18 minutes of water spray and light exposure.

4.4.2.3 Exposure to 36,805 Langley (1539.9 MJ/m²) of ultraviolet (UV) irradiance in accordance with Procedure B of ASTM D 4364, using Spray Cycle 1.

4.4.2.4 Outdoor weathering per ASTM D 1435 with exposure for five years in a hot humid, a hot arid and a northern industrial climate with a southern exposure at a 45-degree angle.

4.4.2.5 Accelerated weathering tests in accordance with ASTM D 4329. Exposure shall be for 2,000 hours, with 12-hour cycles consisting of eight hours UV at 158°F (70°C) followed by four hours condensation at 104°F (40°C).

4.4.3 At the conclusion of the accelerated weathering test, ~~three 1/2-inch by 5-inch (12.7 mm by 127~~

~~mm) specimens are cut from the control and weathered samples and are subjected to the impact test described in ASTM D 256 Method B (Single Beam (Charpy type)) the specimens are subjected to tensile testing in accordance with ASTM D 638.~~

4.4.4 Condition of Acceptance: The loss of ~~impact~~ tensile strength after weathering shall not be greater than ~~25~~ 10 percent.

5.0 QUALITY CONTROL

5.1 Quality documentation complying with the ICC-ES Acceptance Criteria for Quality Documentation (AC10) shall be submitted.

5.2 Third-party follow-up inspections are not required under this acceptance criteria.

6.0 EVALUATION REPORT RECOGNITION

6.1 In applications involving the IBC, use of attic vents composed of plastic is not permitted in Groups H, I-2 and I-3 occupancies. In applications involving other occupancies, the following conditions shall be met for use of attic vents composed of plastic in association with roof coverings that are required by the code to be classified (rated):

6.1.1 Use is limited to buildings where roofs are not required to have a fire-resistance rating, unless the buildings are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the IBC.

6.1.2 The maximum area of individual attic vents classified as CC2 shall not exceed 100 ft² (9.29 m²) [substitute 300 ft² (27.9 m²) for attic vents manufactured from CC1 plastics], and the aggregate area of attic vents classified as CC2 and any light-transmitting roof panels shall not exceed 25 percent [substitute 30 percent for attic vents manufactured from CC1 plastics] of the floor areas of the room or space served.

6.1.3 Individual attic vents shall be separated from each other and any light-transmitting roof panels by a distance of not less than 4 feet (~~424~~ 1220 mm) measured in the horizontal plane unless the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the IBC.

6.1.4 Attic vents shall not be installed within 6 feet (~~1829~~ 1830 mm) of any exterior wall as required by Section 705.8 of the 2009 IBC, or as required by Section 704.8 of the 2006 IBC, as applicable, to have protected wall openings.

6.2 In applications involving the UBC, the following conditions shall be met for use of attic vents composed of plastic in association with roof coverings that are required by the code to be classified (rated):

6.2.1 Use is limited to buildings where roofs are not required to have a fire-resistance rating.

6.2.2 The maximum area of individual attic vents shall not exceed 100 ft² (9.29 m²) [substitute 150 ft² (13.9 m²) for attic vents manufactured from CC1 plastics], and the aggregate area of attic vents and any light-transmitting roof panels shall not exceed 25 percent [substitute 33¹/₃ percent for attic vents manufactured from CC1 plastics] of the floor area of the room or space served.

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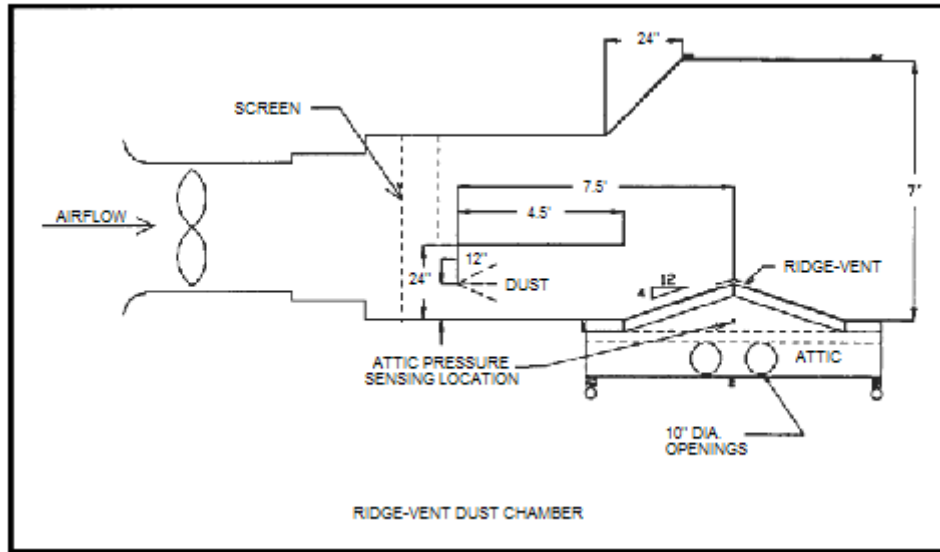
6.2.3 Individual attic vents shall be separated from each other and any light-transmitting roof panels by a distance of not less than 4 feet (1219 mm) measured in the horizontal plane.

6.2.4 Installation of the attic vents is not permitted within that portion of a roof located within a distance to property line or public way where openings in exterior walls are prohibited or required to be protected, whichever is the most restrictive.

6.3 Attic vents composed of metal may be used with classified roof coverings.

6.4 Where attic vents are installed over a continuous opening in the roof sheathing, such as in the case of continuous ridge vents, roof diaphragm nailing requirements shall be addressed and vent installation shall be approved by the code official.

6.5 Attic vents are limited to installation on roofs having a minimum slope of 3 inches to 12 inches (25% slope). ■



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE 1—DUST-EXPOSURE TEST ON RIDGE VENTS