

Workgroups 1 and 3 Agenda

Meeting Date and Time: March 12, 2013 9:30 a.m. to 3:30 p.m.

Location: Virginia Housing Center, 4224 Cox Road, Glen Allen, Virginia 23060

Lunch provided by reservation only. Please email Monica Cousins (Monica.Cousins@dhcd.virginia.gov) by March 5, 2013 if you would like to have a lunch ordered for you.

AGENDA

1. VRC 101.2 Referenced standard (**Handout p. 1**)
2. VCC 101.6 and VRC 101.6 Order of precedence (**Handout p. 2**)
3. VCC 102.3 Shipping containers (**Handout p. 4**)
4. VCC 102.3.1 and 202 Automotive lifts (2 proposals) (**Handout p. 5**)
5. VCC 103.4 Additions (**Handout p. 9**)
6. VCC 103.10 Alterations and scope, energy conservation (**Handout p. 11**)
7. VCC 108.1 Restriping accessible parking spaces (**Handout p. 15**)
8. VCC 108.2 Deck permit exemption (**Handout p. 17**)
9. VCC 113.6 Electronic notice of inspection (**Handout p. 19**)
10. VCC 113.8 Energizing electrical service for final inspection (**Handout p. 20**)
11. VCC 202 Definition of night club (**Handout p. 21**)
12. VRC 202 Definition of existing building (**Handout p. 22**)
13. VCC IRC R202 Definition of habitable attic (**Handout p. 23**)
14. VCC IRC R302.5.1 Garage door (**Handout p. 24**)
15. VCC IRC R311.2.1 Accessible interior doors (**Handout p. 26**)
16. VCC IRC R502.5 Porch headers (**Handout p. 27**)
17. VCC IRC R507 Decks (3 proposals) (**Handout p. 29**)
18. VCC IRC R602.3.1 Tall walls (**Handout p. 44**)
19. VCC IRC R602.7.4 King studs (**Handout p. 46**)
20. VCC IRC R806 Roof ventilation (**Handout p. 49**)
21. VCC IRC R807 Attic access (**Handout p. 51**)
22. VCC IRC R905.2.8.5 Drip edge (**Handout p. 52**)
23. VCC IRC N1102.1.1 (Table) Wall and ceiling insulation (2 proposals) (**Handout p. 54**)
24. VCC IRC N1102.4 Whole house testing (**Handout p. 59**)
25. VCC IRC IECC R402.2.13 Mechanical rooms (**Handout p. 62**)
26. VCC IRC IECC R402.4.1.1 (Table) Air barriers (4 proposals) (**Handout p. 63**)
27. VCC IRC IECC R403.2.1 Attic supply duct insulation (**Handout p. 67**)
28. VCC IRC IECC R403.2.2 Duct testing (**Handout p. 68**)
29. VCC IRC IECC R403.4.2 Hot water pipe insulation (**Handout p. 70**)
30. VCC IRC IECC R403.6 and M1401.3 Equipment sizing (2 proposals) (**Handout p. 72**)
31. VCC IRC IECC R405.5.2(1) (Table) Window glazing (**Handout p. 76**)
32. VCC IRC M1501.2 Transfer air (**Handout p. 78**)
33. VCC IRC M1503.4 Makeup air (**Handout p. 79**)
34. VCC IRC G2411.1 CSST arc-resistant jacket (**Handout p. 81**)

(continued next page)

- 35. SFPC 103.2 Amendments (**Handout p. 101**)
- 36. SFPC 106.3 Third party inspections (**Handout p. 107**)
- 37. VADR § 20 Definition of amusement device (**Handout p. 109**)
- 38. VADR § 20 Small mechanical rides and inflatables (**Handout p. 110**)
- 39. VADR § 30 Devices covered and not covered (**Handout p. 112**)
- 40. VADR § 75 Fees (**Handout p. 113**)
- 41. VADR/VCC 102.3 Generators (**Handout p. 114**)
- 42. VCS – DHCD/BCAAC proposed revisions (**Handout p. 115**)
- 43. Code Academy Standards – DHCD/BCAAC proposed revisions (**Handout p. 120**)

New Business

Adjournment

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Organization

Name: J. Kenneth Payne, Jr., AIA

Representing: VSAIA

Mailing Address: 3200 Norfolk Street, Richmond, VA 23230

Email Address: kpayne@moseleyarchitects.com

Telephone Number: 804.794.7555

Proposal Information

Code(s) and Section(s): **2012 VRC, Section 101.2**

Proposed Change (including all relevant section numbers, if multiple sections):

B. Section 101.2 Incorporation by reference. Chapters 2 – 16 of the 2012 International Existing Building Code, published by the International Code Council, Inc., are adopted and incorporated by reference to be an enforceable part of the Virginia Rehabilitation Code. The term "IEBC" means the 2012 International Existing Building Code, published by the International Code Council, Inc. Any codes and standards referenced in the IEBC are also considered to be part of the incorporation by reference, except that such codes and standards are used only to the prescribed extent of each such reference.

Note: Where the IEBC references the International Building Code or other International Codes, the references are to the International Codes as published by the International Code Council and should not be confused with the use of the International Codes as amended and used in the Virginia Construction Code.

Supporting Statement (including intent, need, and impact of the proposal):

Clarification is needed to ensure the referenced I-Codes are understood to be "as written" and not "as amended" by the VCC or SFPC.

Submittal Information

Date Submitted: ~~August 3, 2012~~ August 9, 2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Organization

Name: J. Kenneth Payne, Jr., AIA Representing: VSAIA

Mailing Address: 3200 Norfolk Street, Richmond, VA 23230

Email Address: kpayne@moseleyarchitects.com Telephone Number: 804.794.7555

Proposal Information

Code(s) and Section(s): 2012 VCC and VRC, Section 101.6 (of both)

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 101.6 of the VCC to read as follows:

101.6 Order of precedence. The provisions of this code shall be used as follows:

1. The provisions of Chapter 1 of this code supersede any conflicting provisions of Chapters 2–35 of the IBC that address the same subject matter and impose differing requirements.
2. The provisions of Chapter 1 of this code supersede and any conflicting provisions of the codes and standards referenced in the IBC that address the same subject matter and impose differing requirements.
3. In addition, the state amendments to the IBC supersede any conflicting provisions of Chapters 2–35 of the IBC that address the same subject matter and impose differing requirements.
4. The state amendments to the IBC supersede and any conflicting provisions of the codes and standards referenced in the IBC that address the same subject matter and impose differing requirements.
5. Further, the provisions of Chapters 2–35 of the IBC supersede any conflicting provisions of the codes and standards referenced in the IBC that address the same subject matter and impose differing requirements.

Change Section 101.6 of the VRC to read as follows:

101.6 Order of precedence. The provisions of this code shall be used as follows:

1. The provisions of Chapter 1 of this code supersede any conflicting provisions of Chapters 2–15 16 of the IEBC that address the same subject matter and impose differing requirements.
2. The provisions of Chapter 1 of this code supersede and any conflicting provisions of the codes and standards referenced in the IEBC that address the same subject matter and impose differing requirements.
3. In addition, the state amendments to the IEBC supersede any conflicting provisions of Chapters 2–15 16 of the IBC that address the same subject matter and impose differing requirements.
4. The state amendments to the IEBC supersede and any conflicting provisions of the codes and standards referenced in the IEBC that address the same subject matter and impose differing requirements.
5. Further, the provisions of Chapters 2–15 16 of the IEBC supersede any conflicting provisions of the codes and standards referenced in the IEBC that address the same subject matter and impose differing requirements.

Supporting Statement (including intent, need, and cost impact of the proposal):

The changes use the same terminology and logic as VCC 101.7 ("that address the same subject matter and impose differing requirements"), which is more encompassing than the term "conflicting." If a "conflict" does not exist, would VCC or VRC 101.6 still apply? The change ensures that VCC and VRC 101.6 remain in effect whether a "conflict" exists or not.

The reformatting is suggested to avoid run-on sentences, and provide clarity considering the duplicated text in each sentence or portion thereof.

Submittal Information

Date Submitted: September 28, 2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: VBCOA Admin Committee and State Building Code Technical Review Board

Proposal Information

Code(s) and Section(s): VCC 102.3 and IBSR

VCC section 102.3 Exemptions.

Add new exception #8:

#8 Off-site manufactured intermodal freight containers, moving containers and storage containers placed on site temporarily or permanently for use as a storage container.

IBSR revise as follows:

13 VAC 5-91-20. Application and compliance.

D. Shipping containers and portable on-demand storage (PODS) containers Off-site manufactured intermodal freight containers, moving containers and storage containers placed on site temporarily or permanently for use as a storage container are not subject to this chapter.

Supporting Statement (including intent, need, and impact of the proposal):

This code change clarifies that manufactured intermodal freight containers, shipping containers and moving containers placed on a property for use as a temporary or permanent storage container/building are exempt from both the USBC and IBSR.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

The Jackson Center

501 N. 2nd Street

Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Lynn Underwood

Representing: City of Norfolk

Mailing Address: 400 Granby, Norfolk, Virginia 23503

Email Address: lynn.underwood@norfolk.gov

Telephone Number: (757) 664-6511

Proposal Information Draft code change #1

Code(s) and Section(s): USBC edit Section 102.3

Proposed Change (including all relevant section numbers, if multiple sections):

Add Section 102.3.1 as follows:

2. Manufacturing and processing machines that do not produce or process hazardous materials regulated by this code, including all of the following service equipment associated with the manufacturing or processing machines.

2.1. Electrical equipment connected after the last disconnecting means.

2.2. Plumbing piping and equipment connected after the last shutoff valve or backflow device and before the equipment drain trap.

2.3. Gas piping and equipment connected after the outlet shutoff valve.

Manufacturing and processing machines that produce or process hazardous materials regulated by this code are only required to comply with the code provisions regulating the hazardous materials.

102.3.1 Vehicle lifts as defined in the referenced standard: ALI ALCTV are not exempt and must comply with the U.S.B.C.

Submittal Information

Supporting Statement (including intent, need, and impact of the proposal):

A DHCD staff interpretation of this section suggests that vehicle lifts are exempt from the USBC as *manufacturing and process machines* therefore provisions in Section 3001.2 that adopt the referenced standard for vehicle lifts are not applicable.

This provision, added to Section 102.3 adds a positive statement that vehicle lifts are not considered processing machines and are therefore regulated by the USBC.

Date Submitted: January 8, 2013.

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

Main Street Center

600 East Main Street

Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Lynn Underwood

Representing: City of Norfolk

Mailing Address: 400 Granby, Norfolk, Virginia 23503

Email Address: lynn.underwood@norfolk.gov

Telephone Number: (757) 664-6511

Proposal Information **Draft code change #1**

Code(s) and Section(s): USBC edit Section 102.3

Proposed Change (including all relevant section numbers, if multiple sections):

Edit Section 202 as follows:

EQUIPMENT. Plumbing, heating, electrical, ventilating, air-conditioning and refrigeration equipment, elevators, dumbwaiters, escalators, vehicle lifts as defined by referenced standard ALI ALCTV and other mechanical additions or installations.

Submittal Information

Supporting Statement (including intent, need, and impact of the proposal):

A DHCD staff interpretation of this section suggests that vehicle lifts are exempt from the USBC as *manufacturing and process machines* therefore provisions in Section 3001.2 that adopt the referenced standard for vehicle lifts are not applicable.

This provision, added to Section 202 adds vehicle lifts to the definition of equipment therefore regulated by the USBC.

Date Submitted: January 8, 2013.

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 East Main Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150





Robert F. McDonnell
Governor

James S. Cheng
Secretary of
Commerce and Trade

COMMONWEALTH of VIRGINIA

William C. Shelton
Director

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

December, 21, 2012

Mr. Jeffrey White
Electrical Supervisor
City of Norfolk
400 Granby Street
Norfolk, VA 23510

Dear Mr. White:

In response to your question specific to vehicle lifts, our office has made the following determination:

The USBC definition of *equipment* is as follows, *Plumbing, heating, electrical, ventilating, air-conditioning and refrigeration equipment, elevators, dumbwaiters, escalators, and other mechanical additions or installations.*

USBC Section 102.3 Exemptions does not specifically list automotive lifts, but it does reference manufacturing and processing machines and service equipment associated with the machines connected after the last disconnect or shutoff valve, as they do not fit the definition of "equipment" in our state law.

USBC Section 101.2 reads, in part, "...Any codes and standards referenced in the IBC are also considered to be part of the incorporation by reference, except that such codes and standards are used only to the prescribed extent of each such reference". Although Chapter 30 of the International Building Code, does include the referenced standard, ALI ALCTV, Standard for Automobile Lifts-Safety requirements for Construction, Testing and Validation, they are not within the scope of the USBC and those provisions of the model code are not applicable.

It is the opinion of this office that automotive lifts do not meet the definition of *equipment*, and therefore, are not regulated by the USBC.

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We recognize that the USBC is not clear on this issue, and that there are localities that are permitting and inspecting them. Therefore, it is our intent to include this as a topic of discussion at the next DHCD Workgroup 2 meeting. That meeting is scheduled to be held on February 28, 2012. The location and time has not been determined as of this date. Also, as a point of information and if time permits, it may be brought up during the January 10 Workgroup meeting, which will be held at the Virginia Housing Center.

If you have any questions, would like to engage in further discussions on this matter, or, if you have any information pertinent to the discussion of this issue, please do not hesitate to contact me or forward any information to me.

Sincerely,

Cindy L. Davis, C.B.O., Director
State Building Codes Office

C: Emory Rodgers
Lynn Underwood, City of Norfolk
Mike Redifer, City of Newport News
Rick Fortner, VBCOA IBC Committee
Dale Powers, Virginia Elevator Safety Association

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: DHCD Staff

Representing: _____

Mailing Address: _____

Email Address: _____

Telephone Number: _____

Proposal Information

Code(s) and Section(s): VCC Section 102.3

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 102.3 as shown below:

102.3 Exemptions. The following are exempt from this code:

(No changes to Items 1-7)

8. Automotive lifts.

Supporting Statement (including intent, need, and cost impact of the proposal):

This proposal is to clarify that automotive lifts are not building equipment and are not within the scope of the VCC. This is based on the definition of "equipment" in the law setting the scope of the USBC.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)

600 East Main Street

Suite 300

Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Organization

Name: J. Kenneth Payne, Jr., AIA

Representing: VSAIA

Mailing Address: 3200 Norfolk Street, Richmond, VA 23230

Email Address: kpayne@moseleyarchitects.com

Telephone Number: 804.794.7555

Proposal Information

Code(s) and Section(s): **2012 VCC, Section 103.4**

Proposed Change (including all relevant section numbers, if multiple sections):

Add exception to 103.4 as follows:

103.4 Additions. Additions to buildings and structures shall comply with the requirements of this code for new construction and an existing building or structure plus additions shall comply with the height and area provisions of Chapter 5. Further, this code shall not require changes to the design or construction of any portions of the building or structure not altered or affected by an addition, unless the addition has the effect of lowering the current level of safety.

Exceptions:

1. This section shall not be construed to permit noncompliance with any applicable flood load or floodresistant construction requirements of this code.
2. Existing structural elements carrying gravity loads shall comply with Section 3403.3 of the IBC, or Section 1003 of the IEBC.

Supporting Statement (including intent, need, and impact of the proposal):

The IBC and IEBC both allow some flexibility when it comes to structural loads on an existing building imposed by an addition (the 5% rule). However, the VCC appears to have deleted this flexibility due to its wording in Section 103.4 ("effect of lowering the current level of safety" - which is not defined and is completely subjective and up to interpretation); and its deletion of Section 3403 in its entirety.

Thus, a building official could interpret any load imposed on the existing structure – even 0.000000000001% - could require the existing structure to be upgraded and to fully comply with the IBC. However, IBC Section 3403.3 and IEBC Section 1003 both allow more flexibility than what appears to be allowed under the VCC, and in this matter, interpretation and subjectivity are not issues in the IBC or IEBC.

IEBC Section 1003 allows some flexibility, but also references the IBC. However, the IBC Section 3403 reference to "Additions" was deleted by the VCC, thus creating what appears to be an ambiguity. Therefore, it appears we are left with Chapter 16, et. al. to deal with the *existing* structural elements – not just the *new* structural elements. Thus, it appears we have lost whatever flexibility the IEBC afforded prior to the VCC amendments.

This code change proposal attempts to bring back the flexibility originally intended by both the IBC and the IEBC when it comes to structural loads on *existing* elements due to an *addition*.

If it is true, that if one uses the VRC for compliance and its reference to the IBC remains valid as originally written, and not as amended by the VCC – then this code change could be withdrawn. However, such interpretation does not appear to exist in the VCC where it states when one I-code references another I-code, the USBC amendments are null and void (refer to 2012 VCC Section 103.10).

Submittal Information

Date Submitted: August 3, 2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Michael Redifer

Representing: City of Newport News

Mailing Address: 2400 Washington Avenue 3rd flr Newport News, VA 23607

Email Address: mredifer@nngov.com

Telephone Number: 757-926-8861

Proposal Information

Code(s) and Section(s): Virginia Construction Code Section 103.10

Proposed Change (including all relevant section numbers, if multiple sections):

Add Item 7 to 103.10 as follows (no changes to existing text)

7. Sections C101.4, C101.5, R101.4 and R101.5 of the IECC

Supporting Statement (including intent, need, and cost impact of the proposal):

Section 101.7 deletes administrative provisions of the referenced model codes in order to reduce potential conflict with Chapter 1 of the VCC. Specific administrative and testing provisions contained within the model codes are incorporated by reference through Section 103.10. Important scoping provisions are contained within Chapter 1 of the IECC. Among them are exemptions for historic and low energy buildings. Without this proposed change, applying these exemptions is questionable and without the exemptions the VCC becomes significantly more restrictive than the model code and results in increased costs.

NOTE:

Although referencing only the section numbers of the IECC is in keeping with the structure of VCC 103.10, the following full text from IECC Sections C101.4, C101.5, R101.4 and R101.5 is provided in an effort to eliminate the need to refer to another document while considering this proposal.

C101.4 Applicability. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between the general requirement and a specific requirement, the specific requirement shall govern.

C101.4.1 Existing buildings. Except as specified in this chapter, this code shall not be used to require the removal, *alteration* or abandonment of, nor prevent the continued use and maintenance of, an existing building or building system lawfully in existence at the time of adoption of this code.

C101.4.2 Historic buildings. Any building or structure that is listed in the State or National Register of Historic Places; designated as a historic property under local or state designation law or survey; certified as a contributing resource with a National Register listed or locally designated historic district; or with an opinion or certification that the property is eligible to be listed on the National or State Registers of Historic Places either individually or as a contributing building to a historic district by the State Historic Preservation Officer or Keeper of the National Register of Historic Places, are exempt from this code.

C101.4.3 Additions, alterations, renovations or repairs. Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. Additions, alterations, renovations or repairs shall not create an unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building.

Exception: The following need not comply provided the energy use of the building is not increased:

1. Storm windows installed over existing fenestration.
2. Glass only replacements in an existing sash and frame.
3. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are filled with insulation.
4. Construction where the existing roof, wall or floor cavity is not exposed.
5. Reroofing for roofs where neither the sheathing nor the insulation is exposed. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.
6. Replacement of existing doors that separate *conditioned space* from the exterior shall not require the installation of a vestibule or revolving door, provided, however, that an existing vestibule that separates a *conditioned space* from the exterior shall not be removed.
7. Alterations that replace less than 50 percent of the luminaires in a space, provided that such alterations do not increase the installed interior lighting power.
8. Alterations that replace only the bulb and ballast within existing luminaires in a space provided that the *alteration* does not increase the installed interior lighting power.

C101.4.4 Change in occupancy or use. Spaces undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with this code. Where the use in a space changes from one use in Table C405.5.2 (1) or (2) to another use in Table C405.5.2 (1) or (2), the installed lighting wattage shall comply with Section C405.5.

C101.4.5 Change in space conditioning. Any nonconditioned space that is altered to become *conditioned space* shall be required to be brought into full compliance with this code.

C101.4.6 Mixed occupancy. Where a building includes both *residential* and *commercial* occupancies, each occupancy shall be separately considered and meet the applicable provisions of IECC – Commercial Provisions or IECC – Residential Provisions.

C101.5 Compliance. *Residential buildings* shall meet the provisions of IECC – Residential Provisions. *Commercial buildings* shall meet the provisions of IECC – Commercial Provisions.

C101.5.1 Compliance materials. The *code official* shall be permitted to approve specific computer software, working sheets, compliance manuals and other similar materials that meet the intent of this code.

C101.5.2 Low energy buildings. The following buildings, or portions thereof, separated from the remainder of

the building by *building thermal envelope* assemblies complying with this code shall be exempt from the *building thermal envelope* provisions of this code:

1. Those with a peak design rate of energy usage less than 3.4 Btu/h-ft² (10.7 W/m²) or 1.0 watt/ft² (10.7 W/m²) of floor area for space conditioning purposes.
2. Those that do not contain *conditioned space*.

R101.4 Applicability. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between the general requirement and a specific requirement, the specific requirement shall govern.

R101.4.1 Existing buildings. Except as specified in this chapter, this code shall not be used to require the removal, *alteration* or abandonment of, nor prevent the continued use and maintenance of, an existing building or building system lawfully in existence at the time of adoption of this code.

R101.4.2 Historic buildings. Any building or structure that is listed in the State or National Register of Historic Places; designated as a historic property under local or state designation law or survey; certified as a contributing resource with a National Register listed or locally designated historic district; or with an opinion or certification that the property is eligible to be listed on the National or State Registers of Historic Places either individually or as a contributing building to a historic district by the State Historic Preservation Officer or Keeper of the National Register of Historic Places, are exempt from this code.

R101.4.3 Additions, alterations, renovations or repairs. Additions, alterations, renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. Additions, alterations, renovations or repairs shall not create an unsafe or hazardous condition or overload existing building systems. An addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building.

Exception: The following need not comply provided the energy use of the building is not increased:

1. Storm windows installed over existing fenestration.
2. Glass only replacements in an existing sash and frame.
3. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are filled with insulation.
4. Construction where the existing roof, wall or floor cavity is not exposed.
5. Reroofing for roofs where neither the sheathing nor the insulation is exposed. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.
6. Replacement of existing doors that separate *conditioned space* from the exterior shall not require the installation of a vestibule or revolving door, provided, however, that an existing vestibule that separates a *conditioned space* from the exterior shall not be removed.
7. Alterations that replace less than 50 percent of the luminaires in a space, provided that such alterations do not increase the installed interior lighting power.
8. Alterations that replace only the bulb and ballast within existing luminaires in a space provided that the *alteration* does not increase the installed interior lighting power.

R101.4.4 Change in occupancy or use. Spaces undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with this code.

R101.4.5 Change in space conditioning. Any nonconditioned space that is altered to become *conditioned space* shall be required to be brought into full compliance with this code.

R101.4.6 Mixed occupancy. Where a building includes both *residential* and *commercial* occupancies, each occupancy shall be separately considered and meet the applicable provisions of IECC – Commercial Provisions or IECC – Residential Provisions.

R101.5 Compliance. *Residential buildings* shall meet the provisions of IECC – Residential Provisions. *Commercial buildings* shall meet the provisions of IECC – Commercial Provisions.

R101.5.1 Compliance materials. The *code official* shall be permitted to approve specific computer software, working sheets, compliance manuals and other similar materials that meet the intent of this code.

R101.5.2 Low energy buildings. The following buildings, or portions thereof, separated from the remainder of the building by *building thermal envelope* assemblies complying with this code shall be exempt from the *building thermal envelope* provisions of this code:

1. Those with a peak design rate of energy usage less than 3.4 Btu/h-ft² (10.7 W/m²) or 1.0 watt/ft² (10.7 W/m²) of floor area for space conditioning purposes.
2. Those that do not contain *conditioned space*.

Submittal Information

Date Submitted: November 29, 2012 (revised January 3, 2013)

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name (Representing):

Ken Fredgren, Chairman, Reston Accessibility Committee of Reston Citizens Association, 703-391-9019, fredgren.k@gmail.com. (Lead contact.)

John Catlett, MCP – Director, Alexandria Dept. of Code Administration. 703.746.4182, john.catlett@alexandriava.gov

Teri Barker-Morgan, Program Manager, Virginia Board for People with Disabilities, Richmond, 804-786-9381, Teri.Barker@vbpd.virginia.gov.

Gayl Brunk, Executive Director, Valley Associates for Independent Living (VAIL), Harrisonburg, 540-433-6513, gayl@govail.org.

Marcia DuBois, Program Coordinator, Community Based Services-Field Rehabilitative Services, Department for Aging and Rehabilitative Services, Richmond, 804-662-7083, Marcia.DuBois@dars.virginia.gov.

Karen Michalski-Karney, Executive Director, Blue Ridge Independent Living Center, Roanoke, 540-342-1231, kmichalski@brilc.org.

Proposal Information

Code(s) and Section(s): USBC, Virginia Construction Code Sections 3411.1 , 3411.6

Proposed Change (including all relevant section numbers, if multiple sections):

Modify as shown:

.ACCESSIBILITY FOR EXISTING BUILDINGS

3411.1 Scope. The provisions of Sections 3411.1 through 3411.9 apply to maintenance, change of occupancy, *addition* and *alterations* to existing buildings and site conditions, including those identified as *historic buildings*.

3411.6 Alterations. A *facility* that is altered shall comply with the applicable provisions in Chapter 11 of this code, unless *technically infeasible*. Where compliance with this section is *technically infeasible*, the *alteration* shall provide access to the maximum extent technically feasible. When restriping an existing parking facility that does not contain accessible parking, at least one van accessible parking space shall be provided in facilities serving use groups A, B, E, M, R1, and I. When existing parking facilities in these use groups contain 100 or more spaces, the number of accessible parking spaces shall be in accordance with Section 1106 (a). Restriping of existing parking facilities shall require an accessible route from existing and newly created accessible parking space(s) to an accessible entrance.

Exceptions:

1. The altered element or space is not required to be on an *accessible* route, unless required by Section 3411.7.
2. *Accessible means of egress* required by Chapter 10 are not required to be provided in existing facilities.
3. The *alteration* to Type A individually owned dwelling units within a Group R-2 occupancy shall be permitted to meet the provision for a *Type B dwelling unit*.
4. *Type B dwelling or sleeping units* required by Section 1107 of this code are not required to be provided in existing buildings and facilities undergoing a change of occupancy in conjunction with alterations where the work area is 50 percent or less of the aggregate area of the building.
5. When restriping existing parking facilities and full compliance with Section 1106 would create a violation of local ordinances establishing a minimum number of parking spaces, compliance with Section 1106 shall be achieved to the maximum extent possible as approved by the building official.
6. The costs of providing access from existing or newly created accessible parking spaces to an accessible route are not required to exceed 20 percent of the costs of the parking restriping alterations.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal results from the initial review by DHCD workgroups of proposals submitted by a legislative study group (the HJR 648 Study Group). This proposal is offered as an additional compromise submitted by the HJR 648 study group and is being submitted by groups involved in the HJR 648 study.

The compromise builds on previous proposals and addresses concerns expressed by the Codes and Standards Committee.

Interestingly enough, the building code already establishes that when a parking lot is altered it must comply with accessibility requirements. 3411.6 states that *facilities* that are altered must comply with Chapter 11 unless technically infeasible.

3411.6 Alterations. A *facility* that is altered shall comply with the applicable provisions in Chapter 11 of this code, unless *technically infeasible*. Where compliance with this section is *technically infeasible*, the *alteration* shall provide access to the maximum extent technically feasible...

Facilities are defined to include site improvements, which includes parking lots

FACILITY. All or any portion of buildings, structures, *site* improvements, elements and pedestrian or vehicular routes located on a *site*.

The proposed change actually proposes lower overall requirements for smaller parking facilities while recognizing the need to add accessible parking to facilities that do not have them. For parking lots in use groups that house places of public accommodation, the change establishes necessary guidance regarding how many spaces to provide and what to do if full compliance causes violations of existing local parking space regulations. In these cases, the number of spaces provided can be less than required by 3411.6 if full compliance cannot be achieved.

The provision also recognizes that lots with greater than 100 spaces have a greater need and requirement for the number of accessible parking spaces.

Since a lot alteration is not generally associated with a primary function space alteration and 3411.6 requires altered facilities (site improvements) to be made in accordance with Chapter 11, the proposed language adopts a disproportional amount provision typically found with primary function alterations which limits the cost exposure to the building owner beyond the parking space striping and signage.

The issue of permitting and inspection, like many other provisions in this code, can be determined by the local building official. Section 108.2 would allow the building official to determine if a permit is needed since this is not a direct health and safety issue.

108.2 Exemption from Permit.

10.11. Other repair work deemed by the building official to be minor and ordinary which does not adversely affect public health or general safety.

Submittal Information

Date Submitted: February 20, 2013

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): X Individual Government Entity Company

Name: Chuck Bajnai

Representing: self _____

Mailing Address: 9800 Government Center Parkway, Chesterfield, VA 23832

Email Address: bajnaic@chesterfield.gov

Telephone Number: 804-717-6428

Proposal Information

Code(s) and Section(s): R502.5 and R602.7.4

Proposed Change (including all relevant section numbers, if multiple sections):

Insert the following item into the list:

108.2 Exemption from application for permitting....

1. Installation of wiring...
2. Group R-5 decks that comply with all of the following:
 - 2.1 do not exceed 256 square feet in area,
 - 2.2 are not more than 24 inches above grade,
 - 2.3 are free standing, and
 - 2.4 do not serve the exit door required by Section R311.4
 - 2.5 are not in a flood plain.
- 2.3. One story detached accessory structures...

Renumber the others accordingly.

Submittal Information

Supporting Statement (including intent, need, and impact of the proposal):

A similar provision was put in the 2009 IRC (and carried forward in the 2012 IRC). It was automatically deleted by the deletion of chapter 1 by the VCC.

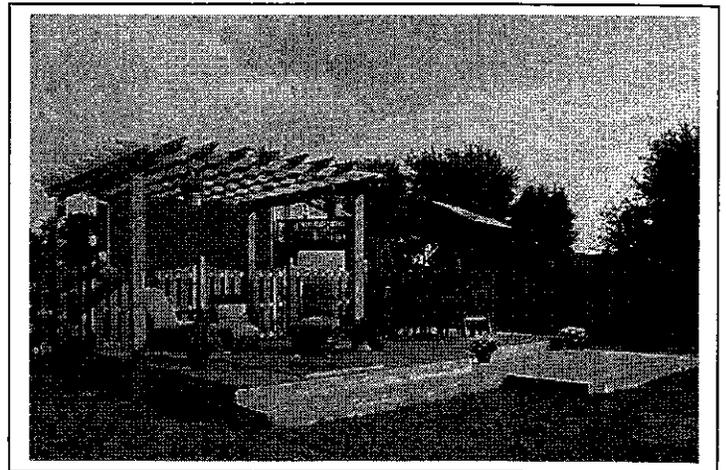
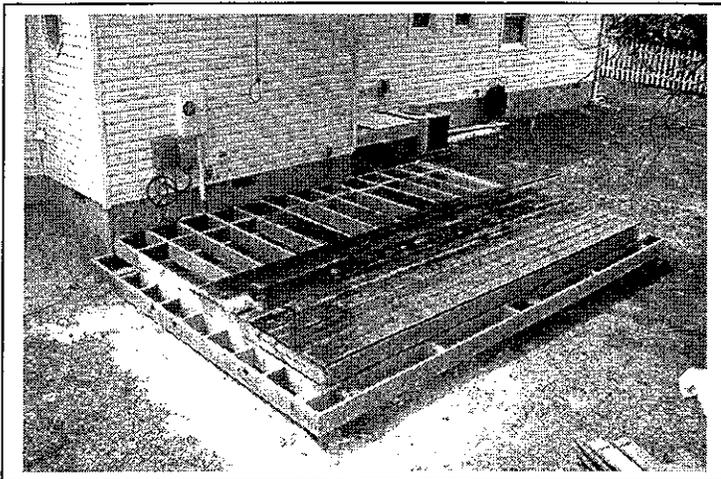
The VBCOA – IRC committee vetted this code change and most agreed that this code change had merit, but there were not enough participants for me to feel comfortable to submit it under the auspices of the VBCOA-IRC committee, hence I am submitting it on my own behalf.

Several changes were made above and beyond the 2009 IRC:

1. format was changed to enumerate that ALL of these provisions have to apply
2. I changed the allowance up to 256 sqft to agree with the proposed change forthcoming regarding sheds and accessory structures.
3. I lowered the height down to 24" to basically say not more than 3 risers high...no guardrails or handrails would be required.
4. I added a flood plain requirement to be sure that these decks were not going to become floating platforms in case of a big flood.

This is a very good change and will make life easier for lots of folks, and many may even save a few dollars. It says that a permit is not required, but does not say that it is excluded from the requirements of the IRC – decks would still need to comply with the requirements for deck footings, joist sizes, etc.

Date Submitted: 9-18-2012



The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: State Building Code Technical Review Board Representing: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): Virginia Construction Code, Section 113.6

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 113.6 as shown below:

113.6 Approval or notice of defective work. The building official shall either approve the work in writing or give written notice of defective work to the permit holder. Upon request of the permit holder, the notice shall reference the USBC section that serves as the basis for the defects and such defects shall be corrected and reinspected before any work proceeds that would conceal such defects. A record of all reports of inspections, tests, examinations, discrepancies and approvals issued shall be maintained by the building official and shall be communicated promptly in writing to the permit holder. Approval issued under this section may be revoked whenever it is discovered that such approval was issued in error or on the basis of incorrect information, or where there are repeated violations of the USBC. Notices issued pursuant to this section shall be permitted to be communicated electronically provided the notice is reasonably calculated to get to the permit holder.

Supporting Statement (including intent, need, and impact of the proposal):

The Review Board issued Interpretation No. 6/06 clarifying that notices may be issued electronically provided reasonable steps were taken to assure they would be received by the permit holder. Under the Review Board's statutory authority, interpretations issued by the Review Board, when deemed appropriate by the Review Board members, are forwarded to the Board of Housing and Community Development as recommendations for future amendments to the code.

Submittal Information

Date Submitted: March 16, 2012



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: State Building Code Technical Review Board Representing: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): Virginia Construction Code, Section 113.8

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 113.8 as shown below:

113.8 Final inspection. Upon completion of a building or structure and before the issuance of a certificate of occupancy, a final inspection shall be conducted to ensure that any defective work has been corrected and that all work complies with the USBC and has been approved, including any work associated with modifications under Section 106.3. The building official shall be permitted to require the electrical service to a building or structure to be energized prior to conducting the final inspection. The approval of a final inspection shall be permitted to serve as the new certificate of occupancy required by Section 116.1 in the case of additions or alterations to existing buildings or structures that already have a certificate of occupancy.

Supporting Statement (including intent, need, and impact of the proposal):

The Review Board issued Interpretation No. 7/90 clarifying that the building official has the authority to require the building electrical system to be energized prior to the final inspection. Under the Review Board's statutory authority, interpretations issued by the Review Board, when deemed appropriate by the Review Board members, are forwarded to the Board of Housing and Community Development as recommendations for future amendments to the code.

Submittal Information

Date Submitted: March 16, 2012



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Organization

Name: J. Kenneth Payne, Jr., AIA

Representing: VSAIA

Mailing Address: 3200 Norfolk Street, Richmond, VA 23230

Email Address: kpayne@moseleyarchitects.com

Telephone Number: 804.794.7555

Proposal Information

Code(s) and Section(s): **2012 VRC, Section 202**

Proposed Change (including all relevant section numbers, if multiple sections):

Existing building. A building for which a legal certificate of occupancy has been issued under any edition of the USBC and that has been occupied for its intended use; or, a building built prior to the initial edition of the 1973 USBC.

Supporting Statement (including intent, need, and impact of the proposal):

Assuming the "initial edition of the USBC" never changes, the actual date of the edition should be indicated to prevent a guessing game as to what edition of the USBC would be considered the "initial" edition, or prevent the need to reference the "Related Laws Package."

Submittal Information

Date Submitted: August 3, 2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: VBCOA IRC Committee

Proposal Information

Code(s) and Section(s): VCC (IRC)

Proposed Change (including all relevant section numbers, if multiple sections):

Change the definition of "Attic, habitable" in the IRC to read as shown below:

ATTIC, HABITABLE. A finished or unfinished area, not considered a *story*, complying with all of the following requirements:

1. The occupiable floor area is at least 70 square feet (17m²), in accordance with Section R304,
2. The occupiable floor area has a ceiling height in accordance with Section R305, and
3. The occupiable space is enclosed by the roof assembly above, knee walls (if applicable) on the sides and the floor-ceiling assembly below.

Habitable attics shall not be permitted in dwellings or townhouses that are three stories above grade plane in height.

Supporting Statement (including intent, need, and cost impact of the proposal):

The intent of this proposal is to restore the number of habitable area stories above grade to three, consistent with scope of the IRC. R101.2 'Scope' limits the application of the IRC to one- and two-family dwellings and townhouses "not more than three stories above grade plane in height"...; the current language in the 'Attic, Habitable' definition: "not considered a story" allows for an additional habitable level above the three story limitation, or in practical terms - a fourth story.

Cost impact: There is no cost impact in this change.

Submittal Information

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)

600 East Main Street

Suite 300

Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Mike Toalson

Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mitoalson@hbav.com

Telephone Number: 804-643-2797

Proposal Information

Code(s) and Section(s): R302.5.1 Opening Protection

Proposed Change (including all relevant section numbers, if multiple sections):

See Attached: Eliminates the Requirement for doors between the garage and the residence to to be equipped with a self closing device.

Supporting Statement (including intent, need, and cost impact of the proposal):

No reliable fire data exists on the number of fires that originated in the garage and passed through the door opening resulting in the fire spreading into the home. Likewise, there is no reliable data linking the spread of carbon monoxide from the garage to the residence through the door opening between the two. This is an unnecessary expense.

Submittal Information

Date Submitted: 12-28-12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors equipped with a self-closing device.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: 2011 HJR 648 Workgroup Representing: _____

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): USBC, Virginia Construction Code Section 310.6 (IRC Section R311.2.1)

Proposed Change (including all relevant section numbers, if multiple sections):

Add new Section R311.2.1 to the International Residential Code to read as follows:

R311.2.1 Interior doors. All interior doors to habitable spaces, bathrooms and toilet rooms which are located on the level of the dwelling containing the egress door required by Section R311.2 shall have doorways that have a clear opening of 31¼ inches (805 mm) minimum. The clear opening of such doorways having swinging doors shall be measured between the face of the door and stop, with the door open 90 degrees. Where the egress door required by Section R311.2 is located on a split level, bi-level or tri-level entryway, or does not otherwise open to the main level of the dwelling, the level of the dwelling to have interior doors conforming to this section shall be the main level of the dwelling.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is to have all interior doors used for maneuvering through the main level of new dwellings to have a clear opening of 31¼ inches to facilitate the movement of wheelchair users on that level without having to later modify the doors. The opening dimension specified permits the use of a standard 2'-8" door, which is already common practice in multi-family dwelling construction and is not significantly more expensive than the standard 2'-6" (30") doors, which some builders are currently using for powder room and bedroom doors. This requirement would not apply to closet or pantry doors or any similar doors not serving a room of the dwelling.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Lynn Underwood, Brian Foley Representing: City of Norfolk, Fairfax County

Mailing Address: 400 Granby, Norfolk, Virginia 23503

Email Address: lynn.underwood@norfolk.gov Telephone Number: (757) 664-6511

Proposal Information Draft code change #1

Code(s) and Section(s): USBC edit Section R502.5 and add new Table R502.5(3)

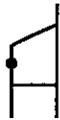
Proposed Change (including all relevant section numbers, if multiple sections):

Edit Section R502.5 as follows:

R502.5 Allowable girder and header spans. The allowable spans of girders and headers fabricated of dimension lumber shall not exceed the values set forth in Tables R502.5(1) and through R502.5(2) R502.5(3).

Add a new Table R502.5(3):

**TABLE R502.5(3)
GIRDER AND HEADER SPANS FOR PORCHES
(Maximum span for southern pine)**

HEADER SUPPORTING	HEADER SIZE	PORCH WIDTH (FT)	
		8	14
Roof 	2-2x4	6'-11"	5'-3"
	2-2x6	9'-11"	7'-6"
	2-2x8	12'-10"	9'-8"
	2-2x10	16'-8"	12'-7"
	2-2x12	19'-6"	14'-9"
Floor 	2-2x4	5'-1"	3'-10"
	2-2x6	7'-4"	5'-6"
	2-2x8	9'-5"	7'-1"
	2-2x10	12'-2"	9'-3"
	2-2x12	14'-4"	10'-10"

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

- a. Tabulated values based on 30 psf ground snow load, L/240 deflection and #2 grade lumber.
- b. The values of this table shall be equivalent to a roof live load of 20 psf.

Submittal Information

1. Please refer to the spreadsheet and supporting documentation.
2. Please see copies of referenced documents from Section 602.6 and Table 602.6 in the 1995 edition of the One and Two Family Dwelling Code published by the Council of American Building Officials (CABO).
3. Please see supporting documentation submitted by the Home Builder's Association of Virginia (HBAV)

Supporting Statement (including intent, need, and impact of the proposal):

The 2012 International Residential Code (IRC) and its predecessors regulated the size of headers based on the provisions in Chapter 5. Note that Tables R502.5(1) and (2) has categories of building width that begins at 20 feet. The size of headers in this table assumes a rectangular tributary area that was at least 10 feet (20/2). Because of the lower end limit of 20 feet, headers over posts or columns that create porches or decks with less than 10 foot of tributary load must use that, much higher criteria. For instance a 6 foot porch with columns spaced at 10' O.C. must use 3 – 2 X 10s or 3 – 2 X 12s to comply with the code. The option for the builder is to seek an engineering rationalization to use anything different.

This table was created based on engineering principles that included analyzing for flexural bending, deflection, and shear. In addition, the design strength of lumber was set at southern pine as porches are exterior and southern pine is the sole species available in Virginia that is preservative treated. It is important to note that the 1995 edition of the One and Two Family Dwelling Code had a table that was very similar to this table.

Date Submitted: June 15, 2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 East Main Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Chuck Bajnai

Representing: VBCOA IRC Committee

Mailing Address: 9800 Government Center Parkway, Chesterfield, VA, 23832

Email Address: bajnaic@chesterfield.gov

Telephone Number: 804-717-6428

Proposal Information

Code(s) and Section(s): R507 - Decks

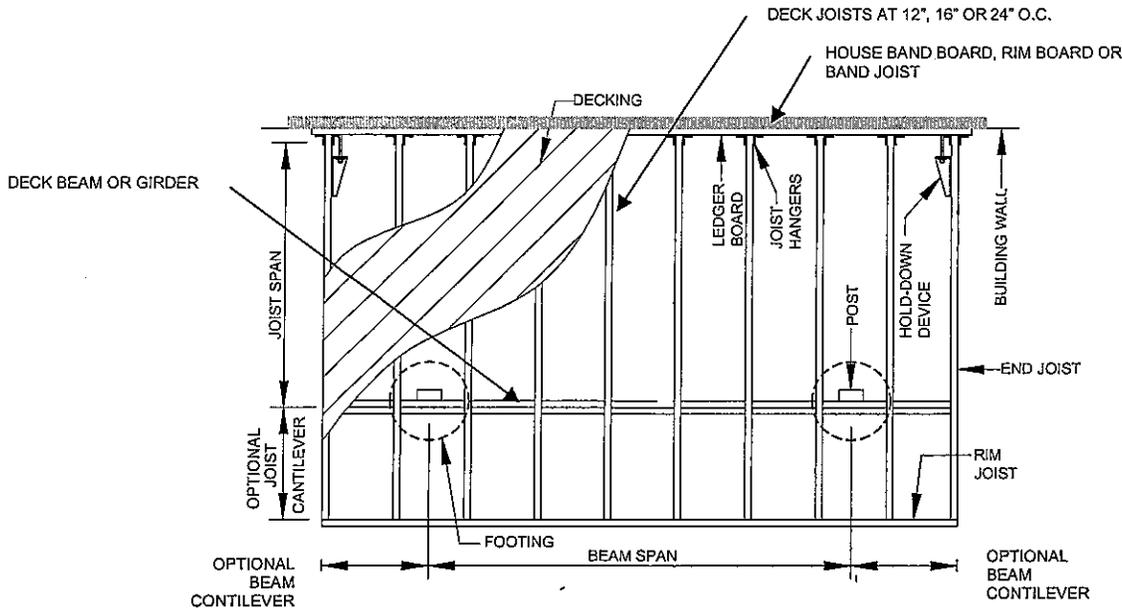
Proposed Change (including all relevant section numbers, if multiple sections):

Delete Section R507 and replace it with the following:

**SECTION R507
DECKS**

R507.1 Wood decks. Typical wood decks shall be designed and constructed in accordance with this section. Other grades, species, loading, materials and conditions not described herein shall be permitted in accordance with Section 301.

R507.2 Requirements. Deck construction shall be capable of accommodating applied loads and of transmitting them to the supporting structural elements. Figure R507.2 is intended for purposes of identifying typical parts, and not to limit the design.



**FIGURE R507.2
DECK CONSTRUCTION**

R507.3 Materials. Materials used in the construction of a deck shall comply with the provisions of this section.

R507.3.1 Preservative-treated lumber. Dimension lumber shall be identified in accordance with Section R502.1 and, where required, preservative-treated in accordance with Section R317. All lumber in contact with the ground shall be identified as suitable for ground contact.

R507.3.2 Wood Decking. Wood decking shall comply with any of the following materials:

1. Wood decking with a minimum nominal thickness of $\frac{5}{4}$ inches (32 mm) shall be installed at 90 degrees to deck joist that are spaced at a maximum of 16 inches (406 mm) on center and up to 45 degrees when spaced at a maximum of 12 inches (305 mm) on center.
2. Wood decking with a nominal 2 inch (51 mm) thickness shall be installed at an angle between 45 and 90 degrees to deck joists that are spaced at a maximum of 24 inches (610 mm) on center. Wood decking shall be attached to each supporting member with a minimum of (2)8d threaded nails or (2)#8 wood screws.

R507.3.3 Wood/plastic composites. Wood/plastic composites used as exterior deck boards, stair treads, handrails and guardrail systems shall be permitted in accordance with manufacturer's instructions.

R507.3.4 Metal guardrail systems. Metal guardrail and handrail systems shall be permitted in accordance with the manufacturer's instructions.

R507.3.5 Fasteners. Nails, bolts with washers and screws shall be hot-dipped galvanized, stainless steel. Proprietary fasteners shall be permitted provided they are compatible with the pressure-preservative-treated lumber being used. Other fasteners, hangers and metallic devices shall be hot-dipped galvanized steel or stainless steel and installed in accordance with manufacturer's instructions.

R507.3.6 Flashing. Flashing shall be corrosion-resistant metal of minimum nominal 0.019 inch (0.5 mm) thickness or approved non-metallic material.

R507.4 Deck joists. Spans for typical wood deck joist configurations, as shown in Figure R507.4, shall be in accordance with Table R507.4. Deck joist shall be permitted to cantilever a maximum of one-fourth of the joist span.

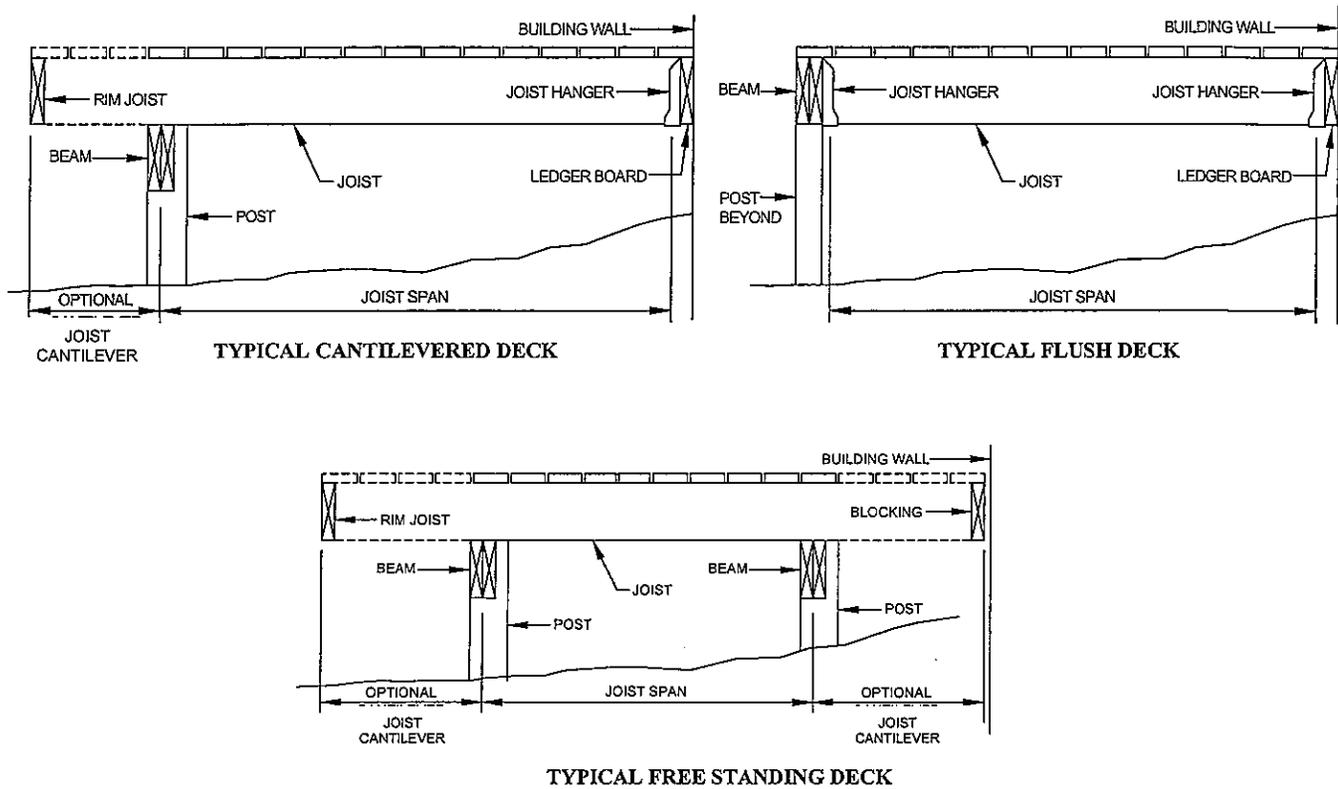


FIGURE R507.4
TYPICAL DECK JOIST SPANS

TABLE R507.4
MAXIMUM DECK JOIST SPANS FOR COMMON LUMBER SPECIES (ft.-in.)

SPECIES ^a	SIZE	MAXIMUM SPACING OF DECK JOISTS WITH NO CANTILEVER ^b (in.)			MAXIMUM SPACING OF DECK JOISTS WITH CANTILEVERS ^c (in.)		
		12	16	24	12	16	24
Southern pine	2 x 6	10-4	9-5	7-10	7-1	7-1	7-1
	2 x 8	13-8	12-5	10-2	10-9	10-9	10-2
	2 x 10	17-5	15-10	13-1	15-6	15-6	13-1
	2 x 12	18-0	18-0	15-5	18-0	18-0	15-5
Douglas fir-larch ^d , hem-fir ^d , spruce-pine-fir ^d	2 x 6	9-6	8-8	7-2	6-3	6-3	6-3
	2 x 8	12-6	11-1	9-1	9-5	9-5	9-1
	2 x 10	15-8	13-7	11-1	13-7	13-7	11-1
	2 x 12	18-0	15-9	12-10	18-0	15-9	12-10
Redwood, western cedars, ponderosa pine ^e , red pine ^e	2 x 6	8-10	8-0	7-0	5-7	5-7	5-7
	2 x 8	11-8	10-7	8-8	8-6	8-6	8-6
	2 x 10	14-11	13-0	10-7	12-3	12-3	10-7
	2 x 12	17-5	15-1	12-4	16-5	15-1	12-4

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

- No. 2 grade with wet service factor.
- Deck joists shall be designed to carry the deck live load in Table R301.5 or the ground snow load, whichever is larger. This table is based on ground snow load or live load = 40 psf, dead load = 10 psf, L/Δ = 360.
- Deck joists shall be designed to carry the deck live load in Table R301.5 or the ground snow load, whichever is larger. This table is based on ground snow load or live load = 40 psf, dead load = 10 psf, L/Δ = 360 at main span, L/Δ = 180 at cantilever with a 220 pound point load applied to end.
- Includes incising factor.
- Northern species with no incising factor

R507.4.1 Joist bearing. Joist ends shall be provided with vertical and rotational support. The ends of joists shall have a minimum of 1.5 inches (38 mm) of bearing on a wood ledger board or on metal hangers. Where rotational support is provided by joist hangers or blocking between joists, their depth shall equal not less than 60 percent of the joist depth. Where rotational support is provided by rim joists, they shall be secured to the end of each joist with a minimum of (3)10d threaded nails or (3)#10x3 inch (76 mm) long wood screws. Joist ends adjacent to the building wall of free-standing decks shall be permitted to replace a rim joist with full depth nominal 2x blocking toe nailed at each end with (3)10d nails.

R507.5 Deck Beams. The maximum span for deck beams, as shown in Figure R507.2, shall be in accordance Table R507.5. Beams shall be permitted to cantilever at each end up to one-fourth of the beam span. The plies of a multi-ply beam shall be fastened with a minimum of two rows of 10d threaded nails at 16 inches (406 mm) on center along each edge. Splices of multi-span beams shall be located at interior post locations.

**TABLE R507.5
MAXIMUM BEAM SPAN LENGTHS ^a**

SPECIES ^b	SIZE ^c	MAIN JOIST SPAN (ft.) LESS THAN OR EQUAL TO:						
		6	8	10	12	14	16	18
Southern pine	2-2x6	7-1	6-2	5-6	5-0	4-8	4-4	4-1
	2-2x8	9-2	7-11	7-1	6-6	6-0	5-7	5-3
	2-2x10	11-10	10-3	9-2	8-5	7-9	7-3	6-10
	2-2x12	13-11	12-0	10-9	9-10	9-1	8-6	8-0
	3-2x6	8-7	7-8	6-11	6-3	5-10	5-5	5-2
	3-2x8	11-4	9-11	8-11	8-1	7-6	7-0	6-7
	3-2x10	14-5	12-10	11-6	10-6	9-9	9-1	8-7
	3-2x12	17-5	15-1	13-6	12-4	11-5	10-8	10-1
Douglas fir-larch ^d , spruce-pine-fir, redwood ^d , western cedars, ponderosa pine ^e , red pine ^e	3x6 or 2-2x6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3x8 or 2-2x8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3x10 or 2-2x10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3x12 or 2-2x12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4x6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4x8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4x10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4x12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3-2x6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3-2x8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3-2x10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3-2x12	13-11	12-1	10-9	9-10	9-1	8-6	8-1

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

a. Deck beams shall be designed to carry the deck live load in Table R301.5 or the ground snow load, which ever is larger. This table is based on ground snow load or live load = 40 psf, dead load = 10 psf, L/A = 360 at main span, L/A = 180 at cantilever with a 220 pound point load applied to end.No 2 grade, wet service factor.

b. Beam depth shall be greater than or equal to depth of joists with a flush beam condition.

c. Includes incising factor.

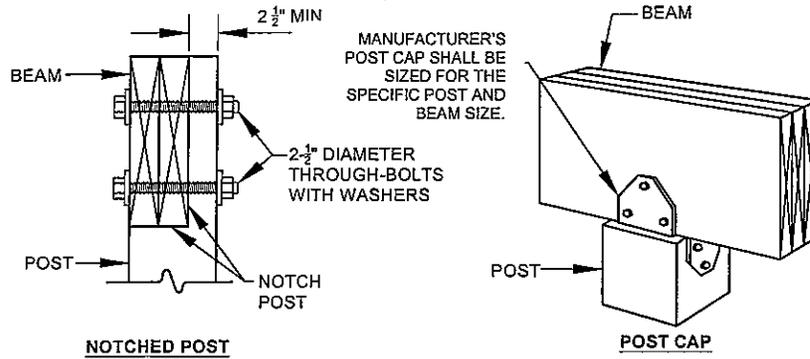
e. Northern species with no incising factor.

R507.5.1 Beam bearing. Single-ply beams and multi-ply beams shall have all of their bearing directly on wood posts or on an approved metal post caps in accordance with Figure R507.6.1 and not less than 3 inches (76 mm) on concrete or masonry.

R507.6 Deck posts. For typical single level wood decks, posts shall be measured from the top of the footing to the underside of the beam. The maximum height of the post shall be in accordance with the following:

1. Posts comprised of a minimum nominal 4x4 shall be permitted to a maximum height of 8 feet (2438 mm),
2. Posts comprised of a minimum nominal 6x6 shall be permitted to a maximum height of 14 feet (5486 mm).
3. Posts comprised of southern pine, of 4x4 or 4x6, grade #2 shall be permitted to a maximum height of 10 feet (3048 mm).
4. Posts comprised of southern pine, of 6x6 shall be permitted to a maximum height of 18 feet (5486 mm).

R507.6.1 Deck post to deck beam connection. Deck beams shall be attached to deck posts in accordance with Figure R507.6.1. Post to beam connections shall be constructed to resist lateral displacement. Manufactured post-to-beam connectors shall be sized for the post and beam sizes. All bolts shall have washers under the head and nut.



For SI: 1 inch = 25.4 mm

FIGURE R507.6.1
TYPICAL BEAM BEARING

R507.7 Deck footings. Deck footings shall be constructed in accordance with Section R403 and Figure R507.7. The size of the footing shall be adequate for the load applied by the posts.

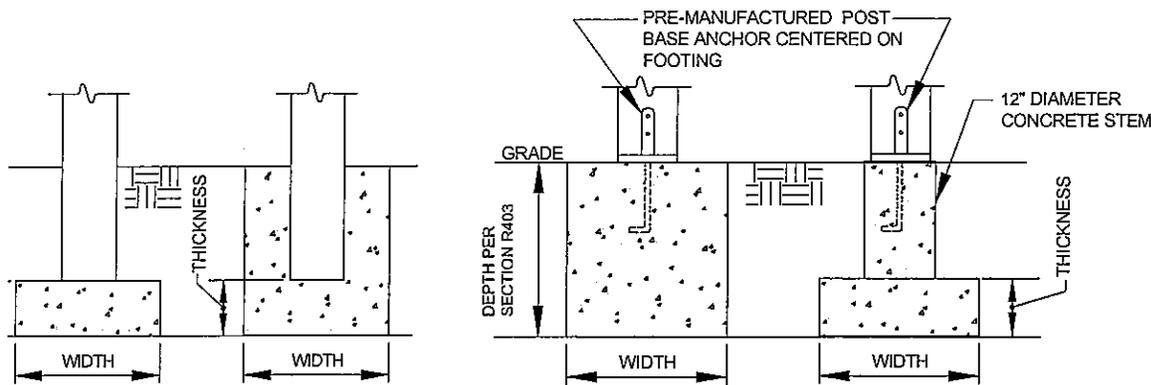


FIGURE R507.7
TYPICAL DECK FOOTINGS

R507.7.1 Footing depth. The minimum depth of footings shall be in accordance with Section R403.1.4 or as approved by the building official. A deck footing within 4 feet of the house shall be set at least to the depth of the house footing.

R507.7.2 Post connection to footing. Where the top of the footings are at or above grade, the posts shall be prevented from being displaced by a connector between the post and the concrete. Where the top of the footings are below grade the post shall be permitted to sit on top of the footing or may be embedded in the concrete.

R507.8 Deck ledger connection to the building. The connection between a deck ledger and the building shall be in accordance with this section.

R507.8.1 Deck ledger connection to band joist. The deck ledger shall be connected to a 2-inch nominal lumber band joist with 1/2-inch lag screws or bolts with washers in accordance with Table R507.8.1 and Figure R507.8.1(1). The bolts or lag screws shall be spaced in accordance with Figure R507.8.1(2). As an alternative to the detail in Figure R507.8.1, the ledger boards shall be permitted to be offset from the band joist a maximum distance of 1/2 inch (13 mm) with the installation of stacked washers. The exterior wall finish shall be removed prior to installation of the ledger board. Flashing at a door threshold shall be installed to prevent water intrusion from rain or melting ice and snow.

R507.8.2 Deck ledger connection to concrete foundation walls. A ledger board shall be connected to a concrete or solid masonry foundation wall with approved 1/2 inch (13 mm) diameter expansion anchors at a spacing specified in Table R507.8.1(1) and as shown in Figure R507.8.2. Expansion anchors shall be installed per the manufacturer.

R507.8.3 Ledger board to hollow masonry foundation wall. A ledger board shall be connected to a hollow masonry foundation wall with approved ½ inch (13 mm) diameter epoxy anchors at a spacing specified in Table R507.8.1(1) and as shown in Figure R507.8.3. Epoxy anchors shall be installed per the manufacturer

R507.8.4 Alternate connections. An approved engineered wood rim board with a minimum thickness of 1 inch (25 mm) shall be permitted to substitute for a 2x lumber band joist provided it has designed and manufactured to support a deck. A ledger board attachment to a masonry or stone veneer, ribbon board of open web floor trusses, band joist of a cantilevered floor and other conditions not addressed herein shall be designed in accordance with accepted engineering practice, or the deck shall be free-standing in accordance with Section R507.10.

**TABLE R507.8.1(1)
FASTENER SPACING ^a**

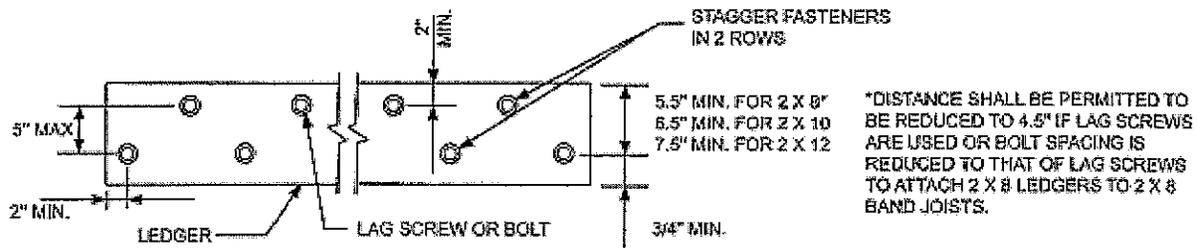
FASTENER	BAND BOARD	JOIST SPAN						
		≤ 6'	> 6'-8'	> 8'-10'	> 10'-12'	> 12'-14'	> 14'-16'	> 16'-18'
½" lag screws ^b	1" min. engineered wood product	24"	18"	14"	12"	10"	9"	8"
	2x lumber	30"	23"	18"	15"	13"	11"	10"
½" through bolts	1" min. engineered wood product	24"	18"	14"	12"	10"	9"	8"
	2x lumber	36"	36"	34"	29"	24"	21"	19"
½" through bolts and ½" stacked washers ^c	1" min. engineered wood product	24"	18"	14"	12"	10"	9"	8"
	2x lumber	36"	36"	29"	24"	21"	18"	16"
Expansion anchors	-	36"	36"	34"	29"	24"	21"	19"
Epoxy anchors	-	32"	32"	32"	24"	24"	16"	16"

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

d.a. Maximum sheathing shall be 15/32 inches (12 mm).

e.b. The tip of the lag screw shall fully extend beyond the inside face of the band board.

f.c. The maximum gap between the face of the ledger board and face of the wall sheathing shall be ½ inches (13 mm).



For SI: 1 inch = 25.4 mm.

**FIGURE R507.8.1(1)
PLACEMENT OF LAG SCREWS AND BOLTS IN**

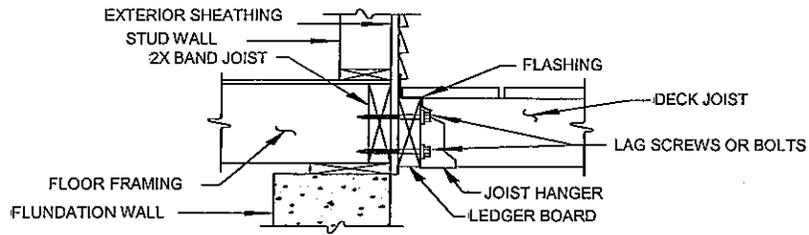


FIGURE R507.8.1(2)
LEDGER BOARD TO BAND BOARD ATTACHMENT

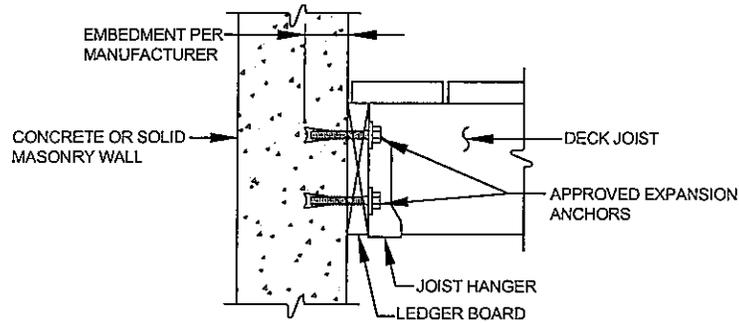


FIGURE R507.8.2
LEDGER BOARD TO SOLID FOUNDATION WALL ATTACHMENT

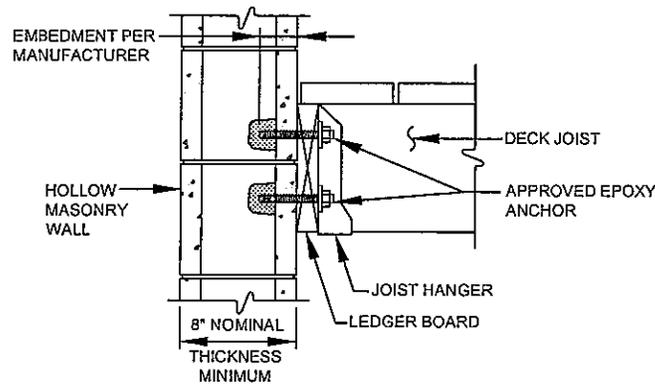
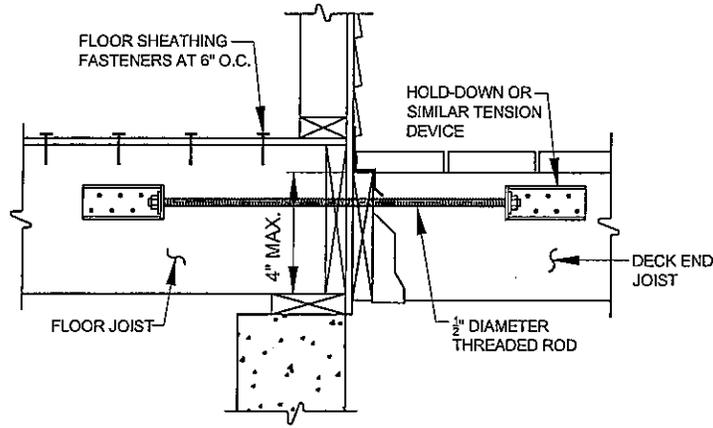


FIGURE R507.8.3
LEDGER BOARD TO HOLLOW MASONRY FOUNDATION WALL ATTACHMENT

R507.9 Attachment to resist lateral load. The lateral load connection required by Section R507.2 shall be permitted to be in accordance with this section.

R507.9.1 Connection at parallel joists. Where floor joists and deck joists are parallel a hold-down or similar tension device with a minimum capacity of 1,500 pounds (6672 N) at each end joist as shown in Figures R507.3.1(1) and R507.9.3.1(2) shall be permitted. Floor sheathing to floor joists fasteners shall be permitted to be substituted with two reinforcing angles on each side of the joist with a minimum capacity of 375 pounds (1668 N).



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

FIGURE R507.9.3.1(1)
CONNECTION AT PARALLEL JOISTS

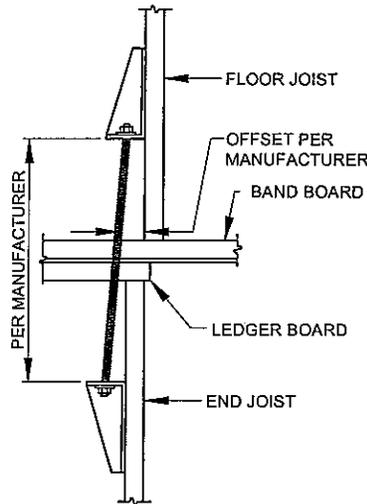
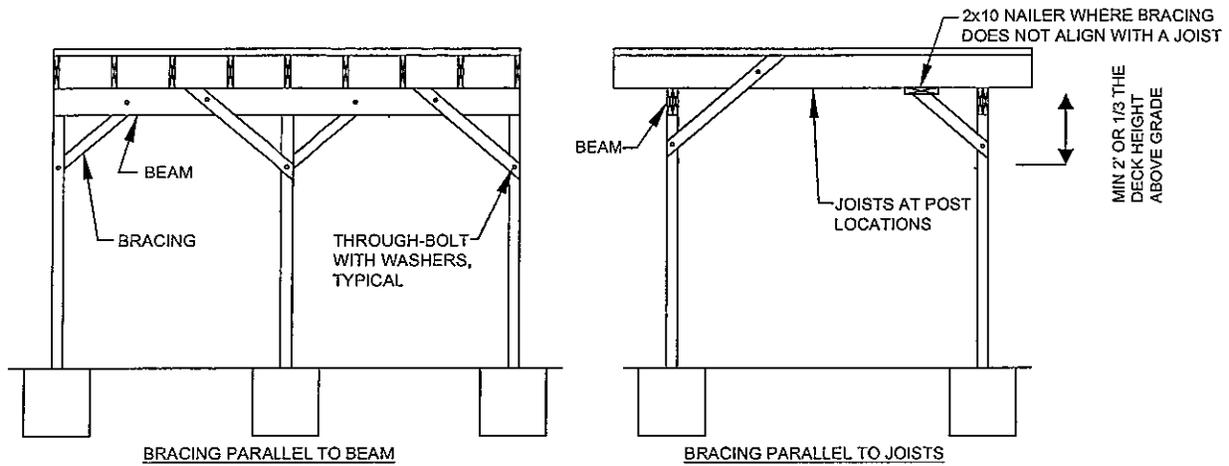


FIGURE R507.9.3.1(2)
OFFSET AT PARALLEL JOISTS

R507.9.2 Connection at perpendicular joists. Where floor joists and deck joists are perpendicular, provide a hold-down or similar tension device with a minimum capacity of 1,500 pounds (6672 N) at each end joist and blocking between floor joists as shown in Figure R507.9.3.2. Floor sheathing to floor joists fasteners shall be permitted to be substituted with two reinforcing angles on each side of the joist with a minimum capacity of 375 pounds (1668 N).

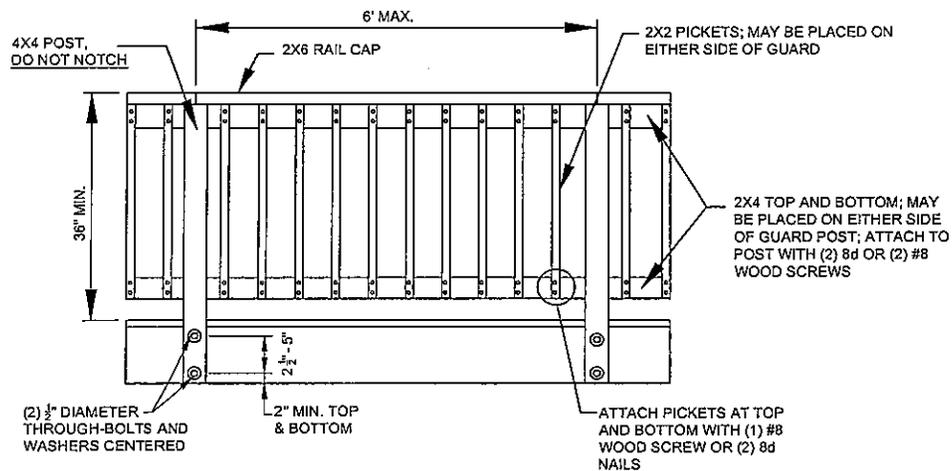


For SI: 1 foot = 304.8 mm

**FIGURE R507.10.1
FREE-STANDING DECK DIAGONAL BRACING**

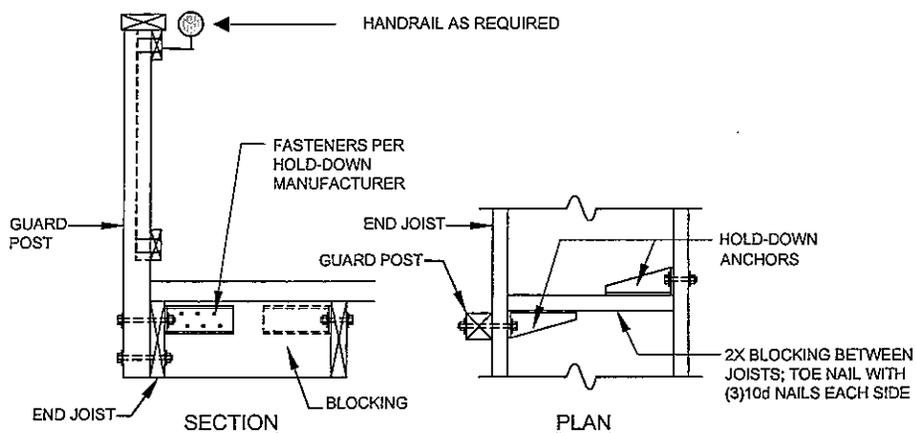
R507.12 Deck guards. Deck guards shall be designed and constructed in accordance with Sections R301.5 and R312. Other materials and construction techniques shall be permitted in accordance with R301.

R507.12.1 Guard construction. Where the guard requirements of Sections R301.5 and R312 are met using the construction shown in Figures R507.12.1(1) through R507.12.1(3), guard posts shall be attached to the inside or outside face of the rim joist or end joist and hold-down anchors shall have a minimum capacity of 1,800 pounds (8006 N).

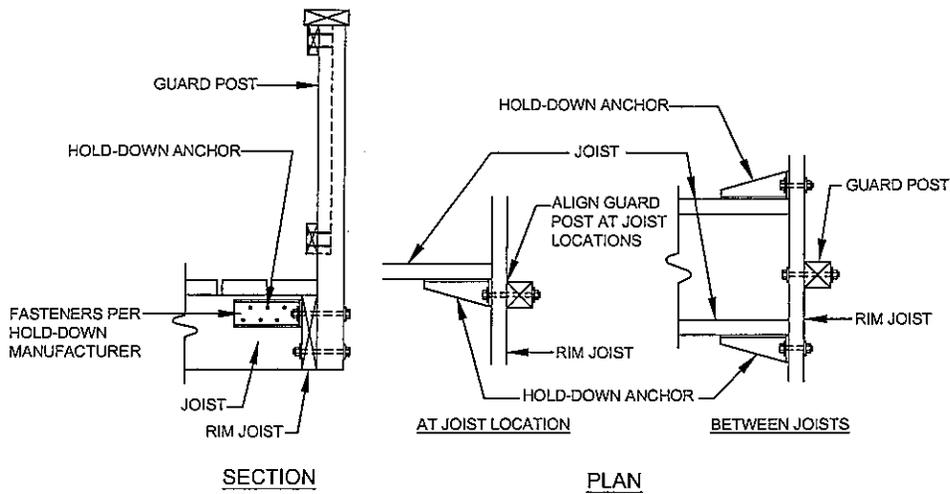


For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm

**FIGURE R507.12.1(1)
DECK GUARD**



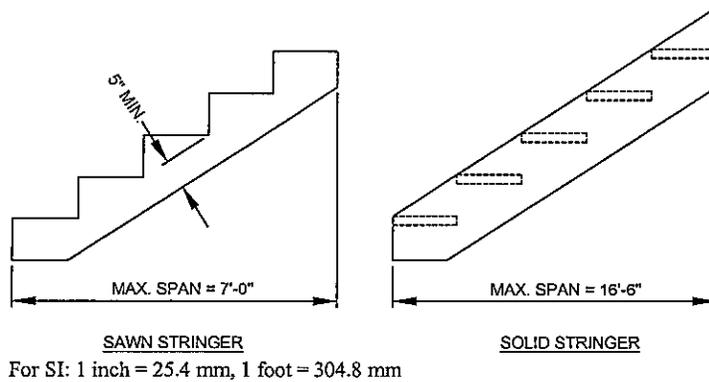
**FIGURE R507.12.1(2)
GUARD POST TO END JOIST**



**FIGURE R507.12.1(3)
GUARD POST TO RIM JOIST**

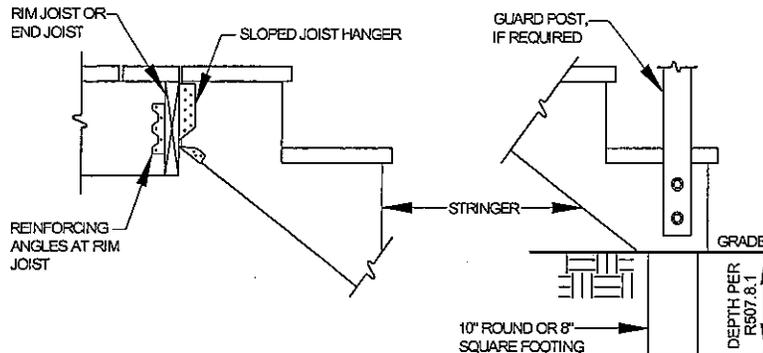
R507.13 Deck stairs. Deck stairs shall be constructed in accordance with this section and Section R311.7. Where a flight of stairs has a vertical rise greater than that required per Section R311.7.3, an intermediate landing shall be provided in accordance with Section R311.7.6 and designed as a free-standing deck in accordance with Section R507.10.

R507.13.1 Stair stringers. Stair stringers shall be constructed of sawn nominal 2x12 members at 18 inches (457 mm) on center with a throat dimension of 5 inches (127 mm) and a maximum span length as shown in Figure R507.13.1. Stairs with a width equal to 36 inches (914 mm) shall be permitted to be constructed with two solid 2x12 stringers with a maximum span length as shown in Figure R507.13.1.



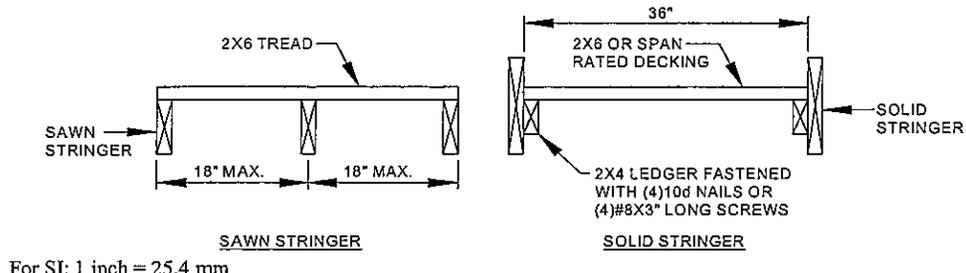
**FIGURE R507.13.1
STAIR STRINGER REQUIREMENTS**

R507.13.2 Stringer bearing. Stringers shall bear on joist hangers attached to the deck structure and on footings at grade in accordance with Figure R507.13.2. Joist hangers shall be specifically designed to accommodate sloped connections and shall have a minimum capacity of 625 pounds (2780 N). Reinforcing angles at rim joist locations only shall have a minimum capacity of 325 pounds (1446 N).



**FIGURE R507.13.2
STRINGER BEARING**

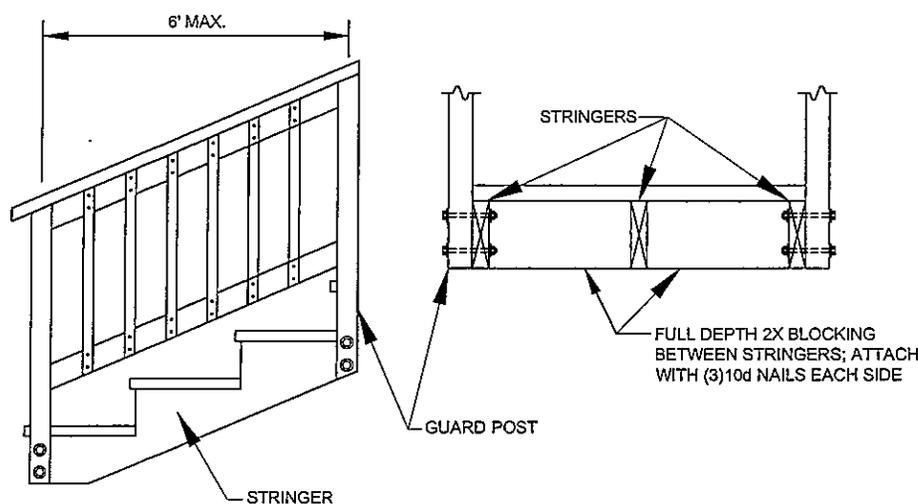
R507.13.3 Treads and risers. Stair treads shall be constructed in accordance with this section and Figure R507.13.3. Treads shall be composed of nominal 2x6 lumber. Treads of stairs constructed with solid stringers shall be permitted to be composed of span rated decking. Risers shall be permitted to be composed of nominal 1x lumber. Openings in risers shall not allow the passage of a 4 inch (102 mm) diameter sphere.



For SI: 1 inch = 25.4 mm

**FIGURE R507.13.3
TREAD REQUIREMENTS**

R507.13.4 Stair guard. Guards for stairs shall be as required per Section R312.1.1 and constructed in accordance with Section R507.12. The attachment of a stair guard post to the stringers shall be constructed in accordance with Figure R507.13.4.



For SI: 1 foot = 304.8 mm

**FIGURE R507.13.4
STAIR GUARD CONNECTION**

R507.13.5 Stair handrails. Handrails for stairs shall be as required per Section R311.7.8. Where the top guard rail does not comply with the handrail grip-size requirements in Section R311.7.8.3, a separate handrail conforming to these requirements shall be required.

R507.13.6 Ramps. Ramps from decks shall be as required in Section R311.8. Details for stringers, guards and handrails shall be similar to those for stairs.

Supporting Statement (including intent, need, and impact of the proposal):

The current deck code Section R507 is new to the 2012 IRC. It was created to put all of the connection details for anchoring the deck to the house in one place. However it does not provide any prescriptive requirements for building a deck.

Currently about one-third of the building permits in our county are for decks. The vast majority of these decks are to be built by homeowners. Since the current code provides them no prescriptive guidelines, many jurisdictions across the country have tried to help by creating local, deck guides or aiming the weekend warrior to DCA6 by the American Wood Council.

This submittal is not intended to describe every possible combination of design features that professional, custom deck builders are so proud of creating for *Deck Builders Magazine*. Rather this section is simplified so the average person can understand the requirements, size their materials and have a reasonable expectation that the deck will be safe.

Section R507 borrows heavily from DCA6 and uses the "wet" span tables to size the joists. If DHCD decides to use the new span tables just adopted by the Southern Pine folks the tables will have to be adjusted accordingly.

This is the same proposal I have submitted to ICC for the 2015 IRC to be heard in Dallas.

Submittal Information

Date Submitted: 2-12-2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: John S. Trenary, CBO Representing: Region III VBCOA / Frederick County

Mailing Address: Frederick County Inspections Department, 107 N. Kent Street, Winchester VA 22601

Email Address: jtrenary@co.frederick.va.us Telephone Number: (540)665-5650

Proposal Information

Code(s) and Section(s): IRC 2012 Section R507.2.3 Deck lateral load connection

Proposed Change (including all relevant section numbers, if multiple sections):

R507.2.3 Deck lateral load connection. The lateral load connection required by Section R507.1 shall be permitted to be in accordance with Figure R507.2.3. Where the lateral load connection is provided in accordance with Figure 507.2.3, hold-down tension devices shall be installed in not less than two locations per deck, ____ each device shall **be spaced so one is located in each end of the deck attachment at a minimum distance apart of one third of the horizontal length** and have an allowable stress design capacity of not less than 1500 pounds (6672N).

Supporting Statement (including intent, need, and impact of the proposal):

This code change would clarify the intent of the code for the proper spacing of the tension devices when they are utilized. The current language would not prevent the installation of the two devices at a single location.

Cost Impact: This code change should not increase the cost of construction.

Submittal Information

Date Submitted: June 13, 2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual(s) Government Entity Company

Name: Bryan Deem

Representing: Stafford County

Mailing Address: 359 Laurel Drive, Aylett, Virginia 23009

Email Address: bdeem@co.stafford.va.us

Telephone Number: 540-658-4504

Proposal Information

Code(s) and Section(s): Change section 507.2.3

Proposed Change (including all relevant section numbers, if multiple sections):

R507.2.3 Deck lateral load connection.

The lateral load connection required by Section R507.1 shall be permitted to be in accordance with Figure R507.2.3. Where the lateral load connection is provided in accordance with Figure 507.2.3, hold-down tension devices shall be installed in not less than two locations per deck. The devices shall be placed on either of the first two joists at both ends of the deck. Each device shall have an allowable stress design capacity of not less than 1500 pounds (6672 N).

Supporting Statement (including intent, need, and impact of the proposal):

Reason:

The Residential code gives a prescription to achieve lateral bracing but without specifying placement details such a system can become ineffective with that which they purport to do. Under the existing provision the installer could place both hold down devices on one side of the deck or place the ineffectively close together. The decking can act essentially as a shearwall or diaphragm if the hold downs are placed proportionately.

Submittal Information

Date Submitted: 6/13/12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Bryan Deem

Representing: Stafford County

Mailing Address: 359 Laurel Drive, Aylett, Virginia 23009

Email Address: bdeem@co.stafford.va.us

Telephone Number: 540-658-4504

Proposal Information

Code(s) and Section(s): IRC table R507.2.

Proposed Change (including all relevant section numbers, if multiple sections):

I propose to replace table R507.2 in the IRC with Table 5 from the DCA 6.

Supporting Statement (including intent, need, and impact of the proposal):

Table R507.2 in the International Residential Code is restrictive to the extent that it does not apply to many existing installations. While the IRC limits ledger attachment to either solid sawn or LVL band joists, a majority of existing homes use rim board or other engineered wood products (EWP's) for band joist material.

The Design for Code Acceptance for Decks (version 6) incorporates a table that permits ledger attachment to EWP with some conditional restraints. This table would grant more flexibility for contractors to achieve a sound ledger attachment prescriptively.

Submittal Information

Date Submitted: 6/13/12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Chuck Bajnai

Representing: VBCOA IRC Committee

Mailing Address: 9800 Government Center Parkway, Chesterfield, VA, 23832

Email Address: bajnaic@chesterfield.gov

Telephone Number: 804-717-6428

Proposal Information

Code(s) and Section(s): R602.3.1

Proposed Change (including all relevant section numbers, if multiple sections):

1. Delete Table R602.3.1 (and the accompanying drawing):

TABLE R602.3.1

~~MAXIMUM ALLOWABLE LENGTH OF WOOD STUDS EXPOSE TO WIND SPEEDS OF 100 MPH OR LESS IN SEISMIC DESIGN CATEGORIES A, B, C, D₀, D₄, and D₂^{b,e}~~

2. Modify Section R602.3.1 as follows:

R602.3.1. Stud size, height and spacing. The size, height and spacing of studs shall be in accordance with Table R602.3(5).

Exceptions:

1. no change

~~2. Studs more than 10 feet in height which are in accordance with Table R602.3.1.~~

2. Where snow loads do not exceed 25 pounds per square foot, walls exposed to wind loads of 100 mph or less shall be permitted over 12 feet tall for either supporting a roof load with not more than 6' of tributary length, or for a gable end wall. The studs shall be a minimum 2x6 at 16 inches on center with a maximum height of 18 feet or 2x6 at 12 inches on center with a maximum height of 20 feet. Openings shall be permitted with jack studs supporting the header in accordance with Section R602.7 and double king studs outboard of the jacks on each side of the opening. If any portion of the two-story wall is required to be a qualified braced wall panel to achieve compliance with Section R602.10.2 for either floor, then the wall shall be designed by a registered design professional in accordance with the International Building Code.

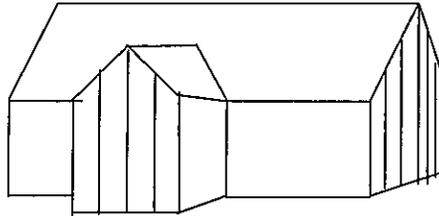
Supporting Statement (including intent, need, and impact of the proposal):

This proposal is submitted to ICC for the 2015 IRC by the Building Code Action Committee (BCAC) and moved forward for the 2012 VRC for the benefit of all users.

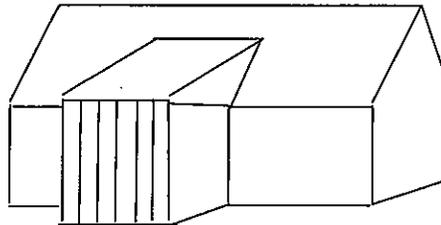
Table R602.3.1 has been the source of a lot of confusion. The footnote b is seldom read or understood. This change is submitted to:

1. Eliminate the table - the source of the confusion
2. Provide clarification as to where it can be applied (see the three options below)
3. Write in code language the requirements for when tall studs can be used.
4. To say that you cannot use these tall studs where the wall is an integral part of the wall bracing system.

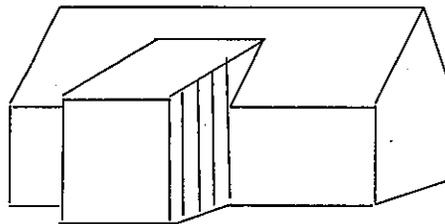
Tall studs could be used for two-story gable ended wall supporting nothing more than self weight.



Tall studs could be used for a two-story projection where the roof framing runs perpendicular to the wall so long as the overbuilt roof has a trib length of 6' or less



Tall studs could be used for a two-story projection where the roof framing runs parallel to the wall such that it was supporting nothing more than self weight



Submittal Information

Date Submitted: _____

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Chuck Bajnai

Representing: VBCOA IRC Committee

Mailing Address: 9800 Government Center Parkway, Chesterfield, VA, 23832

Email Address: bajnaic@chesterfield.gov

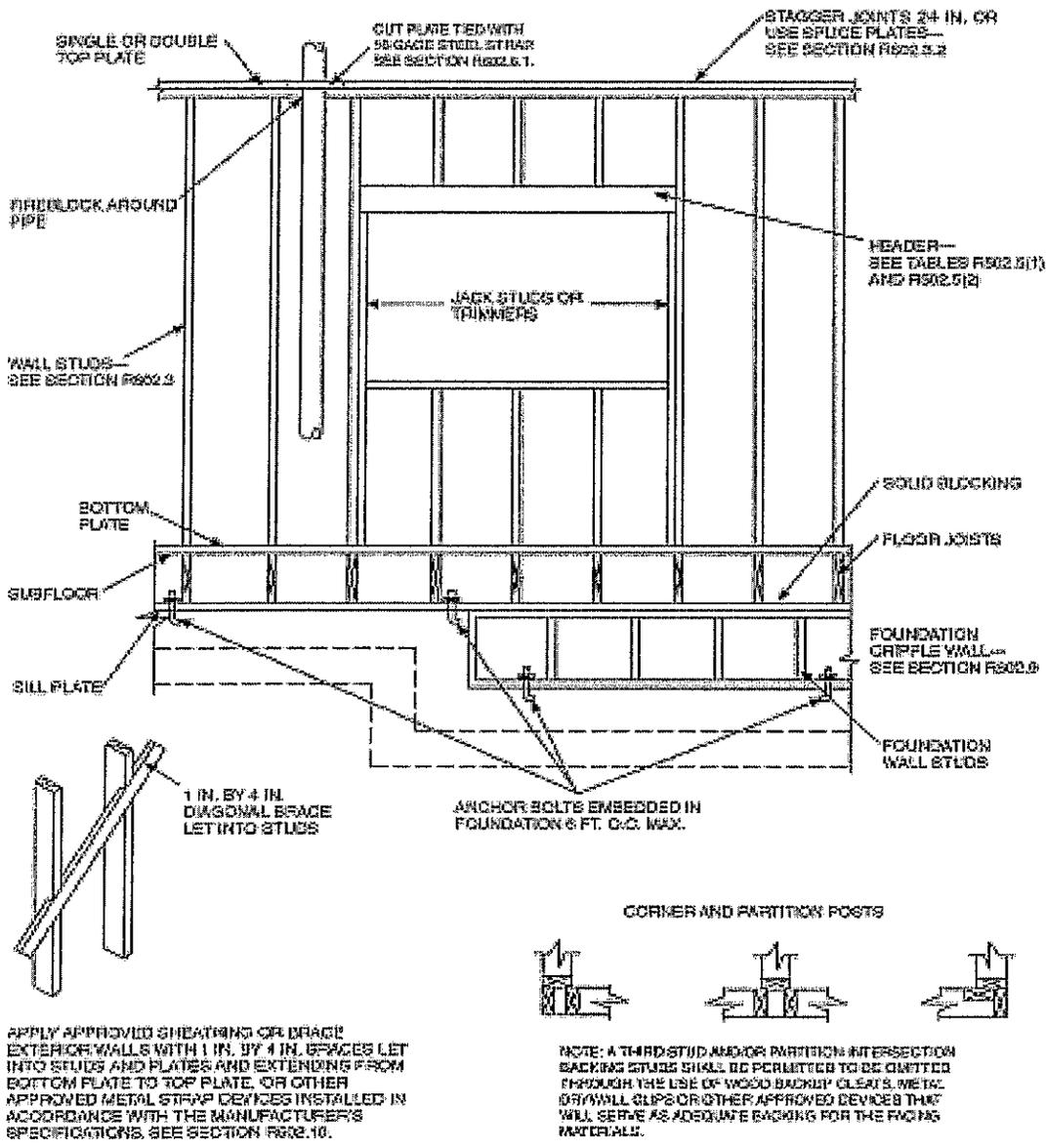
Telephone Number: 804-717-6428

Proposal Information

Code(s) and Section(s): Figure R602.3(2) and Section R602.7.4

Proposed Change (including all relevant section numbers, if multiple sections):

1. Modify Figure R602.3(2) as shown:



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

FIGURE R502.3(2)
FRAMING DETAILS

2. Add new Section R602.7.4 as follows:

602.7.4 Supports for headers. Headers shall be supported on each end with one or more jack studs in accordance with Table R502.5(1) or Table R502.5(2). A king stud shall be adjacent to the jack stud on each end of the header and nailed at each end of the header with 4-16d nails.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is submitted to ICC for the 2015 IRC by the Building Code Action Committee (BCAC) and moved forward for the 2012 VRC for the benefit of all users.

All wooden beams must be designed to account for lateral stability and rotational movement potential. Currently the International Residential Code provides no prescriptive solution for wooden beam stability other than a reference to AFPA NDS in Section R301.1.

The NDS 2005 details methods for achieving beam stability in sections 4.4.1 and 3.3.3. These sections are complex, formulaic and difficult to interpret for those individuals not familiar with engineering methods and NDS standards. Depending on the depth/ breadth ratio of the beam, various means of restraint are required at the ends, compression and tension edges of the member.

This simple addition to the IRC will provide a prescriptive solution for more stable beam installations, especially at perimeter walls where there is often little to prevent window and door header rotation. Often times with exterior window and door headers the only preventative means of beam rotation resistance would be king studs at the end of the header beams, which are currently not required expressly in the IRC. A pony wall that often occurs over door and window headers may or may not provide stability for the beam. Simply prescribing a king stud for all beams (where applicable) and specifying nailing for the king stud to header connection will provide greatly improved beam stability with little cost and effort.

From our less than scientific poll, nailing the headers to the king studs is already being done by most reputable home builders. The only thing this proposal does then is to prescribe the nail size.

Submittal Information

Date Submitted: _____

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Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Chuck Bajnai

Representing: VBCOA IRC Committee

Mailing Address: 9800 Government Center Parkway, Chesterfield, VA, 23832

Email Address: bajnaic@chesterfield.gov

Telephone Number: 804-717-6428

Proposal Information

Code(s) and Section(s): R806.1

Proposed Change (including all relevant section numbers, if multiple sections):

Revise Section R806.1 as follows:

**SECTION R806
ROOF VENTILATION**

~~**R806.1 Ventilation required.** Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air.~~

~~**Exception:** Attic ventilation shall not be required when determined not necessary by the code official due to atmospheric or climatic conditions.~~

~~**R806.2 Minimum vent area.** The minimum net free ventilating area shall be 1/150 of the area of the vented space.~~

~~**Exception:** The minimum net free ventilation area shall be 1/300 of the vented space provided one or more of the following conditions are met:~~

- ~~1. In Climate Zones 6, 7 and 8, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.~~
- ~~2. At least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located no more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.~~

~~**R806.1 Ventilation.** The requirements for vented and unvented attic space and enclosed rafter space shall be in accordance with this section.~~

~~**R806.2 Vented attics.** Vented attics shall have a minimum net free ventilation area at least 1/300 of the area of the vented space. Between half and two thirds of the provided ventilation shall be installed at the eaves. The ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section~~

R802.7. Required ventilation openings shall open directly to the outside air. ~~R806.3 Vent and insulation clearance.~~ Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a 1-inch (25 mm) space shall be provided between the insulation and the roof sheathing and at the location of the vent.

R806.4 ~~R806.2.1~~ Installation and weather protection. Ventilators shall be installed in accordance with manufacturer's installation instructions. Installation of ventilators in roof systems shall be in accordance with the requirements of Section R903. Installation of ventilators in wall systems shall be in accordance with the requirements of Section R703.1.

R806.5 ~~R806.3~~ Unvented attic and unvented enclosed rafter assemblies. (no change to current text)

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is submitted to ICC for the 2015 IRC by the Building Code Action Committee (BCAC) and moved forward for the 2012 VRC for the benefit of all users.

1. This section was rewritten to clarify vented and unvented attics. The current charging language in the first sentence of Section R806.1 says that all attics shall have cross ventilation, and yet Section R806.5 acknowledges unvented attics. The new Section R806.1 offers charging language for both conditions.
2. More importantly however, Section 806.2 now incorporates the concepts that were passed in Portland for the IBC, namely that more than half of the incoming ventilation for attics should come from low sources (eaves) and exit up high (roof vent, mechanical vents, gable end vents, etc.). A range is provided: 1/2 to 2/3 should be low at the eaves for proper chimney effect. Currently the code would allow 100% of the attic ventilation to be from ridge vents...where would the cross ventilation come from?

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Chuck Bajnai

Representing: VBCOA IRC Committee

Mailing Address: 9800 Government Center Parkway, Chesterfield, VA, 23832

Email Address: bajnaic@chesterfield.gov

Telephone Number: 804-717-6428

Proposal Information

Code(s) and Section(s): R807 Attic Access

Proposed Change (including all relevant section numbers, if multiple sections):

Modify Section R807 as follows:

**SECTION R807
ATTIC ACCESS**

R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an *attic* access opening to *attic* areas that exceed 30 square feet (2.8 m²) and that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall not be less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high (559 mm wide by 762 mm high). When the access is located in a ceiling, minimum unobstructed headroom in the *attic* space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical *equipment* is located in *attics*.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is submitted to ICC for the 2015 IRC by the Building Code Action Committee (BCAC) and moved forward for the 2012 VRC for the benefit of all users.

The primary reason for this change is to clarify that the volume of space required for an attic access should be measured as the actual usable space. The clearance should be measured to collar ties, insulation curbs, or other permanent obstructions, not always to the ceiling or roof framing members. The revision of the text describing the 30 square feet is an editorial revision and is not intended to change the requirement, but make it more understandable.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Mike Toalson

Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com

Telephone Number: 804-643-2797

Proposal Information

Code(s) and Section(s): R905.2.8.5 Drip Edge Installation

Proposed Change (including all relevant section numbers, if multiple sections):

See Attached: Would delete the mandate that all new homes be constructed with drip edges.

Supporting Statement (including intent, need, and cost impact of the proposal):

In some cases the requirement to install drip edges conflict with other elements of the roof system, such as the fastening requirements for some gutter systems. The drip edge requirement also conflicts with some leaf protection systems. Now is not the time to be adding unnecessary new costs to new home construction.

Submittal Information

Date Submitted: 12-28-12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150

Recommended Amendment:

Modify the section as shown below:

~~**R905.2.3.5 Drip edge.** A drip edge shall be provided at eaves and gables of shingle roofs. Adjacent pieces of drip edge shall be overlapped a minimum of 2 inches (51 mm). Drip edges shall extend a minimum of 0.25 inch (6.4 mm) below the roof sheathing and extend up the roof deck a minimum of 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at a maximum of 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the underlayment on gables. Unless specified differently by the shingle manufacturer, shingles are permitted to be flush with the drip edge.~~

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Mike Toalson-Randy Melvin Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com Telephone Number: 804 643 2797
randy.melvin@whihomes.com 410 365 7781

Proposal Information

Code(s) and Section(s): IRC Section Number: Table N1102.1.1 and Table N1102.1.3

Proposed Change (including all relevant section numbers, if multiple sections):
Modify the section as shown below:

**TABLE N1102.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a**

CLIMATE ZONE	FENES-TRATION U-FACTOR ^b	SKYLIGHT ^b U-FACTOR	GLAZED FENES-TRATION SHGC ^{b,e}	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ^f	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE AND DEPTH	CRAWL SPACE ^c WALL R-VALUE
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13+5 ^h	8/13	19	5/13 ^f	0	5/13
4 except Marine	0.35	0.55	0.40	49	15 or 13 + 1 ^h 20 or 13+5 ^h	8/13	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.32	0.55	NR	49	20 or 13+5 ^h	13/17	30 ^g	15/19	10, 2 ft	15/19
6	0.32	0.55	NR	49	20+5 or 13+10 ^h	15/20	30 ^g	15/19	10, 4 ft	15/19
7 and 8	0.32	0.55	NR	49	20+5 or 13+10 ^h	19/21	38 ^g	15/19	10, 4 ft	15/19

All Footnotes remain unchanged

**TABLE 1102.1.3
EQUIVALENT U-FACTORS^a**

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor ^b	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
1	0.50	0.75	0.035	0.082	0.197	0.064	0.360	0.477
2	0.40	0.65	0.030	0.082	0.165	0.064	0.360	0.477
3	0.35	0.55	0.030	0.057	0.098	0.047	0.091 ^c	0.136
4 except Marine	0.35	0.55	0.026	0.067 0.057	0.098	0.047	0.059	0.065
5 and Marine 4	0.32	0.55	0.026	0.057	0.082	0.033	0.050	0.055
6	0.32	0.55	0.026	0.048	0.060	0.033	0.050	0.055
7 and 8	0.32	0.55	0.026	0.048	0.057	0.028	0.050	0.055

All Footnotes remain unchanged

Reason:

The prescriptive basement wall requirement increased from R-10 to R-15 in the 2012 IECC. Calculations used to justify the change were based on energy models which had less sophisticated algorithms than Energy Plus which is now the preferred modeling software of the Department of Energy. When using Energy Plus, the energy savings in a 700 square foot basement totaled \$7/yr in Chicago (Climate zone 5). The additional cost for this is conservatively estimated at \$590. This makes the simple payback in excess of 58 years. This also will create a negative cash flow for the consumer. The values being modified by this proposal are the same as what was proposed by the Department of Energy in their proposal EC13 from the last cycle. The values currently adopted were an increase from proposals not submitted by the Department of Energy.

Supporting Statement (including intent, need, and cost impact of the proposal):

This modification increases the exterior walls insulation R value approximately 15% over 2009 IECC levels for climate zone 4, while still allowing the use of well proven, fiberglass batt insulation in 2x4 wall framing cavities. Requiring R20 cavity insulation or R 13 cavity insulation + R 5 continuous insulation is problematic on a number of fronts. The potential for condensation within wall cavities of higher R-value walls is still an ongoing research initiative which needs additional understanding before making such conversions would be prudent. Converting to 2x6 exterior framing, which would allow for continued use, of well proven, fiberglass batt insulation, can pose a major time consuming and costly architectural redesign and rebidding undertaking and particularly so in homes with 36" minimum landing sizes, hall widths, stair widths bathroom size constraints established by standard 60" tubs etc. To stay with 2x4 walls by alternatively using R-5, continuous exterior insulated sheathing, can also be problematic from both an engineering and practical field application perspective as this sheathing often fails to provide adequate shear wall performance, particularly in high wind areas, and an adequate nail base, when in real world applications, where exterior fasteners do always align with and penetrate the studs. In addition, installing foam directly over structural sheathing can lead to a condition representative of the one which created a significant number of issues with barrier EIFS. Spray high density polyurethane foam insulation, which has the potential for achieving R-20 in exterior 2x4 walls is also potentially problematic in that it can potentially cause health issues as advised by the EPA as well as having other non production

friendly application limitations. Please see attached photographs depicting nail base limitation of insulated sheathing, decay created by installing insulated sheathing over structural wood panels and EPA advisory on using spray polyurethane foam. The benefits of going directly to R20 or 13+5 exterior wall insulation requirements in lieu of the state taking an intermediate step of going to R-15 or R13+1 do not offset the associated unintended consequences and risks.

Submittal Information

Date Submitted: February 18, 2013

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Mike Toalson-Randy Melvin Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com Telephone Number: 804 643 2797
randy.melvin@whihomes.com 410 365 7781

Proposal Information

Code(s) and Section(s): IRC Section Number: Table N1102.1.1 and Table N1102.1.3

Proposed Change (including all relevant section numbers, if multiple sections):
Modify the section as shown below:

**TABLE N1102.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a**

CLIMATE ZONE	FENESTRATION U-FACTOR ^b	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC ^{b,e}	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ⁱ	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE AND DEPTH	CRAWL SPACE ^c WALL R-VALUE
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13+5 ^h	8/13	19	5/13 ^f	0	5/13
4 except Marine	0.35	0.55	0.40	49 38	20 or 13+5 ^h	8/13	19	10/13	10, 2 ft	10/13
5 and Marine 4	0.32	0.55	NR	49	20 or 13+5 ^h	13/17	30 ^g	15/19	10, 2 ft	15/19
6	0.32	0.55	NR	49	20+5 or 13+10 ^h	15/20	30 ^g	15/19	10, 4 ft	15/19
7 and 8	0.32	0.55	NR	49	20+5 or 13+10 ^h	19/21	38 ^g	15/19	10, 4 ft	15/19

**TABLE N1102.1.3
EQUIVALENT U-FACTORS***

Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor ^b	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor
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2	0.40	0.65	0.030	0.082	0.165	0.064	0.360	0.477
3	0.35	0.55	0.030	0.057	0.098	0.047	0.091 ^c	0.136
4 except Marine	0.35	0.55	0.026 0.030	0.057	0.098	0.047	0.059	0.065
5 and Marine 4	0.32	0.55	0.026	0.057	0.082	0.033	0.059	0.055
6	0.32	0.55	0.026	0.048	0.060	0.033	0.050	0.055
7 and 8	0.32	0.55	0.026	0.048	0.057	0.028	0.050	0.055

All Footnotes remain unchanged

Supporting Statement (including intent, need, and cost impact of the proposal):

Increasing ceiling R-value requirements, in the 2012 IECC, from R-38 to R-49, in climate zone 4, is not cost effective. It results in a 92 year payback period which creates a negative cash flow for the consumer. Excessive levels of attic insulation are more prone to condensation occurring within the insulation potentially resulting in moisture related damage to the home.

Climate Zone	Representative City	Change	Energy Savings	Incremental Cost	Simple Payback
4	Richmond, VA	R-38 > R-49-	\$15/yr	\$1,379	92 years

The energy modeling was done using the Energy Plus simulation engine and BEopt version 1.4, Cost figures came from ASHRAE RP-1481.

Submittal Information

Date Submitted: February 18, 2013

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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

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Proponent Information

(Check one): Individual Government Entity Company

Name: Mike Toalson-Randy Melvin

Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com
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Telephone Number: 804 643 2797
410 365 7781

Proposal Information

Code(s) and Section(s): IRC Section Number: N1102.4, N1102.4.1, N1102.4.1.1, N1102.4.1.2, N1102.4.1.2.1 (New) or N1102.4.1.2.2 (New), N1102.4.1.3 (New) and TABLE N1105.5.2(1)

Proposed Change (including all relevant section numbers, if multiple sections):

Modify the section as shown below:

~~N1102.4 Air leakage (Mandatory). The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections N1102.4.1 through N1102.4.4~~

~~N1102.4.1 Building thermal envelope. The *building thermal envelope* shall comply with Sections N1102.4.1.1 and N1102.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.~~

~~N1102.4.1.1 Installation (Mandatory). The components of the *building thermal envelope* as listed in Table N1102.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table N1102.4.1.1, as applicable to the method of construction. Where required by the *code official*, an *approved* third party shall inspect all components and verify compliance.~~

N1102.4.1.2 ~~Testing Air Sealing Verification~~

~~Air sealing. Building envelope air tightness shall be demonstrated to comply with one of the following options given by section N1102.4.1.2.1 or N1102.4.1.2.2~~

~~Testing option. The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour in Zones 1 and 2 and 3 air changes per hour in Zones 3 through 8. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the building official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the building official. Testing shall be performed at any time after creations of all penetrations of the building thermal envelope~~

~~During testing:~~

~~1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures;~~

2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully open.

(New) N1102.4.1.2.1 Testing option.

The building or dwelling unit shall be tested for air leakage. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the building official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the building official. Testing shall be performed at any time after creations of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures;
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully open.

(New) N1102.4.1.2.2 Visual inspection option.

Building envelope tightness shall be considered acceptable when the items listed in Table N1102.4.1.1, applicable to the method of construction, are field verified. Where required by the code official, an approved party independent from the installer shall inspect the air barrier.

(New) N1102.4.1.3 Leakage rate (Prescriptive). The building or dwelling unit shall have an air leakage rate not exceeding 5 air changes per hour as verified in accordance with Section N1102.4.1.2

TABLE N1105.5.2(1) SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Air Exchange Rate	Air leakage rate of 5 air changes per hour in Zones 1 and 2 and 3 air changes per hour in zones 3 through 8 at a pressure of 0.2 inches w.g. (50 pa). The mechanical ventilation rate shall be in addition to the air leakage rate and the same as in the proposed design, but no greater than $0.01 \times \text{CFA} + 7.5 \times (N_{br} + 1)$ where: CFA= conditioned floor area N_{br} =number of bedrooms Energy recovery shall not be assumed for mechanical ventilation	For residences that are not tested, the same air leakage rate as the standard reference design. For tested residences, the measured air exchange rate ^c . The mechanical ventilation rate ^d shall be in addition to the air leakage and shall be as proposed.

Supporting Statement (including intent, need, and cost impact of the proposal):

Mandatory 3 ACH 50 Pa, in climate zone 4, even under ideal circumstances, is very difficult to achieve and even more so for more affordable smaller and slab on grade homes. A reduction from 7ACH 50 PA, allowed under the 2009 energy code, to 3 ACH 50 Pa is an excessive order of magnitude change for a single code cycle. Even the latest version of

Energy Star for homes (3.0), allows up to 5 ACH 50 PA. Changing the prescriptive requirement to 5 ACH 50 Pa provides a significant step forward in energy efficiency relative to the 2009 energy code, but without introducing excessive risk of experiencing significant unintended consequences. Overly tight houses are less forgiving and can be problematic by causing potential back drafting of appliance and adversely impacting indoor air quality, especially when added means of electro mechanical outdoor air ventilation fail. In addition, overly tight homes are subject to increased humidity levels and increase the risk of potential condensation within walls or other building components. These modifications provide designers and builders the flexibility to trade-off building tightness with other performance path measures when using the performance path by removing the mandatory maximum air tightness requirement. This proposal does not change the stringency of the performance path relative to the prescriptive path it only increases the flexibility.

In addition, this modification provides a needed choice of air sealing verification methods. In addition to a blower door testing option, an alternative air sealing inspection option, is provided for. Field verified, systematically employed air sealing has been demonstrated to provide predictable results. A blower door test cannot be assumed to be more reliable than visual inspection. It has been shown multiple third party raters can produce significantly different testing outcomes for the same dwelling, at time in part, because of errors or inconsistencies in building volume calculations. There are apt to be times, given variable market conditions and locations, where the timely availability of cost effective blower door testing services may not be available within the state.

These modifications remove the mandatory maximum air tightness requirement and provide designers and builders the flexibility to trade-off building tightness with other performance path measures when using the performance path. This will provide energy neutral trade-offs for expensive and sometimes unattainable requirements with other building improvements. This proposal does not change the stringency of the code it only increases the flexibility.

TABLE N1105.5.2(1), which is applicable to simulated performance path calculations, has been modified to be in alignment and consistent with the changes in the other related section numbers.

Submittal Information

Date Submitted: February 18, 2013

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual(s) Government Entity Company

Name: Bryan Deem/Stephen Turchen/Guy Tomberlin Representing: VBCOA

Mailing Address: 359 Laurel Drive, Aylett, Virginia 23009

Email Address: bdeem@co.stafford.va.us Telephone Number: 540-658-4504

Proposal Information

Code(s) and Section(s): VCC, IECC R402

Proposed Change (including all relevant section numbers, if multiple sections):

Add a new subsection to Section R402 to read as follows:

R402.2.13 Mechanical rooms. If a room contains combustion equipment, and outside air is admitted directly into the room to provide combustion air for the equipment, then the walls, doors, ceilings, and floors of that room bound unconditioned space and must be insulated as part of the *building thermal envelope*.

Supporting Statement (including intent, need, and impact of the proposal):

Reason:

AHJs have disagreed regarding how to apply the energy code to "mechanical rooms" with permanently installed air ducts directly connecting the room to the outdoor environment. This proposal attempts to apply the code requirements to these rooms in a feasible and enforceable manner. Note that by identifying the enclosure of the mechanical room as part of the thermal envelope, these surfaces will be sealed as well as insulated, thereby preventing unwanted and energy-consuming air intrusion into the conditioned living space adjacent to the mechanical room. This provision has been submitted to ICC for review to be incorporated into the 2015 IRC, IECC.

Cost Impact:

To the extent that mechanical rooms have previously been considered unconditioned space and were enforced as such, this clarifying proposal has no cost impact. If these rooms were previously uninsulated, there will be some costs associated with insulating the customary framed walls and ceiling of the room, as well as sealing potential avenues of air infiltration to the conditioned living space beyond.

Submittal Information

Date Submitted: 6/13/12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Stephen Turchen

Representing: Virginia Building & Code Officials Association

Mailing Address: Suite 316 / 12055 Government Center Parkway, Fairfax, VA 22035

Email Address: Stephen.turchen@Fairfaxcounty.gov

Telephone Number: 703-324-1653

Proposal Information

Code(s) and Section(s): 2012 IECC Table R402.4.1.1

Proposed Change (including all relevant section numbers, if multiple sections):

For the Component "Walls," change Criteria to read:
Cavities within corners and headers shall be insulated by completely filling the cavity with a material having a thermal resistance of R3 per inch minimum. and The junction of the foundation and sill plate shall be sealed.

Supporting Statement (including intent, need, and impact of the proposal):
The current text says, "Corners and headers shall be insulated ..." All headers and corners? All the time? Insulated to what level? This provision is a carryover of the 2009 IECC requirement. Varying answers to these questions have already lead to varying interpretations of the code requirements, uneven enforcement, and confusion in the regulated community. This proposal intends to allay some of that confusion by specifying that headers and corners must be insulated when there is an available cavity (e.g., a two-ply 2x header in a 2x4 wall leaves no cavity to fill) and by providing a practical definition of what *insulated* means in this context. Typical insulating materials like fiberglass and rigid foam can easily achieve R3 per inch.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Stephen Turchen

Representing: Virginia Building & Code Officials Association

Mailing Address: Suite 316 / 12055 Government Center Parkway, Fairfax, VA 22035

Email Address: Stephen.turchen@Fairfaxcounty.gov

Telephone Number: 703-324-1653

Proposal Information

Code(s) and Section(s): 2012 IECC Table R402.4.1.1

Proposed Change (including all relevant section numbers, if multiple sections):

For the Component "Shower / tub on exterior wall," change Criteria to read:
Exterior walls adjacent to showers and tubs shall be insulated and an air barrier installed ~~separating them from the showers and tubs on the interior side of the exterior wall, adjacent to the shower / tub.~~

Supporting Statement (including intent, need, and impact of the proposal):

Field personnel have noticed that in many cases, a tub or shower is installed in place prior to insulating the exterior wall in the vicinity of the tub or shower, which results in the wall behind the tub not being fully (floor to ceiling) insulated, not being fully covered with a barrier material, or both. Negative outcomes include cold walls behind the tub / shower and moisture condensing inside the exterior wall when it is not protected by an air barrier and / or not insulated, especially possible in the high moisture environment of bathrooms. This clarification should help to ensure that any exterior wall, or portion thereof, behind the tub or shower will be treated as part of the continuous thermal envelope.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street

Email Address: taso@dhcd.virginia.gov

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Matt Westheimer

Representing: VBCOA Energy Conservation Committee

Mailing Address: 401 Lafayette Street, Williamsburg, VA. 23185

Email Address: mwest@williamsburgva.gov

Telephone Number: 757-220-6135

Proposal Information

Code(s) and Section(s): VCC (IECC Table R402.4.1.1)

Proposed Change (including all relevant section numbers, if multiple sections):

Add a footnote to Table R402.4.1.1 as shown:

TABLE R402.4.1.1	
AIR BARRIER AND INSULATION INSTALLATION	
COMPONENT	CRITERIA a,b
(no change to table)	

- a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.
- b. Structural integrity of headers shall be in accordance with the applicable building code.

Supporting Statement (including intent, need, and impact of the proposal):

The added footnote clarifies that the use of insulating material in headers cannot affect the structural integrity of the header required by the applicable building code.

Date Submitted: 3/21/12 modified 6/25/12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Matt Westheimer

Representing: VBCOA Energy Conservation Committee

Mailing Address: 401 Lafayette Street, Williamsburg, VA. 23185

Email Address: mwest@williamsburgva.gov

Telephone Number: 757-220-6135

Proposal Information

Code(s) and Section(s): Table R402.4.1.1

Proposed Change (including all relevant section numbers, if multiple sections):

Add footnote b. to the shower/tub on exterior wall

Air barriers used behind shower and tubs on exterior walls shall be of a permeable material that does not cause the entrapment of moisture in the stud cavity.

Supporting Statement (including intent, need, and impact of the proposal):

Putting this reference in will eliminate the use of plastic and other products that are installed behind tubs and showers on exterior walls that cause the unwanted buildup of moisture in the stud cavity.

Submittal Information

Date Submitted: 9-24-12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

600 East Main Street

Suite 300

Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Bryan Deem

Representing: Stafford County

Mailing Address: 359 Laurel Drive, Aylett, Virginia 23009

Email Address: bdeem@co.stafford.va.us

Telephone Number: 540-658-4504

Proposal Information

Code(s) and Section(s): Change section N1103.2.1 accordingly:

Proposed Change (including all relevant section numbers, if multiple sections):

N1103.2.1 (R403.2.1) Insulation (Prescriptive). Supply ducts in attics shall be insulated to a minimum of R-8. All other ducts shall be insulated to a minimum of R-6.

Exceptions:

1. Ducts or portions thereof located completely inside the *building thermal envelope*.

Add exception #2 to say:

2. Joist spaces used as combustion air ducts in accordance with IRC G 2407.11 shall not be used in floor required to be insulated according to R 1102.1.1.

Supporting Statement (including intent, need, and impact of the proposal):

A joist space used for a combustion air duct would certainly create a void in the building thermal envelope if used in an insulated floor assembly. With other options available for conveyance of both indoor and outdoor combustion air, there would be little compromise avoiding this type of application when it compromises the building thermal envelope.

Submittal Information

Date Submitted: 6/13/12

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Mike Toalson

Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com

Telephone Number: 804-643-2797

Proposal Information

Code(s) and Section(s): 403.2.2 Duct Testing

Proposed Change (including all relevant section numbers, if multiple sections):

See Attached: 1. Post Construction Test: Change total leakage from less or equal to 4 cfm per 100 square feet to 6 cfm per 100 square feet.

See Attached: 2. Rough-in Test: Change total leakage shall be less than or equal to 4 cfm per 100 square feet to 6cfm per square feet.

Supporting Statement (including intent, need, and cost impact of the proposal):

The additional limit on air leakage in Zone 4 in the current housing economy does not justify the additional expense.

Submittal Information

Date Submitted: 12-28-12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



R403.2.2 Sealing (Mandatory). Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with either the *International Mechanical Code* or *International Residential Code*, as applicable.

Exceptions:

1. Air-impermeable spray foam products shall be permitted to be applied without additional joint seals.
2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
3. Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.

Duct tightness shall be verified by either of the following:

1. Postconstruction test: Total leakage shall be less than or equal to 4 cfm (113.3 L/min) per 100 square feet (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.
2. Rough-in test: Total leakage shall be less than or equal to 4 cfm (113.3 L/min) per 100 square feet (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test. If the air handler is not installed at the time of the test, total leakage shall be less than or equal to 3 cfm (85 L/min) per 100 square feet (9.29 m²) of conditioned floor area.

Exception: The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity X Company

Name: Mike Toalson

Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com

Telephone Number: 804-643-2797

Proposal Information

Code(s) and Section(s): R 403.4.2 Hot Water Pipe Insulation

Proposed Change (including all relevant section numbers, if multiple sections):

See Attached

Supporting Statement (including intent, need, and cost impact of the proposal):

The cost of insulating water pipes throughout a new home would far outweigh any benefits in energy efficiency gained by this requirement.

Submittal Information

Date Submitted: 12-28-12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



Recommended Amendment:

Delete the Section shown below (Delete entire section):

~~403.4.2 Hot water pipe insulation (Prescriptive).. R403.4.2 Hot water pipe insulation (Prescriptive). Insulation for hot water pipe with a minimum thermal resistance (*R*-value) of R-3 shall be applied to the following:~~

- ~~1. Piping larger than 3/4 inch nominal diameter.~~
- ~~2. Piping serving more than one dwelling unit.~~
- ~~3. Piping from the water heater to kitchen outlets.~~
- ~~4. Piping located outside the conditioned space.~~
- ~~5. Piping from the water heater to a distribution manifold.~~
- ~~6. Piping located under a floor slab.~~
- ~~7. Buried piping.~~
- ~~8. Supply and return piping in recirculation systems other than demand recirculation systems.~~
- ~~9. Piping with run lengths greater than the maximum run lengths for the nominal pipe diameter given in Table R403.4.2.~~

All remaining piping shall be insulated to at least R-3 or meet the run length requirements of Table R403.4.2.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: Fairfax County and VPMIA/VBCOA Code Committees

Mailing Address: 12055 Government Center Parkway Fairfax, Virginia 22030

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information

Code(s) and Section(s): VECC Section 403.6

Proposed Change (including all relevant section numbers, if multiple sections):

Add new exception. VECC Section 403.6 add new text and Exception with text as follows:

VECC - R403.6

Revise as follows:

R403.6 Equipment/appliance Sizing (Mandatory). Heating and cooling equipment and appliances shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies.

Exception: Heating and cooling equipment and appliances shall not be limited to the capacities determined in accordance with Manual S where any of the following conditions apply:

- 1- The specified equipment or appliance utilizes multi-stage technology or variable refrigerant flow technology and the loads calculated in accordance with Manual J fall within the range of the manufacturer's published capacities for that equipment or appliance.
- 2- The specified equipment or appliance manufacturer's published capacities cannot satisfy both the total and sensible heat gains calculated in accordance with Manual J and the manufacturer's next larger standard size unit is specified.
- 3- The specified equipment or appliance is the lowest capacity unit available from the specified manufacturer.

Supporting Statement (including intent, need, and impact of the proposal):

Item 1 - Current technology is widely available that incorporates multi-stage or VRF systems for increased efficiency. Some of these appliances have such a wide span of functionality that they extend beyond the allowable requirements outlined in Manual S. However, this technology allows the appliance to operate between minimum and maximum capacities, based on loads imposed, thus eliminating the problems associated with single-stage, oversized appliances. Additionally, the appliance will operate efficiently during times where outdoor air temperatures exceed those used to calculate the loads in Manual J.

Item 2 - Often times, the appliance manufacturer's published total and sensible capacities are at odds with the requirements of Manual S. There are many cases where the total capacity of the appliance will fall within the parameters of Manual S in relation to the calculated total gain, however the sensible capacity of the appliance may fall short of the calculated sensible gain, thus unable to provide efficient sensible cooling for the space. When the manufacturer's next standard size larger is chosen to meet the sensible gain, the total capacity of the appliance may then exceed the requirements of Manual S. Choosing the larger appliance will enable a more efficient and effective system.

Item 3 - The current code language does not have provisions for sizing appliances for minimal dwelling unit or dwelling addition loads, other than forcing owners and contractors to change appliances to less desirable systems. For example; a 2 story townhouse, in climate zone 4, with 600 square feet per floor wants to utilize a two-zone system, or a separate heat pump system for each floor. A 1.5 ton unit per floor would exceed the requirements of Manual S, however a 1.5 ton unit is the smallest available appliance by the desired manufacturer. Current language would require a complete design change, such as utilizing a single appliance to serve the entire dwelling rather than the more desirable two-zone system, or requiring a system that utilizes electric baseboard heating and window-mounted air conditioning units. This is absurd, and an injustice to an owner that desires to reduce energy costs.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: Fairfax County and VPMIA/VBCOA Code Committees

Mailing Address: 12055 Government Center Parkway Fairfax, Virginia 22030

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information

Code(s) and Section(s): VRC Section M1401.3

Proposed Change (including all relevant section numbers, if multiple sections):

Add new exception. VIRC Section M1401.3 add new text and Exception with text as follows:

VRC M1401.3

Revise as follows:

M1401.3 Equipment/appliance Sizing. Heating and cooling equipment and appliances shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies.

Exception: Heating and cooling equipment and appliances shall not be limited to the capacities determined in accordance with Manual S where any of the following conditions apply:

- 1- The specified equipment or appliance utilizes multi-stage technology or variable refrigerant flow technology and the loads calculated in accordance with Manual J fall within the range of the manufacturer's published capacities for that equipment or appliance.
- 2- The specified equipment or appliance manufacturer's published capacities cannot satisfy both the total and sensible heat gains calculated in accordance with Manual J and the manufacturer's next larger standard size unit is specified.
- 3- The specified equipment or appliance is the lowest capacity unit available from the specified manufacturer.

Supporting Statement (including intent, need, and impact of the proposal):

Item 1 - Current technology is widely available that incorporates multi-stage or VRF systems for increased efficiency. Some of these appliances have such a wide span of functionality that they extend beyond the allowable requirements outlined in Manual S. However, this technology allows the appliance to operate between minimum and maximum capacities, based on loads imposed, thus eliminating the problems associated with single-stage, oversized appliances. Additionally, the appliance will operate efficiently during times where outdoor air temperatures exceed those used to calculate the loads in Manual J.

Item 2 - Often times, the appliance manufacturer's published total and sensible capacities are at odds with the requirements of Manual S. There are many cases where the total capacity of the appliance will fall within the parameters of Manual S in relation to the calculated total gain, however the sensible capacity of the appliance may fall short of the calculated sensible gain, thus unable to provide efficient sensible cooling for the space. When the manufacturer's next standard size larger is chosen to meet the sensible gain, the total capacity of the appliance may then exceed the requirements of Manual S. Choosing the larger appliance will enable a more efficient and effective system.

Item 3 - The current code language does not have provisions for sizing appliances for minimal dwelling unit or dwelling addition loads, other than forcing owners and contractors to change appliances to less desirable systems. For example; a 2 story townhouse, in climate zone 4, with 600 square feet per floor wants to utilize a two-zone system, or a separate heat pump system for each floor. A 1.5 ton unit per floor would exceed the requirements of Manual S, however a 1.5 ton unit is the smallest available appliance by the desired manufacturer. Current language would require a complete design change, such as utilizing a single appliance to serve the entire dwelling rather than the more desirable two-zone system, or requiring a system that utilizes electric baseboard heating and window-mounted air conditioning units. This is absurd, and an injustice to an owner that desires to reduce energy costs.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Mike Toalson

Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com

Telephone Number: 804-643-2797

Proposal Information

Code(s) and Section(s): Table 405.5.2(1) Window Glazing

Proposed Change (including all relevant section numbers, if multiple sections):

See Attached

Supporting Statement (including intent, need, and cost impact of the proposal):

Windows have been artificially constrained by the 2012 IECC to not allow an energy neutral Tradeoff for new homes with with reduced window area. This proposed change merely returns the ability to the home designer to receive credit for improved energy efficiency associated with reduced window area ad gives the home owner an equally efficient home.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Mike Toalson-Randy Melvin Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com Telephone Number: 804 643 2797
randy.melvin@whihomes.com 410 365 7781

Proposal Information

Code(s) and Section(s): IRC Section Number: M1501.2 Transfer Air (new)

Proposed Change (including all relevant section numbers, if multiple sections):

Modify the section as shown below:

M1501.2 Transfer air (new). Air transferred from occupiable spaces other than kitchens, baths and toilet rooms shall not be prohibited from serving as makeup air for exhaust systems. Transfer openings between spaces shall be of the same cross-sectional area as the free area of the makeup air openings. Where louvers and grilles are installed, the required size of openings shall be based on the net free area of each opening. Where the design and free area of louvers and grilles are not known, it shall be assumed that wood louvers will have 25-percent free area and metal louvers and grilles will have 75-percent free area.

Supporting Statement (including intent, need, and cost impact of the proposal):

The IMC contains language allowing makeup air to be provided from areas other than the room where the exhaust system is located (transfer air). It is just as important to clarify the allowable use of transfer air for exhaust systems in the IRC as it is in the IMC. Without this provision, Section M1503.4 can be interpreted that the total amount of makeup air is required to be introduced in the direct vicinity of the exhaust. This is not required in commercial construction, and so the IRC should be brought into alignment with the IMC in this area. Most of the language is taken from existing sections of the code. They include: Transfer air: IMC Section 403; Transfer openings: Section M1602 Item 6; and Louvers and grilles: Section G2407.10.

Submittal Information

Date Submitted: February 18, 2013

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Mike Toalson-Randy Melvin

Representing: HBA of Virginia

Mailing Address: 707 East Franklin Street, Richmond, VA 23219

Email Address: mltoalson@hbav.com
randy.melvin@whihomes.com

Telephone Number: 804 643 2797
410 365 7781

Proposal Information

Code(s) and Section(s): IRC Section Number: M1503.4 Makeup Air Required

Proposed Change (including all relevant section numbers, if multiple sections):

Modify the section as shown below:

M1503.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19 m³/s) shall be mechanically or naturally provided with makeup air at a rate approximately equal to the difference between the exhaust air rate and 400 cubic feet per minute. Such makeup air systems shall be equipped with a not less than one damper. Each damper shall be a gravity damper or electrically operated damper that automatically opens when the exhaust system operates ~~means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.~~

Exception: Where all appliances in the house are of sealed combustion, power-vent, unvented, or electric, the exhaust hood system shall be permitted to exhaust up to 600 cubic feet per minute (0.28 m³/s) without providing makeup air. Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.28 m³/s) shall be provided with a makeup air at a rate approximately equal to the difference between the exhaust air rate and 600 cubic feet per minute.

Supporting Statement (including intent, need, and cost impact of the proposal):

As originally written in the 2012 IRC, this section allows range hoods up to 400 cfm to be installed without makeup air. It would be consistent to require makeup air equaling the amount above and beyond 400 cfm for larger fans. Essentially, there would be no difference between the effect a 400 cfm fan has on a house and a 600 cfm fan with 200 cfm of makeup air. This would also improve the feasibility and acceptance of this code section as well as cut down on the amount of wasted energy and potential occupant discomfort caused by needlessly introducing excessive amounts of unconditioned air.

Currently this section of the code does not take into effect the difference between homes where all appliances in the home are of sealed combustion, power-vent, unvented or electric, power and those which contain one or more naturally vented appliances. Because the potential for appliance back drafting is greatly reduced where naturally vented appliances are not present, the 400 cfm threshold can be raised to 600 cfm where only sealed combustion, power-vent, unvented, or electric, power appliances are used in the dwelling. This would allow for the use of more effective, common residential, 500 to 600 cfm cooktop down-draft exhaust fans without the need to unnecessarily add makeup air.

Adding the words, "mechanically or naturally" clarify either means of providing the required quantity of make-up air, including transfer air, and the added words "electrical or gravity" clarify either type of damper is allowed. A gravity damper has the added benefit of equalizing depressurization in the house for any other reason such as the use of bath fans and clothes dryers.

Submittal Information

Date Submitted: February 18, 2013

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Robert Torbin

Representing: Omega Flex, Inc

Mailing Address: 213 Court Street Suite 1001 Middletown, CT 06457

Email Address: bob.torbin@omegaflex.net

Telephone Number: (413) 388-2390

Proposal Information

Code(s) and Section(s): USBC G2411.1

Proposed Change (including all relevant section numbers, if multiple sections):

ADD THE FOLLOWING NEW TEXT TO SECTION G2411.1:

CSST with an arc-resistant jacket listed by an approved agency for installation without the direct bonding, as prescribed in this section, shall be installed in accordance with its listing and the manufacturer's installation instructions.

Supporting Statement (including intent, need, and impact of the proposal):

See attached Supporting Statement.

Submittal Information

Date Submitted: 6 August 2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
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Supporting Statement

The use of a CSST product with a protective, arc-resistant jacket is an alternate method of protection against electrical arcing damage caused by high voltage transient events such as a nearby lightning strike. An arc-resistant jacket does not rely on direct bonding to the grounding electrode system to reduce or eliminate damage from electrical arcing. Instead, the protective jacket acts as a resistor and is designed to locally absorb and dissipate the arcing energy over a short length of the jacket. The jacket, in essence, disrupts the focus of the arc and reduces the energy level below the threshold value that can cause a perforation of the tubing wall. This dynamic action is equally effective compared to the current CSST bonding method regardless of the bonding conductor size or length. The protection against arcing is provided uniformly throughout the piping system, and is not affected by close proximity to other metallic systems that may not be similarly bonded.

The ICC Evaluation Service has developed listing criteria for arc-resistant jackets to verify that this design approach will provide an ability to resist damage from transient arcing currents under a wide range of conditions. A copy of the PMG Listing Criteria (LC1024) is included with this proposal. Currently, three CSST products are listed to PMG LC1024. The listing criteria defines the experimental means to determine whether the protective jacket provides resistance to damage from indirect lightning strikes without the need for additional bonding as prescribed currently in Section G2411.1 of the VA Uniform Statewide Building Code. A proposal to include performance requirements for an arc-resistant jacket based on the PMG LC1024 Listing Criteria is presently under consideration by the ANSI LC-1 TAG.

Extensive testing has been performed by Lightning Technologies Inc. (Pittsfield, MA) to demonstrate that the protective, arc-resistant jacket can resist in excess of 4.5 coulombs without a perforation of the tubing wall. A copy of a pertinent LTI test report is attached. By comparison, experimental testing has determined that energy levels around 0.15 coulombs are sufficient to perforate uncoated CSST. While no product or system is immune to damage from a direct lightning strike, lightning experts agree that a level of approximately 2 coulombs is the upper end of the energy level induced in metallic systems (inside the building) from a nearby/indirect lightning strike. A recent IEEE paper by Dr. Michael Stringfellow (attached) on lightning damage confirms that the proposed energy value (2 coulombs and lower) appears consistent with lightning damage observed in the field, and the acceptance level (4.5 coulombs) represents an appropriate safety threshold for this type of lightning protection.

The cost impact to the consumer of allowing the use of arc-resistant jacket CSST as an alternate method of bonding CSST should be minimal if not zero. The small extra cost per foot of arc-resistant jacket is more than offset by the elimination of the two bonding connections, the 6 AWG conductor wire, and the labor time for the electrician to install.

CSST with arc-resistant jacket has been commercially installed since 2004, and at the present time, three different (black-jacketed) products are commercially available. Field experience has been very favorable with no known cases of indirect lightning damage to CSST piping systems using these arc-resistant jackets. Currently, at least 10 states permit the installation of the arc-resistant CSST without the need for additional bonding. Given that both conventional (yellow) and advanced (black) CSST products will continue to be commercially available, both methods of electrical protection of CSST systems should be recognized and permitted within the Code.

Addenda to the Second Edition of
ANSI LC 1-2005 • CSA 2.26-2005
ANSI LC 1a-2009 • CSA 2.26a-2009

American National Standard/
CSA Standard for
Fuel Gas Piping Systems
Using Corrugated Stainless
Steel Tubing (CSST)

Preface

The standards set forth herein apply to the second edition of the Standard for Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST), ANSI LC 1-2005 • CSA 2.26-2005 and Addenda "a" ANSI LC 1a-2009 • CSA 2.26a-2009, and supersede corresponding standards therein. Following their preparation by the supervising Technical Advisory Group, they were accepted by the American National Standards Institute (ANSI) and the Interprovincial Gas Advisory Council (IGAC), and subsequently approved.

NOTE: Changes, other than editorial, are denoted by a vertical line in the margin.

APPROVED



December 2, 2011
American National Standards Institute, Inc.

IGAC

December 22, 2011
Interprovincial Advisory Council
Effective in Canada June 1, 2013

Standard Developer

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Addenda to American National Standard/ CSA Standard for Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)

Part I: Construction

1.1 Scope

1.1.3

This standard does not apply to CSST, whether coated or uncoated, intended for direct burial underground. Tubing shall be installed underground only when encased inside either an approved conduit or as part of an approved engineered system and in accordance with local codes and the manufacturer's instructions.

1.4 Gas Pressure Regulators

A piping system for use at gas pressures exceeding $1/2$ -psi (3.45-kPa), but intended to serve equipment rated for $1/2$ -psi (3.45-kPa) maximum, shall include a gas pressure regulator to limit the downstream supply pressure to $1/2$ -psi (3.45-kPa), and the installation instructions for the piping system shall specify that such a regulator shall be installed (see 1.8-m). Gas pressure regulators supplied by the manufacturer for use with CSST systems shall comply with a nationally recognized standard for pressure regulators.

For system pressures up to 5-psi (34.5-kPa), the regulator shall either incorporate construction which will "lock up" under no-flow conditions to prevent downstream pressure in excess of 5-psi (34.5 kPa) or the regulator must be installed with an overpressure protection device.

1.8 Instructions

Complete detailed instructions, including appropriate illustrations, necessary for proper sizing, installation, inspection and repair of the piping system shall be provided by the manufacturer. These instructions shall be included in a printed design and installation manual to be provided with the piping system. The manual shall include instructions on all topics and in the exact prescribed format shown in Exhibit D, Minimum Design and Installation Manual Requirements.

Included in the instructions shall be statements to the effect that:

- a. A warning to the installer that the installation instructions shall be followed as prescribed by the manufacturer.

- b. The installation shall be made in accordance with local codes, or, in the absence of local codes, in accordance with the *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Natural Gas and Propane Installation Code, CSA B149.1*, the *International Fuel Gas Code*, the *Uniform Plumbing Code*, the *Federal Manufactured Home Construction and Safety Standards, 24 CFR Part 3280*, the *Manufactured Housing Construction and Safety Standards, ICC/ANSI 2.0*, or the *Standard on Manufactured Housing, NFPA 501*, as applicable.
- c. Precautions shall be taken by the installer to ensure any exposed tubing is not damaged or abused during building construction or reconstruction.
- d. The piping system is for use with fuel gases only and is intended for operating pressures not exceeding 5 psi (34.5 kPa) or 25 psi (172.5 kPa). The maximum actual operating pressure, including transients, shall not in any case exceed 6.5 psi (44.8 kPa) for 5 psi (34.5 kPa) rating or 30 psi (207 kPa) for 25 psi rating.
- e. If the piping system installation requires components in addition to those supplied by the piping system manufacturer, the installation instructions shall specify the specific components required. The instructions shall state that only the components provided or specified by the manufacturer are to be used in the installation.
- f. The size and depth of installation clearance holes or notches for routing the tubing through wall studs and joists shall comply with the requirements of the local building code.
- g. Concealed tubing shall be protected from puncture threats, using the shielding devices specified by the manufacturer, at all points of penetration through studs, joists, plates or similar structures. The extent of protection shall be defined as follows:
 1. At points of penetration less than 2 in (50.8 mm) from any edge of a stud, joist, plate, etc., a listed striker plate is required to provide protection at the area of support and within 5 in (127 mm) of each side (if appropriate) of the support.
 2. At points of penetration 2 to 3 in (50.8 to 76.2 mm) from any edge of a stud, joist, plate, etc., a listed striker plate is required to provide protection throughout the area of support.
 3. At points of penetration greater than 3 in (76.2 mm) from any edge of a stud, joist, plate, etc., no protection is required.
 4. Tubing routed horizontally through studs shall be protected from puncture threats between the studs using the shielding devices provided.
 5. CSST greater than 1 in (25.4 mm) inside diameter installed within hollow cavity walls of 2 x 4 construction shall be protected along the entire concealed length in the manner and using the shielding devices specified by the manufacturer.
 6. The width of the installed striker plate, at the points of penetration through wall studs, floor joists, plates, sills, etc., shall be out at least 1.5 times the outside diameter of the tubing.
- h. The inspection, testing and purging of the installation shall be performed using the procedures specified in Part 4, General, of the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, and/or the *Natural Gas and Propane Installation Code, CSA B149.1*, or the *International Fuel Gas Code*, the *Uniform Plumbing Code*, or in accordance with the requirements of the applicable local codes. The installed gas piping system shall not exhibit any loss of pressure during the field pressure test.

- i. The minimum permissible bend radius for the tubing, and minimum permissible bend radius for fitting/tubing combinations. A warning to avoid sharp bends, stretching, kinking or twisting of the tubing
- j. Sizing tables for 0.5 psi (3.45 kPa), 2 psi (13.8 kPa), 5 psi (34.5 kPa), 10 psi (69 kPa), if applicable, and 25 psi (172.5 kPa), if applicable, service as a minimum shall be provided to aid the installer or contractor in selecting the proper size tubing for the system.
- k. Flame spread and smoke density ratings for nonmetallic coating materials as determined by the Test Method for Surface Burning Characteristics of Building Materials, ASTM E84, test procedures (see 1.2.7). For ratings greater than 25 for flame spread and/or greater than 50 for smoke density, the instructions shall include a statement that the installer shall meet local building codes with respect to flame spread and smoke density regulations for nonmetallic materials.
- l. Installation instructions shall provide minimum requirements for bonding of the CSST system including but not limited to: (refer to Appendix B, Guidelines for the Direct (Electrical) Bonding of CSST Piping Systems, for guidelines).
 - 1. Location of connection;
 - 2. Method of connection;
 - 3. Size of bonding conductor; and
 - 4. Connection to the grounding electrode system.
- m. The instructions shall include information on acceptable regulators, including regulator make, model number, size required and any special installation requirements. The regulator(s) specified shall be listed by a nationally recognized testing agency as complying with 1.4, Gas Pressure Regulators, of this standard.
- n. Guidelines for installing and protecting tubing located outdoors (above ground). The guidelines shall place limits on outdoor installations to those required to make connections to gas meters or outdoor gas appliances which are attached to, mounted on or located in close proximity to the building structure.
- o. When an excess flow valve is supplied as part of the gas piping system, the CSST manufacturer's design and installation instructions, or instructions supplied with the part by the valve manufacturer, shall include data on sizing and pressure drop across the device as a function of flow (up to the activation flow rate) for each size valve.
- p. For operating pressures above 5-psi (34.5 kPa), the manufacturer shall provide engineering guidance for sizing CSST systems. The sizing data shall be provided in the form of actual test data, tables, graphs or formulas for natural gas (LP gas optional) as determined by the manufacturer.

Part II: Performance

2.15 Electrical Properties

2.15.1 Resistance and Conductivity

An assembly of tubing and fittings shall not have an electrical resistance that exceeds the value given in Table 6, Maximum Electrical Resistance.

Method of Test

A length of tubing (with sheathing) is to be laid out (essentially straight) on a flat, horizontal, noncombustible, electrically nonconductive surface. The segment length shall be 6-ft (1830-mm) long. Connection to the tubing shall be made using appropriate end fittings, and installed in accordance with the manufacturer's instructions. A single, low-resistance copper conductor (no smaller than 6 AWG) of sufficient length shall be secured (by an appropriate means as determined by the testing agency) to each end fitting and to an alternating-current supply with a no-load voltage not to exceed 12-V.

A current of 25-A shall be passed between the end fittings of the test assembly by starting with an impressed potential of 0.0 volts AC and gradually increasing the voltage until 25 ampere current is attained. The test specimen shall not be moved or otherwise manipulated during any part of this test. The voltage drop between the end fittings shall be measured. The resistance shall be calculated from the measured voltage drop and the current in the following equation and compared against the acceptance value listed in Table A, Capacity Tables of CSST.

$$R = E/I;$$

where:

E = volts

I = amperes

R = ohms

***Tables Referenced
In Parts I And II***

Table I. Flow Capacity Data Chart RAW Data

Vendor _____ Date _____

Inner Diameter _____

Effective Hydraulic Diameter _____

Column 1		Column 2		Tubing Length feet (m)						
Inlet Pressure		Pressure Drop		30	50	80	100	150	200	250
psi (kPa)	In. W.C.(kPa)	psi (kPa)	In. W.C. (kPa)	(9.1)	(15.2)	(24.4)	(30.5)	(45.7)	(60.9)	(76.2)
0.253 (1.74)	7.0 (1.74)	0.0181 (0.12)	0.50 (0.12)							
0.361 (2.49)	10.0 (2.49)	0.1085 (0.75)	3.0 (0.75)							
0.505 (3.48)	14.0 (3.48)	0.217 (1.49)	6.0 (1.49)							
2.0 (13.79)	55.4 (13.79)	1.5 (10.30)	41.49 (10.33)							
5.0 (34.47)	138.4 (34.48)	3.5 (24.10)	96.81 (24.10)							

Table II. Flow Capacity Data Chart RAW Data

Vendor _____ Date _____

Inner Diameter _____

Effective Hydraulic Diameter _____

Column 1		Column 2		Tubing Length Feet (m)						
Inlet Pressure		Pressure Drop								
psi (kPa)	In. W.C. (kPa)	psi (kPa)	In. W.C. (kPa)							
0.253 (1.74)	7.0 (1.74)	0.0181 (0.12)	0.50 (0.12)							
0.361 (2.49)	10.0 (2.49)	0.1085 (0.75)	3.0 (0.75)							
0.505 (3.48)	14.0 (3.48)	0.217 (1.49)	6.0 (1.49)							
2.0 (13.79)	55.4 (13.79)	1.5 (10.30)	41.49 (10.33)							
5.0 (34.47)	138.4 (34.47)	3.5 (24.10)	96.81 (24.10)							

Table VI Maximum Electrical Resistance

Nominal size of pipe (in)	Resistance (Ω /ft)
$\frac{3}{8}$	0.180
$\frac{1}{2}$	0.150
$\frac{3}{4}$	0.120
1.0	0.120
$1\text{-}\frac{1}{4}$	0.090
$1\text{-}\frac{1}{2}$ and 2	0.090

Appendix B

Guidelines for the Direct (Electrical) Bonding of CSST Piping Systems

Purpose:

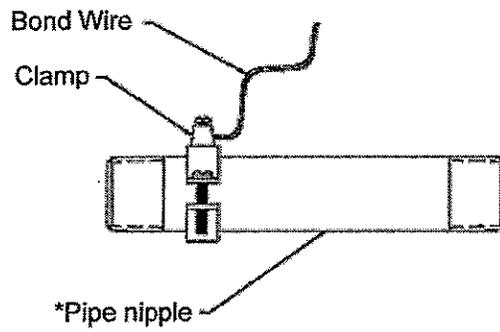
The bonding of the CSST piping system to the grounding electrode system at the entrance to the premises in which it is installed will lower the voltage build-up on the CSST resulting from indirect lightning strikes. The bonding will help achieve an equi-potential state between the CSST and other similarly bonded metallic systems (such as the water piping, structural steel and coax cable). The bonding will help reduce the possibility and/or severity of arcing between the conductive systems when energized by a lightning strike nearby the premises.

These guidelines describe the requirements for the direct bonding of corrugated stainless steel tubing (CSST) gas piping systems, and must be performed by a qualified person recognized by the local jurisdiction as capable of performing such work. Direct bonding is required as part of the installation of all new CSST natural and LP gas piping systems whether or not the connected gas equipment is electrically powered. These guidelines are applicable to typical single-family and multi-family dwellings and certain commercial buildings.

CSST installed inside or attached to the exterior of a building or structure shall be electrically continuous and directly bonded to the electrical ground system of the building. The gas piping is considered to be directly bonded when installed in accordance with the following instructions:

- A bonding jumper is permanently and directly connected to the electrical service grounding system. This can be achieved through a connection to the electrical service equipment enclosure, the grounded conductor at the electrical service, the grounding electrode conductor (where of sufficient size) or to the one or more grounding electrodes used.
- A single bond connection is made to the building gas piping system between the point of delivery and the first CSST fitting, or on the first CSST fitting. A "daisy chain" configuration of the bonding conductor is permitted for multi-meter installations. A bonding connection shall not be made to the underground, natural gas utility service line or the underground supply line from a LP storage tank.
- The bonding conductor is not smaller than a 6 AWG copper wire or equivalent. The bonding conductor is installed and protected in accordance with the *National Electrical Code, NFPA 70, (NEC)* and the *Canadian Electrical Code CSA-C22.1 (CEC)*.
- The bonding conductor is attached in an approved manner in accordance with NEC/CEC and the point of attachment for the bonding conductor is accessible.
- Bonding/grounding clamp used is listed to *UL 467, Grounding and Banding Equipment*, or other acceptable national standards.
- The bonding clamp is attached at one point within the piping system to a segment of rigid pipe or a pipe component such as a nipple, fitting, manifold or the first CSST fitting. (See Figure 1, Bonding Attachment to Pipe, for guidance.) The corrugated stainless steel tubing portion of the gas piping system shall not be used as the point of attachment of the bonding clamp at any location along its length. The bonding clamp is attached such that metal to metal contact is achieved with the pipe component.

- CSST should not be directly supported on or by other electrically conductive systems including copper water pipe, electric power cables, air conditioning and heating ducts, communications cable and structural steel beams.



* Pipe components must be made from steel, galvanized steel, black iron, malleable iron, copper and/or brass.

Figure 1. Bonding Attachment to Pipe

Part I: Construction

1.10 Installer Training

The manufacturer shall establish and maintain an installer training program and a database of installers who have completed the manufacturer's training requirements. An identification card shall be supplied to each installer who has completed the manufacturer's training requirements, and a record of the installer's contact data shall be maintained in the database. The identification card shall include the following information:

- CSST manufacturer's name and telephone number
- CSST product(s)/brand(s) covered by training
- Unique serial number for the identification card (recorded in database)
- Installer's name and the date of training or card issuance (recorded in database), and
- Statement that the named installer has completed the manufacturer's training program to install [insert manufacturer's name or brand] CSST

RATIONALE: Training of installers is a manufacturer-based requirement, and therefore it transcends any other installer qualifications imposed by the country, state or local jurisdiction such as licensing, education or apprenticeship. CSST systems have unique features, including fitting attachments proprietary to each manufacturer, which are not interchangeable between brands. The requirement has been modified and moved to the body of the Standard and not in Exhibit B since training is required whether the installer is US-based or Canada-based. The training requirement was modified to create auditable action items for the certifying agency such as a database and a training program.

1.2 Materials

1.2.6

For tubing which includes a nonmetallic coating or covering, the coating shall comply with the international color designation of yellow. A jacket or covering applied to the tubing shall be either yellow or black, and marked in a contrasting color.

RATIONALE: To recognize alternate color jackets that are currently available in the marketplace consistent with other commercial gas-piping products.

Part II: Performance

2.15 Arc Resistant Jacket or Covering System (Optional)

2.15.1 General

2.15.1.1 Unless otherwise specified, all testing shall be performed in accordance with the general requirements of ANSI LC-1 and as stipulated in Part II Performance.

2.15.1.2 Tubing which has an arc resistant jacket or covering system as an alternate direct-bonding means (henceforth referred to as the "jacket"), shall comply with the following tests:

2.15.1.3 Unless otherwise specified, the jacket shall comply with the following tests with the tubing, jacket, and fitting(s) assembled as a final installation and in accordance with the manufacturer's instructions:

2.15.1.4 Testing shall be performed on samples of tubing sizes ½-inch and 1-inch in diameter. Each test sample shall be at least three feet in length or as specified within the Method of Test.

2.15.2 Resistance of Jacket Material To Extreme Environment(s)

2.15.2.1 Resistance of Jacket Assembly to Extreme Temperature Cycles

Test specimens of the jacket material shall be prepared (based on the fabrication technique used to apply the jacket) and subjected to exposure to low temperature in accordance and compliance with ASTM D746-07 for Brittleness Temperature of Plastics and Elastomers by Impact. The manufacturer shall present a test report from an accredited testing laboratory to the listing agency including a statement on the minimum embrittlement temperature.

2.15.2.2 Resistance of Jacket Assembly to Corrosion

The tubing, jacket and fitting assembly (assembled per the manufacturer's instructions) shall be subjected to the *Standard Practice for Operating Salt Spray (Fog) Apparatus, ASTM B117-97*, for not less than 96 hours without evidence of pitting, flaking, cracking or signs of corrosive attack in accordance with Part 1.2.5, and then shall be subsequently subjected to and pass Part 2.15.3 Electrical Tests. Two samples of each size shall be prepared and subjected to the prescribed test. Products that do not incorporate a metallic layer or component as part of the jacket are not required to be tested to 2.15.2.2. The manufacturer shall present a test report from an accredited testing laboratory to the listing agency and deliver the test samples to the laboratory performing the Electrical Tests.

2.15.3 Electrical Tests

2.15.3.1 Robustness Against Arcing (Indirect Lightning)

Tubing, jacket and fitting assemblies shall withstand electrical arcing, in accordance with the following method of test without perforation of the tubing and without leakage in excess of that specified in Part 2.2, Leakage. The test samples subjected to the salt spray exposure (if applicable) in Part 2.15.2.2 Resistance of Jacket Assembly to Corrosion shall be used in the testing. Other samples shall be used if no samples are required to be subjected to salt spray exposure in Part 2.15.2.2. Testing shall be performed by an accredited lightning testing laboratory acceptable to the listing agency.

Method of Test

For arc robustness determination, a electrical waveform (Current vs. Time) shall be utilized. (NOTE: Additional testing intended to address a wider range of possible transient sources and behaviors may be considered, but this has not been included in the prescribed Method of Test.) The waveform is defined by its rise-time to peak current and fall-time to 50 percent of peak amplitude. The selected waveform is 10 μ s x 1000 μ s.

Generator Calibration:

An electrical test generator and appropriate measurement equipment shall be assembled to generate the waveform under consideration and to record generator output. (See Figure 1 for schematic.) The generator assembly shall utilize an electrode of 1/4 in diameter attached to the output of the generator (i.e. live terminal). The test sample is grounded to the generator with a minimum AWG 6 copper conductor or equivalently sized braided strap. The test sample shall be supported in such a manner to prevent arcing or conduction from the test sample to adjacent equipment.

A length of copper pipe is installed as the test sample, with a 1/8 in gap between the copper pipe and the generator electrode. The generator is charged to the desired level, and discharged through the electrode to the copper pipe (via an arc) and then to ground. Arc attachment to the tubing shall be verified. Arc attachment to nearby equipment or to end connections on the copper tubing invalidates this test run. The recorded generator output is verified against the desired waveform. Adjustments to the generator assembly are made and re-tested until the generator output matches the desired waveform output.

Testing:

The test sample is installed with the electrode placed over a straight portion of the sample, with a 1/8 in gap between the exterior of the jacket and the generator electrode. (Refer to Figure 1) The generator is charged to the desired level, and discharged through the electrode to the test assembly (via arc) and to ground. Arc attachment to

the tubing shall be verified. Arc attachment to nearby equipment or to end connections on the tubing invalidates this test run.

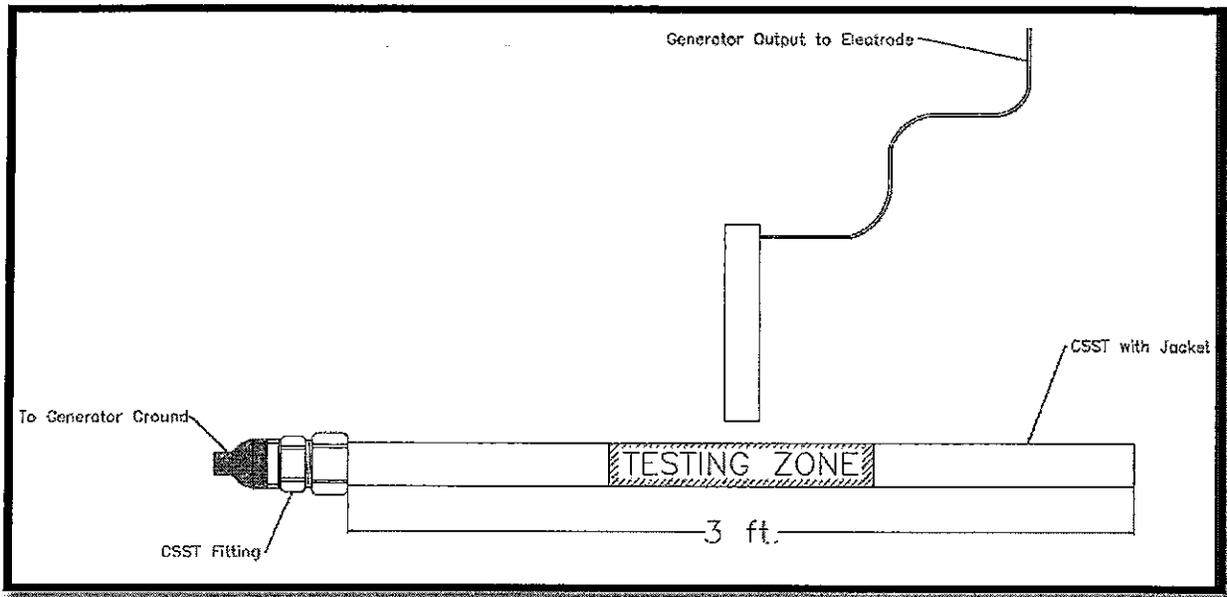


Figure 1 Experimental Set-Up for Arc Resistance Test

The recorded generator output is verified against the desired waveform. Peak current and coulombs transferred (the integral of the waveform) are recorded. The jacket is removed from the site of the arc termination allowing a visual inspection of the exposed tubing. The tubing must show no puncture of the stainless steel tubing.

The test assembly must withstand a minimum of 4.5 Coulombs without leakage as defined by Part 2.2 Leakage.

2.15.4 Resistance to Installation Damage

Tubing and jacket assemblies shall withstand damage from friction/wear in a simulated "drag-zone" installation without excessive damage to the jacket in accordance with the following method of test.

Method of Test

Three individual simulated joists/ studs (spaced 16-inches on-center) made from solid, dimensional lumber (2 x 6 min) are mounted in a framework as shown in Figure 2. The "drag-zone" apparatus can be table or floor mounted. A routing hole shall be drilled through each joist in a 3-in off-set pattern as shown in Figure 2. Each routing hole shall be 1/2-inch greater in diameter than the outside diameter of the jacketed tubing specimen. The routing holes shall be drilled with a standard hole-cutter/drill bit and no post-drilling cleaning or dressing of the holes shall be permitted. No metal fasteners

shall be installed within the drag zone. The test apparatus shall be solidly secured to the table/floor to prevent movement or shaking of the assembly during the pull tests.

Two test specimens of each size, each consisting of a 15-ft length of tubing, shall be prepared. Each test specimen shall be "snaked" through the three offset holes before starting the test. The length of tubing is then pulled, by hand, through the drag zone until the end of the test specimen exits the last member. The rate of pull should be approximately 1 to 2 feet per second.

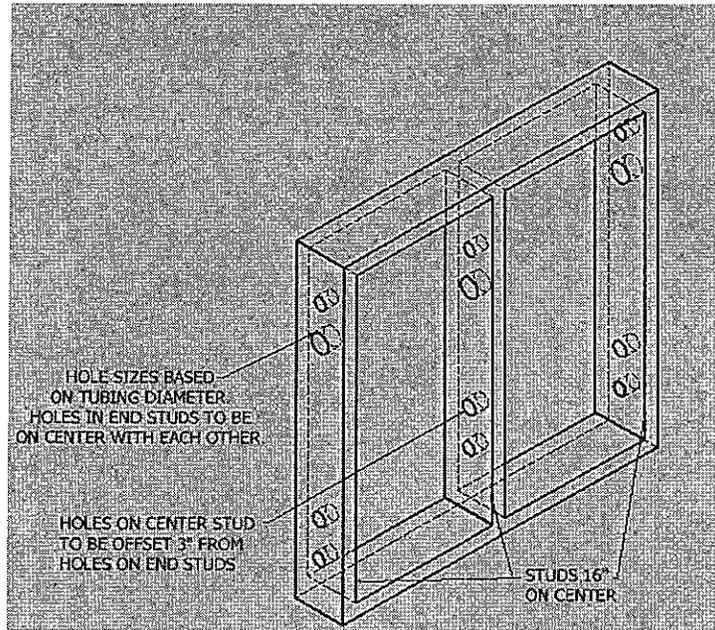


Figure 2 Set-Up for Tubing Wear Test

Upon completion of the pull test, the tubing and jacket shall be inspected for physical damage. Any tearing or ripping of the jacket exposing the underlying stainless steel tubing indicates non-compliance with this requirement.

RATIONALE: Some CSST products have been developed that use a coating or covering system to provide an alternate means of direct-bonding. If such a coating is provided as part of the CSST system, the added tests address the durability and integrity of the coating. The performance requirements and acceptance criteria represent minimally acceptable values that have been developed by independent sources. The International Code Council Evaluation Services have developed such testing methods and listing criteria (LC1024 – Listing Criteria for CSST Utilizing a Protective Jacket) that are being used to list current products. The proposed test methods are similar to testing widely used in the lightning analysis industry and have been recommended by independent lightning experts.

Exhibit B: Items Unique to United States

~~**B.1** The installation shall be done by a qualified installer, who has passed the manufacturer's certification/training program.~~

RATIONALE: *Training of installers is a manufacturer-based requirement, and therefore it transcends any other installer qualifications imposed by the country, state or local jurisdiction such as licensing, education or apprenticeship. CSST systems have unique features, including fitting attachments proprietary to each manufacturer, which are not interchangeable between brands. The requirement has been modified and moved to the body of the Standard and not in Exhibit B since training is required whether the installer is US-based or Canada-based. The training requirement was modified to create auditable action items for the certifying agency such as a database and a training program.*

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual Government Entity Company

Name: Robby Dawson

Representing: Fire Services Board Code Committee

Mailing Address: 1005 Technology Park Drive, Glen Allen, VA 23059

Email Address: dawsonj@chesterfield.gov

Telephone Number: 804-748-1426

Proposal Information

Code(s) and Section(s): Statewide Fire Prevention Code – various sections as listed below

Proposed Change (including all relevant section numbers, if multiple sections):

103.2. Amendments: All requirements of the referenced codes and standards that relate to fees, permits, unsafe notices, disputes, condemnation, inspections, ~~scope of enforcement~~ and all other procedural, and administrative matters are deleted and replaced by the provisions of Chapter 1 of the SFPC.

**Table 107.2
Operational Permit Requirements (to be filled in by local jurisdiction)**

Description	Permit Required (yes or no)	Permit Fee	Inspection Fee
Battery systems. A permit is required to install stationary lead-acid battery systems having a liquid capacity of more than 50 gallons (189 L).			
Compressed gas. An operational permit is required for the storage, use or handling at normal temperature and pressure (NTP) of compressed gases in excess of the amounts listed below. Exception: Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle.			
PERMIT AMOUNTS FOR COMPRESSED GASES			
TYPE OF GAS	AMOUNT (cubic feet at NTP)		
Corrosive	200		
Flammable (except cryogenic fluids and liquefied petroleum gases)	200		
Highly toxic	Any amount		
Inert and simple asphyxiant	6,000		
Oxidizing (including oxygen)	504		
<u>Pyrophoric</u>	<u>Any amount</u>		
Toxic	Any amount		
<small>For SI: 1 cubic foot = 0.02832 m³</small>			
Covered and open mall buildings. An operational permit is required for: 1. The placement of retail fixtures and displays, concession equipment, displays of			

<p>highly combustible goods and similar items in the mall.</p> <p>2. The display of liquid- or gas-fired equipment in the mall.</p> <p>3. The use of open-flame or flame-producing equipment in the mall.</p>																																																	
<p>LP-gas. An operational permit is required for:</p> <p>1. Storage and use of LP-gas.</p> <p>Exception: A permit is not required for individual containers with a 500-gallon (1893 L) water capacity or less <u>or multiple container systems having an aggregate quantity not exceeding 500 gallons (1893 L), serving occupancies in Group R-3.</u></p> <p>2. Operation of cargo tankers that transport LP-gas.</p>																																																	
<p>Cryogenic fluids. An operational permit is required to produce, store, transport on site, use, handle or dispense cryogenic fluids in excess of the amounts listed below. Exception: Operational permits are not required for vehicles equipped for and using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading.</p>																																																	
<p>Explosives, fireworks and pyrotechnics. An operational permit is required for the manufacture, storage, handling, sale or use of any quantity of explosive, explosive materials, fireworks, or pyrotechnic special effects, <u>or pyrotechnic special effects material</u> within the scope of Chapter 3356.</p> <p>Exception: <u>Storage in Group R-3 or R-5 occupancies of smokeless propellant, black powder and small arms primers for personal use, not for resale and in accordance with the quantity limitations and conditions set forth in Section 5601.1, exceptions 4 and 12.</u></p>																																																	
<table border="1"> <thead> <tr> <th>Type of Cryogenic Fluid</th> <th>Inside Building (gallons)</th> <th>Outside Building (gallons)</th> </tr> </thead> <tbody> <tr> <td>Flammable</td> <td>More than 1</td> <td>60</td> </tr> <tr> <td>Inert</td> <td>60</td> <td>500</td> </tr> <tr> <td>Oxidizing (includes oxygen)</td> <td>10</td> <td>50</td> </tr> <tr> <td>Physical or health hazard not indicated above</td> <td>Any amount</td> <td>Any amount</td> </tr> </tbody> </table> <p style="text-align: right;"><i>For SI: 1 gallon = 3.785 L.</i></p>			Type of Cryogenic Fluid	Inside Building (gallons)	Outside Building (gallons)	Flammable	More than 1	60	Inert	60	500	Oxidizing (includes oxygen)	10	50	Physical or health hazard not indicated above	Any amount	Any amount																																
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<p>Fumigation, and thermal and insecticidal fogging. An operational permit is required to operate a business of fumigation, or thermal <u>or</u> insecticidal fogging and to maintain a room, vault or chamber in which a toxic or flammable fumigant is used.</p>																																																	
<p>Hazardous materials. An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the following amounts:</p> <table border="1"> <thead> <tr> <th>Type of material</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>Combustible liquids</td> <td>See Flammable and Combustible Liquids</td> </tr> <tr> <td>Corrosive materials</td> <td></td> </tr> <tr> <td> Gases</td> <td>See Compressed Gases</td> </tr> <tr> <td> Liquids</td> <td>55 gallons</td> </tr> <tr> <td> Solids</td> <td>1000 pounds</td> </tr> <tr> <td>Explosive materials</td> <td>See Explosives</td> </tr> <tr> <td>Flammable materials</td> <td></td> </tr> <tr> <td> Gases</td> <td>See Compressed Gases</td> </tr> <tr> <td> Liquids</td> <td>See Flammable and Combustible Liquids</td> </tr> <tr> <td> Solids</td> <td>100 pounds</td> </tr> <tr> <td>Highly toxic materials</td> <td></td> </tr> <tr> <td> Gases</td> <td>See Compressed Gases</td> </tr> <tr> <td> Liquids</td> <td>Any amount</td> </tr> <tr> <td> Solids</td> <td>Any amount</td> </tr> <tr> <td>Oxidizing materials</td> <td></td> </tr> <tr> <td> Gases</td> <td>See Compressed Gases</td> </tr> <tr> <td> Liquids</td> <td></td> </tr> <tr> <td> Class 4</td> <td>Any amount</td> </tr> <tr> <td> Class 3</td> <td>1 gallon^a</td> </tr> <tr> <td> Class 2</td> <td>10 gallons</td> </tr> <tr> <td> Class 1</td> <td>55 gallons</td> </tr> </tbody> </table>			Type of material	Amount	Combustible liquids	See Flammable and Combustible Liquids	Corrosive materials		Gases	See Compressed Gases	Liquids	55 gallons	Solids	1000 pounds	Explosive materials	See Explosives	Flammable materials		Gases	See Compressed Gases	Liquids	See Flammable and Combustible Liquids	Solids	100 pounds	Highly toxic materials		Gases	See Compressed Gases	Liquids	Any amount	Solids	Any amount	Oxidizing materials		Gases	See Compressed Gases	Liquids		Class 4	Any amount	Class 3	1 gallon ^a	Class 2	10 gallons	Class 1	55 gallons			
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Solids				
Class 4	Any amount			
Class 3	10 pounds ^b			
Class 2	100 pounds			
Class 1	500 pounds			
Organic peroxides				
Liquids				
Class I	Any amount			
Class II	Any amount			
Class III	1 gallon			
Class IV	2 gallons			
Class V	No permit required			
Solids				
Class I	Any amount			
Class II	Any amount			
Class III	10 pounds			
Class IV	20 pounds			
Class V	No permit required			
Pyrophoric materials				
Gases	See Compressed Gases			
Liquids	Any amount			
Solids	Any amount			
Toxic materials				
Gases	See Compressed Gases			
Liquids	10 gallons			
Solids	100 pounds			
Unstable (reactive) materials				
Liquids				
Class 4	Any amount			
Class 3	Any amount			
Class 2	5 gallons			
Class 1	10 gallons			
Solids				
Class 4	Any amount			
Class 3	Any amount			
Class 2	50 pounds			
Class 1	100 pounds			
Water-reactive Materials				
Liquids				
Class 3	Any amount			
Class 2	5 gallons			
Class 1	55 gallons			
Solids				
Class 3	Any amount			
Class 2	50 pounds			
Class 1	500 pounds			
a. 20 gallons when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 20 gallons or less.				
b. 20 pounds when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 200 pounds or less.				
Open flames and candles. An operational permit is required to remove paint with a torch; use a torch or open flame device in a hazardous fire area; or to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments.				
Open flames and torches. An operational permit is required to remove paint with a torch; or to use a torch or open flame device in a wildfire risk area.				
Places of Assembly/educational. An operational permit is required to operate a place of assembly/educational occupancy.				
For SI: 1 cubic foot = 0.02832 m ³ , 1 gallon = 3.785 L., 1 pound = 0.454 kg.				

301.2 Permits. Permits shall be required as set forth in Section ~~105.6107.2~~ for the activities or uses regulated by Sections 306, 307, 308 and 315.

307.2 Permit required. A permit shall be obtained from the *fire code official* in accordance with Section ~~105.6107.2~~ prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or a bonfire. Application for such approval shall only be presented by and permits issued to the *owner* of the land upon which the fire is to be kindled.

308.2 Permits required. Permits shall be obtained from the *fire code official* in accordance with Section ~~105.6107.2~~ prior to engaging in the following activities involving open flame, fire and burning:

1. Use of a torch or flame-producing device to remove paint from a structure.
2. Use of open flame, fire or burning in connection with Group A or E occupancies.
3. Use or operation of torches and other devices, machines or processes liable to start or cause fire in or upon wildfire risk areas.

315.2 Permit required. A permit for miscellaneous combustible storage shall be required as set forth in Section ~~105.6107.2~~.

501.2 Permits. A permit shall be required as set forth in Sections ~~105.6107.2~~ and ~~105.7~~.

601.2 Permits. Permits shall be obtained for refrigeration systems, battery systems and solar photovoltaic power systems as set forth in Sections ~~105.6107.2~~ and ~~105.7~~.

901.2 Construction documents. The *fire code official* shall have the authority to require and receive copies of construction documents and calculations for all *fire protection systems* ~~and to require permits be issued for the installation, rehabilitation or modification of any fire protection system to be installed, rehabilitated or modified.~~ *Construction documents for fire protection systems shall be submitted for review and approval prior to system installation.*

901.3 Permits. Permits shall be required as set forth in Sections ~~105.6107.2~~ and ~~105.7~~.

2001.3 Permits. For permits to operate aircraft-refueling vehicles, application of flammable or combustible finishes and hot work, see Section ~~105.6107.2~~.

2101.2 Permit required. Permits shall be required as set forth in Section ~~105.6107.2~~.

2201.2 Permits. Permits shall be required for *combustible dust*-producing operations as set forth in Section ~~105.6107.2~~.

2301.2 Permits. Permits shall be required as set forth in Section ~~105.6107.2~~.

2401.3 Permits. Permits shall be required as set forth in Sections ~~105.6107.2~~ and ~~105.7~~.

2501.2 Permits. Permits shall be required as set forth in Section ~~105.6107.2~~.

2601.2 Permits. Permits shall be required as set forth in Section ~~105.6107.2~~.

2701.5 Permits. Permits shall be required as set forth in Section ~~105.6107.2~~.

2801.2 Permit. Permits shall be required as set forth in Section ~~105.6107.2~~.

2901.2 Permits. Permits shall be required as set forth in Section ~~105.6107.2~~.

3001.2 Permits. Permits shall be required as set forth in Sections ~~105.6107.2~~ and ~~105.7~~.

3103.4 Permits. Permits shall be required as set forth in Sections ~~105.6107.2~~ and ~~105.7~~.

3201.2 Permits. A permit shall be required as set forth in Section ~~105.6107.2~~.

3401.2 Permit required. Permits shall be required as set forth in Section ~~105.6107.2~~.

5001.5 Permits. Permits shall be required as set forth in Sections ~~105.6107.2~~ and ~~105.7~~.

5101.2 Permit required. Permits shall be required as set forth in Section ~~105.6107.2~~.

5201.3 Permits. Permits shall be required as set forth in Section ~~105.6107.2~~.

5301.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

5401.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

5501.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

5601.2 Permit required. Permits shall be required as set forth in Section ~~105.6~~107.2 and regulated in accordance with this section.

5701.4 Permits. Permits shall be required as set forth in Sections ~~105.6~~107.2 and ~~105.7~~.

5801.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

5901.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

6001.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

6201.2 Permits. Permits shall be required for organic peroxides as set forth in Section ~~105.6~~107.2.

6301.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

6401.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

6501.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

6601.2 Permits. Permits shall be required as set forth in Section ~~105.6~~107.2.

Supporting Statement (including intent, need, and impact of the proposal):

The overall objective for this proposed change is to ensure the proper and accurate coordination of the code's permit provisions and to clearly identify how reference standards are to be applied and when.

1. Section 103.2 amends by eliminating "permits" and "scope of enforcement" from this section. The corrected sections of the SFPC now correctly identify what section of the SFPC (107.2) identifies which operational permits are required. If the term "permits" remains, confusion is created that the permitting requirements in the explosives chapter are not enforceable. But with the proper reference to 107.2, it becomes clear that not only are permits potentially required, they are referenced back to the proper administrative provisions of chapter 1.

The "scope of enforcement" is also removed to clearly indicate those referenced standards (like NFPA) do have limitations on their scope. Without the deletion of this section, one could argue the door is left wide open to take the standard out of context or there is no basis for the standard to be used. The SFPC already has a catch all provision in 102.4 that clearly states any conflict between the SFPC and a reference standard – such as differences in scope – that the SFPC prevails.

2. References to the permit section of Chapter 1 are often encountered in the technical chapters of the code. When encountered in a technical chapter, this proposed change will provide for the proper and accurate reference of the Chapter 1 permit provisions.

3. The changes to Table 107.2 are intended to incorporate the changes found in the 2012 edition of the IFC with the following notable differences:

a. An operational permit requirement for battery systems was deleted from the IFC in October 2004 through action by the ICC Code Correlation Committee (CCC). The stated reason for the CCC action was,

"Section 105.6.5 is the only section in 105.6 that contains the word "install", which clearly indicates that the permit requirement is one of construction, not operation.

Section 105.6.5 was added to the code by code change F203-99 (AM). It originally said "...install or operate..." but the modification deleted the phrase "...or operate...". At that time, there was only one section, 105.6, that

regulated all permits.

In the same code change cycle, code change F46-99 (AM) divided Section 105.6 into the current separate Required Operational Permits Section 105.6 and Required Construction Permits Section 105.7.

Since both code changes F46-99 and F203-99 were approved simultaneously, relocating the new construction-oriented permit requirements created by F203-99 for the installation of battery systems from Section 105.6 to the new Section 105.7 should have been accomplished as a correlation change prior to publication of the 2000 edition, however it was overlooked. This correlation change will place the permit requirement for installation of battery systems into the proper section."

(The ICC references to Section 105.6 equate to SFPC Section 107.2.)

- b. For fumigation, thermal and insecticidal fogging, the model code deleted the reference to "thermal" treatment but its felt this treatment must be retained. To produce high temperatures (thermal) within a building or space may still be a viable method for treating bed bug infestations. One of the methods of thermal pest control is the use of propane. If propane is used to treat bed bug infestations, then a permit may have to be obtained through or coordinated with other chapters of the code such as Chapter 61, Liquefied Petroleum Gas. The changes shown are for the benefit of clarity and distinction for the 3 methods of treatment; fumigation, thermal and fogging.
 - c. The SI units of measurement are relocated to the end of the table as opposed to repeating them in multiple locations. The units of measurement would still be applicable throughout the table.
 - d. Through an omission, the '09 edition of the SFPC did not have notes "a" and "b" as they relate to liquid and solid oxidizing hazardous materials. This change properly puts those notes back into the table.
 - e. As a statewide minimum, the added language regarding explosives, display fireworks and pyrotechnics reflects the combining of separate IFC model code lines and its list of required operational permits. This produces no fundamental or significant operational changes within or for the SFPC and **does not** impact "permissible fireworks".
 - f. The exception for the line for explosives is a reiteration for propellants and primers found in Chapter 56 and those contained in previous editions of the SFPC. There's no attempt to change those SFPC exceptions.
 - g. As a point of information, no edition of the referenced IFC model code has had educational occupancy listed for operational permits, hence the reason for deleting the reference for educational occupancies. The option to amend the code to include Group E is still available at the local level.
4. The change to Section 901.2 allows the fire official to require and receive copies of construction documents related to the installation, rehabilitation or modification of fire protections systems. It is those documents that establish the benchmark for which a level protection or performance is to be maintain for the life of the building and its systems.

Submittal Information

Date Submitted: 12/5/12

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): X Individual Government Entity Company

Name: John Catlett

Representing: VBCOA Administration Committee

Mailing Address: 301 King Street, Alexandria, Virginia 22314

Email Address: john.catlett@alexandriava.gov

Telephone Number: 703.746.4182

Proposal Information

Code(s) and Section(s): Virginia Statewide Fire Prevention Code

Section No(s): SFPC 106.4

Proposed Change (including all relevant section numbers, if multiple sections):

Proposed Change: Modify 106.3, create new section 106.4, and renumber existing sections 106.4, 106.5, 106.7

106.3 Inspections. The fire official is authorized to conduct such inspections as are deemed necessary to determine the extent of compliance with the provisions of this code. ~~and to approve reports of inspection by approved agencies or individuals. All reports of such inspections by approved agencies or individuals shall be prepared and submitted in writing for review and approval. Inspection reports shall be certified by a responsible officer of such approved agency or by the responsible individual. The fire official is authorized to engage such expert opinion as deemed necessary to report upon unusual, detailed or complex technical issues in accordance with local policies.~~

106.3.1 Observations When, during an inspection, the fire official or authorized representative observes an apparent or actual violation of another law, ordinance or code not within the official's authority to enforce, such official shall report the findings to the official having jurisdiction in order that such official may institute the necessary measures.

106.4 (New) Approved inspection agencies and individuals. ~~The fire official may accept reports of inspections or tests from individuals or inspection agencies approved in accordance with the fire official's written policy required by Section 106.4.1. The individual or inspection agency shall meet the qualifications and reliability requirements established by the written policy. Reports of inspections by approved individuals or agencies shall be in writing, shall indicate if compliance with the applicable provisions of the SFPC have been met and shall be certified by the individual inspector or by the responsible officer when the report is from an agency. The fire official shall review and approve the report unless there is cause to reject it. Failure to approve a report shall be in writing within two days of receiving it stating the reasons for rejection.~~

106.4.1 (New) Third-party inspectors. ~~Each fire official charged with the enforcement of the SFPC shall have a written policy establishing the minimum acceptable qualifications for third-party inspectors. The policy shall include the format and time frame required for submission of reports, any prequalification or preapproval requirements before conducting a third-party inspection and any other requirements and procedures established by the fire official.~~

106.4.2 (New) Qualifications ~~In determining third-party qualifications, the fire official may consider such items as DHCD inspector certification, other state or national certifications, state professional registrations, related experience, education and any other factors that would demonstrate competency and reliability to conduct inspections.~~

~~106.4~~ 106.5 Alternatives

~~106.5~~ 106.6 Modifications.....

Supporting Statement (including intent, need, and impact of the proposal):

There has been an indication that the administrative provisions of the Statewide Fire Prevention Code did not permit the acceptance of third party inspection reports from approved agencies or individuals. This change would align the SFPC with the USBC in requiring a written policy that describes the minimum qualifications and requirements for third-party inspectors or agencies.

Submittal Information

Date Submitted: August 2, 2012

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Amusement Device Technical Advisory Comm. Representing: _____

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): Virginia Amusement Device Regulations, Definition of "Amusement Device"

Proposed Change (including all relevant section numbers, if multiple sections):

Change VADR Section 13 VAC 5-31-20 (definition of "Amusement device" only) as shown:

"Amusement device" means (1) a device or structure open to the public by which persons are conveyed or moved in an unusual manner for diversion and (ii) passenger tramways. For the purpose of this definition, the phrase "open to the public" means that the public has full and unrestricted access to an event, irrespective of whether a fee is charged. Private events are not considered to be open to the public.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is to add clarity to the phrase "open to the public" to facilitate a more uniform application of the VADR.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)
600 East Main Street
Suite 300
Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Amusement Device Technical Advisory Comm. Representing: _____

Proposal Information

Code(s) and Section(s): VADR, Sections 20, 40, 75 and 200

Proposed Change (including all relevant section numbers, if multiple sections):

Change the definition of "kiddie ride" in § 20 to read as follows:

"Kiddie Small mechanical ride" means an amusement device, other than an inflatable amusement device, where the passenger or patron height is limited to 54 inches or less, the design capacity of passengers or patrons is 12 or less, and (i) the assembly time for the device is two hours or less, (ii) the revolutions per minute of any rotation of the components of the device is not greater than seven, (iii) the device has a footprint of less than 500 square feet, and (iv) the device does not invert a patron or lift a patron more than three feet in the air, measured from the ground to the bottom of the patron's feet when the device is operating.

Change Item 1 of § 75 to read as follows:

1. \$25 \$35 for each kiddie small mechanical ride or inflatable amusement device covered by the permit;

Change § 75(D) to read as follows:

D. Notwithstanding the provisions of subsection C of this section, a permit application is not required for a kiddie small mechanical ride or an inflatable amusement device that has an unexpired certificate of inspection issued by any local building department in this Commonwealth, regardless of whether the device has been disassembled and moved to a new site. In such cases, the local building department shall be notified at least three days prior to the operation of the kiddie small mechanical ride or the inflatable amusement device and the information required on a permit application as listed in subsection C of this section shall be provided to the local building department. In addition, and notwithstanding the provisions of subsection A of this section, the local building department shall be permitted to charge a \$50 inspection fee per event to the person notifying the local building department of an event where an inflatable amusement device is operating, if the local building department chooses to inspect any or all of the inflatable amusement devices operating at that event. An inspection report shall be provided to the person notifying the local building department of the event if such an inspection is conducted.

Change § 75(E) to read as follows:

E. Local building department personnel shall examine the permit application within five days and issue the permit if all requirements are met. A certificate of inspection for each amusement device shall be issued when the device has been found to comply with this chapter by a private inspector or by an inspector from the local building department. It shall be the responsibility of the local building department to verify that the private inspector possesses a valid certificate of competence as an amusement device inspector from the Virginia Board of Housing and Community Development. In addition, local building department personnel shall be responsible for assuring that the certificate of inspection is posted or affixed on or in the vicinity of the device in a location visible to the public. Permits shall indicate the length of time the device or devices will be operated at the site, clearly identify the device or devices to which it applies and the date of expiration of the permit. Permits shall not be valid for longer than one year, except that permits for small mechanical rides shall not be valid for longer than six months.

Change the term "kiddie ride" to "small mechanical ride" in §§ 40(C)(2) and 75(F).

Change § 200 (Inflatable Amusement Devices) to read as follows:

In addition to other applicable requirements of this chapter, inflatable amusement devices shall be operated, maintained and inspected in accordance with ASTM F2374.

~~Notwithstanding any requirements of this chapter to the contrary, a permit to operate an inflatable amusement device that is less than 150 square feet and in which the height of the patron containment area is less than 10 feet need not be obtained if the device has an unexpired certificate of inspection issued by a local building department in this Commonwealth, regardless of whether the device has been disassembled or moved to a new site.~~

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is to allow inflatable amusement devices to have yearly inspections, but to authorize the local building department to inspect any event where an inflatable amusement device is being operated and to charge a \$50 inspection fee per event if the local building department chooses to inspect such an event. The proposal also expands the term "kiddie ride" to include small mechanical rides (by adding a new definition) and limits the approval of the small mechanical rides to six months without an inspection.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

600 East Main Street

Suite 300

Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Amusement Device Technical Advisory Comm. Representing: _____

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): VADR, Section 30

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 13 VAC 5-31-30 to read as follows:

13 VAC 5-31-30. ~~Exemptions~~ Devices covered and exempt.

A. The following devices, identified by name or description, when open to the public, shall be considered amusement devices subject to this chapter. The list is intended only to clarify questionable devices, while the definition of an "amusement device" in 13 VAC 5-31-20 is generally used to determine the applicability of this chapter.

1. Inflatable amusement devices; and
2. Zip lines.

B. The following equipment or devices shall not be considered amusement devices subject to this chapter:

1. Non-mechanized playground or recreational equipment such as swing sets, sliding boards, climbing bars, jungle gyms, skateboard ramps and similar equipment where no admission fee is charged for its use or for admittance to areas where the equipment is located;
2. Coin-operated rides designed to accommodate three or less passengers; and
3. Water slides or similar equipment used in community association, community club or community organization swimming pools; and
4. Mechanical bulls or similar devices.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is to assist local building departments in the determination of whether certain devices are amusement devices and to achieve more uniformity in the application of the regulation.

Submittal Information

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information (Check one): Individual Government Entity Company

Name: Amusement Device Technical Advisory Comm. Representing: _____

Mailing Address: _____

Proposal Information

Code(s) and Section(s): VADR, Section 75

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 13 VAC 5-31-75 to read as follows:

13 VAC 5-31-75. Local Building Department.

A. In accordance with §§ 36-98.3 and 36-105 of the Code of Virginia, the local building department shall be responsible for the enforcement of this chapter and may charge fees for such enforcement activity. The total amount charged for any one permit to operate an amusement device or devices or the renewal of such permit shall not exceed the following, except that when a private inspector is used, the fees shall be reduced by ~~50%~~ 75%:

1. \$25 for each kiddie ride covered by the permit; (see small mechanical/inflatable proposal for this category)
2. ~~\$35~~ \$55 for each circular ride or flat-ride less than 20 feet in height covered by the permit;
3. ~~\$55~~ \$75 for each spectacular ride covered by the permit which permit which cannot be inspected as a circular ride or flat-ride in subdivision 2 of this subsection due to complexity or height; and
4. ~~\$150~~ \$200 for each coaster covered by the permit which exceeds 30 feet in height.

Notwithstanding the above, the local building department shall be permitted to increase the fees up to 50% when requested to perform weekend or after-hour inspections.

(Remainder of section unchanged)

Supporting Statement (including intent, need, and impact of the proposal):

The revised fees reflect the average real costs of local enforcement, taking into consideration travel times, the increased cost of fuel and actual time performing inspections. Although these factors vary by locality, the existing fees reflect an average hourly rate for an inspector of \$14.09; the new fees: \$23.09 an hour. The fees for "kiddie rides" have been left unchanged in this proposal since there is another proposal from the committee to entirely revise the kiddie ride provisions and which also address fees for the new small mechanical rides and inflatables, which are to replace the kiddie ride provisions. The fees have not been adjusted since 2005. The authorization for increasing the fee for night or weekend inspections will enable the local building department to do more inspections if no third party inspectors are available.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2012 Code Change Cycle

Code Change Number: _____

Proponent Information

(Check one): Individual

Government Entity

Company

Name: Kenneth R. Martin

Proposal Information

Code(s) and Section(s): VCC

Proposed Change (including all relevant section numbers, if multiple sections):

Change VCC Section 102.3 as shown:

102.3 Exemptions. The following are exempt from this code:

(no change to Items 1-6)

7. Generators used with amusement devices, carnivals or fairs.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is to recognize that generators used for amusement devices and at carnivals and fairs are regulated by the VADR, not the USBC.

Date Submitted: February 15, 2013

Please submit the proposal to:

DHCD DBFR SBCO (State Building Codes Office)

600 East Main Street

Suite 300

Richmond, VA 23219

Email Address: Vernon.hodge@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7150



Virginia Certification Standards

13VAC5-21-10. Definitions.

A. The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

“Applicant” means a person seeking a certificate.

“BCAAC” means the Building Code Academy Advisory Committee appointed pursuant to subdivision 7 of § 36-137 of the Code of Virginia.

“BHCD” means the Virginia Board of Housing and Community Development.

“Certificate” means a certificate of competence issued pursuant to subdivision 6 of § 36-137 of the Code of Virginia concerning the content, application, and intent of specified subject areas of the building and fire prevention regulations promulgated by the BHCD and issued to present or prospective personnel of local governments and to any other persons seeking to become qualified to perform inspections pursuant to Chapter 6 (§ 36-97 et seq.) of Title 36 of the Code of Virginia, Chapter 9 (§ 27-94 et seq.) of Title 27 of the Code of Virginia, and any regulations adopted thereunder, who have completed training programs or in other ways demonstrated adequate knowledge.

“Certificate holder” means a person to whom a certificate has been issued.

“Code academy” means the Virginia Building Code Academy established under subdivision 14 of § 36-139 of the Code of Virginia or individual or regional training academies accredited by the department pursuant to subdivision 7 of § 36-137 of the Code of Virginia.

“DFP” means the Virginia Department of Fire Programs.

“Department” means the Virginia Department of Housing and Community Development.

“Nongovernmental employee” means any person not employed by a locality collecting and transmitting the fee levy to the department in accordance with subdivision 7 of § 36-137 of the Code of Virginia.

“SFPC” means the Virginia Statewide Fire Prevention Code (13VAC5-51).

“State Review Board” means the Virginia State Building Code Technical Review Board established under § 36-108 of the Code of Virginia.

“USBC” means the Virginia Uniform Statewide Building Code (13VAC5-63).

“VADR” means the Virginia Amusement Device Regulations (13VAC5-31).

B. Words and terms used in this chapter that are defined in the USBC, VADR or SFPC and that are not defined in this chapter shall have the meaning ascribed to them in those regulations unless the context clearly indicates otherwise.

13VAC5-21-20. Purpose.

The purpose of this chapter is to establish standards for applicants for a certificate and standards to be used by the department in the evaluation and determination of a person's eligibility for the issuance of certificates.

13VAC5-21-31. Qualification and examination requirements.

A. An applicant for a certificate in categories associated with the USBC or the SFPC shall provide a written or electronic endorsement from the code official or the code official's supervisor in the locality in which they are employed certifying that the applicant complies with the qualification section in the USBC or the SFPC for each type of certificate sought. When the applicant for a certificate in categories associated with the USBC or the SFPC is a ~~nongovernment~~ nongovernmental employee, the applicant shall provide written or electronic documentation that the applicant complies with the qualification section in the USBC or the SFPC as it would relate to the applicant's job responsibilities for each type of certificate sought.

B. An applicant for a certificate in categories associated with the VADR shall provide a written endorsement from the applicant's supervisor or a person having a similar relationship to the applicant certifying that the applicant is generally qualified to conduct activities related to the VADR.

C. Applicants for all certificates shall provide proof of successful completion of approved examinations for each certificate sought, ~~except as provided for in 13VAC5-21-45 based on current certification examination requirements.~~ Applications submitted with passing grades of approved examinations older than six years from the date of passing will be denied except where the applicant can demonstrate the maintenance of a current certification issued by the approved testing agency. The department may consider related certifications maintained by the certifying entity. The department shall maintain a list of approved testing agencies and examinations that meet nationally accepted standards for each certificate offered. For information on approved testing agencies and examinations contact the department's ~~Technical Assistance Services Office, 501 N. 2nd St.~~ Training and Certification Office, 600 East Main St., Suite 300, Richmond, VA 23219, telephone (804) 371-7180.

13VAC5-21-41. Certification categories and training requirements.

A. The department maintains a list of all certificates offered and the list sets out the required training necessary to attend and complete to obtain a certificate. ~~This section also contains specific training requirements for some certificates offered that may be duplicated on the list or that may be in addition to those on the list.~~ Alternatives to the training requirements set out in 13VAC5-21-45 shall be permitted considered for all certificates offered except that no alternative shall be accepted for the code academy core module.

B. Applicants for certificates shall attend and complete the code academy core module. ~~In addition to~~ After the completion of the core module, applicants for the following certificates are required to attend and complete the following code academy training as set out in a list maintained by the department, except as provided for in 13VAC5-21-45. All required training must be completed within no more than six years prior to the date the application is submitted and the requirements for training are based on those in effect at the time of application.

Certificate	Code Academy Training
Building official	Advanced official module
Fire official	Advanced official module and the 1031 school as administered by DFP
Building maintenance official	Advanced official module and the property maintenance module
Fire prevention inspector	The 1031 school as administered by DFP
Amusement device inspector	Amusement device inspection module

13VAC5-21-45. Alternatives to ~~examination and~~ training requirements.

~~A. An applicant for a certificate with the written endorsement or documentation required by 13VAC5-21-31 may submit a written request to the department to approve an equivalent examination by a testing agency not on the list of approved testing agencies to satisfy the examination requirements of 13VAC5-21-31. BCAAC may be consulted with in any such consideration.~~

B. Upon written request, alternative training or a combination of training, education or experience to satisfy the training requirements of 13VAC5-21-41 may be approved, provided that such alternatives or combinations are determined to be equivalent to that required. However, as provided in 13VAC5-21-41, no substitutions shall be approved for the code academy core module. The types of combinations of education and experience may include military training, college classes, technical schools or long-term work experiences, except that long-term work experiences shall not be approved as the sole substitute to satisfy the training requirements. BCAAC may be consulted with in any such consideration.

13VAC5-21-51. Issuance and maintenance of certificates.

A. Certificates will be issued when an applicant has complied with the current applicable requirements of this chapter. Certificate holders will be classified as active ~~or~~, inactive or lapsed. An active certificate holder is a person who is certified and who has attended all periodic training courses designated by the department and complied with all continuing education requirements subsequent to becoming certified. An inactive certificate holder is a person who is certified ~~but~~ and has not either attended all such the periodic training courses designated by the department or met the continuing education requirements, but not both. An inactive certificate holder may request reinstatement as an active certificate holder after completing make-up training courses authorized by the department. A lapsed certificate holder is a person who is certified but has not attended all periodic training courses designated by the department and who has not complied

with all continuing education requirements. A lapsed certificate holder may request reinstatement as an active certificate holder after completing make-up training courses or examinations, or both, as authorized by the department. Provisional certificates may also be issued in accordance with subsection C of this section. Requirements for periodic training courses and continuing education requirements are set out in subsection D of this section.

B. All certificates issued since June 1978 are considered to be valid unless revoked or suspended, except that provisional certificates shall remain valid as set out under subsection C of this section.

C. A provisional certificate may be issued to (i) a person who has been directed by the department to obtain a certificate; (ii) an applicant requesting a certificate under the alternative ~~examination or~~ training provisions of 13VAC5-21-45; ~~or~~ (iii) an applicant when the training required ~~training~~ by the department has not been provided or offered; or (iv) an inactive or lapsed certificate holder when the issuance of a provisional certificate is determined to be warranted by the department.

~~Such a~~ A provisional certificate may also be issued ~~when the applicant to a person who has submitted an application to obtain a certificate and has not fully complied with the eligibility requirements of training and competency established in this chapter and~~ has (i) provided the written endorsement or documentation required by 13VAC5-21-31, (ii) satisfactorily completed the code academy core module, and (iii) completed any training through the code academy or through other providers determined to warrant the issuance of the provisional certificate.

The provisional certificate is valid for a period of one year after the date of issuance and shall only be issued once to any individual, except that a provisional certificate shall remain valid when the required training has not been provided or offered.

D. All certificate holders shall attend periodic maintenance training as designated by the department and shall attend 16 hours of continuing education every two years as approved by the department. If a certificate holder possesses more than one certificate, the 16 hours shall satisfy the continuing education requirement for all certificates.

13VAC5-21-61. Sanctions.

When the BHCD determines a certificate holder has failed to (i) comply with an order issued by the State Review Board ~~or failed to;~~ (ii) meet the required training or testing requirements, ~~or (iv) attend periodic maintenance training or continuing education, or both,~~ a warning letter may be issued to the certificate holder or a certificate may be revoked or suspended by the BHCD. In such cases, a noncompliance notice shall be issued to the certificate holder and notification shall be provided to the locality or company employing the certificate holder. Exceptions to the issuance of a noncompliance notice for failing to comply with the continuing education requirements may be considered where there is a separation from employment by medical or military leave for 12 consecutive months or more during the continuing education period. A record of any action taken pursuant to this section shall be permanently retained in the training record of the certificate holder.

13VAC5-21-70. Appeal.

Decisions of the BHCD regarding an applicant for a certificate or a certificate holder shall be final unless appealed.

Actions under this regulation are governed by the Virginia Administrative Process Act (§ 2.2-4000 et seq. of the Code of Virginia) and are subject to judicial review in accordance with that law.

Virginia Standards for Individual and Regional Code Academies

13VAC5-80-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

“BHCD” means the Virginia Board of Housing and Community Development.

“Certificate of Accreditation” means the certificate issued to an individual or regional code academy that accredits that code academy to conduct educational programs for persons seeking to become BHCD-certified for enforcement of Virginia’s building- and fire-related regulations.

“Code Academy” means an educational institution established in accordance with § 36-137 of the Code of Virginia that is accredited by DHCD to conduct classes to prepare an individual to pursue an occupation in the inspection profession relating to enforcement of the USBC, VADR and SFPC, or to upgrade an individual in technical phases of the USBC, VADR and SFPC.

“DHCD” means the Virginia Department of Housing and Community Development.

“Operator” means the person designated as the executive official in charge of the code academy.

“SFPC” means the Virginia Statewide Fire Prevention Code (13VAC5-51).

“Train the Trainer” means the DHCD training provided for code academy instructors.

~~“TRB” means the Virginia State Building Code Technical Review Board established under § 36-108 of the Code of Virginia.~~

“USBC” means the Virginia Uniform Statewide Building Code ~~(13VAC5-62)~~ (13VAC5-63).

“VADR” means the Virginia Amusement Device Regulations (13VAC5-31).

13VAC5-80-40. Appeals.

Decisions of DHCD under this regulation are case decisions under the Virginia Administrative Process Act (§ 2.2-4000 et seq. of the Code of Virginia) and are subject to judicial review in accordance with that law.

13VAC5-80-50. Listing of certified academies.

DHCD shall maintain a list of code academies that hold valid Certificates of Accreditation, which shall be available for public review.

13VAC5-80-60. Application for accreditation.

A. Any Code Academy seeking a Certificate of Accreditation shall submit the information required by these standards, on forms provided by DHCD, 120 calendar days prior to the date for which approval is requested.

B. The operator shall reimburse DHCD for the cost of processing and monitoring the accreditation.

C. The following information shall be submitted as part of the application:

1. A budget documenting the financial resources available to equip, maintain, and operate the code academy and proposed expenditures;

2. The educational and teaching qualifications of the operator and instructors;

3. The individual courses of instruction which will be offered, and the purpose of such instructions and an instruction schedule including proposed dates, times and instructors. The course listing shall include state academy courses required for certification and continuing education programs;

4. A listing of any equipment available to aid instruction in each field;

5. The maximum anticipated enrollment to be accommodated with the equipment available in each specified field, and the ratio of students to instructors which shall not exceed 50 to 1 for lecture format courses, and 20 to 1 for interactive courses;

6. The locations where such instruction will take place;

7. Any additional information that DHCD may deem necessary to carry out the provisions of this chapter.

D. Each application for a Certificate of Accreditation shall also include the following commitments:

1. Conduct the Code Academy in accordance with all standards and regulations promulgated by DHCD and BHCD;

2. Permit DHCD to inspect the Code Academy at any time, and to provide all information pertaining to the activities of the Code Academy or its financial condition as requested by DHCD;

3. The levy retained under § 36-137 of the Code of Virginia shall not be used for purposes other than directly relating to the operation of the Code Academy;

4. Conduct all state certification courses in accordance with DHCD content and delivery requirements;

5. In the event that the Code Academy should close, a list of enrolled students who have not completed their program of study, and the amount of the course which they have completed, shall be submitted to DHCD;

5- 6. Maintain current, complete and accurate student records, including a record of all hours of work completed by each student-;

7. Submit quarterly activity reports on forms provided by DHCD. The reports shall include:

a. Training activities conducting during a quarter;

b. Expenditures for conducted training activities;

c. Expenditures for related activities; and

d. Anticipated adjustments to approved activities at the time of accreditation;

8. Submit final activity and budget reports on forms provided by DHCD within 90 days prior to the end of the accreditation period. The reports shall include:

a. A training and activity report including courses, programs, instructors and student statistics;

b. A report detailing related activities;

c. A report on expenditures on all activities and purchases including revenue collected and any carry-over balance; and

d. Summary of the accreditation year.

13VAC5-80-70. Certificate display.

The Certificate of Accreditation shall be displayed on the premises of the Code Academy in an area which is readily accessible to the public.

13VAC5-80-80. Renewal of certificate.

A. Every Code Academy shall apply for renewal of its Certificate of Accreditation no later than April 15 of each year, on forms provided by DHCD. The application for renewal following information shall include a current training schedule. be submitted as part of the renewal application:

1. Proposed state certification course and continuing education training schedule for accreditation for the renewal period, including a delivery schedule, instructors, target participants, site logistics and proposed budget;

2. Proposed related activities such as, but not limited to, equipment and related training purchases, conferences and outside training events;

3. Anticipated revenue for the operation of the academy, budget for all training activities, academy staffing, related purchases and anticipated carry-over funds;

4. Any changes to the initially approved instructor list;

5. The following commitments:

a. Conduct the Code Academy in accordance with all standards and regulations promulgated by DHCD and BHCD;

b. Permit DHCD to inspect the Code Academy at any time and to provide all information pertaining to the activities of the Code Academy or its financial condition as requested by DHCD;

c. To not use the levy retained under § 36-137 of the Code of Virginia for purposes other than those directly relating to the operation of the Code Academy;

d. Conduct all state certification courses in accordance with DHCD content and delivery requirements;

e. In the event that the Code Academy should close, a list, to be submitted to DHCD, of enrolled students who have not completed their program of study and the amount of the course which they have completed; and

f. Maintain current, complete and accurate student records, including a record of all hours of work completed by each student.

B. Every Certificate of Accreditation shall expire upon failure to obtain renewal by June 30 of each year.

13VAC5-80-90. Personnel qualifications.

A. Any director of the Code Academy shall demonstrate a working knowledge of USBC, VADR and SFPC training-related technology and shall possess a minimum of two years of supervisory experience. Managerial experience and a college degree from an accredited college or university are preferred.

B. All instructors shall have knowledge and experience in the trade or profession in which the instructor teaches. Instructors teaching the state required certification courses shall have DHCD-approved experience as an instructor or shall have successfully completed a "Train the Trainer" or DHCD-approved equivalent course and hold an active DHCD instructor certification and active certifications in the discipline in which they are teaching.

C. DHCD shall be notified of any staff or instructor changes within the code academy subsequent to receiving accreditation. Staff changes forwarded to DHCD shall include qualifications of the instructors.

13VAC5-80-100. Instructional program.

The instructional program shall consist of those courses and subjects, related to the technical provisions of the national model codes and referenced standards, which the Code Academy has been accredited to offer, and be consistent with the instructional programs offered by DHCD. DHCD reserves the sole right to provide programs based on Chapter 1 of the USBC, VADR and SFPC. Attendance at any local or regional Code Academy shall not satisfy mandatory attendance at programs administered by DHCD on any changes to the USBC, VADR or SFPC.

13VAC5-80-110. Application for additional courses.

The operator shall present a supplementary application to DHCD for approval of additional courses of instruction.

13VAC5-80-120. ~~Withdrawal~~ Approval of initial application, withdrawal of course approval and revocation, suspension, or refusal to renew a certificate of accreditation.

A. DHCD may not approve an initial application, withdraw course approval, or revoke, suspend, or refuse to renew, any ~~code academy's~~ Code Academy's Certificate of Accreditation for any of the following:

1. Violation of any provision of this chapter;
2. Furnishing false, misleading, or incomplete information to DHCD, or failure to furnish information requested by DHCD within a reasonable time;
3. Presenting to a student any information that is false, misleading or fraudulent;
4. Failure to maintain the premises in a safe and sanitary condition as required by law, state regulation or local ordinance;
5. Failing to maintain adequate financial resources to satisfactorily conduct the courses of instruction offered, or to retain an adequate, qualified staff.

B. DHCD shall notify the operator by certified mail 30 calendar days prior to the effective date of any withdrawal of course approval, or revocation, suspension, or refusal to renew, a Certificate of Accreditation.

13VAC5-80-130. Return of certificate.

Any Certificate of Accreditation issued to a Code Academy shall be returned to DHCD immediately, by registered mail, for the following:

1. Revocation; or
2. Voluntary closure of institution; or
3. Any other cause deemed sufficient by DHCD.

13VAC5-80-140. Records.

DHCD shall maintain records on all actions, findings and recommendations concerning the initial application approval or denial, or approval, revocation, suspension, or refusal to renew any Certificate of Accreditation. All records shall be available to the public, upon request.