

**Virginia Board of Housing and Community Development
CODES AND STANDARDS COMMITTEE
2015 CODE CHANGE CYCLE – BOOK 2
September 19, 2016**

Opening Statement

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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT 2015 VIRGINIA UNIFORM STATEWIDE BUILDING CODE BASE DOCUMENT

Summary – This document is compiled by staff of the State Building Codes Office of the Division of Building and Fire Regulation. Its purpose is to convert the 2012 USBC to the 2015 USBC by comparing the language in the 2012 USBC to the 2015 editions of the International Codes and standards which have amendments in the USBC. It is not intended to create substantive changes to the 2012 USBC. Those differences between the 2012 International Codes and standards and the 2015 International Codes and standards which are not affected by existing state amendments to the 2012 International Codes and standards are not addressed in this document. Those differences may be addressed in the full code change process for the 2015 USBC. The base document is simply to make those necessary changes to the 2012 USBC to bring in the 2015 International Codes and standards and keep the existing state amendments which were made to the 2012 International Codes and standards. If the 2015 International Codes and standards have language that is consistent with an existing state amendment to the 2012 International Codes and standards, then the existing state amendment is deleted. The staff document is intended to serve as the basis for the publishing of proposed regulations for the 2015 USBC. Once the base document is approved by the Board of Housing and Community Development, if any code change proposals are considered and approved by the Board of Housing and Community Development to also go into the proposed regulations for the 2015 USBC, those proposals would be correlated with this base document and brought back to the Board of Housing and Community Development as a separate “proposed regulations” document for review.

Part I Construction

13VAC5-63-10. Chapter 1 Administration; Section 101 General.

A. Section 101.1 Short title. The Virginia Uniform Statewide Building Code, Part I, Construction, may be cited as the Virginia Construction Code or as the VCC. The term "USBC" shall mean the VCC unless the context in which the term is used clearly indicates it to be an abbreviation for the entire Virginia Uniform Statewide Building Code or for a different part of the Virginia Uniform Statewide Building Code.

Note: This code is also known as the ~~2012~~ 2015 edition of the USBC due to the use of the ~~2012~~ 2015 editions of the model codes.

B. Section 101.2 Incorporation by reference. Chapters 2 - 35 of the ~~2012~~ 2015 International Building Code, published by the International Code Council, Inc., are adopted and incorporated by reference to be an enforceable part of the USBC. The term "IBC" means the ~~2012~~ 2015 International Building Code, published by the International Code Council, Inc. 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. In addition, any provisions of the appendices of the IBC specifically identified to be part of the USBC are also considered to be part of the incorporation by reference.

Note 1: The IBC references other International Codes and standards including the following major codes:

~~2012~~ 2015 International Plumbing Code (IPC)

~~2012~~ 2015 International Mechanical Code (IMC)

~~2011~~ 2014 NFPA 70

~~2012~~ 2015 International Fuel Gas Code (IFGC)

~~2012~~ 2015 International Energy Conservation Code (IECC)

~~2012~~ 2015 International Residential Code (IRC)

Note 2: The IRC is applicable to the construction of detached one- and two-family dwellings and townhouses as set out in Section 310.

C. Section 101.3 Numbering system. A dual numbering system is used in the USBC to correlate the numbering system of the Virginia Administrative Code with the numbering system of the IBC. IBC numbering system designations are provided in the catchlines of the Virginia Administrative Code sections. Cross references between sections or chapters of the USBC use only the IBC numbering system designations. The term "chapter" is used in the context of the numbering system of the IBC and may mean a chapter in the USBC, a chapter in the IBC or a chapter in a referenced code or standard, depending on the context of the use of the term. The term "chapter" is not used to designate a chapter of the Virginia Administrative Code, unless clearly indicated.

D. Section 101.4 Arrangement of code provisions. The USBC is comprised of the combination of (i) the provisions of Chapter 1, Administration, which are established herein, (ii) Chapters 2 - 35 of the IBC, which are incorporated by reference in Section 101.2, and (iii) the changes to the text of the incorporated chapters of the IBC that are specifically identified. The terminology "changes to the text of the incorporated chapters of the IBC that are specifically identified" shall also be referred to as the "state amendments to the IBC." Such state amendments to the IBC are set out using corresponding chapter and section numbers of the IBC numbering system. In addition, since Chapter 1 of the IBC is not incorporated as part of the USBC, any reference to a provision of Chapter 1 of the IBC in the provisions of Chapters 2 - 35 of the IBC is generally invalid. However, where the purpose of such a reference would clearly correspond to a provision of Chapter 1 established herein, then the reference may be construed to be a valid reference to such corresponding Chapter 1 provision.

E. Section 101.5 Use of terminology and notes. The term "this code," or "the code," where used in the provisions of Chapter 1, in Chapters 2 - 35 of the IBC or in the state amendments to the IBC means the USBC, unless the context clearly indicates otherwise. The term "this code" or "the code" where used in a code or standard referenced in the IBC means that code or standard, unless the context clearly indicates otherwise. The use of notes in Chapter 1 is to provide information only and shall not be construed as changing the meaning of any code provision. Notes in the IBC, in the codes and standards referenced in the IBC and in the state amendments to the IBC may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise.

F. Section 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 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 any provisions of the codes and standards referenced in the IBC that address the same subject matter and impose differing requirements.
3. The state amendments to the IBC supersede any 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 any provisions of the codes and standards referenced in the IBC that address the same subject matter and impose differing requirements.
5. The provisions of Chapters 2 - 35 of the IBC supersede any provisions of the codes and standards referenced in the IBC that address the same subject matter and impose differing requirements.

G. Section 101.7 Administrative provisions. The provisions of Chapter 1 establish administrative requirements, which include but are not limited to provisions relating to the scope of the code, enforcement, fees, permits, inspections and disputes. Any provisions of Chapters 2 - 35 of the IBC or any provisions of the codes and standards referenced in the IBC that address the same subject matter and impose differing requirements are deleted and replaced by the provisions of Chapter 1. Further, any administrative requirements contained in the state amendments to the IBC shall be given the same precedence as the provisions of Chapter 1. Notwithstanding the above, where administrative requirements of Chapters 2 - 35 of the IBC or of the codes and standards referenced in the IBC are specifically identified as valid administrative requirements in Chapter 1 of this code or in the state amendments to the IBC, then such requirements are not deleted and replaced.

Note: The purpose of this provision is to eliminate overlap, conflicts and duplication by providing a single standard for administrative, procedural and enforcement requirements of this code.

H. Section 101.8 Definitions. The definitions of terms used in this code are contained in Chapter 2 along with specific provisions addressing the use of definitions. Terms may be defined in other chapters or provisions of the code and such definitions are also valid.

Note: The order of precedence outlined in Section 101.6 may be determinative in establishing how to apply the definitions in the IBC and in the referenced codes and standards.

13VAC5-63-20. Section 102 Purpose and scope.

A. Section 102.1 Purpose. In accordance with § 36-99 of the Code of Virginia, the purpose of the USBC is to protect the health, safety and welfare of the residents of the Commonwealth of Virginia, provided that buildings and structures should be permitted to be constructed at the least possible cost consistent with recognized standards of health, safety, energy conservation and water conservation, including provisions necessary to prevent overcrowding, rodent or insect infestation, and garbage accumulation; and barrier-free provisions for the physically handicapped and aged.

B. Section 102.2 Scope. This section establishes the scope of the USBC in accordance with § 36-98 of the Code of Virginia. The USBC shall supersede the building codes and regulations of the counties, municipalities and other political subdivisions and state agencies. This code also shall supersede the provisions of local ordinances applicable to single-family residential construction that (i) regulate dwelling foundations or crawl spaces, (ii) require the use of specific building materials or finishes in construction, or (iii) require minimum surface area or numbers of windows; however, this code shall not supersede proffered conditions accepted as a part of a rezoning application, conditions imposed upon the grant of special exceptions, special or conditional use permits or variances, conditions imposed upon a clustering of single-family homes and preservation of open space development through standards, conditions, and criteria established by a locality pursuant to subdivision 8 of § 15.2-2242 of the Code of Virginia or ~~subdivision A-12 of § 15.2-2286~~ § 15.2-2286.1 of the Code of Virginia, or land use requirements in airport or highway overlay districts, or historic districts created pursuant to § 15.2-2306 of the Code of Virginia, or local flood plain regulations adopted as a condition of participation in the National Flood Insurance Program.

Note: Requirements relating to functional design are contained in Section 103.10 of this code.

C. Section 102.2.1 Invalidity of provisions. To the extent that any provisions of this code are in conflict with Chapter 6 (§ 36-97 et seq.) of Title 36 of the Code of Virginia or in conflict with the scope of the USBC, those provisions are considered to be invalid to the extent of such conflict.

D. Section 102.3 Exemptions. The following are exempt from this code:

1. Equipment, related wiring, and poles and towers supporting the related wiring installed by a provider of publicly regulated utility service or a franchised cable television operator and electrical equipment and related wiring used for radio, broadcast or cable television, telecommunications or information service transmission. The exemption shall apply only if under applicable federal and state law the ownership and control of the equipment and wiring is by the service provider or its affiliates. Such exempt equipment and wiring shall be located on either rights-of-way or property for which the service provider has rights of occupancy and entry; however, the structures, including their service equipment, housing or supporting such exempt equipment and wiring shall be subject to the USBC. The installation of equipment and wiring exempted by this section shall not create an unsafe condition prohibited by the USBC.

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.

3. Parking lots and sidewalks that are not part of an accessible route.

4. Nonmechanized 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.

5. Industrialized buildings subject to the Virginia Industrialized Building Safety Regulations (13VAC5-91) and manufactured homes subject to the Virginia Manufactured Home Safety Regulations (13VAC5-95); except as provided for in Section ~~425~~ 427.

6. Farm buildings and structures, except for a building or a portion of a building located on a farm that is operated as a restaurant as defined in § 35.1-1 of the Code of Virginia and licensed as such by the Virginia Board of Health pursuant to Chapter 2 (§ 35.1-11 et seq.) of Title 35.1 of the Code of Virginia. However, farm buildings and structures lying within a flood plain or in a mudslide-prone area shall be subject to flood-proofing regulations or mudslide regulations, as applicable.

7. Federally owned buildings and structures unless federal law specifically requires a permit from the locality. Underground storage tank installations, modifications and removals shall comply with this code in accordance with federal law.

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

9. Automotive lifts.

13VAC5-63-30. Section 103 Application of code.

A. Section 103.1 General. In accordance with § 36-99 of the Code of Virginia, the USBC shall prescribe building regulations to be complied with in the construction and rehabilitation of buildings and structures, and the equipment therein.

B. Section 103.2 When applicable to new construction. Construction for which a permit application is submitted to the local building department on or after the effective date of the ~~2012~~ 2015 edition of the code shall comply with the provisions of this code, except for permit applications submitted during a one-year period beginning on the effective date of the ~~2012~~ 2015 edition of the code. The applicant for a permit during such one-year period shall be permitted to choose whether to comply with the provisions of this code or the provisions of the edition of the code in effect immediately prior to the ~~2012~~ 2015 edition. This provision shall also apply to subsequent amendments to this code based on the effective date of such amendments. In addition, when a permit has been properly issued under a previous edition of this code, this code shall not require changes to the approved construction documents, design or construction of such a building or structure, provided the permit has not been suspended or revoked.

C. Section 103.3 Change of occupancy. No change of occupancy shall be made in any structure when the current USBC requires a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation or sanitation. When such a greater degree is required, the owner or the owner's agent shall comply with the following:

1. When involving Group I-2 or I-3, written application shall be made to the local building department for a new certificate of occupancy and the new certificate of occupancy shall be obtained prior to the new use of the structure. When impractical to achieve compliance with this code for the new occupancy classification, the building official shall consider modifications upon application and as provided for in Section 106.3. In addition, the applicable accessibility provisions of Section 1012.8 of Part II of the Virginia Uniform Statewide Building Code, also known as the "Virginia Rehabilitation Code," or the "VRC" shall be met.

Exception: This section shall not be construed to permit noncompliance with any applicable flood load or flood-resistant construction requirements of this code.

2. In other than Group I-2 or I-3, the provisions of the VRC for change of occupancy shall be met.

D. Section 103.4 Additions. Additions to buildings and structures shall comply with the requirements of this code for new construction or shall comply with the VRC. An existing building or structure plus additions shall comply with the height and area provisions of Chapter 5 and the applicable provisions of Chapter 9. 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 flood-resistant construction requirements of this code.

2. When this code is used for compliance, existing structural elements carrying gravity loads shall be permitted to comply with Section 1103 of the International Existing Building Code.

E. Section 103.5 Reconstruction, alteration or repair in Group R-5 occupancies. The following criteria is applicable to reconstruction, alteration or repair of Group R-5 buildings or structures:

1. Any reconstruction, alteration or repair shall not adversely affect the performance of the building or structure, or cause the building or structure to become unsafe or lower existing levels of health and safety.

2. Parts of the building or structure not being reconstructed, altered or repaired shall not be required to comply with the requirements of this code applicable to newly constructed buildings or structures.

3. The installation of material or equipment, or both, that is neither required nor prohibited shall only be required to comply with the provisions of this code relating to the safe installation of such material or equipment.

4. Material or equipment, or both, may be replaced in the same location with material or equipment of a similar kind or capacity.

Exceptions:

1. This section shall not be construed to permit noncompliance with any applicable flood load or flood-resistant construction requirements of this code.

2. Reconstructed decks, balconies, porches and similar structures located 30 inches (762 mm) or more above grade shall meet the current code provisions for structural loading capacity, connections and structural attachment. This requirement excludes the configuration and height of handrails and guardrails.

3. Compliance with the VRC shall be an acceptable alternative to compliance with this section at the discretion of the owner or owner's agent.

F. Section 103.5.1 Equipment changes. Upon the replacement or new installation of any fuel-burning appliances or equipment in existing Group R-5 occupancies, an inspection or inspections shall be conducted to ensure that the connected vent or chimney systems comply with the following:

1. Vent or chimney systems are sized in accordance with the IRC.

2. Vent or chimney systems are clean, free of any obstruction or blockages, defects, or deterioration, and are in operable condition. Where not inspected by the local building department, persons performing such changes or installations shall certify to the building official that the requirements of Items 1 and 2 of this section are met.

G. Section 103.6 Reconstruction, alteration, and repair in other occupancies. Reconstruction, alteration, and repair in occupancies other than Group R-5 shall comply with the VRC.

H. Section 103.7 Retrofit requirements. The local building department shall enforce the provisions of Section 1701 of the VRC, which require certain existing buildings to be retrofitted with fire protection systems and other safety equipment. Retroactive fire protection system requirements contained in the International Fire Code (IFC) shall not be applicable unless required for compliance with the provisions of Section 1701 of the VRC.

I. Section 103.8 Nonrequired equipment. The following criteria for nonrequired equipment is in accordance with § 36-103 of the Code of Virginia. Building owners may elect to install partial or full fire alarms or other safety equipment that was not required by the edition of the USBC in effect at the time a building was constructed without meeting current requirements of the code, provided the installation does not create a hazardous condition. Permits for installation shall be obtained in accordance with this code. In addition, as a requirement of this code, when such nonrequired equipment is to be installed, the building official shall notify the appropriate fire official or fire chief.

J. Section 103.8.1 Reduction in function or discontinuance of nonrequired fire protection systems. When a nonrequired fire protection system is to be reduced in function or discontinued, it shall be done in such a manner so as not to create a false sense of protection. Generally, in such cases, any features visible from interior areas shall be removed, such as sprinkler heads, smoke detectors or alarm panels or devices, but any wiring or piping hidden within the construction of the building may remain. Approval of the proposed method of reduction or discontinuance shall be obtained from the building official.

K. Section 103.9 Use of certain provisions of referenced codes. The following provisions of the IBC and of other indicated codes or standards are to be considered valid provisions of this code. Where any such provisions have been modified by the state amendments to the IBC, then the modified provisions apply.

1. Special inspection requirements in Chapters 2 - 35.
2. Testing requirements and requirements for the submittal of construction documents in any of the ICC codes referenced in Chapter 35 and in the IRC.
3. Section R301.2 of the IRC authorizing localities to determine climatic and geographic design criteria.
4. Flood load or flood-resistant construction requirements in the IBC or the IRC, including, but not limited to, any such provisions pertaining to flood elevation certificates that are located in Chapter 1 of those codes. Any required flood elevation certificate pursuant to such provisions shall be prepared by a land surveyor licensed in Virginia or an RDP.
5. Section R101.2 of the IRC.
6. Section ~~N1101.6~~ N1102.1 of the IRC and Sections ~~C401.5.2~~ C402.1.1 and ~~R401.5.2~~ R402.1 of the IECC.

L. Section 103.10 Functional design. The following criteria for functional design is in accordance with § 36-98 of the Code of Virginia. The USBC shall not supersede the regulations of other state agencies that require and govern the functional design and operation of building related activities not covered by the USBC, including but not limited to (i) public water supply systems, (ii) waste water treatment and disposal systems, and (iii) solid waste facilities. Nor shall state agencies be prohibited from requiring, pursuant to other state law, that buildings and equipment be maintained in accordance with provisions of this code. In addition, as established by this code, the building official may refuse to issue a permit until the applicant has supplied certificates of functional design approval from the appropriate state agency or agencies. For purposes of coordination, the locality may require reports to the building official by other departments or agencies indicating compliance with their regulations applicable to the functional design of a building or structure as a condition for issuance of a building permit or certificate of occupancy. Such reports shall be based upon review of the plans or inspection of the project as determined by the locality. All enforcement of these conditions shall not be the responsibility of the building official, but rather the agency imposing the condition.

Note: Identified state agencies with functional design approval are listed in the "Related Laws Package," which is available from DHCD.

M. Section 103.11 Amusement devices and inspections. In accordance with § 36-98.3 of the Code of Virginia, to the extent they are not superseded by the provisions of § 36-98.3 of the Code of Virginia and the VADR, the provisions of the USBC shall apply to amusement devices. In addition, as a requirement of this code, inspections for compliance with

the VADR shall be conducted either by local building department personnel or private inspectors provided such persons are certified as amusement device inspectors under the VCS.

N. Section 103.12 State buildings and structures. This section establishes the application of the USBC to state-owned buildings and structures in accordance with § 36-98.1 of the Code of Virginia. The USBC shall be applicable to all state-owned buildings and structures, with the exception that §§ 2.2-1159 through 2.2-1161 of the Code of Virginia shall provide the standards for ready access to and use of state-owned buildings by the physically handicapped.

Any state-owned building or structure or building built on state-owned property for which preliminary plans were prepared or on which construction commenced after the initial effective date of the USBC, shall remain subject to the provisions of the USBC that were in effect at the time such plans were completed or such construction commenced. Subsequent reconstruction, renovation or demolition of such building or structure shall be subject to the pertinent provisions of this code.

Acting through the Division of Engineering and Buildings, the Virginia Department of General Services shall function as the building official for state-owned buildings. The department shall review and approve plans and specifications, grant modifications, and establish such rules and regulations as may be necessary to implement this section. It shall provide for the inspection of state-owned buildings and enforcement of the USBC and standards for access by the physically handicapped by delegating inspection and USBC enforcement duties to the State Fire Marshal's Office, to other appropriate state agencies having needed expertise, and to local building departments, all of which shall provide such assistance within a reasonable time and in the manner requested. State agencies and institutions occupying buildings shall pay to the local building department the same fees as would be paid by a private citizen for the services rendered when such services are requested by the department. The department may alter or overrule any decision of the local building department after having first considered the local building department's report or other rationale given for its decision. When altering or overruling any decision of a local building department, the department shall provide the local building department with a written summary of its reasons for doing so.

Notwithstanding any provision of this code to the contrary, roadway tunnels and bridges owned by the Virginia Department of Transportation shall be exempt from this code. The Virginia Department of General Services shall not have jurisdiction over such roadway tunnels, bridges and other limited access highways; provided, however, that the Department of General Services shall have jurisdiction over any occupied buildings within any Department of Transportation rights-of-way that are subject to this code.

Except as provided in subsection D of § 23-38.109 of the Code of Virginia, and notwithstanding any provision of this code to the contrary, at the request of a public institution of higher education, the Virginia Department of General Services, as further set forth in this provision, shall authorize that institution of higher education to contract with a building official of the locality in which the construction is taking place to perform any inspection and certifications required for the purpose of complying with this code. The department shall publish administrative procedures that shall be followed in contracting with a building official of the locality. The authority granted to a public institution of higher education under this provision to contract with a building official of the locality shall be subject to the institution meeting the conditions prescribed in subsection B of § 23-38.88 of the Code of Virginia.

Note: In accordance with § 36-98.1 of the Code of Virginia, roadway tunnels and bridges shall be designed, constructed and operated to comply with fire safety standards based on nationally recognized model codes and standards to be developed by the Virginia Department of Transportation in consultation with the State Fire Marshal ~~and approved by the Virginia Commonwealth Transportation Board~~. Emergency response planning and activities related to the standards ~~approved by the Commonwealth Transportation Board~~ shall be developed by the Department of Transportation and coordinated with the appropriate local officials and emergency service providers. On an annual basis, the Department of Transportation shall provide a report on the maintenance and operability of installed fire protection and detection systems in roadway tunnels and bridges to the State Fire Marshal.

O. Section 103.12.1 Certification of state enforcement personnel. State enforcement personnel shall comply with the applicable requirements of Section 105 for certification, ~~periodic maintenance training, and continuing education~~.

13VAC5-63-40. Section 104 Enforcement, generally.

A. Section 104.1 Scope of enforcement. This section establishes the requirements for enforcement of the USBC in accordance with § 36-105 of the Code of Virginia. Enforcement of the provisions of the USBC for construction and rehabilitation shall be the responsibility of the local building department. Whenever a county or municipality does not have such a building department, the local governing body shall enter into an agreement with the local governing body of another county or municipality or with some other agency, or a state agency approved by DHCD for such enforcement. For the purposes of this section, towns with a population of less than 3,500 may elect to administer and enforce the USBC; however, where the town does not elect to administer and enforce the code, the county in which the town is situated shall administer and enforce the code for the town. In the event such town is situated in two or more counties, those counties shall administer and enforce the USBC for that portion of the town situated within their respective boundaries.

However, upon a finding by the local building department, following a complaint by a tenant of a residential dwelling unit that is the subject of such complaint, that there may be a violation of the unsafe structures provisions of Part III of the Virginia Uniform Statewide Building Code, also known as the "Virginia Maintenance Code," or the "VMC," the local building department shall enforce such provisions.

If the local building department receives a complaint that a violation of the VMC exists that is an immediate and imminent threat to the health or safety of the owner, tenant, or occupants of any building or structure, or the owner, occupant, or tenant of any nearby building or structure, and the owner, occupant, or tenant of the building or structure that is the subject of the complaint has refused to allow the local building official or his agent to have access to the subject building or structure, the local building official or his agent may ~~present sworn testimony to~~ make an affidavit under oath before a magistrate or a court of competent jurisdiction and request that the magistrate or court grant the local building official or his agent an inspection warrant to enable the building official or his agent to enter the subject building or structure for the purpose of determining whether violations of the VMC exist. After issuing a warrant under this section, the magistrate or judge shall file the affidavit in the manner prescribed by § 19.2-54 of the Code of Virginia. After executing the warrant, the local building official or his agents shall return the warrant to the clerk of the circuit court of the city or county wherein the inspection was made. The local building official or his agent shall make a reasonable effort to obtain consent from the owner, occupant, or tenant of the subject building or structure prior to seeking the issuance of an inspection warrant under this section.

The local governing body shall, however, inspect and enforce the provisions of the VMC for elevators, escalators, and related conveyances, except for elevators in single-family and two-family homes and townhouses. Such inspection and enforcement shall be carried out by an agency or department designated by the local governing body.

B. Section 104.2 Interagency coordination. When any inspection functions under this code are assigned to a local agency other than the local building department, such agency shall coordinate its reports of inspection with the local building department.

13VAC5-63-50. Section 105 Local building department.

A. Section 105.1 Appointment of building official. Every local building department shall have a building official as the executive official in charge of the department. The building official shall be appointed in a manner selected by the local governing body. After permanent appointment, the building official shall not be removed from office except for cause after having been afforded a full opportunity to be heard on specific and relevant charges by and before the appointing authority. DHCD shall be notified by the appointing authority within 30 days of the appointment or release of a permanent or acting building official.

Note: Building officials are subject to sanctions in accordance with the VCS.

B. Section 105.1.1 Qualifications of building official. The building official shall have at least five years of building experience as a licensed professional engineer or architect, building, fire or trade inspector, contractor, housing inspector or superintendent of building, fire or trade construction or at least five years of building experience after obtaining a degree in architecture or engineering, with at least three years in responsible charge of work. Any combination of education and experience that would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. The building official shall have general knowledge of sound engineering practice in respect to the design and construction of structures, the basic principles of fire prevention, the accepted requirements for means of

egress and the installation of elevators and other service equipment necessary for the health, safety and general welfare of the occupants and the public. The local governing body may establish additional qualification requirements.

C. Section 105.1.2 Certification of building official. An acting or permanent building official shall be certified as a building official in accordance with the VCS within one year after being appointed as acting or permanent building official.

Exception: A building official in place prior to April 1, 1983, shall not be required to meet the certification requirements in this section while continuing to serve in the same capacity in the same locality.

D. Section 105.1.3 Noncertified building official. Except for a building official exempt from certification under the exception to Section 105.1.2, any acting or permanent building official who is not certified as a building official in accordance with the VCS shall attend the core module of the Virginia Building Code Academy or an equivalent course in an individual or regional code academy accredited by DHCD within 180 days of appointment. This requirement is in addition to meeting the certification requirement in Section 105.1.2.

~~E. Section 105.1.4 Requirements for periodic maintenance and continuing education. Building officials shall attend periodic maintenance training as designated by DHCD. In addition to the periodic maintenance training required above, building officials shall attend 16 hours of continuing education every two years as approved by DHCD. If a building official possesses more than one BHCD certificate, the 16 hours shall satisfy the continuing education requirement for all BHCD certificates.~~

Note: Continuing education and periodic training requirements for DHCD certifications are set out in the VCS.

~~F. E.~~ Section 105.2 Technical assistants. The building official, subject to any limitations imposed by the locality, shall be permitted to utilize technical assistants to assist the building official in the enforcement of the USBC. DHCD shall be notified by the building official within 60 days of the employment of, contracting with or termination of all technical assistants.

Note: Technical assistants are subject to sanctions in accordance with the VCS.

~~G. E.~~ Section 105.2.1 Qualifications of technical assistants. A technical assistant shall have at least three years of experience and general knowledge in at least one of the following areas: building construction; building, fire or housing inspections; plumbing, electrical or mechanical trades; or fire protection, elevator or property maintenance work. Any combination of education and experience that would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. The locality may establish additional qualification requirements.

~~H. G.~~ Section 105.2.2 Certification of technical assistants. A technical assistant shall be certified in the appropriate subject area within 18 months after becoming a technical assistant. When required by local policy to have two or more certifications, a technical assistant shall obtain the additional certifications within three years from the date of such requirement.

Exception: A technical assistant in place prior to March 1, 1988, shall not be required to meet the certification requirements in this section while continuing to serve in the same capacity in the same locality.

~~I. Section 105.2.3 Requirements for periodic maintenance and continuing education. Technical assistants shall attend periodic maintenance training as designated by DHCD. In addition to the periodic maintenance training required above, technical assistants shall attend 16 hours of continuing education every two years as approved by DHCD. If a technical assistant possesses more than one BHCD certificate, the 16 hours shall satisfy the continuing education requirement for all BHCD certificates.~~

Note: Continuing education and periodic training requirements for DHCD certifications are set out in the VCS.

~~J. H.~~ Section 105.3 Conflict of interest. The standards of conduct for building officials and technical assistants shall be in accordance with the provisions of the State and Local Government Conflict of Interests Act, Chapter 31 (§ 2.2-3100 et seq.) of Title 2.2 of the Code of Virginia.

~~K. I.~~ Section 105.4 Records. The local building department shall retain a record of applications received, permits, certificates, notices and orders issued, fees collected and reports of inspection in accordance with The Library of Virginia's General Schedule Number Six.

13VAC5-63-60. Section 106 Powers and duties of the building official.

A. Section 106.1 Powers and duties, generally. The building official shall enforce this code as set out herein and as interpreted by the State Review Board.

B. Section 106.2 Delegation of authority. The building official may delegate powers and duties except where such authority is limited by the local government. However, such limitations of authority by the local government are not applicable to the third-party inspector policy required by Section 113.7.1 nor shall such limitations of authority by the local government have the effect of altering the provisions of this code or creating building regulations. When such delegations are made, the building official shall be responsible for assuring that they are carried out in accordance with the provisions of this code.

C. Section 106.3 Issuance of modifications. Upon written application by an owner or an owner's agent, the building official may approve a modification of any provision of the USBC provided the spirit and functional intent of the code are observed and public health, welfare and safety are assured. The decision of the building official concerning a modification shall be made in writing and the application for a modification and the decision of the building official concerning such modification shall be retained in the permanent records of the local building department.

Note: The USBC references nationally recognized model codes and standards. Future amendments to such codes and standards are not automatically included in the USBC; however the building official should give them due consideration in deciding whether to approve a modification.

D. Section 106.3.1 Substantiation of modification. The building official may require or may consider a statement from an RDP or other person competent in the subject area of the application as to the equivalency of the proposed modification. In addition, the building official may require the application to include construction documents sealed by an RDP.

E. Section 106.3.2 Use of performance code. Compliance with the provisions of a nationally recognized performance code when approved as a modification shall be considered to constitute compliance with this code. All documents submitted as part of such consideration shall be retained in the permanent records of the local building department.

13VAC5-63-70. Section 107 Fees.

A. Section 107.1 Authority for charging fees. In accordance with § 36-105 of the Code of Virginia, fees may be levied by the local governing body in order to defray the cost of enforcement of the USBC.

Note: See subsection D of § 36-105 of the Code of Virginia for rules for permit fees involving property with easements or liens.

B. Section 107.1.1 Fee schedule. The local governing body shall establish a fee schedule incorporating unit rates, which may be based on square footage, cubic footage, estimated cost of construction or other appropriate criteria. A permit or any amendments to an existing permit shall not be issued until the designated fees have been paid, except that the building official may authorize the delayed payment of fees.

C. Section 107.1.2 Refunds. When requested in writing by a permit holder, the locality shall provide a fee refund in the case of the revocation of a permit or the abandonment or discontinuance of a building project. The refund shall not be required to exceed an amount which correlates to work not completed.

D. Section 107.1.3 Fees for generators used with amusement devices. Fees for generators and associated wiring used with amusement devices shall only be charged under the Virginia Amusement Device Regulations (13VAC5-31).

E. Section 107.2 Code academy fee levy. In accordance with subdivision 7 of § 36-137 of the Code of Virginia, the local building department shall collect a 2.0% levy of fees charged for permits issued under this code and transmit it

quarterly to DHCD to support training programs of the Virginia Building Code Academy. Localities that maintain individual or regional training academies accredited by DHCD shall retain such levy.

13VAC5-63-80. Section 108 Application for permit.

A. Section 108.1 When applications are required. Application for a permit shall be made to the building official and a permit shall be obtained prior to the commencement of any of the following activities, except that applications for emergency construction, alterations or equipment replacement shall be submitted by the end of the first working day that follows the day such work commences. In addition, the building official may authorize work to commence pending the receipt of an application or the issuance of a permit.

1. Construction or demolition of a building or structure. Installations or alterations involving (i) the removal or addition of any wall, partition or portion thereof, (ii) any structural component, (iii) the repair or replacement of any required component of a fire or smoke rated assembly, (iv) the alteration of any required means of egress system, (v) water supply and distribution system, sanitary drainage system or vent system, (vi) electric wiring, (vii) fire protection system, mechanical systems, or fuel supply systems, or (viii) any equipment regulated by the USBC.

2. For change of occupancy, application for a permit shall be made when a new certificate of occupancy is required under Section 103.3.

3. Movement of a lot line that increases the hazard to or decreases the level of safety of an existing building or structure in comparison to the building code under which such building or structure was constructed.

4. Removal or disturbing of any asbestos containing materials during the construction or demolition of a building or structure, including additions.

B. Section 108.2 Exemptions from application for permit. Notwithstanding the requirements of Section 108.1, application for a permit and any related inspections shall not be required for the following; however, this section shall not be construed to exempt such activities from other applicable requirements of this code. In addition, when an owner or an owner's agent requests that a permit be issued for any of the following, then a permit shall be issued and any related inspections shall be required.

1. Installation of wiring and equipment that (i) operates at less than 50 volts, (ii) is for network powered broadband communications systems, or (iii) is exempt under Section 102.3(1), except when any such installations are located in a plenum, penetrate fire rated or smoke protected construction or are a component of any of the following:

1.1. Fire alarm system.

1.2. Fire detection system.

1.3. Fire suppression system.

1.4. Smoke control system.

1.5. Fire protection supervisory system.

1.6. Elevator fire safety control system.

1.7. Access or egress control system or delayed egress locking or latching system.

1.8. Fire damper.

1.9. Door control system.

2. One story detached structures used as tool and storage sheds, playhouses or similar uses, provided the building area does not exceed 256 square feet (23.78 m²) and the structures are not classified as a Group F-1 or H occupancy.

3. Detached prefabricated buildings housing the equipment of a publicly regulated utility service, provided the floor area does not exceed 150 square feet (14 m²).
4. Tents or air-supported structures, or both, that cover an area of 900 square feet (84 m²) or less, including within that area all connecting areas or spaces with a common means of egress or entrance, provided such tents or structures have an occupant load of 50 or less persons.
5. Fences of any height unless required for pedestrian safety as provided for by Section 3306, or used for the barrier for a swimming pool.
6. Concrete or masonry walls, provided such walls do not exceed six feet in height above the finished grade. Ornamental column caps shall not be considered to contribute to the height of the wall and shall be permitted to extend above the six feet height measurement.
7. Retaining walls supporting less than three feet of unbalanced fill that are not constructed for the purpose of impounding Class I, II or III-A liquids or supporting a surcharge other than ordinary unbalanced fill.
8. Swimming pools that have a surface area not greater than 150 square feet (13.95 m²), do not exceed 5,000 gallons (19 000 L) and are less than 24 inches (610 mm) deep.
9. Signs under the conditions in Section H101.2 of Appendix H.
10. Replacement of above-ground existing LP-gas containers of the same capacity in the same location and associated regulators when installed by the serving gas supplier.
11. Flagpoles 30 feet (9144 mm) or less in height.
12. Temporary ramps serving dwelling units in Group R-3 and R-5 occupancies where the height of the entrance served by the ramp is no more than 30 inches (762 mm) above grade.
13. Construction work deemed by the building official to be minor and ordinary and which does not adversely affect public health or general safety.
14. Ordinary repairs that include the following:
 - 14.1. Replacement of windows and doors with windows and doors of similar operation and opening dimensions that do not require changes to the existing framed opening and that are not required to be fire rated in Group R-2 where serving a single dwelling unit and in Groups R-3, R-4 and R-5.
 - 14.2. Replacement of plumbing fixtures and well pumps in all groups without alteration of the water supply and distribution systems, sanitary drainage systems or vent systems.
 - 14.3. Replacement of general use snap switches, dimmer and control switches, 125 volt-15 or 20 ampere receptacles, luminaires (lighting fixtures) and ceiling (paddle) fans in Group R-2 where serving a single dwelling unit and in Groups R-3, R-4 and R-5.
 - 14.4. Replacement of mechanical appliances provided such equipment is not fueled by gas or oil in Group R-2 where serving a single-family dwelling and in Groups R-3, R-4 and R-5.
 - 14.5. Replacement of an unlimited amount of roof covering or siding in Groups R-3, R-4 or R-5 provided the building or structure is not in an area where the ~~design (3-second gust)~~ nominal design wind speed is greater than 100 miles per hour (~~160 km/hr~~ 44.7 meters per second) and replacement of 100 square feet (9.29 m²) or less of roof covering in all groups and all wind zones.
 - 14.6. Replacement of 100 square feet (9.29 m²) or less of roof decking in Groups R-3, R-4 or R-5 unless the decking to be replaced was required at the time of original construction to be fire-retardant-treated or protected in some other way to form a fire-rated wall termination.

14.7. Installation or replacement of floor finishes in all occupancies.

14.8. Replacement of Class C interior wall or ceiling finishes installed in Groups A, E and I and replacement of all classes of interior wall or ceiling finishes in other groups.

14.9. Installation or replacement of cabinetry or trim.

14.10. Application of paint or wallpaper.

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

15. Crypts, mausoleums, and columbaria structures not exceeding 1500 square feet (139.35 m²) in area if the building or structure is not for occupancy and used solely for the interment of human or animal remains and is not subject to special inspections.

Exception: Application for a permit may be required by the building official for the installation of replacement siding, roofing and windows in buildings within a historic district designated by a locality pursuant to § 15.2-2306 of the Code of Virginia.

C. Section 108.3 Applicant information, processing by mail. Application for a permit shall be made by the owner or lessee of the relevant property or the agent of either or by the RDP, contractor or subcontractor associated with the work or any of their agents. The full name and address of the owner, lessee and applicant shall be provided in the application. If the owner or lessee is a corporate body, when and to the extent determined necessary by the building official, the full name and address of the responsible officers shall also be provided.

A permit application may be submitted by mail and such permit applications shall be processed by mail, unless the permit applicant voluntarily chooses otherwise. In no case shall an applicant be required to appear in person.

The building official may accept applications for a permit through electronic submissions provided the information required by this section is obtained.

D. Section 108.4 Prerequisites to obtaining permit. In accordance with § 54.1-1111 of the Code of Virginia, any person applying to the building department for the construction, removal or improvement of any structure shall furnish prior to the issuance of the permit either (i) satisfactory proof to the building official that he is duly licensed or certified under the terms of Chapter 11 (§ 54.1-1000 et seq.) of Title 54.1 of the Code of Virginia to carry out or superintend the same or (ii) file a written statement, supported by an affidavit, that he is not subject to licensure or certification as a contractor or subcontractor pursuant to Chapter 11 of Title 54.1 of the Code of Virginia. The applicant shall also furnish satisfactory proof that the taxes or license fees required by any county, city, or town have been paid so as to be qualified to bid upon or contract for the work for which the permit has been applied.

E. Section 108.5 Mechanics' lien agent designation. In accordance with § 36-98.01 of the Code of Virginia, a building permit issued for any one-family or two-family residential dwelling shall at the time of issuance contain, at the request of the applicant, the name, mailing address, and telephone number of the mechanics' lien agent as defined in § 43-1 of the Code of Virginia. If the designation of a mechanics' lien agent is not so requested by the applicant, the building permit shall at the time of issuance state that none has been designated with the words "None Designated."

Note: In accordance with § 43-4.01A of the Code of Virginia, a permit may be amended after it has been initially issued to name a mechanics' lien agent or a new mechanics' lien agent.

F. Section 108.6 Application form, description of work. The application for a permit shall be submitted on a form or forms supplied by the local building department. The application shall contain a general description and location of the proposed work and such other information as determined necessary by the building official.

G. Section 108.7 Amendments to application. An application for a permit may be amended at any time prior to the completion of the work governed by the permit. Additional construction documents or other records may also be

submitted in a like manner. All such submittals shall have the same effect as if filed with the original application for a permit and shall be retained in a like manner as the original filings.

H. Section 108.8 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned six months after the date of filing unless such application has been pursued in good faith or a permit has been issued, except that the building official is authorized to grant one or more extensions of time if a justifiable cause is demonstrated.

13VAC5-63-90. Section 109 Construction documents.

A. Section 109.1 Submittal of documents. Construction documents shall be submitted with the application for a permit. The number of sets of such documents to be submitted shall be determined by the locality. Construction documents for one- and two-family dwellings may have floor plans reversed provided an accompanying site plan is approved.

Exception: Construction documents do not need to be submitted when the building official determines the proposed work is of a minor nature.

Note: Information on the types of construction required to be designed by an RDP is included in the "Related Laws Package" available from DHCD.

B. Section 109.2 Site plan. When determined necessary by the building official, a site plan shall be submitted with the application for a permit. The site plan shall show to scale the size and location of all proposed construction, including any associated wells, septic tanks or drain fields. The site plan shall also show to scale the size and location of all existing structures on the site, the distances from lot lines to all proposed construction, the established street grades and the proposed finished grades. When determined necessary by the building official, the site plan shall contain the elevation of the lowest floor of any proposed buildings. The site plan shall also be drawn in accordance with an accurate boundary line survey. When the application for a permit is for demolition, the site plan shall show all construction to be demolished and the location and size of all existing structures that are to remain on the site.

Note: Site plans are generally not necessary for alterations, renovations, repairs or the installation of equipment.

C. Section 109.3 Engineering details. When determined necessary by the building official, construction documents shall include adequate detail of the structural, mechanical, plumbing or electrical components. Adequate detail may include computations, stress diagrams or other essential technical data and when proposed buildings are more than two stories in height, adequate detail may specifically be required to include where floor penetrations will be made for pipes, wires, conduits, and other components of the electrical, mechanical and plumbing systems and how such floor penetrations will be protected to maintain the required structural integrity or fire-resistance rating, or both. All engineered documents, including relevant computations, shall be sealed by the RDP responsible for the design.

D. Section 109.4 Examination of documents. The building official shall examine or cause to be examined all construction documents or site plans, or both, within a reasonable time after filing. If such documents or plans do not comply with the provisions of this code, the permit applicant shall be notified in writing of the reasons, which shall include any adverse construction document review comments or determinations that additional information or engineering details need to be submitted. The review of construction documents for new one- and two-family dwellings for determining compliance with the technical provisions of this code not relating to the site, location or soil conditions associated with the dwellings shall not be required when identical construction documents for identical dwellings have been previously approved in the same locality under the same edition of the code and such construction documents are on file with the local building department.

E. Section 109.4.1 Expedited construction document review. The building official may accept reports from an approved person or agency that the construction documents have been examined and conform to the requirements of the USBC and may establish requirements for the person or agency submitting such reports. In addition, where such reports have been submitted, the building official may expedite the issuance of the permit.

F. Section 109.5 Approval of construction documents. The approval of construction documents shall be limited to only those items within the scope of the USBC. Either the word "Approved" shall be stamped on all required sets of approved construction documents or an equivalent endorsement in writing shall be provided. One set of the approved

construction documents shall be retained for the records of the local building department and one set shall be kept at the building site and shall be available to the building official at all reasonable times.

G. Section 109.6 Phased approval. The building official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for the foundation or other parts of a building or structure shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure will be granted.

13VAC5-63-100. Section 110 Permits.

A. Section 110.1 Approval and issuance of permits. The building official shall examine or cause to be examined all applications for permits or amendments to such applications within a reasonable time after filing. If the applications or amendments do not comply with the provisions of this code or all pertinent laws and ordinances, the permit shall not be issued and the permit applicant shall be notified in writing of the reasons for not issuing the permit. If the application complies with the applicable requirements of this code, a permit shall be issued as soon as practicable. The issuance of permits shall not be delayed in an effort to control the pace of construction of new detached one- or two-family dwellings.

B. Section 110.2 Types of permits. Separate or combined permits may be required for different areas of construction such as building construction, plumbing, electrical, and mechanical work, or for special construction as determined appropriate by the locality. In addition, permits for two or more buildings or structures on the same lot may be combined. Annual permits may also be issued for any construction regulated by this code. The annual permit holder shall maintain a detailed record of all alterations made under the annual permit. Such record shall be available to the building official and shall be submitted to the local building department if requested by the building official.

C. Section 110.3 Asbestos inspection in buildings to be renovated or demolished; exceptions. In accordance with § 36-99.7 of the Code of Virginia, the local building department shall not issue a building permit allowing a building for which an initial building permit was issued before January 1, 1985, to be renovated or demolished until the local building department receives certification from the owner or his agent that the affected portions of the building have been inspected for the presence of asbestos by an individual licensed to perform such inspections pursuant to § 54.1-503 of the Code of Virginia and that no asbestos-containing materials were found or that appropriate response actions will be undertaken in accordance with the requirements of the Clean Air Act National Emission Standard for the Hazardous Air Pollutant (NESHAPS) (40 CFR Part 61, Subpart M), and the asbestos worker protection requirements established by the U.S. Occupational Safety and Health Administration for construction workers (29 CFR 1926.1101). Local educational agencies that are subject to the requirements established by the Environmental Protection Agency under the Asbestos Hazard Emergency Response Act (AHERA) shall also certify compliance with 40 CFR Part 763 and subsequent amendments thereto.

To meet the inspection requirements above, except with respect to schools, asbestos inspection of renovation projects consisting only of repair or replacement of roofing, floorcovering, or siding materials may be satisfied by a statement that the materials to be repaired or replaced are assumed to contain friable asbestos and that asbestos installation, removal, or encapsulation will be accomplished by a licensed asbestos contractor.

The provisions of this section shall not apply to single-family dwellings or residential housing with four or fewer units unless the renovation or demolition of such buildings is for commercial or public development purposes. The provisions of this section shall not apply if the combined amount of regulated asbestos-containing material involved in the renovation or demolition is less than 260 linear feet on pipes or less than 160 square feet on other facility components or less than 35 cubic feet off facility components where the length or area could not be measured previously.

An abatement area shall not be reoccupied until the building official receives certification from the owner that the response actions have been completed and final clearances have been measured. The final clearance levels for reoccupancy of the abatement area shall be 0.01 or fewer asbestos fibers per cubic centimeter if determined by Phase Contrast Microscopy analysis (PCM) or 70 or fewer structures per square millimeter if determined by Transmission Electron Microscopy analysis (TEM).

D. Section 110.4 Fire apparatus access road requirements. The permit applicant shall be informed of any requirements for providing or maintaining fire apparatus access roads prior to the issuance of a building permit.

E. Section 110.5 Signature on and posting of permits; limitation of approval. The signature of the building official or authorized representative shall be on or affixed to every permit. A copy of the permit shall be posted on the construction site for public inspection until the work is completed. Such posting shall include the street or lot number, if one has been assigned, to be readable from a public way. In addition, each building or structure to which a street number has been assigned shall, upon completion, have the number displayed so as to be readable from the public way.

A permit shall be considered authority to proceed with construction in accordance with this code, the approved construction documents, the permit application and any approved amendments or modifications. The permit shall not be construed to otherwise authorize the omission or amendment of any provision of this code.

F. Section 110.6 Abandonment of work. A building official shall be permitted to revoke a permit if work on the site authorized by the permit is not commenced within six months after issuance of the permit, or if the authorized work on the site is suspended or abandoned for a period of six months after the permit is issued; however, permits issued for plumbing, electrical and mechanical work shall not be revoked if the building permit is still in effect. It shall be the responsibility of the permit applicant to prove to the building official that authorized work includes substantive progress, characterized by approved inspections as specified in Section 113.3 of at least one inspection within a period of six months or other evidence that would indicate substantial work has been performed. Upon written request, the building official may grant one or more extensions of time, not to exceed one year per extension.

G. Section 110.7 Single-family dwelling permits. The building official shall be permitted to require a three year time limit to complete construction of new detached single-family dwellings, additions to detached single-family dwellings and residential accessory structures. The time limit shall begin from the issuance date of the permit. The building official may grant extensions of time if the applicant can demonstrate substantive progress, characterized by approved inspections as specified in Section 113.3 of at least one inspection within a period of six months or other evidence that would indicate substantial work has been performed.

H. Section 110.8 Revocation of a permit. The building official may revoke a permit or approval issued under this code in the case of any false statement, misrepresentation of fact, abandonment of work, failure to complete construction as required by Section 110.7 or incorrect information supplied by the applicant in the application or construction documents on which the permit or approval was based.

13VAC5-63-110. Section 111 RDP services.

A. Section 111.1 When required. In accordance with § 54.1-410 of the Code of Virginia and under the general authority of this code, the local building department shall establish a procedure to ensure that construction documents under Section 109 are prepared by an RDP in any case in which the exemptions contained in § 54.1-401, 54.1-402 or 54.1-402.1 of the Code of Virginia are not applicable or in any case where the building official determines it necessary. When required under § 54.1-402 of the Code of Virginia or when required by the building official, or both, construction documents shall bear the name and address of the author and his occupation.

Note: Information on the types of construction required to be designed by an RDP is included in the "Related Laws Package" available from DHCD.

B. Section 111.2 Special inspection requirements. Special inspections shall be conducted when required by Section 1704. Individuals or agencies, or both, conducting special inspections shall meet the qualification requirements of Sections 1703 and 1704.2.1. The permit applicant shall submit a completed statement of special inspections with the permit application. The building official shall review, and if satisfied that the requirements have been met, approve the statement of special inspections as required in Sections 1704.2.3 and 1705 as a requisite to the issuance of a building permit. The building official may require interim inspection reports. The building official shall receive, and if satisfied that the requirements have been met, approve a final report of special inspections as specified in Section 1704.2.4. All fees and costs related to the special inspections shall be the responsibility of the building owner.

13VAC5-63-120. Section 112 Workmanship, materials and equipment.

A. Section 112.1 General. It shall be the duty of any person performing work covered by this code to comply with all applicable provisions of this code and to perform and complete such work so as to secure the results intended by the USBC. Damage to regulated building components caused by violations of this code or by the use of faulty materials or installations shall be considered as separate violations of this code and shall be subject to the applicable provisions of Section 115.

B. Section 112.2 Alternative methods or materials. In accordance with § 36-99 of the Code of Virginia, where practical, the provisions of this code are stated in terms of required level of performance so as to facilitate the prompt acceptance of new building materials and methods. When generally recognized standards of performance are not available, this section and other applicable requirements of this code provide for acceptance of materials and methods whose performance is substantially equal in safety to those specified on the basis of reliable test and evaluation data presented by the proponent. In addition, as a requirement of this code, the building official shall require that sufficient technical data be submitted to substantiate the proposed use of any material, equipment, device, assembly or method of construction.

C. Section 112.3 Documentation and approval. In determining whether any material, equipment, device, assembly or method of construction complies with this code, the building official shall approve items listed by nationally recognized testing laboratories, when such items are listed for the intended use and application, and in addition, may consider the recommendations of RDPs. Approval shall be issued when the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code and that the material, equipment, device, assembly or method of construction offered is, for the purpose intended, at least the equivalent of that prescribed by the code. Such approval is subject to all applicable requirements of this code and the material, equipment, device, assembly or method of construction shall be installed in accordance with the conditions of the approval and their listings. In addition, the building official may revoke such approval 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.

D. Section 112.3.1 Conditions of listings. Where conflicts between this code and conditions of the listing or the manufacturer's installation instructions occur, the provisions of this code shall apply.

Exception: Where a code provision is less restrictive than the conditions of the listing of the equipment or appliance or the manufacturer's installation instructions, the conditions of the listing and the manufacturer's installation instructions shall apply.

E. Section 112.4 Used material and equipment. Used materials, equipment and devices may be approved provided they have been reconditioned, tested or examined and found to be in good and proper working condition and acceptable for use by the building official.

F. Section 112.5 Defective materials. Notwithstanding any provision of this code to the contrary, where action has been taken and completed by the BHCD under subsection D of § 36-99 of the Code of Virginia establishing new performance standards for identified defective materials, this section sets forth the new performance standards addressing the prospective use of such materials and establishes remediation standards for the removal of any defective materials already installed, which when complied with enables the building official to certify that the building is deemed to comply with the edition of the USBC under which the building was originally constructed with respect to the remediation of the defective materials.

G. Section 112.5.1 Drywall, performance standard. All newly installed gypsum wallboard shall not be defective drywall as defined in Section 112.5.1.1.1.

H. Section 112.5.1.1 Remediation standards. The following provisions establish remediation standards where defective drywall was installed in buildings.

I. Section 112.5.1.1.1 Definition. For the purposes of this section the term "defective drywall" means gypsum wallboard that (i) contains elemental sulfur exceeding 10 parts per million that when exposed to heat or humidity, or both, emits volatile sulfur compounds in quantities that cause observable corrosion on electrical wiring, plumbing pipes, fuel gas lines, or HVAC equipment, or any components of the foregoing or (ii) has been designated by the U.S. Consumer Product Safety Commission as a product with a product defect that constitutes a substantial product hazard within the meaning of § 15(a)(2) of the Consumer Product Safety Act (15 USC § 2064(a)(2)).

J. Section 112.5.1.1.2 Permit. Application for a permit shall be made to the building official, and a permit shall be obtained prior to the commencement of remediation work undertaken to remove defective drywall from a building and for the removal, replacement, or repair of corroded electrical, plumbing, mechanical, or fuel gas equipment and components.

K. Section 112.5.1.1.3 Protocol. Where remediation of defective drywall is undertaken, the following standards shall be met. The building official shall be permitted to consider and approve modifications to these standards in accordance with Section 106.3.

L. Section 112.5.1.1.3.1 Drywall. Drywall in the building, whether defective or nondefective, shall be removed and discarded, including fasteners that held any defective drywall to prevent small pieces of drywall from remaining under fasteners.

Exceptions:

1. Nondefective drywall not subject to the corrosive effects of any defective drywall shall be permitted to be left in place in buildings where the defective drywall is limited to a defined room or space or isolated from the rest of the building and the defective drywall can be positively identified. If the room or space containing the defective drywall also contains any nondefective drywall, the nondefective drywall in that room or space shall also be removed.

2. In multifamily buildings where defective drywall was not used in the firewalls between units and there are no affected building systems behind the firewalls, the firewalls shall be permitted to be left in place.

M. Section 112.5.1.1.3.2 Insulation and other building components. Insulation in walls and ceilings shall be removed and discarded. Carpet and vinyl flooring shall be removed and discarded. Woodwork, trim, cabinets, and tile or wood floors may be left in place or may be reused.

Exceptions:

1. Closed-cell foam insulation is permitted to be left in place if testing for off-gassing from defective drywall is negative, unless its removal is required to gain access.

2. Insulation, carpet, or vinyl flooring in areas not exposed to defective drywall or to the effects of defective drywall, may be left in place or reused.

N. Section 112.5.1.1.3.3 Electrical wiring, equipment, devices, and components. All electrical wiring regulated by this code shall be permitted to be left in place, but removal or cleaning of exposed ends of the wiring to reveal clean or uncorroded surfaces is required. All electrical equipment, devices, and components of the electrical system of the building regulated by this code shall be removed and discarded. This shall include all smoke detectors.

Exceptions:

1. Electrical equipment, devices, or components in areas not exposed to the corrosive effects of defective drywall shall be permitted to be left in place or reused. Electrical equipment, devices, or components in areas exposed to the corrosive effects of defective drywall shall be cleaned, repaired, or replaced.

2. Cord and plug connected appliances are not subject to this code and, therefore, cannot be required to be removed or replaced.

Note: All low-voltage wiring associated with security systems, door bells, elevator controls, and other such components shall be removed and replaced or repaired.

O. Section 112.5.1.1.3.4 Plumbing and fuel gas piping, fittings, fixtures, and equipment. All copper fuel gas piping and all equipment utilizing fuel gas with copper, silver, or aluminum components shall be removed and discarded. All copper plumbing pipes and fittings shall be removed and discarded. Plumbing fixtures with copper, silver, or aluminum components shall be removed and discarded.

Exception: Plumbing or fuel gas piping, fittings, fixtures, equipment, or components in areas not exposed to the corrosive effects of defective drywall shall be permitted to be left in place or reused.

P. Section 112.5.1.1.3.5 Mechanical systems. All heating, air-conditioning, and ventilation system components, including but not limited to ductwork, air-handling units, furnaces, heat pumps, refrigerant lines, and thermostats and associated wiring, shall be removed and discarded.

Exception: Mechanical system components in areas not exposed to the corrosive effects of defective drywall shall be permitted to be left in place or reused.

Q. Section 112.5.1.1.3.6 Cleaning. Following the removal of all materials and components in accordance with Sections 112.5.1.1.3.1 through 112.5.1.1.3.5, the building shall be thoroughly cleaned to remove any particulate matter and dust.

R. Section 112.5.1.1.3.7 Airing out. Following cleaning in accordance with Section 112.5.1.1.3.6, the building shall be thoroughly aired out with the use of open windows and doors and fans.

S. Section 112.5.1.1.3.8 Pre-rebuilding clearance testing. Following the steps outlined above for removal of all materials and components, cleaning and airing out, a pre-rebuilding clearance test shall be conducted with the use of copper or silver coupons and the methodology outlined in the April 2, 2010, joint report by the Consumer Products Safety Commission and the Department of Housing and Urban Development "Interim Remediation Guidance for Homes with Corrosion from Problem Drywall" or with the use of a copper probe and dosimeter. The clearance testing shall confirm that all airborne compounds associated with the defective drywall are at usual environmental background levels. The clearance testing report, certifying compliance, shall be submitted to the building official.

Notes:

1. Where the building is served by a well and prior to conducting clearance tests, all outlets in piping served by the well should be capped or otherwise plugged to prevent contamination of the air sample.

2. To prevent siphoning and evaporation of the trap seals, fixtures should be capped or otherwise plugged to prevent sewer gases from contaminating the air sample.

T. Section 112.5.1.1.3.9 Testing agencies and personnel. Agencies and personnel performing pre-rebuilding or post-rebuilding clearance testing shall be independent of those responsible for all other remediation work and the agencies and personnel shall be appropriately certified or accredited by the Council of Engineering and Scientific Specialty Boards, the American Indoor Air Quality Council, or the World Safety Organization.

Exception: Testing agencies and personnel shall be accepted if certified by an RDP or if the agency employs an RDP to be in responsible charge of the work.

U. Section 112.5.1.1.3.10 Rebuilding standards. The rebuilding of the building shall comply with the edition of the USBC that was in effect when the building was originally built.

V. Section 112.5.1.1.3.11 Post-rebuilding clearance testing. A post-rebuilding clearance test prior to reoccupancy of the building or structure shall be conducted with the use of copper or silver coupons and the methodology outlined in the April 2, 2010, joint report by the Consumer Products Safety Commission and by the Department of Housing and Urban Development "Interim Remediation Guidance for Homes with Corrosion from Problem Drywall" or with the use of a copper probe and dosimeter. The clearance testing shall confirm that all airborne compounds associated with the defective drywall are at usual environmental background levels. The clearance testing report certifying compliance shall be submitted to the building official.

Notes:

1. Where the building is served by a well and prior to conducting clearance tests, all outlets in piping served by the well should be capped or otherwise plugged to prevent contamination of the air sample.

2. To prevent siphoning and evaporation of the trap seals, fixtures should be capped or otherwise plugged to prevent sewer gases from contaminating the air sample.

W. Section 112.5.1.1.4 Final approval by the building official. Once remediation has been completed in accordance with this section, a certificate or letter of approval shall be issued by the building official. The certificate or letter shall state that the remediation and rebuilding is deemed to comply with this code.

X. Section 112.5.1.1.4.1 Approval of remediation occurring prior to these standards. The building official shall issue a certificate or letter of approval for remediation of defective drywall that occurred prior to the effective date of these standards provided post-rebuilding clearance testing has been performed in accordance with Section 112.5.1.1.3.11, by agencies and personnel complying with Section 112.5.1.1.3.9, and the clearance testing confirms that all airborne compounds associated with the defective drywall are at usual environmental background levels. The clearance testing report certifying compliance shall be submitted to the building official.

13VAC5-63-130. Section 113 Inspections.

A. Section 113.1 General. In accordance with § 36-105 of the Code of Virginia, any building or structure may be inspected at any time before completion, and shall not be deemed in compliance until approved by the inspecting authority. Where the construction cost is less than \$2,500, however, the inspection may, in the discretion of the inspecting authority, be waived. The building official shall coordinate all reports of inspections for compliance with the USBC, with inspections of fire and health officials delegated such authority, prior to the issuance of an occupancy permit.

B. Section 113.1.1 Equipment required. Any ladder, scaffolding or test equipment necessary to conduct or witness a requested inspection shall be provided by the permit holder.

C. Section 113.1.2 Duty to notify. When construction reaches a stage of completion that requires an inspection, the permit holder shall notify the building official.

D. Section 113.1.3 Duty to inspect. Except as provided for in Section 113.7, the building official shall perform the requested inspection in accordance with Section 113.6 when notified in accordance with Section 113.1.2.

E. Section 113.2 Prerequisites. The building official may conduct a site inspection prior to issuing a permit. When conducting inspections pursuant to this code, all personnel shall carry proper credentials.

F. Section 113.3 Minimum inspections. The following minimum inspections shall be conducted by the building official when applicable to the construction or permit:

1. Inspection of footing excavations and reinforcement material for concrete footings prior to the placement of concrete.
2. Inspection of foundation systems during phases of construction necessary to assure compliance with this code.
3. Inspection of preparatory work prior to the placement of concrete.
4. Inspection of structural members and fasteners prior to concealment.
5. Inspection of electrical, mechanical and plumbing materials, equipment and systems prior to concealment.
6. Inspection of energy conservation material prior to concealment.
7. Final inspection.

G. Section 113.4 Additional inspections. The building official may designate additional inspections and tests to be conducted during the construction of a building or structure and shall so notify the permit holder.

H. Section 113.5 In-plant and factory inspections. When required by the provisions of this code, materials, equipment or assemblies shall be inspected at the point of manufacture or fabrication. The building official shall require the submittal

of an evaluation report of such materials, equipment or assemblies. The evaluation report shall indicate the complete details of the assembly including a description of the assembly and its components, and describe the basis upon which the assembly is being evaluated. In addition, test results and other data as necessary for the building official to determine conformance with the USBC shall be submitted. For factory inspections, an identifying label or stamp permanently affixed to materials, equipment or assemblies indicating that a factory inspection has been made shall be acceptable instead of a written inspection report, provided the intent or meaning of such identifying label or stamp is properly substantiated.

I. Section 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.

J. Section 113.7 Approved inspection agencies. The building official may accept reports of inspections and tests from individuals or inspection agencies approved in accordance with the building official's written policy required by Section 113.7.1. The individual or inspection agency shall meet the qualifications and reliability requirements established by the written policy. Under circumstances where the building official is unable to make the inspection or test required by Section 113.3 or 113.4 within two working days of a request or an agreed upon date or if authorized for other circumstances in the building official's written policy, the building official shall accept reports for review. The building official shall approve the report from such approved individuals or agencies unless there is cause to reject it. Failure to approve a report shall be in writing within two working days of receiving it stating the reason for the rejection. Reports of inspections conducted by approved third-party inspectors or agencies shall be in writing, shall indicate if compliance with the applicable provisions of the USBC have been met and shall be certified by the individual inspector or by the responsible officer when the report is from an agency.

Note: Photographs, videotapes or other sources of pertinent data or information may be considered as constituting such reports and tests.

K. Section 113.7.1 Third-party inspectors. Each building official charged with the enforcement of the USBC 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 building official.

L. Section 113.7.2 Qualifications. In determining third-party inspector qualifications, the building 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.

M. Section 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.

13VAC5-63-140. Section 114 Stop work orders.

A. Section 114.1 Issuance of order. When the building official finds that work on any building or structure is being executed contrary to the provisions of this code or any pertinent laws or ordinances, or in a manner endangering the general public, a written stop work order may be issued. The order shall identify the nature of the work to be stopped and be given either to the owner of the property involved, to the owner's agent or to the person performing the work.

Following the issuance of such an order, the affected work shall cease immediately. The order shall state the conditions under which such work may be resumed.

B. Section 114.2 Limitation of order. A stop work order shall apply only to the work identified in the order, provided that other work on the building or structure may be continued if not concealing the work covered by the order.

13VAC5-63-150. Section 115 Violations.

A. Section 115.1 Violation a misdemeanor; civil penalty. In accordance with § 36-106 of the Code of Virginia, it shall be unlawful for any owner or any other person, firm or corporation, on or after the effective date of any code provisions, to violate any such provisions. Any locality may adopt an ordinance that establishes a uniform schedule of civil penalties for violations of specified provisions of the code that are not abated or remedied promptly after receipt of a notice of violation from the local enforcement officer.

Note: See the full text of § 36-106 of the Code of Virginia for additional requirements and criteria pertaining to legal action relative to violations of the code.

B. Section 115.2 Notice of violation. The building official shall issue a written notice of violation to the responsible party if any violations of this code or any directives or orders of the building official have not been corrected or complied with in a reasonable time. The notice shall reference the code section upon which the notice is based and direct the discontinuance and abatement of the violation or the compliance with such directive or order. The notice shall be issued by either delivering a copy to the responsible party by mail to the last known address or delivering the notice in person or by leaving it in the possession of any person in charge of the premises, or by posting the notice in a conspicuous place if the person in charge of the premises cannot be found. The notice of violation shall indicate the right of appeal by referencing the appeals section. When the owner of the building or structure, or the permit holder for the construction in question, or the tenants of such building or structure, are not the responsible party to whom the notice of violation is issued, then a copy of the notice shall also be delivered to the such owner, permit holder or tenants.

C. Section 115.2.1 Notice not to be issued under certain circumstances. When violations are discovered more than two years after the certificate of occupancy is issued or the date of initial occupancy, whichever occurred later, or more than two years after the approved final inspection for an alteration or renovation, a notice of violation shall only be issued upon advice from the legal counsel of the locality that action may be taken to compel correction of the violation. When compliance can no longer be compelled by prosecution under § 36-106 of the Code of Virginia, the building official, when requested by the building owner, shall document in writing the existence of the violation noting the edition of the USBC the violation is under.

D. Section 115.3 Further action when violation not corrected. If the responsible party has not complied with the notice of violation, the building official shall submit a written request to the legal counsel of the locality to institute the appropriate legal proceedings to restrain, correct or abate the violation or to require the removal or termination of the use of the building or structure involved. In cases where the locality so authorizes, the building official may issue or obtain a summons or warrant. Compliance with a notice of violation notwithstanding, the building official may request legal proceedings be instituted for prosecution when a person, firm or corporation is served with three or more notices of violation within one calendar year for failure to obtain a required construction permit prior to commencement of work subject to this code.

Note: See § 19.2-8 of the Code of Virginia concerning the statute of limitations for building code prosecutions.

E. Section 115.4 Penalties and abatement. Penalties for violations of the USBC shall be as set out in § 36-106 of the Code of Virginia. The successful prosecution of a violation of the USBC shall not preclude the institution of appropriate legal action to require correction or abatement of a violation.

F. Section 115.5 Transfer of ownership. In accordance with § 36-105 of the Code of Virginia, if the local building department has initiated an enforcement action against the owner of a building or structure and such owner subsequently transfers the ownership of the building or structure to an entity in which the owner holds an ownership interest greater than 50%, the pending enforcement action shall continue to be enforced against the owner.

13VAC5-63-160. Section 116 Certificates of occupancy.

A. Section 116.1 General; when to be issued. A certificate of occupancy indicating completion of the work for which a permit was issued shall be obtained prior to the occupancy of any building or structure, except as provided for in this section generally and as specifically provided for in Section 113.8 for additions or alterations. The certificate shall be issued after completion of the final inspection and when the building or structure is in compliance with this code and any pertinent laws or ordinances, or when otherwise entitled. The building official shall, however, issue a certificate of occupancy within five working days after being requested to do so, provided the building or structure meets all of the requirements for a certificate.

Exception: A certificate of occupancy is not required for an accessory structure as defined in the IRC.

B. Section 116.1.1 Temporary certificate of occupancy. Upon the request of a permit holder, a temporary certificate of occupancy may be issued before the completion of the work covered by a permit, provided that such portion or portions of a building or structure may be occupied safely prior to full completion of the building or structure without endangering life or public safety.

C. Section 116.2 Contents of certificate. A certificate of occupancy shall specify the following:

1. The edition of the USBC under which the permit is issued.
2. The group classification and occupancy in accordance with the provisions of Chapter 3.
3. The type of construction as defined in Chapter 6.
4. If an automatic sprinkler system is provided and whether or not such system was required.
5. Any special stipulations and conditions of the building permit and if any modifications were issued under the permit, there shall be a notation on the certificate that modifications were issued.
6. Group R-5 occupancies complying with Section R320.2 of the IRC shall have a notation of compliance with that section on the certificate.

D. Section 116.3 Suspension or revocation of certificate. A certificate of occupancy may be revoked or suspended whenever the building official discovers that such certificate was issued in error or on the basis of incorrect information, or where there are repeated violations of the USBC after the certificate has been issued or when requested by the code official under Section 105.7 of the VMC. The revocation or suspension shall be in writing and shall state the necessary corrections or conditions for the certificate to be reissued or reinstated in accordance with Section 116.3.1.

E. Section 116.3.1 Reissuance or reinstatement of certificate of occupancy. When a certificate of occupancy has been revoked or suspended, it shall be reissued or reinstated upon correction of the specific condition or conditions cited as the cause of the revocation or suspension and the revocation or suspension of a certificate of occupancy shall not be used as justification for requiring a building or structure to be subject to a later edition of the code than that under which such building or structure was initially constructed.

F. Section 116.4 Issuance of certificate for pre-USBC buildings or structures. When a building or structure was constructed prior to being subject to the initial edition of the USBC and the local building department does not have a certificate of occupancy for the building or structure, the owner or owner's agent may submit a written request for a certificate to be created. The building official, after receipt of the request, shall issue a certificate provided a determination is made that there are no current violations of the VMC or the Virginia Statewide Fire Prevention Code (13VAC5-51) and the occupancy classification of the building or structure has not changed. Such buildings and structures shall not be prevented from continued use.

Exception: When no certificate exists, but the local building department has records indicating that a certificate did exist, then the building official may either verify in writing that a certificate did exist or issue a certificate based upon the records.

13VAC5-63-170. Section 117 Temporary and moved buildings and structures; demolition.

A. Section 117.1 Temporary buildings and structures. The building official is authorized to issue a permit for temporary buildings or structures. Such permits shall be limited as to time of service, but shall not be permitted for more than one year, except that upon the permit holder's written request, the building official may grant one or more extensions of time, not to exceed one year per extension. The building official is authorized to terminate the approval and order the demolition or removal of temporary buildings or structures during the period authorized by the permit when determined necessary.

B. Section 117.1.1 Temporary uses within existing buildings and structures. The building official shall review and may approve conditions or modifications for temporary uses, including hypothermia and hyperthermia shelters, that may be necessary as long as the use meets the spirit and functional intent intended by this code. The building official is authorized to terminate the approval and order the discontinuance of the temporary use during the period authorized by the permit when determined necessary. The building official shall notify the appropriate fire official or fire chief of the approved temporary use.

C. Section 117.2 Moved buildings and structures. Any building or structure moved into a locality or moved to a new location within a locality shall not be occupied or used until a ~~certification~~ certificate of occupancy is issued for the new location. Such moved buildings or structures shall be required to comply with the requirements of this code for a newly constructed building or structure unless meeting all of the following requirements relative to the new location:

1. There is no change in the occupancy classification from its previous location.
2. The building or structure was in compliance with all state and local requirements applicable to it in its previous location and is in compliance with all state and local requirements applicable if originally constructed in the new location.
3. The building or structure did not become unsafe during the moving process due to structural damage or for other reasons.
4. Any alterations, reconstruction, renovations or repairs made pursuant to the move are in compliance with applicable requirements of the VRC.

D. Section 117.3 Demolition of buildings and structures. Prior to the issuance of a permit for the demolition of any building or structure, the owner or the owner's agent shall provide certification to the building official that all service connections of utilities have been removed, sealed or plugged satisfactorily and a release has been obtained from the associated utility company. The certification shall further provide that written notice has been given to the owners of adjoining lots and any other lots that may be affected by the temporary removal of utility wires or the temporary disconnection or termination of other services or facilities relative to the demolition. In addition, the requirements of Chapter 33 of the IBC for any necessary retaining walls or fences during demolition shall be applicable and when a building or structure is demolished or removed, the established grades shall be restored.

13VAC5-63-180. Section 118 Unsafe buildings or structures.

A. Section 118.1 Applicability. This section applies to unsafe buildings or structures.

Note: Existing buildings and structures other than those under construction or subject to this section are subject to the VMC, which also has requirements for unsafe conditions.

B. Section 118.2 Repair or removal of unsafe buildings or structures. Any unsafe building or structure shall be made safe through compliance with this code or shall be taken down and removed if determined necessary by the building official.

C. Section 118.3 Inspection report. The building official shall inspect any reported unsafe building or structure and shall prepare a report to be filed in the records of the local building department. In addition to a description of any unsafe conditions found, the report shall include the occupancy classification of the building or structure and the nature and extent of any damages caused by collapse or failure of any building components.

D. Section 118.4 Notice of unsafe building or structure. When a building or structure is determined by the building official to be an unsafe building or structure, a written notice of unsafe building or structure shall be issued by personal service to the owner, the owner's agent, or the person in control of such building or structure. The notice shall specify the corrections necessary to comply with this code and specify the time period within which the repairs must occur, or if the notice specifies that the unsafe building or structure is required to be demolished, the notice shall specify the time period within which demolition must occur.

Note: Whenever possible, the notice should also be given to any tenants or occupants of the unsafe building or structure.

E. Section 118.4.1 Vacating unsafe building or structure. If the building official determines there is actual and immediate danger to the occupants or public, or when life is endangered by the occupancy of an unsafe building or structure, the building official shall be authorized to order the occupants to immediately vacate the unsafe building or structure. When an unsafe building or structure is ordered to be vacated, the building official shall post a notice at each entrance that reads as follows:

"This Building (or Structure) is Unsafe and its Occupancy (or Use) is Prohibited by the Building Official."

After posting, occupancy or use of the unsafe building or structure shall be prohibited except when authorized to enter to conduct inspections, make required repairs, or as necessary to demolish the building or structure.

F. Section 118.5 Posting of notice. If the notice is unable to be issued by personal service as required by Section 118.4, then the notice shall be sent by registered or certified mail to the last known address of the responsible party and a copy of the notice shall be posted in a conspicuous place on the premises.

G. Section 118.6 Posting of placard. In the case of an unsafe building or structure, if the notice is not complied with, a placard with the following wording shall be posted at the entrance to the building or structure:

"This Building (or Structure) is Unfit for Habitation and its Use or Occupancy has been Prohibited by the Building Official."

After an unsafe building or structure is placarded, entering the unsafe building or structure shall be prohibited except as authorized by the building official to make inspections, to perform required repairs, or to demolish the unsafe building or structure. In addition, the placard shall not be removed until the unsafe building or structure is determined by the building official to be safe to occupy. The placard shall not be defaced.

H. Section 118.7 Emergency repairs and demolition. To the extent permitted by the locality, the building official may authorize emergency repairs to unsafe buildings or structures when it is determined that there is an immediate danger of any portion of the unsafe building or structure collapsing or falling and when life is endangered. Emergency repairs may also be authorized when there is a code violation resulting in a serious and imminent threat to the life and safety of the occupants or public. The building official shall be permitted to authorize the necessary work to make the unsafe building or structure temporarily safe whether or not legal action to compel compliance has been instituted.

In addition, whenever an owner of an unsafe building or structure fails to comply with a notice to demolish issued under Section 118.4 in the time period stipulated, the building official shall be permitted to cause the unsafe building or structure to be demolished. In accordance with §§ 15.2-906 and 15.2-1115 of the Code of Virginia, the legal counsel of the locality may be requested to institute appropriate action against the property owner to recover the costs associated with any such emergency repairs or demolition and every such charge that remains unpaid shall constitute a lien against the property on which the emergency repairs or demolition were made and shall be enforceable in the same manner as provided in Articles 3 (§ 58.1-3940 et seq.) and 4 (§ 58.1-3965 et seq.) of Chapter 39 of Title 58.1 of the Code of Virginia.

Note: Building officials and local governing bodies should be aware that other statutes and court decisions may impact on matters relating to demolition, in particular whether newspaper publication is required if the owner cannot be located and whether the demolition order must be delayed until the owner has been given the opportunity for a hearing.

I. Section 118.8 Closing of streets. When necessary for public safety, the building official shall be permitted to order the temporary closing of sidewalks, streets, public ways, or premises adjacent to unsafe buildings or structures and prohibit the use of such spaces.

13VAC5-63-190. Section 119 Appeals.

A. Section 119.1 Establishment of appeals board. In accordance with § 36-105 of the Code of Virginia, there shall be established within each local building department a LBBCA. Whenever a county or a municipality does not have such a LBBCA, the local governing body shall enter into an agreement with the local governing body of another county or municipality or with some other agency, or a state agency approved by DHCD for such appeals resulting therefrom. Fees may be levied by the local governing body in order to defray the cost of such appeals. In addition, as an authorization in this code, separate LBBCAs may be established to hear appeals of different enforcement areas such as electrical, plumbing or mechanical requirements. Each such LBBCA shall comply with the requirements of this section. The locality is responsible for maintaining a duly constituted LBBCA prepared to hear appeals within the time limits established in this section. The LBBCA shall meet as necessary to assure a duly constituted board, appoint officers as necessary, and receive such training on the code as may be appropriate or necessary from staff of the locality.

B. Section 119.2 Membership of board. The LBBCA shall consist of at least five members appointed by the locality for a specific term of office established by written policy. Alternate members may be appointed to serve in the absence of any regular members and as such, shall have the full power and authority of the regular members. Regular and alternate members may be reappointed. Written records of current membership, including a record of the current chairman and secretary shall be maintained in the office of the locality. In order to provide continuity, the terms of the members may be of different length so that less than half will expire in any one-year period.

C. Section 119.3 Officers and qualifications of members. The LBBCA shall annually select one of its regular members to serve as chairman. When the chairman is not present at an appeal hearing, the members present shall select an acting chairman. The locality or the chief executive officer of the locality shall appoint a secretary to the LBBCA to maintain a detailed record of all proceedings. Members of the LBBCA shall be selected by the locality on the basis of their ability to render fair and competent decisions regarding application of the USBC and shall to the extent possible, represent different occupational or professional fields relating to the construction industry. At least one member should be an experienced builder; at least one member should be an RDP, and at least one member should be an experienced property manager. Employees or officials of the locality shall not serve as members of the LBBCA.

D. Section 119.4 Conduct of members. No member shall hear an appeal in which that member has a conflict of interest in accordance with the State and Local Government Conflict of Interests Act (§ 2.2-3100 et seq. of the Code of Virginia). Members shall not discuss the substance of an appeal with any other party or their representatives prior to any hearings.

E. Section 119.5 Right of appeal; filing of appeal application. Any person aggrieved by the local building department's application of the USBC or the refusal to grant a modification to the provisions of the USBC may appeal to the LBBCA. The applicant shall submit a written request for appeal to the LBBCA within 30 calendar days of the receipt of the decision being appealed. The application shall contain the name and address of the owner of the building or structure and in addition, the name and address of the person appealing, when the applicant is not the owner. A copy of the building official's decision shall be submitted along with the application for appeal and maintained as part of the record. The application shall be marked by the LBBCA to indicate the date received. Failure to submit an application for appeal within the time limit established by this section shall constitute acceptance of a building official's decision.

Note: To the extent that a decision of a building official pertains to amusement devices there may be a right of appeal under the VADR.

F. Section 119.6 Meetings and postponements. The LBBCA shall meet within 30 calendar days after the date of receipt of the application for appeal, except that a period of up to 45 calendar days shall be permitted where the LBBCA has regularly scheduled monthly meetings. A longer time period shall be permitted if agreed to by all the parties involved in the appeal. A notice indicating the time and place of the hearing shall be sent to the parties in writing to the addresses listed on the application at least 14 calendar days prior to the date of the hearing, except that a lesser time period shall be permitted if agreed to by all the parties involved in the appeal. When a quorum of the LBBCA is not present at a hearing to hear an appeal, any party involved in the appeal shall have the right to request a postponement of the hearing.

The LBBCA shall reschedule the appeal within 30 calendar days of the postponement, except that a longer time period shall be permitted if agreed to by all the parties involved in the appeal.

G. Section 119.7 Hearings and decision. All hearings before the LBBCA shall be open meetings and the appellant, the appellant's representative, the locality's representative and any person whose interests are affected by the building official's decision in question shall be given an opportunity to be heard. The chairman shall have the power and duty to direct the hearing, rule upon the acceptance of evidence and oversee the record of all proceedings. The LBBCA shall have the power to uphold, reverse or modify the decision of the official by a concurring vote of a majority of those present. Decisions of the LBBCA shall be final if no further appeal is made. The decision of the LBBCA shall be by resolution signed by the chairman and retained as part of the record of the appeal. Copies of the resolution shall be sent to all parties by certified mail. In addition, the resolution shall contain the following wording:

"Any person who was a party to the appeal may appeal to the State Review Board by submitting an application to such Board within 21 calendar days upon receipt by certified mail of this resolution. Application forms are available from the Office of the State Review Board, 600 East Main Street, Richmond, Virginia 23219, (804) 371-7150."

H. Section 119.8 Appeals to the State Review Board. After final determination by the LBBCA in an appeal, any person who was a party to the appeal may further appeal to the State Review Board. In accordance with § 36-98.2 of the Code of Virginia for state-owned buildings and structures, appeals by an involved state agency from the decision of the building official for state-owned buildings or structures shall be made directly to the State Review Board. The application for appeal shall be made to the State Review Board within 21 calendar days of the receipt of the decision to be appealed. Failure to submit an application within that time limit shall constitute an acceptance of the building official's decision. For appeals from a LBBCA, a copy of the building official's decision and the resolution of the LBBCA shall be submitted with the application for appeal to the State Review Board. Upon request by the office of the State Review Board, the LBBCA shall submit a copy of all pertinent information from the record of the appeal. In the case of appeals involving state-owned buildings or structures, the involved state agency shall submit a copy of the building official's decision and other relevant information with the application for appeal to the State Review Board. Procedures of the State Review Board are in accordance with Article 2 (§ 36-108 et seq.) of Chapter 6 of Title 36 of the Code of Virginia. Decisions of the State Review Board shall be final if no further appeal is made.

13VAC5-63-200. Chapter 2 Definitions.

A. Add the following definitions to Section 202 of the IBC to read:

Aboveground liquid fertilizer storage tank (ALFST). A device that contains an accumulation of liquid fertilizer (i) constructed of nonearthen materials, such as concrete, steel or plastic, that provide structural support; (ii) having a capacity of 100,000 gallons (378 500 L) or greater; and (iii) the volume of which is more than 90% above the surface of the ground. The term does not include any wastewater treatment or wastewater storage tank, utility or industry pollution control equipment.

Building regulations. Any law, rule, resolution, regulation, ordinance or code, general or special, or compilation thereof, heretofore or hereafter enacted or adopted by the Commonwealth or any county or municipality, including departments, boards, bureaus, commissions, or other agencies thereof, relating to construction, reconstruction, alteration, conversion, repair, maintenance, or use of structures and buildings and installation of equipment therein. The term does not include zoning ordinances or other land use controls that do not affect the manner of construction or materials to be used in the erection, alteration or repair of a building or structure.

~~Change of occupancy. A change in the use or occupancy of any building or structure that would place the building or structure in a different division of the same group of occupancies or in a different group of occupancies; or a change in the purpose or level of activity within a building or structure that involves a change in application of the requirements of this code.~~

Construction. The construction, reconstruction, alteration, repair, or conversion of buildings and structures.

Day-night average sound level (Ldn). A 24-hour energy average sound level expressed in dBA, with a 10 decibel penalty applied to noise occurring between 10 p.m. and 7 a.m.

DHCD. The Virginia Department of Housing and Community Development.

Emergency communication equipment. Emergency communication equipment, includes but is not limited to two-way radio communications, signal booster, bi-directional amplifiers, radiating cable systems, or internal multiple antenna, or a combination of the foregoing.

Emergency public safety personnel. Emergency public safety personnel includes firefighters, emergency medical personnel, law-enforcement officers, and other emergency public safety personnel routinely called upon to provide emergency assistance to members of the public in a wide variety of emergency situations, including but not limited to fires, medical emergencies, violent crimes, and terrorist attacks.

Equipment. Plumbing, heating, electrical, ventilating, air-conditioning and refrigeration equipment, elevators, dumbwaiters, escalators, and other mechanical additions or installations.

Farm building or structure. A building or structure not used for residential purposes, located on property where farming operations take place, and used primarily for any of the following uses or combination thereof:

1. Storage, handling, production, display, sampling or sale of agricultural, horticultural, floricultural or silvicultural products produced in the farm.
2. Sheltering, raising, handling, processing or sale of agricultural animals or agricultural animal products.
3. Business or office uses relating to the farm operations.
4. Use of farm machinery or equipment or maintenance or storage of vehicles, machinery or equipment on the farm.
5. Storage or use of supplies and materials used on the farm.
6. Implementation of best management practices associated with farm operations.

Hospice facility. An institution, place, or building owned or operated by a hospice provider and licensed by the Virginia Department of Health as a hospice facility to provide room, board, and palliative and supportive medical and other health services to terminally ill patients and their families, including respite and symptom management, on a 24-hour basis to individuals requiring such care pursuant to the orders of a physician.

Industrialized building. A combination of one or more sections or modules, subject to state regulations and including the necessary electrical, plumbing, heating, ventilating and other service systems, manufactured off-site and transported to the point of use for installation or erection, with or without other specified components, to comprise a finished building. Manufactured homes shall not be considered industrialized buildings for the purpose of this code.

LBBCA. Local board of building code appeals.

Liquid fertilizer. A fluid in which a fertilizer is in true solution. This term does not include anhydrous ammonia or a solution used in pollution control.

Local building department. The agency or agencies of any local governing body charged with the administration, supervision, or enforcement of this code, approval of construction documents, inspection of buildings or structures, or issuance of permits, licenses, certificates or similar documents.

Local governing body. The governing body of any city, county or town in this Commonwealth.

Locality. A city, county or town in this Commonwealth.

Manufactured home. A structure subject to federal regulation, which is transportable in one or more sections; is eight body feet or more in width and 40 body feet or more in length in the traveling mode, or is 320 or more square feet when erected on site; is built on a permanent chassis; is designed to be used as a single-family dwelling, with or without a

permanent foundation, when connected to the required utilities; and includes the plumbing, heating, air-conditioning, and electrical systems contained in the structure.

Marina. Any installation, operating under public or private ownership, that has a structure providing dockage or moorage for boats, other than paddleboats or rowboats, and provides, through sale, rental, fee, or on a free basis, any equipment, supply, or service, including fuel, electricity, or water, for the convenience of the public or its lessees, renters, or users of its facilities. A dock or pier with or without slips that exclusively serves a single-family residential lot for the use of the owner of the lot is not a marina.

Night club. Any building in which the main use is a place of public assembly that provides exhibition, performance or other forms of entertainment; serves alcoholic beverages; and provides music and space for dancing.

Permissible fireworks. Any sparklers, fountains, Pharaoh's serpents, caps for pistols, or pinwheels commonly known as whirligigs or spinning jennies.

Short-term holding area. An area containing a holding cell or cells, or a holding room or rooms, including associated rooms or spaces where the occupants are restrained or detained by the use of security measures not under the occupant's control for less than 24 hours.

Skirting. A weather-resistant material used to enclose the space from the bottom of the manufactured home to grade.

Slip. A berth or space where a boat may be secured to a fixed or floating structure, including a dock, finger pier, boat lift, or mooring buoy.

Sound transmission class (STC) rating. A single number characterizing the sound reduction performance of a material tested in accordance with ASTM E90-90, "Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions."

State regulated care facility (SRCF). A building with an occupancy in Group R-2, R-3, R-4 or R-5 occupied by persons in the care of others where program oversight is provided by the Virginia Department of Social Services, the Virginia Department of Behavioral Health and Developmental Services, the Virginia Department of Education or the Virginia Department of Juvenile Justice.

State Review Board. The Virginia State Building Code Technical Review Board as established under § 36-108 of the Code of Virginia.

Technical assistant. Any person employed by or under an extended contract to a local building department or local enforcing agency for enforcing the USBC, including but not limited to inspectors and plans reviewers. For the purpose of this definition, an extended contract shall be a contract with an aggregate term of 18 months or longer.

Tenable environmental. An environment in which the products of combustion, including smoke, toxic gases, particulates, and heat, are limited or otherwise restricted in order to maintain the impact on occupants, including those in the area of fire origin, to a level that is not life threatening and permits the rescue of occupants for a limited time.

Unsafe building or structure. Any building or structure that is under construction and has not received a permanent certificate of occupancy, final inspection, or for which a permit was never issued or has expired and has been determined by the building official to be of faulty construction that is so damaged, decayed, dilapidated, structurally unsafe, or of such faulty construction or unstable foundation that partial or complete collapse is likely, or any unfinished construction that does not have a valid permit, or the permit has been revoked, and the condition of the unfinished construction presents an immediate serious and imminent threat to the life and safety of the occupants or the public.

VADR. The Virginia Amusement Device Regulations (13VAC5-31).

VCS. The Virginia Certification Standards (13VAC5-21).

Working day. A day other than Saturday, Sunday or a legal local, state or national holiday.

B. Change the following definitions in Section 202 of the IBC to read:

~~24 hour basis. The actual time that a person is an occupant within a facility for the purpose of receiving care. It shall not include a facility that is open for 24 hours and is capable of providing care to someone visiting the facility during any segment of the 24 hours.~~

Ambulatory health care facility. Buildings or portions thereof that are licensed by the Virginia Department of Health as outpatient surgical hospitals.

Automatic fire-extinguishing system. An approved system of devices and equipment that automatically detects a fire and discharges an approved fire-extinguishing agent onto or in the area of a fire and includes among other systems an automatic sprinkler system, unless otherwise expressly stated.

Building. A combination of materials, whether portable or fixed, having a roof to form a structure for the use or occupancy by persons, or property. The word "building" shall be construed as though followed by the words "or part or parts thereof" unless the context clearly requires a different meaning. "Building" shall not include roadway tunnels and bridges owned by the Virginia Department of Transportation, which shall be governed by construction and design standards approved by the Virginia Commonwealth Transportation Board.

For application of this code, each portion of a building that is completely separated from other portions by fire walls complying with Section 706 shall be considered as a separate building (see Section 503.1).

Change of occupancy. A change in the use or occupancy of any building or structure that would place the building or structure in a different division of the same group of occupancies or in a different group of occupancies; or a change in the purpose or level of activity within a building or structure that involves a change in application of the requirements of this code.

Custodial care. Assistance with day-to-day living tasks, such as assistance with cooking, taking medication, bathing, using toilet facilities, and other tasks of daily living. In other than in hospice facilities, custodial care includes occupants that have the ability to respond to emergency situations and evacuate at a slower rate or who have mental and psychiatric complications, or both.

~~Group home. A facility for social rehabilitation or substance abuse or mental health problems that contains a group housing arrangement that provides custodial care but does not provide medical care.~~

Owner. The owner or owners of the freehold of the premises or lesser estate therein, a mortgagee or vendee in possession, assignee of rents, receiver, executor, trustee or lessee in control of a building or structure.

Registered Design Professional (RDP). An architect or professional engineer, licensed to practice architecture or engineering, as defined under § 54.1-400 of the Code of Virginia.

Swimming pool. ~~An aquatic vessel~~ A pool or spa as defined in the International Swimming Pool and Spa Code (ISPSC).

Structure. An assembly of materials forming a construction for occupancy or use including stadiums, gospel and circus tents, reviewing stands, platforms, stagings, observation towers, radio towers, water tanks, storage tanks (underground and aboveground), trestles, piers, wharves, swimming pools, amusement devices, storage bins, and other structures of this general nature but excluding water wells. The word "structure" shall be construed as though followed by the words "or part or parts thereof" unless the context clearly requires a different meaning. "Structure" shall not include roadway tunnels and bridges owned by the Virginia Department of Transportation, which shall be governed by construction and design standards approved by the Virginia Commonwealth Transportation Board.

C. Delete the following ~~definitions~~ definition from Section 202 of the IBC:

Agricultural; building

~~Existing structure (For Chapter 34)~~

13VAC5-63-210. Chapter 3 Use and occupancy classification.

A. Change Section 303.6 of the IBC to read:

303.6 Assembly Group A-5. Assembly uses intended for participation in or viewing outdoor activities including, but not limited to:

Amusement park structures

Bleachers

Grandstands

Stadiums

Swimming pools

B. Change exception ~~13~~ 14 of Section 307.1 of the IBC to read:

~~13, 14.~~ 14. The storage of black powder, smokeless propellant and small arms primers in Groups M, R-3 and R-5 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in the IFC, as amended in Section 307.9.

C. ~~Change the "Consumer fireworks" row in and add~~ Add a new "Permissible fireworks" row to Table 307.1(1) of the IBC to read:

Consumer fireworks	1.4G	H-3	125 ^{a,t}	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Permissible fireworks	1.4G	H-3	125 ^{a,e,l}	N/A	N/A	N/A	N/A	N/A	N/A	N/A

D. Add Section 307.9 to the IBC to read:

307.9 Amendments. The following changes shall be made to the IFC for the use of Exception ~~13~~ 14 in Section 307.1:

1. Change the following definition in Section 202 of the IFC to read:

Smokeless propellants. Solid propellants, commonly referred to as smokeless powders, or any propellants classified by DOTn as smokeless propellants in accordance with NA3178 (Smokeless Powder for Small Arms), used in small arms ammunition, firearms, cannons, rockets, propellant-actuated devices, and similar articles.

2. Change Section 314.1 of the IFC to read as follows:

314.1 General. Indoor displays constructed within any building or structure shall comply with Sections 314.2 through 314.5.

3. Add new Section 314.5 to the IFC to read as follows:

314.5 Smokeless powder and small arms primers. Vendors shall not store, display or sell smokeless powder or small arms primers during trade shows inside exhibition halls except as follows:

1. The amount of smokeless powder each vendor may store is limited to the storage arrangements and storage amounts established in Section 5606.5.2.1.

2. Smokeless powder shall remain in the manufacturer's original sealed container and the container shall remain sealed while inside the building. The repackaging of smokeless powder shall not be performed inside the building. Damaged containers shall not be repackaged inside the building and shall be immediately removed from the building in such manner to avoid spilling any powder.

3. There shall be at least 50 feet separation between vendors and 20 feet from any exit.
4. Small arms primers shall be displayed and stored in the manufacturer's original packaging and in accordance with the requirements of Section 5606.5.2.3.
4. Change Exception 4 and add Exceptions 10 and 11 to Section 5601.1 of the IFC as follows:
 4. The possession, storage and use of not more than 15 pounds (6.75 kg) of commercially manufactured sporting black powder, 20 pounds (9 kg) of smokeless powder and any amount of small arms primers for hand loading of small arms ammunition for personal consumption.
 10. The display of small arms primers in Group M when in the original manufacturer's packaging.
 11. The possession, storage and use of not more than 50 pounds (23 kg) of commercially manufactured sporting black powder, 100 pounds (45 kg) of smokeless powder, and small arms primers for hand loading of small arms ammunition for personal consumption in Group R-3 or R-5, or 200 pounds (91 kg) of smokeless powder when stored in the manufacturer's original containers in detached Group U structures at least 10 feet (3048 mm) from inhabited buildings and are accessory to Group R-3 or R-5.
5. Change Section 5606.4 of the IFC to read as follows:

5606.4 Storage in residences. Propellants for personal use in quantities not exceeding 50 pounds (23 kg) of black powder or 100 pounds (45 kg) of smokeless powder shall be stored in original containers in occupancies limited to Group R-3 and R-5 or 200 pounds (91 kg) of smokeless powder when stored in the manufacturer's original containers in detached Group U structures at least 10 feet (3048 mm) from inhabited buildings and are accessory to Group R-3 or R-5. In other than Group R-3 or R-5, smokeless powder in quantities exceeding 20 pounds (9 kg) but not exceeding 50 pounds (23 kg) shall be kept in a wooden box or cabinet having walls of at least one inch (25 mm) nominal thickness or equivalent.
6. Delete Sections 5606.4.1 and 5606.4.2 of the IFC.
7. Change Section 5606.5.1.1 of the IFC to read as follows:

5606.5.1.1 Smokeless propellant. No more than 100 pounds (45 kg) of smokeless propellants in containers of eight pounds (3.6 kg) or less capacity shall be displayed in Group M occupancies.
8. Delete Section 5606.5.1.3 of the IFC.
9. Change Section 5606.5.2.1 of the IFC as follows:

5606.5.2.1 Smokeless propellant. Commercial stocks of smokeless propellants shall be stored as follows:

 1. Quantities exceeding 20 pounds (9 kg), but not exceeding 100 pounds (45 kg) shall be stored in portable wooden boxes having walls of at least one inch (25 mm) nominal thickness or equivalent.
 2. Quantities exceeding 100 pounds (45 kg), but not exceeding 800 pounds (363 kg), shall be stored in storage cabinets having walls at least one inch (25 mm) nominal thickness or equivalent. Not more than 400 pounds (182 kg) shall be stored in any one cabinet, and cabinets shall be separated by a distance of at least 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of at least one hour.
 3. Storage of quantities exceeding 800 pounds (363 kg), but not exceeding 5,000 pounds (2270 kg) in a building shall comply with all of the following:
 - 3.1. The storage is inaccessible to unauthorized personnel.

3.2. Smokeless propellant shall be stored in nonportable storage cabinets having wood walls at least one inch (25 mm) nominal thickness or equivalent and having shelves with no more than 3 feet (914 mm) of vertical separation between shelves.

3.3. No more than 400 pounds (182 kg) is stored in any one cabinet.

3.4. Cabinets shall be located against walls with at least 40 feet (12 192 mm) between cabinets. The minimum required separation between cabinets may be reduced to 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades must extend a minimum of 10 feet (3048 mm) outward, be firmly attached to the wall, and be constructed of steel not less than 0.25 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick, or concrete block.

3.5. Smokeless propellant shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids, or oxidizing materials by a distance of 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of 1 hour.

3.6. The building shall be equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

4. Smokeless propellants not stored according to Item 1, 2, or 3 above shall be stored in a Type 2 or 4 magazine in accordance with Section 5604 and NFPA 495.

E. Add the following to the list of terms in Section 308.2 of the IBC:

Hospice facility

F. Change Section 308.3 of the IBC to read:

308.3 Institutional Group I-1. This occupancy shall include buildings, structures or portions thereof for more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care. Buildings of Group I-1, other than assisted living facilities licensed by the Virginia Department of Social Services, shall be classified as the occupancy condition indicated in Section 308.3.1. Assisted living facilities licensed by the Virginia Department of Social Services shall be classified as one of the occupancy conditions indicated in Section 308.3.1 or 308.3.2. This group shall include, but not be limited to, the following:

Alcohol and drug centers

Assisted living facilities

Congregate care facilities

Group homes

Halfway houses

Residential board and care facilities

Social rehabilitation facilities

G. Change Sections 308.3.1 and 308.3.2 of the IBC to read:

308.3.1 Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care who, without any assistance, are capable of responding to an emergency situation to complete building evacuation. Not more than five of the residents may require physical assistance from staff to respond to an emergency situation when all residents who may require the physical assistance reside on a single level of exit discharge.

308.3.2 Condition 2. This occupancy condition shall include buildings in which there are persons receiving custodial care who require assistance by not more than one staff member while responding to an emergency situation to complete building evacuation. Five of the residents may require physical assistance from more than one staff member to respond to an emergency.

~~H.~~ H. Add Sections 308.3.3 and 308.3.4 to the IBC to read:

~~308.3.3 Six to 16 persons receiving custodial care. A facility housing not fewer than six and not more than 16 persons receiving custodial care shall be classified as Group R-4.~~

~~308.3.4 Five or fewer persons receiving custodial care. A facility with five or fewer persons receiving custodial care shall be classified as Group R-3 or shall comply with the IRC provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or with Section P2904 of the IRC.~~

~~I.~~ H. Change Section 308.4 of the IBC to read:

308.4 Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are incapable of self-preservation. This group shall include, but not be limited to, the following:

Convalescent facilities

Detoxification facilities

Foster care facilities

Hospice facilities

Hospitals

Nursing homes

Psychiatric hospitals

Exception: Hospice facilities occupied by 16 or less occupants, excluding staff, are permitted to be classified as Group R-4.

~~J.~~ I. Add an exception to Section 308.6 of the IBC to read:

Exception: Family day homes under Section 310.9.

~~K.~~ J. Change Section 310.3 of the IBC to read:

310.3 Residential Group R-1. Residential occupancies containing sleeping units where the occupants are primarily transient in nature, including:

Boarding houses (transient) with more than 10 occupants

Congregate living facilities (transient) with more than 10 occupants

Hotels (transient)

Motels (transient)

Exceptions:

1. Nonproprietor occupied bed and breakfast and other transient boarding facilities not more than three stories above grade plane in height with a maximum of 10 occupants total are permitted to be classified as either Group R-3 or R-5 provided that smoke alarms are installed in compliance with Section 907.2.11.2 for Group R-3 or Section R314 of the IRC for Group R-5.

2. Proprietor occupied bed and breakfast and other transient boarding facilities not more than three stories above grade plane in height, that are also occupied as the residence of the proprietor, with a maximum of five guest room sleeping units provided for the transient occupants are permitted to be classified as either Group R-3 or R-5 provided that smoke alarms are installed in compliance with Section 907.2.11.2 for Group R-3 or Section R314 of the IRC for Group R-5.

~~1. K.~~ Change Section 310.6 of the IBC to read:

310.6 Residential Group R-4. This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care. Buildings of Group R-4, other than assisted living facilities licensed by the Virginia Department of Social Services, shall be classified as the occupancy condition indicated in Section 310.6.1. Assisted living facilities licensed by the Virginia Department of Social Services shall be classified as one of the occupancy conditions indicated in Section 310.6.1 or 310.6.2. This group shall include, but not be limited to the following:

Alcohol and drug centers

Assisted living facilities

Congregate care facilities

Group homes

Halfway houses

Residential board and care facilities

Social rehabilitation facilities

This occupancy shall also include hospice facilities with not more than 16 occupants, excluding staff.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code.

Exceptions:

1. Group homes licensed by the Virginia Department of Behavioral Health and Developmental Services that house no more than eight persons with one or more resident counselors shall be classified as Group R-2, R-3, R-4 or R-5. Not more than five of the persons may require physical assistance from staff to respond to an emergency situation.

2. In Group R-4 occupancies classified as the occupancy condition indicated in Section 310.6.1, other than in hospice facilities, not more than five of the residents may require physical assistance from staff to respond to an emergency situation when all residents who may require the physical assistance from staff reside on a single level of exit discharge and other than using a ramp, a change of elevation using steps or stairs is not within the path of egress to an exit door.

3. Assisted living facilities licensed by the Virginia Department of Social Services that house no more than eight persons, with one or more resident counselors, and all of the residents are capable of responding to an emergency situation without physical assistance from staff, may be classified as Group R-2, R-3 or R-5.

4. Assisted living facilities licensed by the Virginia Department of Social Services that house no more than eight persons, with one or more resident counselors, may be classified as Group R-5 when in compliance with all of the following:

4.1. The building is protected by an automatic sprinkler system installed in accordance with Section 903.3 or Section P2904 of the IRC.

4.2. Not more than five of the residents may require physical assistance from staff to respond to an emergency situation.

4.3. All residents who may require physical assistance from staff to respond to an emergency situation reside on a single level of exit discharge and other than using a ramp, a change in elevation using steps or stairs is not within the path of egress to an exit door.

5. Hospice facilities with five or fewer occupants are permitted to comply with the IRC provided the building is protected by an automatic sprinkler system in accordance with IRC Section P2904 or IBC Section 903.3.

~~M.~~ L. Add Sections 310.6.1 and 310.6.2 to the IBC to read:

310.6.1 Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care who, without any assistance, are capable of responding to an emergency situation to complete building evacuation and hospice facilities.

310.6.2 Condition 2. This occupancy condition shall include buildings in which there are persons receiving custodial care who require assistance by not more than one staff member while responding to an emergency situation to complete building evacuation.

~~N.~~ M. Add Section 310.7 to the IBC to read:

310.7 Residential Group R-5. Residential occupancies in detached single-family and two-family dwellings, townhouses and accessory structures within the scope of the IRC.

~~O.~~ N. Add Section 310.8 to the IBC to read:

310.8 Group R-5. The construction of Group R-5 structures shall comply with the IRC. The amendments to the IRC set out in Section 310.11 shall be made to the IRC for its use as part of this code. In addition, all references to the IRC in the IBC shall be considered to be references to this section.

~~P.~~ O. Add Section 310.8.1 to the IBC to read:

310.8.1 Additional requirements. Methods of construction, materials, systems, equipment or components for Group R-5 structures not addressed by prescriptive or performance provisions of the IRC shall comply with applicable IBC requirements.

~~Q.~~ P. Add Section 310.9 to the IBC to read:

310.9 Family day homes. Family day homes where program oversight is provided by the Virginia Department of Social Services shall be classified as Group R-2, R-3 or R-5.

Note: Family day homes may generally care for up to 12 children. See the DHCD Related Laws Package for additional information.

~~R.~~ Q. Add Section 310.10 to the IBC to read:

310.10 Radon-resistant construction in Groups R-3 and R-4 structures. Groups R-3 and R-4 structures shall be subject to the radon-resistant construction requirements in Appendix F of the IRC in localities enforcing such requirements pursuant to Section R324 of the IRC.

~~S.~~ R. Add Section 310.11 to the IBC to read:

310.11 Amendments to the IRC. The following changes shall be made to the IRC for its use as part of this code:

1. Add the following definitions to read:

Nonpotable fixtures and outlets. Fixtures and outlets that are not dependent on potable water for the safe operation to perform their intended use. Such fixtures and outlets may include, but are not limited to water closets, urinals, irrigation, mechanical equipment, and hose connections to perform operations, such as vehicle washing and lawn maintenance.

Nonpotable water systems. Water systems for the collection, treatment, storage, distribution, and use or reuse of nonpotable water. Nonpotable systems include reclaimed water, rainwater, and gray water systems.

Rainwater. Natural precipitation, including snow melt, from roof surfaces only.

Stormwater. Precipitation that is discharged across the land surface or through conveyances to one or more waterways and that may include stormwater runoff, snow melt runoff, and surface runoff and drainage.

2. Change the following definitions to read:

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 (7 m²), 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 greater than two-thirds of the area of the story below or over 400 square feet (37.16 m²) shall not be permitted in dwellings or townhouses that are three stories above grade plane in height.

Gray water. Water discharged from lavatories, bathtubs, showers, clothes washers, and laundry trays.

3. Change Section R301.2.1 to read:

R301.2.1 Wind design criteria. Buildings and portions thereof shall be constructed in accordance with the wind provisions of this code using the ~~basic~~ ultimate design wind speed in Table R301.2(1) as determined from Figure R301.2(4)A. The structural provisions of this code for wind loads are not permitted where wind design is required as specified in Section R301.2.1.1. Where different construction methods and structural materials are used for various portions of a building, the applicable requirements of this section for each portion shall apply. Where not otherwise specified, the wind loads listed in Table R301.2(2) adjusted for height and exposure using Table R301.2(3) shall be used to determine design load performance requirements for wall coverings, curtain walls, roof coverings, exterior windows, skylights, garage doors, and exterior doors. Asphalt shingles shall be designed for wind speeds in accordance with Section R905.2.4. A continuous load path shall be provided to transmit the applicable uplift forces in Section R802.11.1 from the roof assembly to the foundation. Wind speeds for localities in special wind regions, near mountainous terrain, and near gorges shall be based on elevation. Areas at 4,000 feet in elevation or higher shall use the nominal design wind speed of 110 mph (48.4 m/s) and areas under 4,000 feet in elevation shall use nominal design wind speed of 90 mph (39.6 m/s). Gorge areas shall be based on the highest recorded speed per locality or in accordance with local jurisdiction requirements determined in accordance with Section 26.5.1 of ASCE 7.

4. Add Exception 6 to Section R302.1 to read:

6. Decks and open porches.

~~5. Change the exception in Section R302.2 to require a common two-hour fire resistance rated wall instead of a one-hour fire resistance rated wall, unless the townhouse development is fully sprinklered as provided for in Section R313.1, in which case a common one-hour fire resistive-rated wall shall be permitted between townhouses.~~

~~6.~~ 5. Add the following sentence to the end of Section R302.3 to read:

Dwelling unit separation wall assemblies that are constructed on a lot line shall be constructed as required in Section R302.2 for townhouses.

7- 6. Change Section R302.5.1 to read:

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) thickness, solid or honeycomb-core steel doors not less than 1-3/8 inches (35 mm) thick, or 20-minute fire-rated doors.

8- 7. Add an exception to Section R303.9 to read:

Exception: Seasonal structures not used as a primary residence for more than 90 days per year, unless rented, leased or let on terms expressed or implied to furnish heat, shall not be required to comply with this section.

9- 8. Add Section R303.9.1 to read:

R303.9.1 Nonowner occupied required heating. Every dwelling unit or portion thereof which is to be rented, leased or let on terms either expressed or implied to furnish heat to the occupants thereof shall be provided with facilities in accordance with Section R303.9 during the period from October 15 to May 1.

10- 9. Add Section R303.10 to read:

R303.10 Insect screens. Every door, window and other outside opening required for ventilation purposes shall be supplied with approved tightly fitted screens of not less than 16 mesh per inch (16 mesh per 25 mm) and every screen door used for insect control shall have a self-closing device.

11- 10. Add Section R306.5 to read:

R306.5 Water supply sources and sewage disposal systems. The water and drainage system of any building or premises where plumbing fixtures are installed shall be connected to a public or private water supply and a public or private sewer system. As provided for in Section 103.10 of Part I of the Virginia Uniform Statewide Building Code (13VAC5-63), for functional design, water supply sources and sewage disposal systems are regulated and approved by the Virginia Department of Health and the Virginia Department of Environmental Quality.

Note: See also the Memorandums of Agreement in the "Related Laws Package," which is available from the Virginia Department of Housing and Community Development.

12- 11. Change Section R310.1 to read:

R310.1 Emergency escape and rescue opening required. Basements, habitable attics, and every sleeping room designated on the construction documents shall have ~~at least~~ not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency egress and rescue ~~openings~~ opening shall be required in each sleeping room. ~~Where emergency escape and rescue openings are provided, they shall have a sill height of not more than 44 inches (1118 mm) measured from the finished floor to the bottom of the clear opening. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside, except that tilt out or removable sash designed windows shall be permitted to be used. Emergency escape and rescue openings with a finished height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2.~~ Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

Exceptions:

1. Dwelling units equipped throughout with an approved automatic sprinkler system installed in accordance with NFPA 13, 13R, or 13D or Section P2904.

2. Storm shelters and basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m²).

~~43.~~ 12. Change Section ~~R310.1.1~~ R310.2.1 to read:

~~R310.1.1~~ R310.2.1 Minimum opening area. ~~All emergency~~ Emergency and escape and rescue openings shall have a ~~minimum~~ net clear opening of not less than 5.7 square feet (0.530 m²). The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside, including the tilting or removal of the sash as the normal operation to comply with Sections R310.1.2 and R310.1.3. The net clear height opening shall be not less than 24 inches (610 mm) and the net clear width shall be not less than 20 inches (508 mm).

Exception: Grade floor or below grade openings shall have a ~~minimum~~ net clear opening of not less than 5 square feet (0.465 m²).

~~44.~~ 13. Add Section R311.2.1 to read:

R311.2.1 Interior passage. Where a dwelling unit has both a kitchen and a living or entertainment area on the same level as the egress door required by Section R311.2, an interior passage route shall be provided from such egress door to the kitchen and the living or entertainment area and to at least one bedroom and at least one bathroom containing a water closet, lavatory and bathtub or shower, where such rooms are provided on that same level. Any doors or cased openings along such interior passage route providing access to the areas identified above shall comply with the following.

1. Cased openings shall provide a minimum 34-inch clear width.
2. Doors shall be, at a minimum, nominal 34-inch doors.

Exceptions:

1. Where a door or cased opening, and its associated molding or trim, is at the end and facing the length of a hallway and the width of the hallway is not wide enough to accommodate such doors or cased openings.
2. Closet doors or cased openings.
3. Pantry door or cased openings.
4. Bathrooms accessed directly from a bedroom that is not required to comply with this section.

~~45.~~ 14. Change the exception in Section R311.3.1 to read:

Exception: The landing or floor on the exterior side shall not be more than 8-1/4 inches (210 mm) below the top of the threshold provided the door does not swing over the landing or floor.

~~46.~~ 15. Change Section R311.7.5.1 to read:

R311.7.5.1 Risers. The ~~maximum~~ riser height shall be not more than 8-1/4 inches (210 mm). The riser shall be measured vertically between the leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted provided that the ~~opening between treads does~~ openings located more than 30 inches (763 mm), as measured vertically, to the floor or grade below do not permit the passage of a 4-inch-diameter (102 mm) sphere.

~~Exception~~ Exceptions:

1. The opening between adjacent treads is not limited on ~~stairs with a total rise of 30 inches (762 mm) or less spiral stairways.~~

2. The riser height of spiral stairways shall be in accordance with Section R311.7.10.1.

~~47- 16.~~ Change Section R311.7.5.2 to read:

R311.7.5.2 Treads. The ~~minimum~~ tread depth shall be not less than 9 inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

~~48- 17.~~ Change Section R311.7.7 to read:

R311.7.7 Stairway walking surface. The walking surface of treads and landings of stairways shall be level or sloped no steeper than one unit vertical in 48 units horizontal (2.0% slope).

~~49- 18.~~ Change Section R312.2.1 to read:

R312.2.1 Window sills. In dwelling units, where the ~~opening top of the sill~~ of an operable window opening is located ~~more~~ less than 18 inches (457 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, the lowest part of the clear opening of the window shall be a minimum of 18 inches (457 mm) above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4 inch diameter (102 mm) sphere where such openings are located within 18 inches (457 mm) of the finished floor. operable window shall comply with one of the following:

Exceptions:

1. ~~Windows whose openings~~ Operable windows with openings that will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening ~~when~~ where the opening is in its largest opened position.
2. ~~Openings~~ Operable windows that are provided with window fall prevention devices that comply with ASTM F 2090.
3. ~~Windows~~ Operable windows that are provided with window opening control devices that comply with Section R312.2.2.

~~20- 19.~~ Replace Section R313 with the following:

Section R313.

Automatic Fire Sprinkler Systems.

R313.1 Townhouse automatic fire sprinkler systems. Notwithstanding the requirements of Section 103.8, where installed, an automatic residential fire sprinkler system for townhouses shall be designed and installed in accordance with NFPA 13D or Section P2904.

Exception: An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.

R313.2 One-family and two-family dwellings automatic fire sprinkler systems. Notwithstanding the requirements of Section 103.8, where installed, an automatic residential fire sprinkler system shall be designed and installed in accordance with NFPA 13D or Section P2904.

Exception: An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential fire sprinkler system.

~~21- 20.~~ Change Delete Section R314.2 to read: R314.2.2.

~~R314.2 Smoke detection systems. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), the system shall become a permanent fixture of the dwelling unit.~~

~~Exception: Where smoke alarms are provided meeting the requirements of Section R314.4.~~

~~22. 21. Delete~~ Change Section R314.3.1, R314.7.3 to read:

R314.7.3 Permanent fixture. Where a household fire alarm system is installed, it shall become a permanent fixture of the dwelling unit.

~~23. 22. Delete~~ Change Section R315.3, R315.1.1 to read:

~~24. Change Section R315.4 to read:~~

~~R315.4 Alarm requirements~~ R315.1.1 Listings. Single station carbon Carbon monoxide alarms shall be hard wired, plug-in or battery type; listed as complying with UL 2034; and installed in accordance with this code and the manufacturer's installation instructions. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.

23. Change Section R315.2 to read:

R315.2 Where required. Carbon monoxide alarms shall be provided in accordance with this section.

24. Delete Section R315.2.2.

25. Delete Section R315.5.

26. Change Section R315.6.3 to read:

R315.6.3 Permanent fixture. Where a household carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy.

~~25. Add Exception 3 to Section R317.1.4 to read:~~

~~3. Deck posts supported by concrete piers or metal pedestals projecting a minimum of one inch (25.4 mm) above a concrete floor or six inches (152 mm) above exposed earth.~~

~~26. 27.~~ Add Section R320.2 to read:

R320.2 Universal design features for accessibility in dwellings. Dwellings constructed under the IRC not subject to Section R320.1 may comply with Section 1109.16 of the USBC and be approved by the local building department as dwellings containing universal design features for accessibility.

~~27. 28.~~ Add Section R324 R327 Radon-Resistant Construction.

~~28. 29.~~ Add Section R324.1 R327.1 to read:

R324.1 R327.1 Local enforcement of radon requirements. Following official action under Article 7 (§ 15.2-2280 et seq.) of Chapter 22 of Title 15.2 of the Code of Virginia by a locality in areas of high radon potential, as indicated by Zone 1 on the U.S. EPA Map of Radon Zones (IRC Figure AF101), such locality shall enforce the provisions contained in Appendix F.

Exception: Buildings or portions thereof with crawl space foundations which are ventilated to the exterior, shall not be required to provide radon-resistant construction.

~~29. Add Section R325 Swimming Pools.~~

~~30. Add Section R325.1 to read:~~

~~R325.1 Swimming pools. In addition to other applicable provisions of this code, swimming pools, as defined in the USBC, shall comply with the applicable provisions of the ISPSC.~~

~~31. Add Section R326 R328~~ Patio Covers.

~~32. 31. Add Section R326.1 R328.1 to read:~~

~~R326.1 R328.1~~ Use of Appendix H for patio covers. Patio covers shall comply with the provisions in Appendix H.

~~33. 32. Add Section R327 R329~~ Sound Transmission.

~~34. 33. Add Section R327.1 R329.1 to read:~~

~~R327.1 R329.1~~ Sound transmission between dwelling units. Construction assemblies separating dwelling units shall provide airborne sound insulation as required in Appendix K.

~~35. 34. Add Section R327.2 R329.2 to read:~~

~~R327.2 R329.2~~ Airport noise attenuation. This section applies to the construction of the exterior envelope of detached one-family and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress within airport noise zones when enforced by a locality pursuant to § 15.2-2295 of the Code of Virginia. The exterior envelope of such structures shall comply with Section 1207.4 of the state amendments to the IBC.

~~36. 35. Add Section R328 R330~~ Fire Extinguishers.

~~37. 36. Add Section R328.1 R330.1 to read:~~

~~R328.1 R330.1~~ Kitchen areas. Other than where the dwelling is equipped with an approved sprinkler system in accordance with Section R313, a fire extinguisher having a rating of 2-A:10-B:C or an approved equivalent type of fire extinguisher shall be installed in the kitchen area.

~~38. 37. Change Section R401.3 to read:~~

R401.3 Drainage. Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard to the dwelling unit. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of six inches (152 mm) within the first 10 feet (3048 mm).

Exception: Where lot lines, walls, slopes or other physical barriers prohibit six inches (152 mm) of fall within 10 feet (3048 mm), drains or swales shall be constructed to ensure drainage away from the structure. Impervious surfaces within 10 feet (3048 mm) of the building foundation shall be sloped a minimum of 2.0% away from the building.

~~39. 38. Change Add the following exceptions to~~ Section R403.1 to read:

~~R403.1 General. All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, wood foundations, or other approved structural systems that shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character of the soil. Footings shall be supported on undisturbed natural soils or engineered fill.~~

Exceptions:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, not exceeding 256 square feet (23.7824 m²) of building area, provided all of the following conditions are met:

1.1. The building eave height is 10 feet or less.

1.2. The maximum height from the finished floor level to grade does not exceed 18 inches.

1.3. The supporting structural elements in direct contact with the ground shall be placed level on firm soil and when such elements are wood they shall be approved pressure preservative treated suitable for ground contact use.

1.4. The structure is anchored to withstand wind loads as required by this code.

1.5. The structure shall be of light-frame construction whose vertical and horizontal structural elements are primarily formed by a system of repetitive wood or light gauge steel framing members, with walls and roof of light weight material, not slate, tile, brick or masonry.

2. Footings are not required for ramps serving dwelling units in Group R-3 and R-5 occupancies where the height of the entrance is no more than 30 inches (762 mm) above grade.

~~40:~~ 39. Add Section R408.3.1 to read as follows and delete Section R501.3 in its entirety:

R408.3.1 Termite inspection. Where an unvented crawl space is installed and meets the criteria in Section R408, the vertical face of the sill plate shall be clear and unobstructed and an inspection gap shall be provided below the sill plate along the top of any interior foundation wall covering. The gap shall be a minimum of one inch (25.4 mm) and a maximum of two inches (50.8 mm) in width and shall extend throughout all parts of any foundation that is enclosed. Joints between the sill plate and the top of any interior wall covering may be sealed.

Exceptions:

1. In areas not subject to damage by termites as indicated by Table R301.2(1).

2. Where other approved means are provided to inspect for potential damage.

Where pier and curtain foundations are installed as depicted in Figure R404.1.5(1), the inside face of the rim joist and sill plate shall be clear and unobstructed except for construction joints which may be sealed.

Exception: Fiberglass or similar insulation may be installed if easily removable.

~~41. Change the indicated rows of Table R502.3.1(1) to read:~~

Joist Spacing (inches)	Species and Grade	Dead Load = 10 psf				Dead Load = 20 psf			
		2x6	2x8	2x10	2x12	2x6	2x8	2x10	2x12
		Maximum floor joist spans							
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	12-3	16-2	20-8	25-1	12-3	16-2	20-8	25-1
	Southern Pine #1	11-10	15-7	19-10	24-2	11-10	15-7	18-7	22-0
	Southern Pine #2	11-3	14-11	18-1	21-4	10-9	13-8	16-2	19-1
	Southern Pine #3	9-2	11-6	14-0	16-6	8-2	10-3	12-6	14-9
16	Southern Pine SS	11-2	14-8	18-9	22-10	11-2	14-8	18-9	22-10
	Southern Pine #1	10-9	14-2	18-0	21-4	10-9	13-9	16-1	19-1
	Southern Pine #2	10-3	13-3	15-8	18-6	9-4	11-10	14-0	16-6

-		Southern Pine #3	7-11	10-0	12-1	14-4	7-1	8-11	10-10	12-10
-	19.2	Southern Pine SS	10-6	13-10	17-8	21-6	10-6	13-10	17-8	21-6
-		Southern Pine #1	10-1	13-4	16-5	19-6	9-11	12-7	14-8	17-5
-		Southern Pine #2	9-6	12-1	14-4	16-10	8-6	10-10	12-10	15-1
-		Southern Pine #3	7-3	9-1	11-0	13-1	6-5	8-2	9-10	11-8
-	24	Southern Pine SS	9-9	12-10	16-5	19-11	9-9	12-10	16-5	19-8
-		Southern Pine #1	9-4	12-4	14-8	17-5	8-10	11-3	13-1	15-7
-		Southern Pine #2	8-6	10-10	12-10	15-1	7-7	9-8	11-5	13-6
-		Southern Pine #3	6-5	8-2	9-10	11-8	5-9	7-3	8-10	10-5

42. Change the indicated rows of Table R502.3.1(2) to read:

Joist Spacing (inches)	Species and Grade	Dead Load = 10 psf				Dead Load = 20 psf			
		2x6	2x8	2x10	2x12	2x6	2x8	2x10	2x12
		Maximum floor joist spans							
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	11-2	14-8	18-9	22-10	11-2	14-8	18-9	22-10
	Southern Pine #1	10-9	14-2	18-0	21-11	10-9	14-2	16-11	20-1
	Southern Pine #2	10-3	13-6	16-2	19-1	9-10	12-6	14-9	17-5
	Southern Pine #3	8-2	10-3	12-6	14-9	7-5	9-5	11-5	13-6
16	Southern Pine SS	10-2	13-4	17-0	20-9	10-2	13-4	17-0	20-9
	Southern Pine #1	9-9	12-10	16-1	19-1	9-9	12-7	14-8	17-5
	Southern Pine #2	9-4	11-10	14-0	16-6	8-6	10-10	12-10	15-1
	Southern Pine #3	7-1	8-11	10-10	12-10	6-5	8-2	9-10	11-8
19.2	Southern Pine SS	9-6	12-7	16-0	19-6	9-6	12-7	16-0	19-6
	Southern Pine #1	9-2	12-1	14-8	17-5	9-0	11-5	13-5	15-11
	Southern Pine #2	8-6	10-10	12-10	15-1	7-9	9-10	11-8	13-9
	Southern Pine #3	6-5	8-2	9-10	11-8	5-11	7-5	9-0	10-8
24	Southern Pine SS	8-10	11-8	14-11	18-1	8-10	11-8	14-11	18-0
	Southern Pine #1	8-6	11-3	13-1	15-7	8-1	10-3	12-0	14-3
	Southern Pine #2	7-7	9-8	11-5	13-6	7-0	8-10	10-5	12-4
	Southern Pine #3	5-9	7-3	8-10	10-5	5-3	6-8	8-1	9-6

43. Change footnote "b" in Table R502.3.3(1) to read:

~~b. Spans are based on minimum design properties for No. 2 Grade lumber of Douglas fir larch, hem fir, and spruce-pine fir for repetitive (three or more) members. No. 1 or better grade lumber shall be used for southern pine.~~

44. Change footnote "a" in Table R502.3.3(2) to read:

~~a. Spans are based on minimum design properties for No. 2 Grade lumber of Douglas fir larch, hem fir, and spruce-pine fir for repetitive (three or more) members. No. 1 or better grade lumber shall be used for southern pine.~~

45. Change Section R502.5 to read:

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) through R502.5(3).

46. Change the title and footnote "b" of Table R502.5(1) to read:

Table R502.5(1)

Girder Spans^{a,b} and Header Spans^{a,b} for Exterior Bearing Walls

(Maximum Spans for Douglas fir larch, hem fir, southern pine, and spruce pine fir^b and required number of jack studs)

b. Spans are based on minimum design properties for No. 2 Grade lumber of Douglas fir larch, hem fir, and spruce pine fir. No. 1 or better grade lumber shall be used for southern pine.

47. Change the title and footnote "b" of Table R502.5(2) to read:

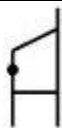

Table R502.5(2)

Girder Spans^{a,b} and Header Spans^{a,b} for Interior Bearing Walls

(Maximum Spans for Douglas fir larch, hem fir, southern pine, and spruce pine fir^b and required number of jack studs)

b. Spans are based on minimum design properties for No. 2 Grade lumber of Douglas fir larch, hem fir, and spruce pine fir. No. 1 or better grade lumber shall be used for southern pine.

48. Add Table R502.5(3) to read:

Table R502.5(3) Girder and Header Spans ^a for Porches ^{b,c} (Maximum span for southern pine)			
Supporting	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. Spans are given in feet and inches. b. Tabulated values based on 30 psf ground snow load, L/240 deflection and No. 2 grade lumber. c. The values of this table shall be equivalent to a roof live load of 20 psf.			

49. 40. Change Section R506.2.1 to read:

R506.2.1 Fill. Fill material shall be free of vegetation and foreign material and shall be natural nonorganic material that is not susceptible to swelling when exposed to moisture. The fill shall be compacted to assure uniform support of the slab, and except where approved, the fill depth shall not exceed 24 inches (610 mm) for clean sand or gravel and 8 inches (203 mm) for earth.

Exception: Material other than natural material may be used as fill material when accompanied by a certification from an RDP and approved by the building official.

50. 41. Change Section R506.2.2 to read:

R506.2.2 Base. A 4-inch-thick (102 mm) base course consisting of clean graded sand, gravel or crushed stone passing a 2-inch (51 mm) sieve shall be placed on the prepared subgrade when the slab is below grade.

Exception: A base course is not required when the concrete slab is installed on well drained or sand-gravel mixture soils classified as Group I according to the United Soil Classification System in accordance with Table R405.1. Material other than natural material may be used as base course material when accompanied by a certification from an RDP and approved by the building official.

51. Change Section R507.1 to read:

~~R507.1 Decks. Wood framed decks shall be in accordance with this section or Section R301 for materials and conditions not prescribed in this section. Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self supporting. For decks with cantilevered framing members, connections to exterior walls or other framing members shall be designed and constructed to resist uplift resulting from the full live load specified in Table R301.5 acting on the cantilevered portion of the deck.~~

52. Add Sections R507.4 through R507.8 to read:

~~R507.4 Decking. Maximum allowable spacing for wood joists supporting decking shall be in accordance with Table R507.4. Wood decking shall be attached to each supporting member with a minimum of two 8d nails or two #8 wood screws.~~

Table R507.4 Maximum Joist Spacing (inches)		
Material Type and Nominal Size	Maximum Joist Spacing	
	Perpendicular to Joist	Diagonal to Joist ^a
5/4-inch thick wood	16	12
2-inch thick wood	24	16
Wood/plastic composite	per R507.3	per R507.3
For SI: 1 inch = 25.4 mm		
a. Maximum angle of 45 degrees from perpendicular for wood deck boards.		

~~R507.5 Deck joists. Maximum allowable spans for wood deck joists, as shown in Figure R507.5, shall be in accordance with Table R507.5. Deck joist shall be permitted to cantilever a maximum of one fourth of the actual, adjacent joist span.~~

(DHCD staff note: Figure R507.5 shown below is to be deleted)

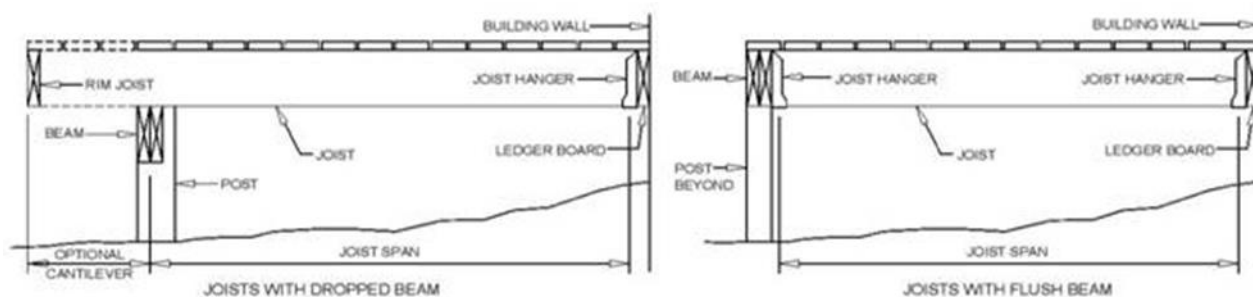


FIGURE R507.5
TYPICAL DECK JOIST SPANS

Table R507.5 Deck Joist Spans ^a and Cantilevers ^a for Common Lumber Species							
Species ^b	Size	Allowable Joist Span ^c			Allowable Cantilever ^{d,e}		
		Spacing of deck joists (in.)			Spacing of deck joists (in.)		
		12	16	24	12	16	24

Southern pine	2 x 6	9-11	9-0	7-7	1-3	1-4	1-6
	2 x 8	13-1	11-10	9-8	2-1	2-3	2-5
	2 x 10	16-2	14-0	11-5	3-4	3-6	2-10
	2 x 12	18-0	16-6	13-6	4-6	4-2	3-4
Douglas fir-larch ^f , hem-fir ^f , spruce-pine-fir ^f	2 x 6	9-6	8-4	6-10	1-2	1-3	1-5
	2 x 8	12-6	11-1	9-1	1-11	2-1	2-3
	2 x 10	15-8	13-7	11-1	3-1	3-5	2-9
	2 x 12	18-0	15-9	12-10	4-6	3-11	3-3
Redwood, western cedars, ponderosa pine ^g , red pine ^g	2 x 6	8-10	8-0	6-10	1-0	1-1	1-2
	2 x 8	11-8	10-7	8-8	1-8	1-10	2-0
	2 x 10	14-11	13-0	10-7	2-8	2-10	2-8
	2 x 12	17-5	15-1	12-4	3-10	3-9	3-1

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.
a. Spans and cantilevers are given in feet and inches.
b. No. 2 grade with wet service factor.
c. Ground snow load, live load = 40 psf, dead load = 10 psf, L/Δ = 360.
d. Ground snow load, 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.
e. Maximum allowable cantilever shall not exceed one-fourth of the actual joist span.
f. Includes incising factor.
g. Northern species with no incising factor.

R507.5.1 Lateral restraint at supports. Joist ends and bearing locations shall be provided with lateral restraint to prevent rotation. Where lateral restraint is provided by joist hangers or blocking between joists, their depth shall equal not less than 60% of the joist depth. Where lateral restraint is provided by rim joists, they shall be secured to the end of each joist with a minimum of (3)10d (3-inch x 0.128-inch) nails or (3)#10x3-inch (76 mm) long wood screws.

R507.6 Deck beams. Maximum allowable spans for wood deck beams, as shown in Figure R507.6, shall be in accordance with Table R507.6. Beam plies shall be fastened with two rows of 10d (3-inch x 0.128-inch) nails minimum at 16 inches (406 mm) on center along each edge. Beams shall be permitted to cantilever at each end up to one-fourth of the beam span. Splices of multi-span beams shall be located at interior post locations.

(DHCD staff note: Figure R507.6 shown below is to be deleted)

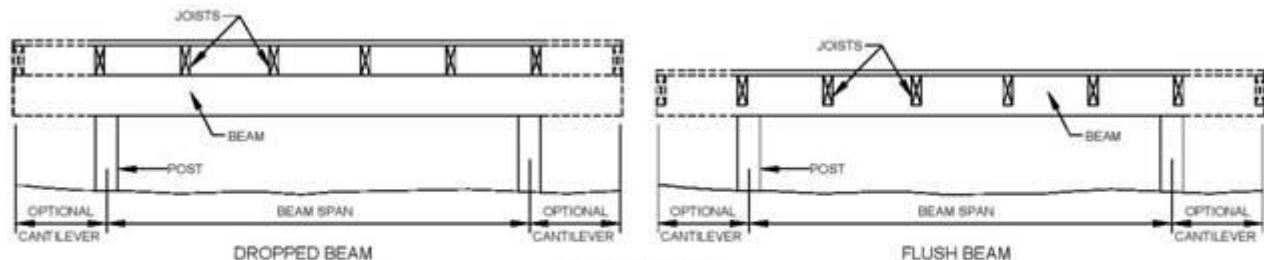


FIGURE R507.6
TYPICAL DECK BEAM SPANS

Table R507.6 Deck Beam Span ^a Lengths ^{b,c}								
Species ^d	Size ^e	Deck Joist Span (feet) Less Than or Equal To:						
		6	8	10	12	14	16	18
Southern pine	2-2x6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2-2x8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2-2x10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2-2x12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3-2x6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3-2x8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3-2x10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3-2x12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas fir-larch ^f , hem-fir ^f , spruce-pine-fir ^f , redwood, western cedars, ponderosa pine ^g , red pine ^g	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. Spans are given in feet and inches. b. Ground snow load, 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 at the end. c. Beams supporting deck joists from one side only. d. No. 2 grade, wet service factor. e. Beam depth shall be greater than or equal to depth of joists with a flush beam condition. f. Includes incising factor. g. Northern species with no incising factor.								

R507.7 Deck joist and deck beam bearing. The ends of each joist and beam shall have not less than 1.5 inches (38 mm) of bearing on wood or metal and not less than three inches (76 mm) on concrete or masonry for the entire width of the beam. Joist framing into the side of a ledger board or beam shall be supported by approved joist hangers. Joists bearing on a beam shall be attached to the beam to resist lateral displacement.

R507.7.1 Deck beam to deck post. Deck beams shall be attached to deck posts in accordance with Figure R507.7.1 or by other equivalent means capable 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.

~~Exception: Where deck beams bear directly on footings in accordance with Section R507.8.1.~~

(DHCD staff note: Figure R507.7.1 shown below is to be deleted)

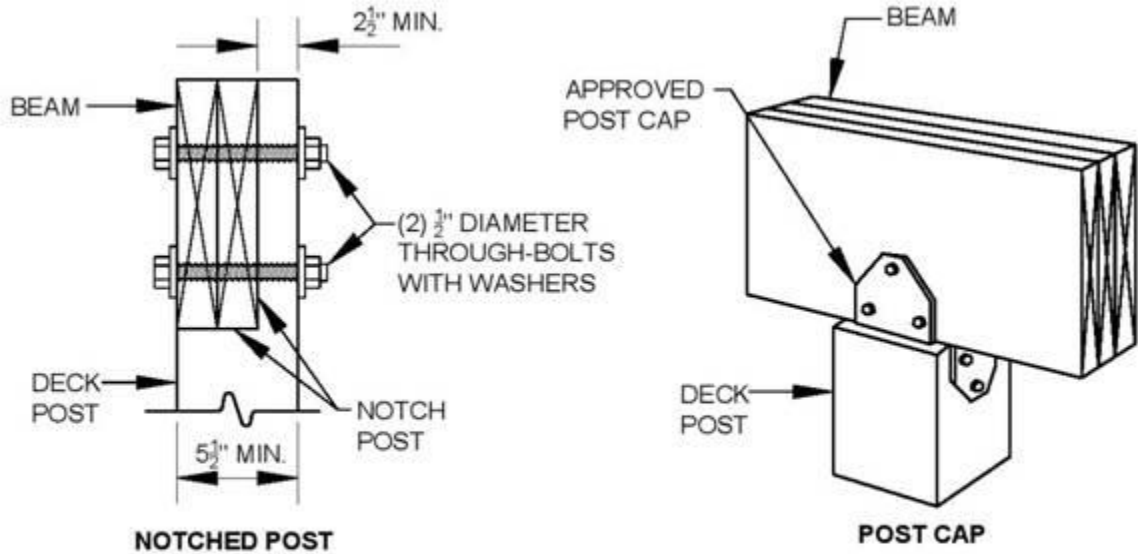


FIGURE R507.7.1
DECK BEAM TO DECK POST

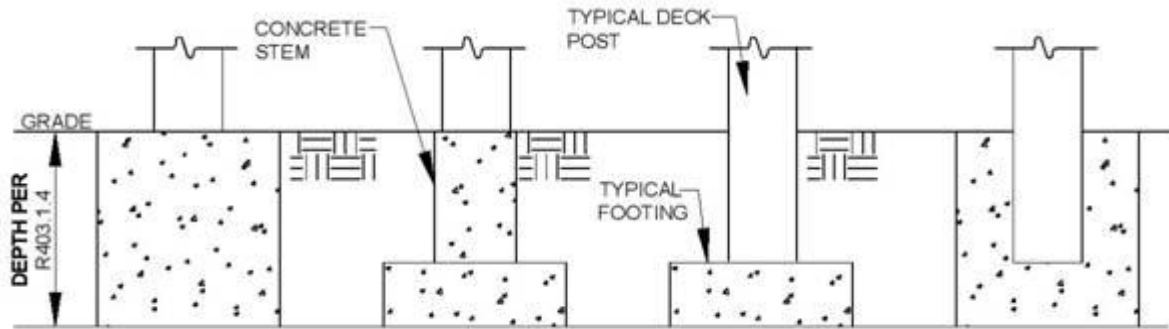
R507.8 Deck posts. For single level wood framed decks with beams sized in accordance with Table R507.6, deck post size shall be in accordance with Table R507.8.

-	Table R507.8 Deck Post Height ^a (feet)	
-	Deck Post Size	Maximum Height ^a

-	4x4	8
-	4x6	8
-	6x6	14
-	For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm. a. Measured to the underside of the beam.	

~~R507.8.1 Deck post to deck footing. Posts shall bear on footings in accordance with Section R403 and Figure R507.8.1. Posts shall be restrained to prevent lateral displacement at the footing. Lateral restraint shall be provided by manufactured connectors installed in accordance with the manufacturers' installation instructions or by a minimum post embedment of 12 inches (304.8 mm) in surrounding soils or concrete piers.~~

(DHCD staff note: Figure R507.8.1 shown below is to be deleted)



**FIGURE R507.8.1
TYPICAL DECK POSTS TO DECK FOOTINGS**

53. Change Section R602.3.1 to read:

~~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. Utility grade studs shall not be spaced more than 16 inches (406 mm) on center, shall not support more than a roof and ceiling, and shall not exceed eight feet (2438 mm) in height for exterior walls and load bearing walls or 10 feet (3048 mm) for interior nonload bearing walls.

2. Where snow loads are less than or equal to 25 pounds per square foot (1.198 kPa), and the ultimate design wind speed is less than or equal to 130 mph (58.11 m/s), 2 inch by 6 inch (38 mm by 140 mm) studs supporting a roof load with not more than six feet (1829 mm) of tributary length shall have a maximum height of 18 feet (5486 mm) where spaced at 16 inches (406 mm) on center, or 20 feet (6096 mm) where spaced at 12 inches (305 mm) on center. ~~Studs shall be minimum No. 2 grade lumber.~~

54. Delete Table R602.3.1.

55. Change Figure R602.3(2) to read:

(DHCD staff note: space below intentionally left blank)

(DHCD staff note: Figure R602.3.5 shown below is to be deleted)

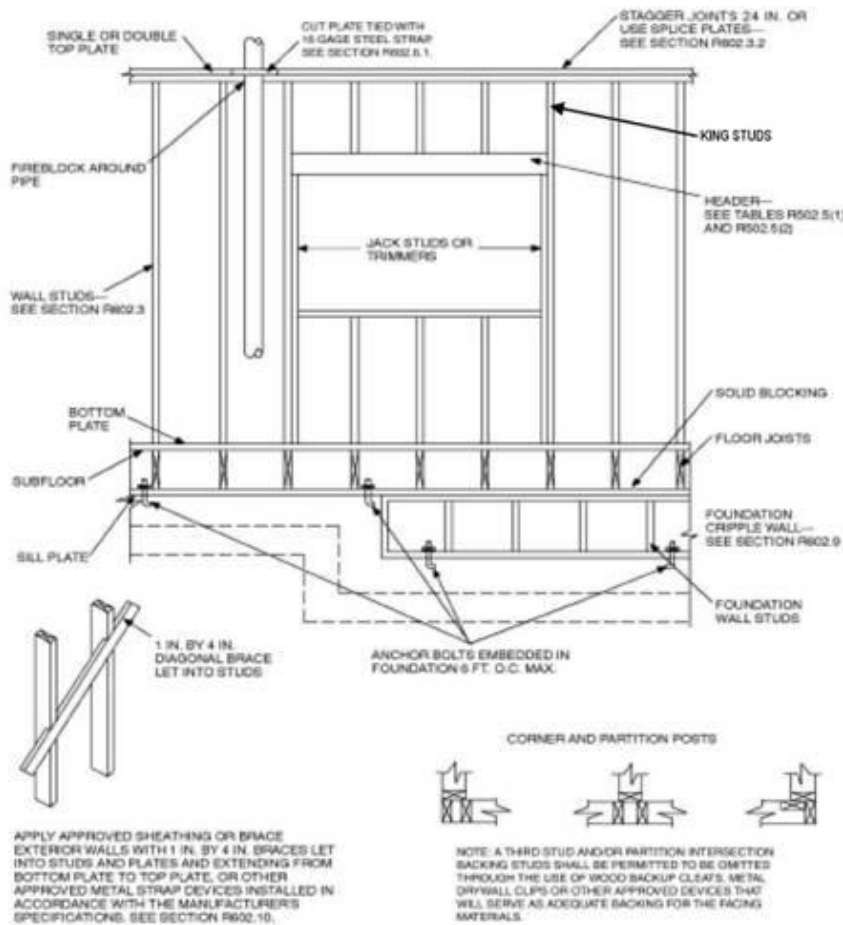


FIGURE R602.3(2)
FRAMING DETAILS

56. Change the column entries under the heading "Wood Species" in Table R602.7.1 to read:

-	Spruce-Pine-Fir
	Hem-Fir
	Douglas-Fir or No. 1 Grade Southern Pine

57. Add Section R602.7.4 to read:

R602.7.4 Supports for headers. Headers shall be supported on each end with one or more jack studs in accordance with Table R505.5(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 12d nails.

58. 42. Change Section R602.10 to read:

R602.10 Wall bracing. Buildings shall be braced in accordance with this section or Section R602.12. Where a building, or portion thereof, does not comply with one or more of the bracing requirements in this section, those portions shall be designed and constructed in accordance with Section R301.1.

The building official shall be permitted to require the permit applicant to identify braced wall lines and braced wall panels on the construction documents as described in this section and provide associated analysis. The building official shall be permitted to waive the analysis of the upper floors where the cumulative length of wall openings of each upper floor wall is less than or equal to the length of the openings of the wall directly below.

59. Change the following row and footnotes in Table R602.10.3(1) to read:

Basic Wind Speed (mph)	Story Location	Braced Wall Line Spacing ^b (feet)	Method LIB ^c	Method GB	Methods DWB, WSP, SFB, PBS, PCP, HPS, BV-WSP, ABW, PFH, PFG, CS-SFB ^d	Methods CS-WSP, CS-G, CS-PF
<p>For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 mile per hour = 0.447 m/s.</p> <p>a. Linear interpolation shall be permitted.</p> <p>b. Where a braced wall line has parallel braced wall lines on one or both sides of differing dimensions, the average dimension shall be permitted to be used for braced wall line spacing.</p> <p>c. Method LIB shall have gypsum board fastened to at least one side with nails or screws per Table R602.3(1) for exterior sheathing or Table R702.3.5 for interior gypsum board. Spacing of fasteners at panel edges shall not exceed eight inches (203 mm).</p> <p>d. Method CS-SFB does not apply where the wind speed is greater than 100 mph.</p>						

60. Change Section R602.10.4.1 to read:

~~R602.10.4.1 Mixing methods. Mixing of bracing methods shall be permitted as follows:~~

- ~~1. Mixing bracing methods from braced wall line to braced wall line shall be permitted.~~
- ~~2. Mixing intermittent bracing methods along a braced wall line shall be permitted in Seismic Design Categories A and B, and detached dwellings in Seismic Design Category C, provided the length of bracing in accordance with Table R602.10.3(1) or R602.10.3(3) is the highest value of all bracing methods used.~~
- ~~3. Mixing of methods CS-WSP, CS-G, CS-PF, ABW, PFH, and PFG along a braced wall line shall be permitted.~~
- ~~4. In Seismic Design Categories A and B, and detached dwellings in Seismic Design Category C, mixing of intermittent bracing methods along the interior portion of a braced wall line with continuous sheathing methods along the exterior portion of the same braced wall line shall be permitted. The length of required bracing shall be the highest value of all bracing methods used in accordance with Table R602.10.3(1) or R602.10.3(3). The requirements of Section R602.10.7 shall apply to each end of the continuously sheathed portions of the braced wall line.~~

61. Change the "CS-PF" row of Table R602.10.5 to read:

CS-PF	16	18	20	22°	24°	1.5 x Actual ^b
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62. Change Items 3.3 and 3.4 of Section R602.10.8.2 to read:

- ~~3.3. Blocking panels provided by the roof truss manufacturer and designed in accordance with Section R802.10.~~
- ~~3.4. Blocking, blocking panels, or other methods of lateral load transfer designed in accordance with the AWC WFCM or accepted engineering practice.~~

63. Change Item 3 of Section R602.10.10 to read:

- ~~3. Where the bracing length provided is at least twice the minimum length required by Table R602.10.3(1) and Table R602.10.3(3), blocking at horizontal joints shall not be required in braced wall panels constructed using Methods WSP, SFB, GB, PBS, HPS, CS-WSP or CS-SFB.~~

~~64. Change Section R602.10.11 to read:~~

~~R602.10.11 Cripple wall bracing. Cripple walls shall be constructed in accordance with Section R602.9 and braced in accordance with this section. Cripple walls shall be braced with the length and method of bracing used for the wall above in accordance with Tables R602.10.3(1) and R602.10.3(3), and the applicable adjustment factors in Tables R602.10.3(2) and R602.10.3(4), respectively, except the length of the cripple wall bracing shall be multiplied by a factor of 1.15. Cripple wall bracing shall comply with Section R602.10.4.3.~~

~~65. 43. Replace Section R602.12, including all subsections, with the following:~~

R602.12 Practical wall bracing. All buildings in Seismic Design Categories A and B and detached buildings in Seismic Design Category C shall be permitted to be braced in accordance with this section as an alternative to the requirements of Section R602.10. Where a building, or portion thereof, does not comply with one or more of the bracing requirements in this section, those portions shall be designed and constructed in accordance with Section R301.1. The use of other bracing provisions of Section R602.10, except as specified herein, shall not be permitted.

The building official shall be permitted to require the permit applicant to identify bracing on the construction documents and provide associated analysis. The building official shall be permitted to waive the analysis of the upper floors where the cumulative length of wall openings of each upper floor wall is less than or equal to the length of the openings of the wall directly below.

R602.12.1 Sheathing materials. The following materials shall be permitted for use as sheathing for wall bracing. Exterior walls shall be sheathed on all sheathable surfaces, including infill areas between bracing locations, above and below wall openings, and on gable end walls.

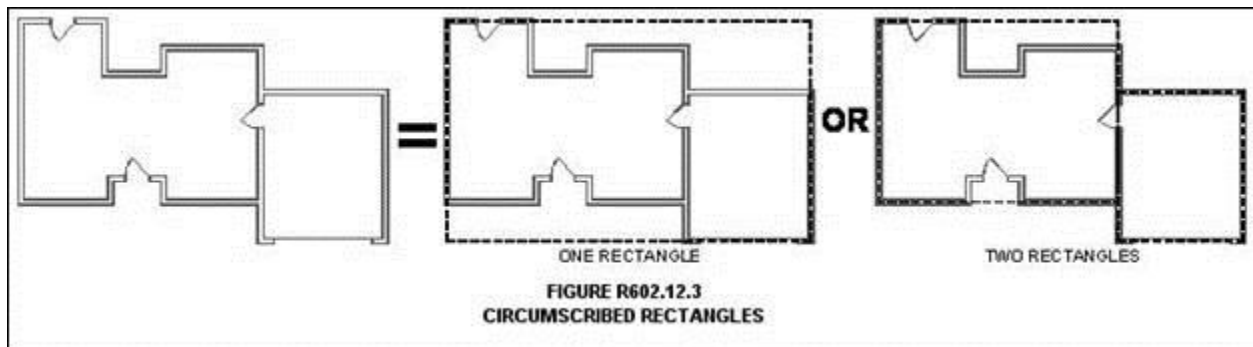
1. Wood structural panels with a minimum thickness of 7/16 inch (9.5 mm) fastened in accordance with Table R602.3(3).
2. Structural fiberboard sheathing with a minimum thickness of 1/2 inch (12.7 mm) fastened in accordance with Table R602.3(1).
3. Gypsum board with a minimum thickness of 1/2 inch (12.7 mm) fastened in accordance with Table R702.3.5 on interior walls only.

R602.12.2 Braced wall panels. Braced wall panels shall be full-height wall sections sheathed with the materials listed in Section R602.12.1 and complying with the following:

1. Exterior braced wall panels shall have a minimum length based on the height of the adjacent opening as specified in Table R602.12.2. Panels with openings on both sides of differing heights shall be governed by the taller opening when determining panel length.
2. Interior braced wall panels shall have a minimum length of 48 inches (1220 mm) when sheathing material is applied to one side. Doubled-sided applications shall be permitted to be considered two braced wall panels.
3. Braced wall panels shall be permitted to be constructed of Methods ABW, PFH, PFG, and CS-PF in accordance with Section R602.10.4.
4. Exterior braced wall panels, other than the methods listed in Item 3 above shall have a finish material installed on the interior. The finish material shall consist of 1/2 inch (12.7 mm) gypsum board or equivalent and shall be permitted to be omitted where the required length of bracing, as determined in Section R602.12.4, is multiplied by 1.40, unless otherwise required by Section R302.6.
5. Vertical sheathing joints shall occur over and be fastened to common studs.
6. Horizontal sheathing joints shall be edge nailed to 1-1/2 inch (38 mm) minimum thick common blocking.

Table R602.12.2 Braced Wall Panel Lengths					
Location	Wall Height (feet)				
	8	9	10	11	12
	Minimum Panel Length (inches)				
Adjacent garage door of one-story garage ^a	24	27	30	33	36
Adjacent all other openings ^b					
Clear opening height (inches) ≤ 64	24	27	30	33	36
Clear opening height (inches) ≤ 72	27	27	30	33	36
Clear opening height (inches) ≤ 80	30	30	30	33	36
Clear opening height (inches) > 80	36	36	36	40	40
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.					
a. Braced wall panels supporting a gable end wall or roof load only.					
b. Interpolation shall be permitted.					

R602.12.3 Circumscribed rectangle. Required length of bracing shall be determined by circumscribing one or more rectangles around the entire building or portions thereof as shown in Figure R602.12.3. Rectangles shall surround all enclosed offsets and projections such as sunrooms and attached garages. Chimneys, partial height projections, and open structures, such as carports and decks, shall be excluded from the rectangle. Each rectangle shall have no side greater than 80 feet (24 384 mm) with a maximum 3:1 ratio between the long and short side. Rectangles shall be permitted to be skewed to accommodate angled projections as shown in Figure R602.12.4.3.



R602.12.4 Required length of bracing. The required length of bracing for each side of a circumscribed rectangle shall be determined using Table R602.12.4. Where multiple rectangles share a common side or sides, the required length of bracing shall equal the sum of the required lengths from all shared rectangle sides.

Table R602.12.4 Required Length of Bracing Along Each Side of a Circumscribed Rectangle ^{a,b,c}																		
Wind Speed	Eave-to-Ridge Height (feet)	Number of Floor Levels Above ^{e,f}	Required Length of Bracing on Front/Rear Side (feet)								Required Length of Bracing on Left/Right Side (feet)							
			Length of Left/Right Side (feet)								Length of Front/Rear Side (feet)							
			10	20	30	40	50	60	70	80	10	20	30	40	50	60	70	80
90	10	0	2.0	3.5	5.0	6.0	7.5	9.0	10.5	12.0	2.0	3.5	5.0	6.0	7.5	9.0	10.5	12.0
		1 ^d	3.5	6.5	9.0	12.0	14.5	17.0	19.8	22.6	3.5	6.5	9.0	12.0	14.5	17.0	19.8	22.6

		2 ^d	5.0	9.5	13.5	17.5	21.5	25.0	29.2	33.4	5.0	9.5	13.5	17.5	21.5	25.0	29.2	33.4
	15	0	2.6	4.6	6.5	7.8	9.8	11.7	13.7	15.7	2.6	4.6	6.5	7.8	9.8	11.7	13.7	15.7
		1 ^d	4.0	7.5	10.4	13.8	16.7	19.6	22.9	26.2	4.0	7.5	10.4	13.8	16.7	19.6	22.9	26.2
		2 ^d	5.5	10.5	14.9	19.3	23.7	27.5	32.1	36.7	5.5	10.5	14.9	19.3	23.7	27.5	32.1	36.7
	20	0	2.9	5.2	7.3	8.8	11.1	13.2	15.4	17.6	2.9	5.2	7.3	8.8	11.1	13.2	15.4	17.6
		1 ^d	4.5	8.5	11.8	15.6	18.9	22.1	25.8	29.5	4.5	8.5	11.8	15.6	18.9	22.1	25.8	29.5
		2 ^d	6.2	11.9	16.8	21.8	27.3	31.1	36.3	41.5	6.2	11.9	16.8	21.8	27.3	31.1	36.3	41.5
100	10	0	2.5	4.0	6.0	7.5	9.5	11.0	12.8	14.6	2.5	4.0	6.0	7.5	9.5	11.0	12.8	14.6
		1 ^d	4.5	8.0	11.0	14.5	18.0	21.0	24.5	28.0	4.5	8.0	11.0	14.5	18.0	21.0	24.5	28.0
		2 ^d	6.0	11.5	16.5	21.5	26.5	31.0	36.2	41.4	6.0	11.5	16.5	21.5	26.5	31.0	36.2	41.4
	15	0	3.4	5.2	7.8	9.8	12.4	14.3	16.7	19.1	3.4	5.2	7.8	9.8	12.4	14.3	16.7	19.1
		1 ^d	5.2	9.2	12.7	16.7	20.7	24.2	28.2	32.2	5.2	9.2	12.7	16.7	20.7	24.2	28.2	32.2
		2 ^d	6.6	12.7	18.2	23.7	29.2	34.1	39.8	45.5	6.6	12.7	18.2	23.7	29.2	34.1	39.8	45.5
	20	0	3.8	5.9	8.8	11.1	14.0	16.2	18.9	21.6	3.8	5.9	8.8	11.1	14.0	16.2	18.9	21.6
		1 ^d	5.9	10.4	14.4	18.9	23.4	27.3	31.8	36.3	5.9	10.4	14.4	18.9	23.4	27.3	31.8	36.3
		2 ^d	7.5	14.4	20.6	26.8	33.0	38.5	44.9	51.3	7.5	14.4	20.6	26.8	33.0	38.5	44.9	51.3

For SI: 1 ft = 304.8 mm.

a. Interpolation shall be permitted; extrapolation shall be prohibited.

b. For Exposure Category C, multiply the required length of bracing by a factor of 1.20 for a one-story building, 1.30 for a two-story building, and 1.40 for a three-story building.

c. For wall height adjustments multiply the required length of bracing by the following factors: 0.90 for 8 feet (2438 mm), 0.95 for 9 feet (2743 mm), 1.0 for 10 feet (3048 mm), 1.05 for 11 feet (3353 mm), and 1.10 for 12 feet (3658 mm).

d. Where braced wall panels supporting stories above have been sheathed in wood structural panels with edge fasteners spaced at 4 inches (102 mm) on center, multiply the required length of bracing by 0.83.

e. A floor level, habitable or otherwise, contained wholly within the roof rafters or trusses shall not be considered a floor level for purposes of determining the required length of bracing.

f. A rectangle side with differing number of floor levels above shall use the greatest number when determining the required length of bracing.

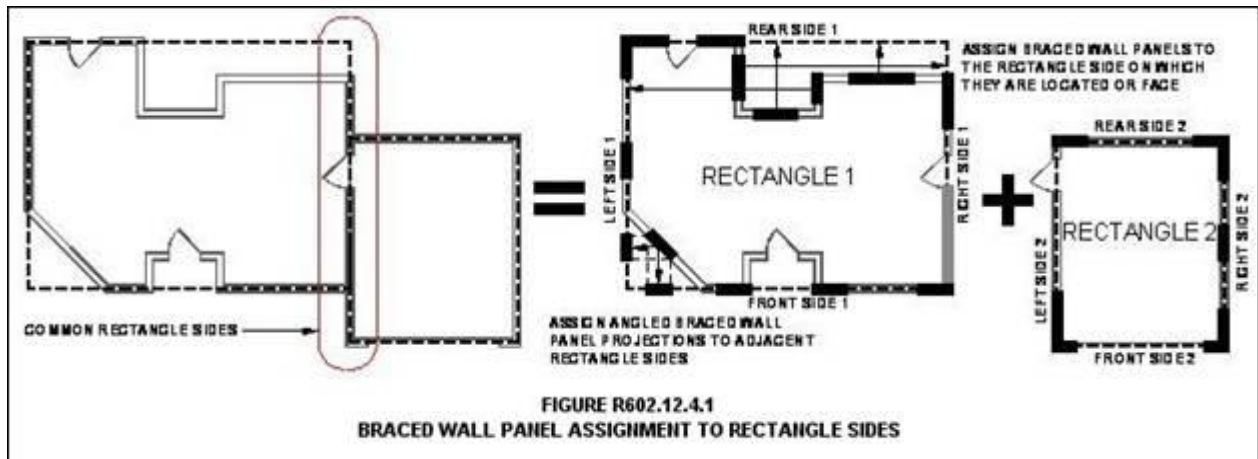
R602.12.4.1 Braced wall panel assignment to rectangle sides. Braced wall panels shall be assigned to the applicable rectangle side and contribute to its required length of bracing. Panels shall be assigned as specified below and as shown in Figure R602.12.4.1.

1. Exterior braced wall panels shall be assigned to the parallel rectangle side on which they are located or in which they face.

2. Interior braced wall panels shall be assigned to the parallel rectangle side on which they are located or in which they face up to 4 feet (1220 mm) away. Interior braced wall panels more than 4 feet (1220 mm) away from a parallel rectangle side shall not contribute.

3. The projections of angled braced wall panels shall be assigned to the adjacent rectangle sides.

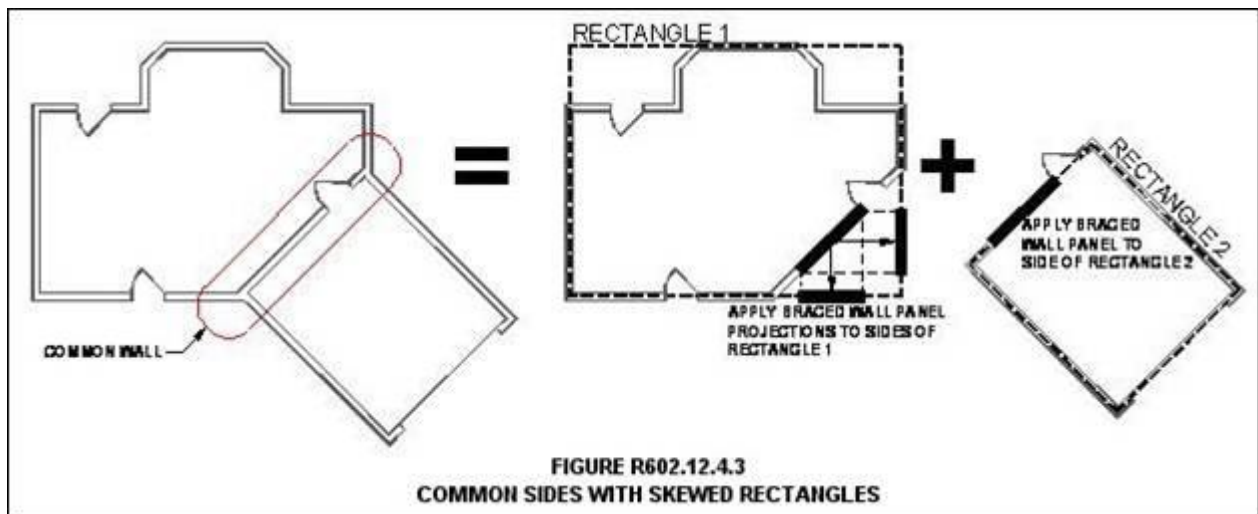
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R602.12.4.2 Contributing length. The cumulative contributing length of braced wall panels assigned to a rectangle side shall be greater than or equal to the required length of bracing as determined in Section R602.12.4. The contributing length of a braced wall panel shall be as specified below. When applying contributing length to angled braced wall panels, apply the requirements below to each projection:

1. Exterior braced wall panels shall contribute their actual length.
2. Interior braced wall panels shall contribute one-half of their actual length.
3. The contributing length of Methods ABW, PFH, PFG, and CS-PF shall be in accordance with Table R602.10.5.

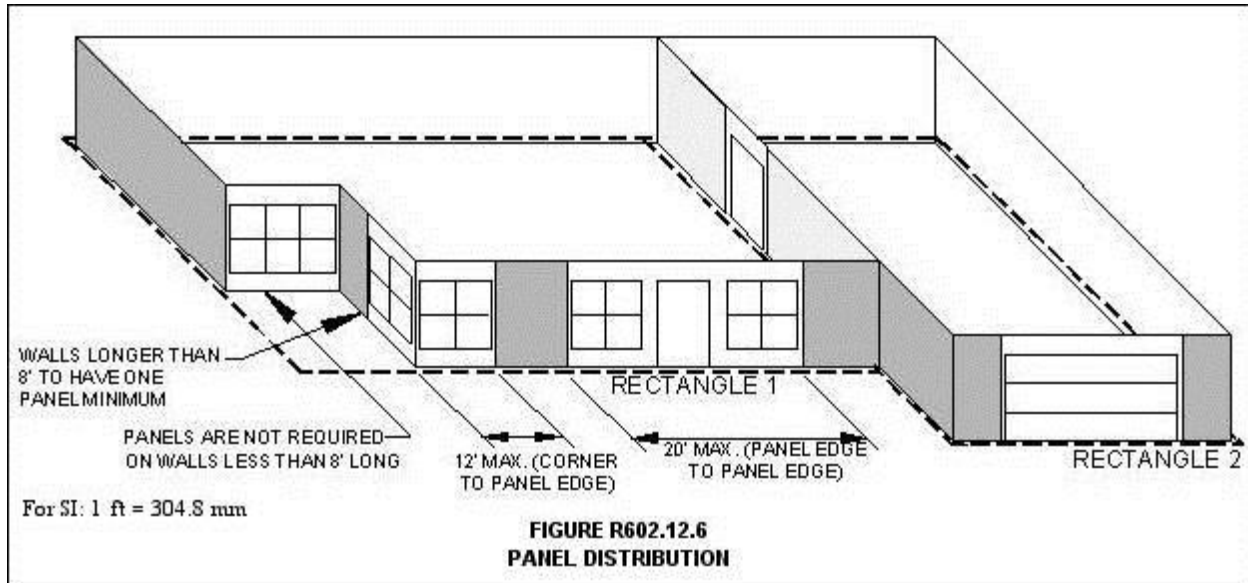
R602.12.4.3 Common sides with skewed rectangles. Braced wall panels located on a common wall where skewed rectangles intersect, as shown in Figure R602.12.4.3, shall be permitted to be assigned to the parallel rectangle side, and their projections shall be permitted to be assigned to the adjacent skewed rectangle sides.



R602.12.5 Cripple walls and framed walls of walk-out basements. For rectangle sides with cripple walls having a maximum height of 48 inches (1220 mm), the required length of bracing shall be as determined in Section R602.12.4. For rectangle sides with cripple walls having a height greater than 48 inches (1220 mm) at any location or framed walls of a walk-out basement, the required length of bracing shall be determined using Table R602.12.4. Braced wall panels within cripple walls and walls of walk-out basements shall comply with Item 4 of Section R602.12.2.

R602.12.6 Distribution of braced wall panels. Braced wall panels shall be distributed in accordance with the following requirements as shown in Figure R602.12.6.

1. The edge of a braced wall panel shall be no more than 12 feet (3658 mm) from any building corner or rectangle corner.
2. The distance between adjacent edges of braced wall panels shall be no more than 20 feet (6096 mm).
3. Segments of exterior walls greater than 8 feet (2438 mm) in length shall have a minimum of one braced wall panel.
4. Segments of exterior wall 8 feet (2438 mm) or less in length shall be permitted to have no braced wall panels.



R602.12.6.1 Panels adjacent to balloon framed walls. Braced wall panels shall be placed on each side of each story adjacent to balloon framed walls designed in accordance with Section R602.3 with a maximum height of two stories.

R602.12.7 Braced wall panel connection. Braced wall panels shall be connected to other structural elements in accordance with Section R602.10.8.

R602.12.8 Braced wall panel support. Braced wall panels shall be supported in accordance with Section R602.10.9.

66. Change the indicated rows of Table R802.4(1) to read:

Ceiling Joist Spacing (inches)	Species and Grade	Dead Load = 5 psf			
		2x4	2x6	2x8	2x10
		Maximum ceiling joist spans			
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS Southern Pine #1 Southern Pine #2 Southern Pine #3	12-11 12-5 11-10 10-1	20-3 19-6 18-8 14-11	Note-a 25-8 24-7 18-9	Note-a Note-a Note-a 22-9
16	Southern Pine SS	11-9	18-5	24-3	Note-a

	Southern Pine #1	11-3	17-8	23-4	Note a
	Southern Pine #2	10-9	16-11	21-7	25-7
	Southern Pine #3	8-9	12-11	16-3	19-9
19.2	Southern Pine SS	11-0	17-4	22-10	Note a
	Southern Pine #1	10-7	16-8	22-0	Note a
	Southern Pine #2	10-2	15-7	19-8	23-5
	Southern Pine #3	8-0	11-9	14-10	18-0
24	Southern Pine SS	10-3	16-1	21-2	Note a
	Southern Pine #1	9-10	15-6	20-5	24-0
	Southern Pine #2	9-3	13-11	17-7	20-11
	Southern Pine #3	7-2	10-6	13-3	16-1

67. Change the indicated rows of Table R802.4(2) to read:

Ceiling Joist Spacing (inches)	Species and Grade	Dead Load = 10 psf			
		2x4	2x6	2x8	2x10
		Maximum ceiling joist spans			
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	10-3	16-1	21-2	Note a
	Southern Pine #1	9-10	15-6	20-5	24-0
	Southern Pine #2	9-3	13-11	17-7	20-11
	Southern Pine #3	7-2	10-6	13-3	16-1
16	Southern Pine SS	9-4	14-7	19-3	24-7
	Southern Pine #1	8-11	14-0	17-9	20-9
	Southern Pine #2	8-0	12-0	15-3	18-1
	Southern Pine #3	6-2	9-2	11-6	14-0
19.2	Southern Pine SS	8-9	13-9	18-2	23-1
	Southern Pine #1	8-5	12-9	16-2	18-11
	Southern Pine #2	7-4	11-0	13-11	16-6
	Southern Pine #3	5-8	8-4	10-6	12-9
24	Southern Pine SS	8-1	12-9	16-10	21-6
	Southern Pine #1	7-8	11-5	14-6	16-11
	Southern Pine #2	6-7	9-10	12-6	14-9
	Southern Pine #3	5-1	7-5	9-5	11-5

68. Change the indicated rows of Table R802.5.1(1) to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 psf					Dead Load = 20 psf				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans ^a									
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	11-3	17-8	23-4	Note b	Note b	11-3	17-8	23-4	Note b	Note b
	Southern	10-10	17-0	22-5	Note b	Note b	10-6	15-8	19-10	23-2	Note b

	Pine #1										
	Southern Pine #2	10-4	15-7	19-8	23-5	Note b	9-0	13-6	17-1	20-3	23-10
	Southern Pine #3	8-0	11-9	14-10	18-0	21-4	6-11	10-2	12-10	15-7	18-6
16	Southern Pine SS	10-3	16-1	21-2	Note b	Note b	10-3	16-1	21-2	25-7	Note b
	Southern Pine #1	9-10	15-6	19-10	23-2	Note b	9-1	13-7	17-2	20-1	23-10
	Southern Pine #2	9-0	13-6	17-1	20-3	23-10	7-9	11-8	14-9	17-6	20-8
	Southern Pine #3	6-11	10-2	12-10	15-7	18-6	6-0	8-10	11-2	13-6	16-0
19.2	Southern Pine SS	9-8	15-2	19-11	25-5	Note b	9-8	15-2	19-7	23-4	Note b
	Southern Pine #1	9-3	14-3	18-1	21-2	25-2	8-4	12-4	15-8	18-4	21-9
	Southern Pine #2	8-2	12-3	15-7	18-6	21-9	7-1	10-8	13-6	16-0	18-10
	Southern Pine #3	6-4	9-4	11-9	14-3	16-10	5-6	8-1	10-2	12-4	14-7
24	Southern Pine SS	8-11	14-1	18-6	23-8	Note b	8-11	13-10	17-6	20-10	24-8
	Southern Pine #1	8-7	12-9	16-2	18-11	22-6	7-5	11-1	14-0	16-5	19-6
	Southern Pine #2	7-4	11-0	13-11	16-6	19-6	6-4	9-6	12-1	14-4	16-10
	Southern Pine #3	5-8	8-4	10-6	12-9	15-1	4-11	7-3	9-1	11-0	13-1

69. Change the indicated rows of Table R802.5.1(2) to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 psf					Dead Load = 20 psf				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans ^a									
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	10-3	16-1	21-2	Note b	Note b	10-3	16-1	21-2	Note b	Note b
	Southern Pine #1	9-10	15-6	20-5	Note b	Note b	9-10	15-6	19-10	23-2	Note b
	Southern Pine #2	9-5	14-9	19-6	23-5	Note b	9-0	13-6	17-1	20-3	23-10
	Southern Pine #3	8-0	11-9	14-10	18-0	21-4	6-11	10-2	12-10	15-7	18-6
16	Southern Pine SS	9-4	14-7	19-3	24-7	Note b	9-4	14-7	19-3	24-7	Note b
	Southern Pine #1	8-11	14-1	18-6	23-2	Note b	8-11	13-7	17-2	20-1	23-10

	Southern Pine #2	8-7	13-5	17-1	20-3	23-10	7-9	11-8	14-9	17-6	20-8
	Southern Pine #3	6-11	10-2	12-10	15-7	18-6	6-0	8-10	11-2	13-6	16-0
19.2	Southern Pine SS	8-9	13-9	18-2	23-1	Note b	8-9	13-9	18-2	23-1	Note b
	Southern Pine #1	8-5	13-3	17-5	21-2	25-2	8-4	12-4	15-8	18-4	21-9
	Southern Pine #2	8-1	12-3	15-7	16-6	21-9	7-1	10-8	13-6	16-0	18-10
	Southern Pine #3	6-4	9-4	11-9	14-3	16-10	5-6	8-1	10-2	12-4	14-7
24	Southern Pine SS	8-1	12-9	16-10	21-6	Note b	8-1	12-9	16-10	20-10	24-8
	Southern Pine #1	7-10	12-3	16-2	18-11	22-6	7-6	11-1	14-0	16-5	19-6
	Southern Pine #2	7-4	11-0	13-11	16-6	19-6	6-4	9-6	12-1	14-4	16-10
	Southern Pine #3	5-8	8-4	10-6	12-9	15-1	4-11	7-3	9-1	11-0	13-1

70. Change the indicated rows of Table R802.5.1(3) to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 psf					Dead Load = 20 psf				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans ^a									
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	9-10	15-6	20-5	Note b	Note b	9-10	15-6	20-5	25-4	Note b
	Southern Pine #1	9-6	14-10	19-0	22-3	Note b	9-0	13-5	17-0	19-11	23-7
	Southern Pine #2	8-7	12-11	16-4	19-5	22-10	7-8	11-7	14-8	17-4	20-5
	Southern Pine #3	6-7	9-9	12-4	15-0	17-9	5-11	8-9	11-0	13-5	15-10
16	Southern Pine SS	8-11	14-1	18-6	23-8	Note b	8-11	14-1	18-5	21-11	25-11
	Southern Pine #1	8-7	13-0	16-6	19-3	22-10	7-10	11-7	14-9	17-3	20-5
	Southern Pine #2	7-6	11-2	14-2	16-10	19-10	6-8	10-0	12-8	15-1	17-9
	Southern Pine #3	5-9	8-6	10-8	13-0	15-4	5-2	7-7	9-7	11-7	13-9
19.2	Southern Pine SS	8-5	13-3	17-5	22-3	Note b	8-5	13-3	16-10	20-0	23-7
	Southern Pine #1	8-0	11-10	15-1	17-7	20-11	7-1	10-7	13-5	15-9	18-8
	Southern Pine #2	6-10	10-2	12-11	15-4	18-1	6-1	9-2	11-7	13-9	16-2

	Southern Pine #3	5-3	7-9	9-9	11-10	14-0	4-8	6-11	8-9	10-7	12-6
24	Southern Pine SS	7-10	12-3	16-2	20-0	23-7	7-10	11-10	15-0	17-11	21-2
	Southern Pine #1	7-1	10-7	13-5	15-9	18-8	6-4	9-6	12-0	14-1	16-8
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-5	8-2	10-4	12-3	14-6
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-2	6-2	7-10	9-6	11-2

71. Change the indicated rows of Table R802.5.1(4) to read

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 psf					Dead Load = 20 psf				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans ^a									
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	8-4	13-1	17-2	21-11	Note b	8-4	13-1	17-2	21-5	25-3
	Southern Pine #1	8-0	12-3	15-6	18-2	21-7	7-7	11-4	14-5	16-10	20-0
	Southern Pine #2	7-0	10-6	13-4	15-10	18-8	6-6	9-9	12-4	14-8	17-3
	Southern Pine #3	5-5	8-0	10-1	12-3	14-6	5-0	7-5	9-4	11-4	13-5
16	Southern Pine SS	7-6	11-10	15-7	19-11	23-7	7-6	11-10	15-7	18-6	21-10
	Southern Pine #1	7-1	10-7	13-5	15-9	18-8	6-7	9-10	12-5	14-7	17-3
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-8	8-5	10-9	12-9	15-0
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-4	6-5	8-1	9-10	11-7
19.2	Southern Pine SS	7-1	11-2	14-8	18-3	21-7	7-1	11-2	14-2	16-11	20-0
	Southern Pine #1	6-6	9-8	12-3	14-4	17-1	6-0	9-0	11-4	13-4	15-9
	Southern Pine #2	5-7	8-4	10-7	12-6	14-9	5-2	7-9	9-9	11-7	13-8
	Southern Pine #3	4-3	6-4	8-0	9-8	11-5	4-0	5-10	7-4	8-11	10-7
24	Southern Pine SS	6-7	10-4	13-8	16-4	19-3	6-7	10-0	12-8	15-2	17-10
	Southern Pine #1	5-10	8-8	11-0	12-10	15-3	5-5	8-0	10-2	11-11	14-1
	Southern Pine #2	5-0	7-5	9-5	11-3	13-2	4-7	6-11	8-9	10-5	12-3
	Southern Pine #3	3-10	5-8	7-1	8-8	10-3	3-6	5-3	6-7	8-0	9-6

72. Change the indicated rows of Table R802.5.1(5) to read:-

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 psf					Dead Load = 20 psf				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans ^a									
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	8-11	14-1	18-6	23-8	Note b	8-11	14-1	18-6	23-8	Note b
	Southern Pine #1	8-7	13-6	17-10	22-3	Note b	8-7	13-5	17-0	19-11	23-7
	Southern Pine #2	8-3	12-11	16-4	19-5	22-10	7-8	11-7	14-8	17-4	20-5
	Southern Pine #3	6-7	9-9	12-4	15-0	17-9	5-11	8-9	11-0	13-5	15-10
16	Southern Pine SS	8-1	12-9	16-10	21-6	Note b	8-1	12-9	16-10	21-6	25-11
	Southern Pine #1	7-10	12-3	16-2	19-3	22-10	7-10	11-7	14-9	17-3	20-5
	Southern Pine #2	7-6	11-2	14-2	16-10	19-10	6-8	10-0	12-8	15-1	17-9
	Southern Pine #3	5-9	8-6	10-8	13-0	15-4	5-2	7-7	9-7	11-7	13-9
19.2	Southern Pine SS	7-8	12-0	15-10	20-2	24-7	7-8	12-0	15-10	20-0	23-7
	Southern Pine #1	7-4	11-7	15-1	17-7	20-11	7-1	10-7	13-5	15-9	18-8
	Southern Pine #2	6-10	10-2	12-11	15-4	18-1	6-1	9-2	11-7	13-9	16-2
	Southern Pine #3	5-3	7-9	9-9	11-10	14-0	4-8	6-11	8-9	10-7	12-6
24	Southern Pine SS	7-1	11-2	14-8	18-9	22-10	7-1	11-2	14-8	17-11	21-2
	Southern Pine #1	6-10	10-7	13-5	15-9	18-8	6-4	9-6	12-0	14-1	16-8
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-5	8-2	10-4	12-3	14-6
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-2	6-2	7-10	9-6	11-2

73. Change the indicated rows of Table R802.5.1(6) to read:-

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 psf					Dead Load = 20 psf				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans ^a									
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	7-6	11-0	15-7	19-11	24-3	7-6	11-10	15-7	19-11	24-3
	Southern Pine	7-3	11-5	15-0	18-2	21-7	7-3	11-4	14-5	16-10	20-0

	Pine #1										
	Southern Pine #2	6-11	10-6	13-4	15-10	18-8	6-6	9-9	12-4	14-8	17-3
	Southern Pine #3	5-5	8-0	10-1	12-3	14-6	5-0	7-5	9-4	11-4	13-5
16	Southern Pine SS	6-10	10-9	14-2	18-1	22-0	6-10	10-9	14-2	18-1	21-10
	Southern Pine #1	6-7	10-4	13-5	15-9	18-8	6-7	9-10	12-5	14-7	17-3
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-8	8-5	10-9	12-9	15-0
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-4	6-5	8-1	9-10	11-7
19.2	Southern Pine SS	6-5	10-2	13-4	17-0	20-9	6-5	10-2	13-4	16-11	20-0
	Southern Pine #1	6-2	9-8	12-3	14-4	17-1	6-0	9-0	11-4	13-4	13-8
	Southern Pine #2	5-7	8-4	10-7	12-6	14-9	5-2	7-9	9-9	11-7	15-9
	Southern Pine #3	4-3	6-4	8-0	9-8	11-5	4-0	5-10	7-4	8-11	10-7
24	Southern Pine SS	6-0	9-5	12-5	15-10	19-3	6-0	9-5	12-5	15-2	17-10
	Southern Pine #1	5-9	8-8	11-0	12-10	15-3	5-5	8-0	10-2	11-11	14-1
	Southern Pine #2	5-0	7-5	9-5	11-3	13-2	4-7	6-11	8-9	10-5	12-3
	Southern Pine #3	3-10	5-8	7-1	8-8	10-3	3-6	5-3	6-7	8-0	9-6

74. Change the indicated rows of Table R802.5.1(7) to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 psf					Dead Load = 20 psf				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans ^a									
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	7-5	11-8	15-4	19-7	23-7	7-5	11-8	15-4	18-10	22-3
	Southern Pine #1	7-1	10-7	13-5	15-9	18-8	6-9	10-0	12-8	14-10	17-7
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-9	8-7	10-11	12-11	15-3
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-5	6-6	8-3	10-0	11-10
16	Southern Pine SS	6-9	10-7	14-0	17-4	20-5	6-9	10-7	13-9	16-4	19-3
	Southern Pine #1	6-2	9-2	11-8	13-8	16-2	5-10	8-8	11-0	12-10	15-3
	Southern Pine #2	5-3	7-11	10-0	11-11	14-0	5-0	7-5	9-5	11-3	13-2

	Pine #2										
	Southern Pine #3	4-1	6-0	7-7	9-2	10-10	3-10	5-8	7-1	8-8	10-3
19.2	Southern Pine SS	6-4	10-0	13-2	15-10	18-8	6-4	9-10	12-6	14-11	17-7
	Southern Pine #1	5-8	8-5	10-8	12-5	14-9	5-4	7-11	10-0	11-9	13-11
	Southern Pine #2	4-10	7-3	9-2	10-10	12-9	4-6	6-10	8-8	10-3	12-1
	Southern Pine #3	3-8	5-6	6-11	8-4	9-11	3-6	5-2	6-6	7-11	9-4
24	Southern Pine SS	5-11	9-3	11-11	14-2	16-8	5-11	8-10	11-2	13-4	15-9
	Southern Pine #1	5-0	7-6	9-6	11-1	13-2	4-9	7-1	9-0	10-6	12-5
	Southern Pine #2	4-4	6-5	8-2	9-9	11-5	4-1	6-1	7-9	9-2	10-9
	Southern Pine #3	3-4	4-11	6-2	7-6	8-10	3-1	4-7	5-10	7-1	8-4

75. Change the indicated rows of Table R802.5.1(8) to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 psf					Dead Load = 20 psf				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans ^a									
		(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)	(feet-inches)
12	Southern Pine SS	6-9	10-7	14-0	17-10	21-8	6-9	10-7	14-0	17-10	21-8
	Southern Pine #1	6-6	10-2	13-5	15-9	18-8	6-6	10-0	12-8	14-10	17-7
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-9	8-7	10-11	12-11	15-3
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-5	6-6	8-3	10-0	11-10
16	Southern Pine SS	6-1	9-7	12-8	16-2	19-8	6-1	9-7	12-8	16-2	19-3
	Southern Pine #1	5-11	9-2	11-8	13-8	16-2	5-10	8-8	11-0	12-10	15-3
	Southern Pine #2	5-3	7-11	10-0	11-11	14-0	5-0	7-5	9-5	11-3	13-2
	Southern Pine #3	4-1	6-0	7-7	9-2	10-10	3-10	5-8	7-1	8-8	10-3
19.2	Southern Pine SS	5-9	9-1	11-11	15-3	18-6	5-9	9-1	11-11	14-11	17-7
	Southern Pine #1	5-6	8-5	10-8	12-5	14-9	5-4	7-11	10-0	11-9	13-11
	Southern Pine #2	4-10	7-3	9-2	10-10	12-9	4-6	6-10	8-8	10-3	12-1

	Southern Pine #3	3-8	5-6	6-11	8-4	9-11	3-6	5-2	6-6	7-11	9-4
24	Southern Pine SS	5-4	8-5	11-1	14-2	16-8	5-4	8-5	11-1	13-4	15-9
	Southern Pine #1	5-0	7-6	9-6	11-1	13-2	4-9	7-1	9-0	10-6	12-5
	Southern Pine #2	4-4	6-5	8-2	9-9	11-5	4-1	6-1	7-9	9-2	10-9
	Southern Pine #3	3-4	4-11	6-2	7-6	8-10	3-1	4-7	5-10	7-1	8-4

76. Change Section R807.1 to read:

~~R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas 30 square feet (2.8 m²) or larger having a vertical height of not less than 30 inches (762 mm). 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.~~

77. ~~44.~~ Delete Section R905.2.8.5.

78. ~~45.~~ Change Section R1001.8 to read:

R1001.8 Smoke chamber. Smoke chamber walls shall be constructed of solid masonry units, hollow masonry units grouted solid, stone, or concrete. The total minimum thickness of front, back, and side walls shall be 8 inches (203 mm) of solid masonry. When the inside surface of the smoke chamber is formed by corbelled masonry, the inside surface shall be parged smooth. When a lining of firebrick at least 2 inches (51 mm) thick, or a lining of vitrified clay at least 5/8 inch (16 mm) thick, is provided, the total minimum thickness of front, back, and side walls shall be 6 inches (152 mm) of solid masonry, including the lining. Firebrick shall conform to ASTM C 1261 and shall be laid with medium duty refractory mortar conforming to ASTM C 199. Vitrified clay linings shall conform to ASTM C 315.

79. ~~46.~~ Delete Section ~~N1101.16~~ N1101.14 (R401.3).

80. ~~47.~~ Change the ceiling R-value and wood frame wall R-value categories for climate zone "4 except Marine" in Table N1102.1.1 (R402.1.1) N1102.1.2 (R402.1.2) to read:

Ceiling R-Value	Wood Frame Wall R-Value
38	15 or 13 + 1 ^h

81. ~~48.~~ Change the ceiling U-factor and frame wall U-factor categories for climate zone "4 except Marine" in Table N1102.1.3 (R402.1.3) N1102.1.4 (R402.1.4) to read:

Ceiling U-Factor	Frame Wall U-Factor
0.030	0.079

82. ~~49.~~ Change Sections ~~N1102.2.1 (R402.2.1)~~ and Section N1102.2.4 (R402.2.4) to read:

~~N1102.2.1 (R402.2.1) Ceilings with attic spaces. When Section N1102.1.1 would require R-38 in the ceiling, installing R-30 over 100% of the ceiling area shall be deemed to satisfy the requirement for R-38 wherever the full height of~~

~~uncompressed R-30 insulation extends over the wall top plate at the eaves. Similarly, when Section N1102.1.1 would require R-49 in the ceiling, installing R-38 over 100% of the ceiling area shall be deemed to satisfy the requirement for R-49 wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the U-factor alternative approach in Section N1102.1.3 and the total UA alternative in Section N1102.1.4.~~

N1102.2.4 (R402.2.4) Access hatches and doors. Access doors from conditioned spaces to unconditioned spaces (e.g., attics and crawl spaces) shall be weatherstripped and insulated in accordance with the following values:

1. Hinged vertical doors shall have a minimum overall R-5 insulation value;
2. Hatches and scuttle hole covers shall be insulated to a level equivalent to the insulation on the surrounding surfaces; and
3. Pull down stairs shall have a minimum of 75% of the panel area having R-5 rigid insulation.

Access shall be provided to all equipment that prevents damaging or compressing the insulation. A wood framed or equivalent baffle or retainer is required to be provided when loose fill insulation is installed, the purpose of which is to prevent the loose fill insulation from spilling into the living space when the attic access is opened, and to provide a permanent means of maintaining the installed R-value of the loose fill insulation.

~~83. 50. Delete Section N1102.3.6 (R402.3.6) and change~~ Change Sections N1102.4 (R402.4) and N1102.4.1.1 (R402.4.1.1) to read:

N1102.4 (R402.4) Air leakage. 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.

N1102.4.1.1 (R402.4.1.1) 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.

~~84. 51. Change the title of the "Insulation Installation Criteria" category of Table N1102.4.1.1 (R402.4.1.1); change the "Walls," "Shower/tub on exterior wall," and "Fireplace" categories~~ category of Table N1102.4.1.1 (R402.4.1.1), and add footnotes "b" and "c" to Table N1102.4.1.1 (R402.4.1.1) to read:

Component	Criteria ^{a,b}
Walls	<p>Cavities within corners and headers shall be insulated by completely filling the cavity with a material having a minimum thermal resistance of R-3 per inch.</p> <p>The junction of the foundation and sill plate shall be sealed.</p> <p>The junction of the top plate and top of exterior walls shall be sealed.</p> <p>Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.</p> <p>Knee walls shall be sealed.</p>
Shower/tub on exterior wall ^c	Exterior walls adjacent to showers and tubs shall be insulated, and an air barrier shall be installed on the interior side of the exterior wall, adjacent to the shower or tub.
Fireplace	An air barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors or tight-fitting flue dampers.
<p>b. Structural integrity of headers shall be in accordance with the applicable building code.</p> <p>c. Air barriers used behind showers and tubs on exterior walls shall be of a permeable material that does not cause the entrapment of moisture in the stud cavity.</p>	

Component	Air Barrier Criteria	Insulation Installation Criteria ^b
Shower/tub on exterior wall ^c	The air barrier installed at exterior walls adjacent to showers and tubs shall be	Exterior walls adjacent to showers and tubs shall be insulated.

	<u>installed on the interior side and separate the exterior walls from the showers and tubs.</u>	
b. Structural integrity of headers shall be in accordance with the applicable building code.		
c. Air barriers used behind showers and tubs on exterior walls shall be of a permeable material that does not cause the entrapment of moisture in the stud cavity.		

85- 52. Change Section N1102.4.1.2 (R402.4.1.2) and add Sections N1102.4.1.2.1 (R402.4.1.2.1), N1102.4.1.2.2 (R402.4.1.2.2), and N1102.4.1.3 (R402.4.1.3) to read:

N1102.4.1.2 (R402.4.1.2) Air sealing. Building envelope air tightness shall be demonstrated to comply with either Section N1102.4.1.2.1 or N1102.4.1.2.2.

N1102.4.1.2.1 (R402.4.1.2.1) 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 Pa). 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 creation of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and doors and 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.

N1102.4.1.2.2 (R402.4.1.2.2) 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 building official, an approved party, independent from the installer, shall inspect the air barrier. When this option is chosen, whole-house mechanical ventilation shall be provided in accordance with Section M1507.3.

N1102.4.1.3 (R402.4.1.3) Leakage rate (Prescriptive). The building or dwelling unit shall have an air leakage rate less than 5 changes per hour as verified in accordance with Section N1102.4.1.2.

86- ~~Change Section N1103.1.1 (R403.1.1) to read:~~

~~N1103.1.1 (R403.1.1) Programmable thermostat. The thermostat controlling the primary heating or cooling system of the dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule to maintain different temperature set points at different times of the day. This thermostat shall include the capability to set back or temporarily operate the system to maintain zone temperatures down to 55°F (13°C) or up to 85°F (29°C). The thermostat shall initially be programmed with a heating temperature set point no higher than 70°F (21°C) and a cooling temperature set point no lower than 78°F (26°C).~~

87- 53. Change Section N1103.2.2 (~~R403.2.2~~) N1103.3.2 (R403.3.2) to read:

~~N1103.2.2 (R403.2.2)~~ N1103.3.2 (R403.3.2) Sealing (Mandatory). Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with either the International Mechanical Code or Section M1601.4.1 of this code, as applicable. Verification of compliance with this section shall be in accordance with either ~~Section N1103.2.2.1~~ Sections

N1103.3.3 and N1103.3.4 when the testing option is chosen, or N1103.2.2.2 N1103.3.5 when the visual inspection option is chosen.

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~~ For ducts having a static pressure of less than 2 inches of water column (500 Pa) pressure classification shall not require, additional closure systems shall not be required for continuously welded joints and seams, and locking-type joints and seams of other than the snap-lock and button-lock types.

88. ~~54.~~ Change Section ~~N1103.2.2.1 (R403.2.2.1)~~ N1103.3.5 (R403.3.5) to read:

~~N1103.2.2.1 (R403.2.2.1) Testing option. Duct tightness shall be verified by either of the following:~~

1. ~~Post construction test: Total leakage shall be less than or equal to 6 cfm (169.9 L/min) per 100 square feet (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inch 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 5 cfm (141.5 L/min) per 100 square feet (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All register boots 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 5 cfm (141.5 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.~~

~~When this option is chosen, testing shall be performed by approved qualified individuals, testing agencies or contractors. Testing and results shall be as prescribed in Section N1103.2.2 and approved recognized industry standards.~~

89. ~~Add Section N1103.2.2.2 (R403.2.2.2) to read:~~

~~N1103.2.2.2 (R403.2.2.2)~~ N1103.3.5 (R403.3.5) Visual inspection option. In addition to the inspection of ducts otherwise required by this code, when the air handler and all ducts are not within conditioned space and this option is chosen to verify duct tightness, duct tightness shall be considered acceptable when the requirements of Section ~~N1103.2.2~~ N1103.3.2 are field verified.

90. ~~55.~~ Add Section ~~N1103.2.2.3 (R403.2.2.3)~~ N1103.3.6 (R403.3.6) to read:

~~N1103.2.2.3 (R403.2.2.1) Sealed air handler. Air handlers shall have a manufacturer's designation for an air leakage of no more than 2.0% of the design air flow rate when tested in accordance with ASHRAE 193.~~

N1103.3.6 (R403.3.6) Building cavities (Mandatory). Building framing cavities shall not be used as ducts or plenums.

91. ~~Change Section N1103.4.2 (R403.4.2) to read:~~

~~N1103.4.2 (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 located outside the conditioned space.~~

~~4. Piping from the water heater to a distribution manifold.~~

~~5. Piping located under a floor slab.~~

~~6. Buried piping.~~

~~7. Supply and return piping in recirculation systems other than demand recirculation systems.~~

~~92. Delete Table N1103.4.2 (R403.4.2).~~

~~93. 56.~~ Change Section ~~N1103.6 (R403.6)~~ N1103.7 (R403.7) to read:

~~N1103.6 (R403.6)~~ N1103.7 (R403.7) Equipment and appliance sizing. Heating and cooling equipment and appliances shall be sized in accordance with ACCA Manual S or other approved sizing methodologies 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 appliance sizing shall not be limited to the capacities determined in accordance with Manual S or other approved sizing methodologies 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 the approved heating and cooling methodology 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 the approved heating and cooling methodology and the next larger standard size unit is specified.
3. The specified equipment or appliance is the lowest capacity unit available from the specified manufacturer.

~~94. 57.~~ Change Section N1104.1 (R404.1) to read:

N1104.1 (R404.1) Lighting equipment (Mandatory). A minimum of 50% of the lamps in permanently installed luminaires shall be high-efficacy lamps, or a minimum of 50% of the permanently installed luminaires shall contain only high-efficacy lamps.

Exception: Low-voltage lighting shall not be required to utilize high-efficiency lamps.

~~95. 58.~~ Change the "~~Glazing Vertical fenestration other than opaque doors~~" and "Air exchange rate" categories of Table N1105.5.2(1) (Table R405.5.2(1)) to read:

Building Component	Standard Reference Design	Proposed Design
Glazing^a Vertical fenestration other than opaque doors	Total area ^b is 15% of the conditioned floor area.	As proposed
Glazing^a Vertical fenestration other than opaque doors	Orientation: equally distributed to four cardinal compass orientations (North, East, South & West).	As proposed
Glazing^a Vertical fenestration other than opaque doors	U-factor: from Table N1102.1.3 (R402.1.3) <u>N1102.1.4.</u>	As proposed
Glazing^a Vertical fenestration other than opaque doors	SHGC: From Table N1102.1.1 (R402.1.1) <u>N1102.1.2</u> except that for climates with no requirement (NR) SHGC = 0.40 shall be	As proposed

	used.	
Glazing ^a Vertical fenestration other than opaque doors	Interior shade fraction: 0.92-(0.21 x SHGC for the standard reference design).	0.92-(0.21 x SHGC as proposed)
Glazing ^a Vertical fenestration other than opaque doors	External shading: none.	As proposed
Air exchange rate	Air leakage rate of 5 air changes per hour 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 $0.01 \times \text{CFA} + 7.5 \times (\text{N}_{\text{br}} + 1)$ 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 ^{ea} . The mechanical ventilation rate ^{eb} shall be in addition to the air leakage rate and shall be as proposed.

59. Delete Section N1109.1.1.1 (R503.1.1.1).

96. 60. Change Section M1401.3 to read:

M1401.3 Equipment and appliance sizing. Heating and cooling equipment and appliances shall be sized in accordance with ACCA Manual S or other approved sizing methodologies 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 appliance sizing shall not be limited to the capacities determined in accordance with Manual S or other approved sizing methodologies 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 the approved heating and cooling methodology 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 the approved heating and cooling methodology, and the next larger standard size unit is specified.
3. The specified equipment or appliance is the lowest capacity unit available from the specified manufacturer.

97. 61. Add Section M1501.2 to read:

M1501.2 Transfer air. 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% free area and metal louvers and grilles will have 75% free area.

98. 62. Change Section M1503.4 and add Section M1503.4.1 to read:

M1503.4 Makeup air required. Exhaust hood systems capable of exhausting more than 400 cubic feet per minute (0.19 m³/s) shall be provided with makeup air at a rate approximately equal to the exhaust air rate in excess of 400 cubic feet per minute (0.19 m³/s). Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

Exception: Intentional openings for makeup air are not required for kitchen exhaust systems capable of exhausting not greater than 600 cubic feet per minute ($0.28 \text{ m}^3/\text{s}$) provided that one of the following conditions is met:

1. Where the floor area within the air barrier of a dwelling unit is at least 1500 square feet (139.35 m^2), and where natural draft or mechanical draft space-heating or water-heating appliances are not located within the air barrier.
2. Where the floor area within the air barrier of a dwelling unit is at least 3000 square feet (278.71 m^2), and where natural draft space-heating or water-heating appliances are not located within the air barrier.

~~M1503.4.1 Location. Kitchen exhaust makeup air shall be provided in the same room as the exhaust system or in a room or duct system communicating through one or more permanent openings with the room in which such exhaust system is located. Permanent openings shall be at least of the same net cross-sectional area as the required area of the makeup air openings.~~

~~99-~~ 63. Add Section M1801.1.1 to read:

M1801.1.1 Equipment changes. Upon the replacement or new installation of any fuel-burning appliances or equipment in existing buildings, an inspection or inspections shall be conducted to ensure that the connected vent or chimney systems comply with the following:

1. Vent or chimney systems are sized in accordance with this code.
2. Vent or chimney systems are clean, free of any obstruction or blockages, defects or deterioration and are in operable condition.

Where not inspected by the local building department, persons performing such changes or installations shall certify to the building official that the requirements of Items 1 and 2 of this section are met.

~~100-~~ 64. Add Section G2425.1.1 to read:

G2425.1.1 Equipment changes. Upon the replacement or new installation of any fuel-burning appliances or equipment in existing buildings, an inspection or inspections shall be conducted to ensure that the connected vent or chimney systems comply with the following:

1. Vent or chimney systems are sized in accordance with this code.
2. Vent or chimney systems are clean, free of any obstruction or blockages, defects, or deterioration and are in operable condition.

Where not inspected by the local building department, persons performing such changes or installations shall certify to the building official that the requirements of Items 1 and 2 of this section are met.

~~101-~~ 65. Change Section P2601.2 to read:

P2601.2 Connections. Plumbing fixtures, drains and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved nonpotable gray water system in accordance with the applicable provisions of Sections ~~P2909~~, P2910, ~~and P2911~~ and P2912.

~~102-~~ 66. Change Section P2602.1 to read:

P2602.1 General. The water and drainage system of any building or premises where plumbing fixtures are installed shall be connected to a public or private water supply and a public or private sewer system. As provided for in Section 103.10 of Part I of the Virginia Uniform Statewide Building Code (13VAC5-63) for functional design, water supply sources

and sewage disposal systems are regulated and approved by the Virginia Department of Health and the Virginia Department of Environmental Quality.

Note: See also the Memorandums of Agreement in the "Related Laws Package," which is available from the Virginia Department of Housing and Community Development.

~~403-~~ 67. Add Section P2901.1.1 to read:

P2901.1.1 Nonpotable fixtures and outlets. Nonpotable water shall be permitted to serve nonpotable type fixtures and outlets in accordance with the applicable provisions of Sections ~~P2909~~, P2910, ~~and P2911~~ and P2912.

~~404-~~ 68. Change Section P2903.5 to read:

P2903.5 Water hammer. The flow velocity of the water distribution system shall be controlled to reduce the possibility of water hammer. A water-hammer arrestor shall be installed where quick-closing valves are utilized, unless otherwise approved. Water hammer arrestors shall be installed in accordance with manufacturer's specifications. Water hammer arrestors shall conform to ASSE 1010.

~~407- Add Section P2909 Nonpotable Water Systems.~~

~~408-~~ 69. ~~Add~~ Change Sections ~~P2909-1~~ P2910.1 through ~~P2909-18~~ P2910.14, including subsections, to read:

~~P2909-1~~ P2910.1 Scope. The provisions of this section shall govern the materials, design, construction, and installation of nonpotable water systems subject to this code.

~~P2909-1.1~~ P2910.1.1 Design of nonpotable water systems. All portions of nonpotable water systems subject to this code shall be constructed using the same standards and requirements for the potable water systems or drainage systems as provided for in this code unless otherwise specified in this section or Section ~~P2910-6~~ P2911 or P2912, as applicable.

~~P2909-2~~ P2910.2 Makeup water. Makeup water shall be provided for all nonpotable water supply systems. The makeup water system shall be designed and installed to provide supply of water in the amounts and at the pressures specified in this code. The makeup water supply shall be potable and be protected against backflow in accordance with the applicable requirements of Section P2902.

~~P2909-2.1~~ P2910.2.1 Makeup water sources. Nonpotable water shall be permitted to serve as makeup water for gray water and rainwater systems.

~~P2909-2.2~~ P2910.2.2 Makeup water supply valve. A full-open valve shall be provided on the makeup water supply line.

~~P2909-2.3~~ P2910.2.3 Control valve alarm. Makeup water systems shall be fitted with a warning mechanism that alerts the user to a failure of the inlet control valve to close correctly. The alarm shall activate before the water within the storage tank begins to discharge into the overflow system.

~~P2909-3~~ P2910.3 Sizing. Nonpotable water distribution systems shall be designed and sized for peak demand in accordance with approved engineering practice methods that comply with the applicable provisions of this chapter.

~~P2909-4~~ P2910.4 Signage required. All nonpotable water outlets, other than water closets and urinals, such as hose connections, open ended pipes, and faucets shall be identified at the point of use for each outlet with signage that reads as follows: "Nonpotable water is utilized for (insert application name). Caution: nonpotable water. DO NOT DRINK." The words shall be legibly and indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material or shall be indelibly printed on the fixture. The letters of the words shall be not less than 0.5 inches (12.7 mm) in height and in colors in contrast to the background on which they are applied. The pictograph shown in Figure ~~P2909-4~~ P2910.4 shall appear on the signage required by this section.



~~P2909.5~~ P 2910.5 Potable water supply system connections. Where a potable water supply system is connected to a nonpotable water system, the potable water supply shall be protected against backflow in accordance with the applicable provisions of Section P2902.

~~P2909.6~~ P2910.6 Nonpotable water system connections. Where a nonpotable water system is connected and supplies water to another nonpotable water system, the nonpotable water system that supplies water shall be protected against backflow in accordance with the applicable provisions of Section P2902.

~~P2909.7~~ P2910.7 Approved components and materials. Piping, plumbing components, and materials used in the nonpotable water drainage and distribution systems shall be approved for the intended application and compatible with the water and any disinfection or treatment systems used.

~~P2909.8~~ P2910.8 Insect and vermin control. Nonpotable water systems shall be protected to prevent the entrance of insects and vermin into storage and piping systems. Screen materials shall be compatible with system material and shall not promote corrosion of system components.

~~P2909.9~~ P2910.9 Freeze protection. Nonpotable water systems shall be protected from freezing in accordance with the applicable provisions of Chapter 26.

~~P2909.10~~ P2910.10 Nonpotable water storage tanks. Nonpotable water storage tanks shall be approved for the intended application and comply with Sections ~~P2909.10.1~~ P2910.10.1 through ~~P2909.10.12~~ P2910.10.12.

~~P2909.10.1~~ P2910.10.1 Sizing. The holding capacity of storage tanks shall be sized for the intended use.

~~P2909.10.2~~ P2910.10.2 Inlets. Storage tank inlets shall be designed to introduce water into the tank and avoid agitating the contents of the storage tank. The water supply to storage tanks shall be controlled by fill valves or other automatic supply valves designed to stop the flow of incoming water before the tank contents reach the overflow pipes.

~~P2909.10.3~~ P2910.10.3 Outlets. Outlets shall be located at least 4 inches (102 mm) above the bottom of the storage tank and shall not skim water from the surface.

~~P2909.10.4~~ P2910.10.4 Materials and location. Storage tanks shall be constructed of material compatible with treatment systems used to treat water. Above grade storage vessels shall be constructed using opaque, UV-resistant materials such as tinted plastic, lined metal, concrete, or wood or painted to prevent algae growth. Above grade storage tanks shall be protected from direct sunlight unless their design specifically incorporates the use of the sunlight heat transfer. Wooden storage tanks shall be provided with a flexible liner. Storage tanks and their manholes shall not be located directly under soil or waste piping or sources of contamination.

~~P2909.10.5~~ P2910.10.5 Foundation and supports. Storage tanks shall be supported on a firm base capable of withstanding the storage tank's weight when filled to capacity. Storage tanks shall be supported in accordance with the applicable provisions of the IBC.

~~P2909.10.5.1~~ P2910.10.5.1 Ballast. Where the soil can become saturated, an underground storage tank shall be ballasted, or otherwise secured, to prevent the effects of buoyancy. The combined weight of the tank and hold down ballast shall meet or exceed the buoyancy force of the tank. Where the installation requires a foundation, the foundation shall be flat and shall be designed to support the storage tank weight when full, consistent with the bearing capability of adjacent soil.

~~P2909.10.5.2~~ P2910.10.5.2 Structural support. Where installed below grade, storage tank installations shall be designed to withstand earth and surface structural loads without damage.

~~P2909.10.6~~ P2910.10.6 Overflow. The storage tank shall be equipped with an overflow pipe having a diameter not less than that shown in Table ~~P2909.10.6~~ P2910.10.6. The overflow outlet shall discharge at a point not less than 6 inches (152 mm) above the roof or roof drain, floor or floor drain, or over an open water-supplied fixture. The overflow outlet shall terminate through a check valve. Overflow pipes shall not be directed on walkways. The overflow drain shall not be equipped with a shutoff valve. A minimum of one cleanout shall be provided on each overflow pipe in accordance with the applicable provisions of Section P3005.2.

Table P2909.10.6 <u>P2910.10.6</u> Sizes for Overflow Pipes for Water Supply Tanks	
Maximum Capacity of Water Supply Line to Tank (gpm)	Diameter of Overflow Pipe (inches)
0 – 50	2
50 – 150	2-1/2
150 – 200	3
200 – 400	4
400 – 700	5
700 – 1,000	6
Over 1,000	8
For SI: 1 inch = 25.4 mm, 1 gallon per minute = 3.785 L/m.	

~~P2909.10.7~~ P2910.10.7 Access. A minimum of one access opening shall be provided to allow inspection and cleaning of the tank interior. Access openings shall have an approved locking device or other approved method of securing access. Below grade storage tanks, located outside of the building, shall be provided with either a manhole not less than 24 inches (610 mm) square or a manhole with an inside diameter not less than 24 inches (610 mm). The design and installation of access openings shall prohibit surface water from entering the tank. Each manhole cover shall have an approved locking device or other approved method of securing access.

Exception: Storage tanks under 800 gallons (3028 L) in volume installed below grade shall not be required to be equipped with a manhole, but shall have an access opening not less than 8 inches (203 mm) in diameter to allow inspection and cleaning of the tank interior.

~~P2909.10.8~~ P2910.10.8 Venting. Storage tanks shall be vented. Vents shall not be connected to the sanitary drainage system. Vents shall be at least equal in size to the internal diameter of the drainage inlet pipe or pipes connected to the tank. Where installed at grade, vents shall be protected from contamination by means of a U-bend installed with the opening directed downward. Vent outlets shall extend a minimum of 12 inches (304.8 mm) above grade, or as necessary to prevent surface water from entering the storage tank. Vent openings shall be protected against the entrance of vermin and insects. Vents serving gray water tanks shall terminate in accordance with the applicable provisions of Sections P3103 and ~~P2909.8~~ P2910.8.

~~P2909.10.9~~ P2910.10.9 Drain. Where drains are provided, they shall be located at the lowest point of the storage tank. The tank drain pipe shall discharge as required for overflow pipes and shall not be smaller in size than specified in Table ~~P2909.10.6~~ P2910.10.6. A minimum of one cleanout shall be provided on each drain pipe in accordance with Section P3005.2.

~~P2909.10.10~~ P2910.10.10 Labeling and signage. Each nonpotable water storage tank shall be labeled with its rated capacity and the location of the upstream bypass valve. Underground and otherwise concealed storage tanks shall be labeled at all access points. The label shall read: "CAUTION: NONPOTABLE WATER – DO NOT DRINK." Where an opening is provided that could allow the entry of personnel, the opening shall be marked with the words: "DANGER – CONFINED SPACE." Markings shall be indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material mounted on the tank or shall be indelibly printed on the tank. The letters of the words shall be not less than 0.5 inches (12.7 mm) in height and shall be of a color in contrast with the background on which they are applied.

~~P2909.10.11~~ P2910.10.11 Storage tank tests. Storage tanks shall be tested in accordance with the following:

1. Storage tanks shall be filled with water to the overflow line prior to and during inspection. All seams and joints shall be left exposed and the tank shall remain water tight without leakage for a period of 24 hours.
2. After 24 hours, supplemental water shall be introduced for a period of 15 minutes to verify proper drainage of the overflow system and verify that there are no leaks.
3. Following a successful test of the overflow system, the water level in the tank shall be reduced to a level that is at 2 inches (50.8 mm) below the makeup water offset point. The tank drain shall be observed for proper operation. The makeup water system shall be observed for proper operation, and successful automatic shutoff of the system at the refill threshold shall be verified. Water shall not be drained from the overflow at any time during the refill test.
4. Air tests shall be permitted in lieu of water testing as recommended by the tank manufacturer or the tank standard.

~~P2909.10.12~~ P2910.10.12 Structural strength. Storage tanks shall meet the applicable structural strength requirements of the IBC.

~~P2909.11~~ P2910.11 Trenching requirements for nonpotable water system piping. Underground nonpotable water system piping shall be horizontally separated from the building sewer and potable water piping by 5 feet (1524 mm) of undisturbed or compacted earth. Nonpotable water system piping shall not be located in, under, or above sewage systems cesspools, septic tanks, septic tank drainage fields, or seepage pits. Buried nonpotable water system piping shall comply with the requirements of this code for the piping material installed.

Exceptions:

1. The required separation distance shall not apply where the bottom of the nonpotable water pipe within 5 feet (1524 mm) of the sewer is equal to or greater than 12 inches (305 mm) above the top of the highest point of the sewer and the pipe materials conforms to Table P3002.2.
2. The required separation distance shall not apply where the bottom of the potable water service pipe within 5 feet (1524 mm) of the nonpotable water pipe is a minimum of 12 inches (305 mm) above the top of the highest point of the nonpotable water pipe and the pipe materials comply with the requirements of Table ~~P2905.5~~ P2906.5.
3. Nonpotable water pipe is permitted to be located in the same trench with building sewer piping, provided that such sewer piping is constructed of materials that comply with the requirements of Table P3002.1(2).
4. The required separation distance shall not apply where a nonpotable water pipe crosses a sewer pipe, provided that the pipe is sleeved to at least 5 feet (1524 mm) horizontally from the sewer pipe centerline on both sides of such crossing with pipe materials that comply with Table P3002.1(2).
5. The required separation distance shall not apply where a potable water service pipe crosses a nonpotable water pipe provided that the potable water service pipe is sleeved for a distance of at least 5 feet (1524 mm) horizontally from the centerline of the nonpotable pipe on both sides of such crossing with pipe materials that comply with Table P3002.1(2).

~~P2909.12~~ P2910.12 Outdoor outlet access. Sillcocks, hose bibs, wall hydrants, yard hydrants, and other outdoor outlets that are supplied by nonpotable water shall be located in a locked vault or shall be operable only by means of a removable key.

~~P2909.13~~ P2910.13 Drainage and vent piping and fittings. Nonpotable drainage and vent pipe and fittings shall comply with the applicable material standards and installation requirements in accordance with provisions of Chapter 30.

~~P2909.13.1~~ P2910.13.1 Labeling and marking. Identification of nonpotable drainage and vent piping shall not be required.

~~P2909.14~~ P2910.14 Pumping and control system. Mechanical equipment, including pumps, valves, and filters, shall be accessible and removable in order to perform repair, maintenance, and cleaning. The minimum flow rate and flow pressure delivered by the pumping system shall be designed for the intended application in accordance with the applicable provisions of Section P2903.

70. Add sections 2910.15 through 2910.18, including subsections, to read:

~~P2909.15~~ P2910.15 Water-pressure reducing valve or regulator. Where the water pressure supplied by the pumping system exceeds 80 psi (552 kPa) static, a pressure-reducing valve shall be installed to reduce the pressure in the nonpotable water distribution system piping to 80 psi (552 kPa) static or less. Pressure-reducing valves shall be specified and installed in accordance with the applicable provisions of Section P2903.3.1.

~~P2909.16~~ P2910.16 Distribution pipe. Distribution piping utilized in nonpotable water stems shall comply with Sections ~~P2909.16.1~~ P2910.16.1 through ~~P2909.16.4~~ P2910.16.4.

~~P2909.16.1~~ P2910.16.1 Materials, joints, and connections. Distribution piping and fittings shall comply with the applicable material standards and installation requirements in accordance with applicable provisions of Chapter 29.

~~P2909.16.2~~ P2910.16.2 Design. Distribution piping shall be designed and sized in accordance with the applicable provisions of Chapter 29.

~~P2909.16.3~~ P2910.16.3 Labeling and marking. Distribution piping labeling and marking shall comply with Section P2901.1.

~~P2909.16.4~~ P2910.16.4 Backflow prevention. Backflow preventers shall be installed in accordance with the applicable provisions of Section P2902.

~~P2909.17~~ P2910.17 Tests and inspections. Tests and inspections shall be performed in accordance with Sections ~~P2909.17.1~~ P2910.17.1 through ~~P2909.17.5~~ P2910.17.5.

~~P2909.17.1~~ P2910.17.1 Drainage and vent pipe test. Drain, waste, and vent piping used for gray water and rainwater nonpotable water systems shall be tested in accordance with the applicable provisions of Section P2503.

~~P2909.17.2~~ P2910.17.2 Storage tank test. Storage tanks shall be tested in accordance with the Section ~~P2909.10.11~~ P2910.10.11.

~~P2909.17.3~~ P2910.17.3 Water supply system test. Nonpotable distribution piping shall be tested in accordance with Section P2503.7.

~~P2909.17.4~~ P2910.17.4 Inspection and testing of backflow prevention assemblies. The testing of backflow preventers and backwater valves shall be conducted in accordance with Section P2503.8.

~~P2909.17.5~~ P2910.17.5 Inspection of vermin and insect protection. Inlets and vent terminations shall be visually inspected to verify that each termination is installed in accordance with Section ~~P2909.10.8~~ P2910.10.8.

~~P2909.18~~ P2910.18 Operation and maintenance manuals. Operations and maintenance materials for nonpotable water systems shall be provided as prescribed by the system component manufacturers and supplied to the owner to be kept in a readily accessible location.

~~409- 71. Add~~ Change the title of Section P2910 P2911 to “Gray Water Nonpotable Water Systems.”

~~440. 72. Add Change Sections P2910.1 P2911.1 through P2910.6 P2911.6, including subsections, to read:~~

~~P2910.1 P2911.1~~ Gray water nonpotable water systems. This code is applicable to the plumbing fixtures, piping or piping systems, storage tanks, drains, appurtenances, and appliances that are part of the distribution system for gray water within buildings and to storage tanks and associated piping that are part of the distribution system for gray water outside of buildings. This code does not regulate equipment used for, or the methods of, processing, filtering, or treating gray water, which may be regulated by the Virginia Department of Health or the Virginia Department of Environmental Quality.

~~P2910.1.1 P2911.1.1~~ Separate systems. Gray water nonpotable water systems, unless approved otherwise under the permit from the Virginia Department of Health, shall be separate from the potable water system of a building with no cross connections between the two systems except as permitted by the Virginia Department of Health.

~~P2910.2 P2911.2~~ Water quality. Each application of gray water reuse shall meet the minimum water quality requirements set forth in Sections ~~P2910.2.1 P2911.2.1~~ through ~~P2910.2.4 P2911.2.4~~ unless otherwise superseded by other state agencies.

~~P2910.2.1 P2911.2.1~~ Disinfection. Where the intended use or reuse application for nonpotable water requires disinfection or other treatment or both, it shall be disinfected as needed to ensure that the required water quality is delivered at the point of use or reuse.

~~P2910.2.2 P2911.2.2~~ Residual disinfectants. Where chlorine is used for disinfection, the nonpotable water shall contain not more than 4 parts per million (4 mg/L) of free chlorine, combined chlorine, or total chlorine. Where ozone is used for disinfection, the nonpotable water shall not exceed 0.1 parts per million (by volume) of ozone at the point of use.

~~P2910.2.3 P2911.2.3~~ Filtration. Water collected for reuse shall be filtered as required for the intended end use. Filters shall be accessible for inspection and maintenance. Filters shall utilize a pressure gauge or other approved method to indicate when a filter requires servicing or replacement. Shutoff valves installed immediately upstream and downstream of the filter shall be included to allow for isolation during maintenance.

~~P2910.2.4 P2911.2.4~~ Filtration required. Gray water utilized for water closet and urinal flushing applications shall be filtered by a 100 micron or finer filter.

~~P2910.3 P2911.3~~ Storage tanks. Storage tanks utilized in gray water nonpotable water systems shall comply with Section ~~P2909.10 P2910.10~~.

~~P2910.4 P2911.4~~ Retention time limits. Untreated gray water shall be retained in storage tanks for a maximum of 24 hours.

~~P2910.5 P2911.5~~ Tank location. Storage tanks shall be located with a minimum horizontal distance between various elements as indicated in Table ~~P2910.5.1 P2911.5.1~~.

Table P2910.5.1 P2911.5.1 Location of Nonpotable Gray Water Reuse Storage Tanks	
Element	Minimum Horizontal Distance from Storage Tank (feet)
Lot line adjoining private lots	5
Sewage systems	5
Septic tanks	5
Water wells	50
Streams and lakes	50
Water service	5

Table P2910.5.1 <u>P2911.5.1</u> Location of Nonpotable Gray Water Reuse Storage Tanks	
Element	Minimum Horizontal Distance from Storage Tank (feet)
Public water main	10

~~P2910.6~~ P2911.6 Valves. Valves shall be supplied on gray water nonpotable water drainage systems in accordance with Sections ~~P2910.6.1~~ P2911.6.1 and ~~P2910.6.2~~ P2911.6.2.

~~P2910.6.1~~ P2911.6.1 Bypass valve. One three-way diverter valve certified to NSF 50 or other approved device shall be installed on collection piping upstream of each storage tank, or drainfield, as applicable, to divert untreated gray water to the sanitary sewer to allow servicing and inspection of the system. Bypass valves shall be installed downstream of fixture traps and vent connections. Bypass valves shall be labeled to indicate the direction of flow, connection, and storage tank or drainfield connection. Bypass valves shall be provided with access for operation and maintenance. Two shutoff valves shall not be installed to serve as a bypass valve.

~~P2910.6.2~~ P2911.6.2 Backwater valve. Backwater valves shall be installed on each overflow and tank drain pipe to prevent unwanted water from draining back into the storage tank. If the overflow and drain piping arrangement is installed to physically not allow water to drain back into the tank, such as in the form of an air gap, backwater valves shall not be required. Backwater valves shall be constructed and installed in accordance with Section P3008.

~~441. 73. Add~~ Change the title of Section ~~P2911.1~~ P2912 to “Rainwater Nonpotable Water Systems.”

~~442. 74. Add~~ Change Sections ~~P2911.1~~ P2912.1 through ~~P2911.10~~ P2912.10, including subsections, to read:

~~P2911.1~~ P2912.1 General. The provisions of this section shall govern the design, construction, installation, alteration, and repair of rainwater nonpotable water systems for the collection, storage, treatment, and distribution of rainwater for nonpotable applications.

~~P2911.2~~ P2912.2 Water quality. Each application of rainwater reuse shall meet the minimum water quality requirements set forth in Sections ~~P2911.2.1~~ P2912.2.1 through ~~P2911.2.4~~ P2912.2.4 unless otherwise superseded by other state agencies.

~~P2911.2.1~~ P2912.2.1 Disinfection. Where the intended use or reuse application for nonpotable water requires disinfection or other treatment or both, it shall be disinfected as needed to ensure that the required water quality is delivered at the point of use or reuse.

~~P2911.2.2~~ P2912.2.2 Residual disinfectants. Where chlorine is used for disinfection, the nonpotable water shall contain not more than 4 parts per million (4 mg/L) of free chlorine, combined chlorine, or total chlorine. Where ozone is used for disinfection, the nonpotable water shall not exceed 0.1 parts per million (by volume) of ozone at the point of use.

~~P2911.2.3~~ P2912.2.3 Filtration. Water collected for reuse shall be filtered as required for the intended end use. Filters shall be accessible for inspection and maintenance. Filters shall utilize a pressure gauge or other approved method to indicate when a filter requires servicing or replacement. Shutoff valves installed immediately upstream and downstream of the filter shall be included to allow for isolation during maintenance.

~~P2911.2.4~~ P2912.2.4 Filtration required. Rainwater utilized for water closet and urinal flushing applications shall be filtered by a 100 micron or finer filter.

~~P2911.3~~ P2912.3 Collection surface. Rainwater shall be collected only from aboveground impervious roofing surfaces constructed from approved materials. Overflow or discharge piping from appliances or equipment or both, including but not limited to evaporative coolers, water heaters, and solar water heaters shall not discharge onto rainwater collection surfaces.

~~P2911.4~~ P2912.4 Collection surface diversion. At a minimum, the first 0.04 inches (1.016 mm) of each rain event of 25 gallons (94.6 L) per 1000 square feet (92.9 m²) shall be diverted from the storage tank by automatic means and not require the operation of manually operated valves or devices. Diverted water shall not drain onto other collection surfaces that are discharging to the rainwater system or to the sanitary sewer. Such water shall be diverted from the storage tank and discharged in an approved location.

~~P2911.5~~ P2912.5 Pre-tank filtration. Downspouts, conductors, and leaders shall be connected to a pre-tank filtration device. The filtration device shall not permit materials larger than 0.015 inches (0.4 mm).

~~P2911.6~~ P2912.6 Roof gutters and downspouts. Gutters and downspouts shall be constructed of materials that are compatible with the collection surface and the rainwater quality for the desired end use. Joints shall be made watertight.

~~P2911.6.1~~ P2912.6.1 Slope. Roof gutters, leaders, and rainwater collection piping shall slope continuously toward collection inlets. Gutters and downspouts shall have a slope of not less than 1 unit in 96 units along their entire length, and shall not permit the collection or pooling of water at any point.

~~P2911.6.2~~ P2912.6.2 Size. Gutters and downspouts shall be installed and sized in accordance with local rainfall rates.

~~P2911.6.3~~ P2912.6.3 Cleanouts. Cleanouts or other approved openings shall be provided to permit access to all filters, flushes, pipes, and downspouts.

~~P2911.7~~ P2912.7 Storage tanks. Storage tanks utilized in rainwater nonpotable water systems shall comply with Section P2909.10.

~~P2911.8~~ P2912.8 Location. Storage tanks shall be located with a minimum horizontal distance between various elements as indicated in Table ~~P2911.8.1~~ P2912.8.1.

Table P2911.8.1 <u>P2912.8.1</u> Location of Rainwater Storage Tanks	
Element	Minimum Horizontal Distance from Storage Tank (feet)
Lot line adjoining private lots	5
Sewage systems	5
Septic tanks	5

~~P2911.9~~ P2912.9 Valves. Valves shall be installed in collection and conveyance drainage piping of rainwater nonpotable water systems in accordance with Sections ~~P2911.9.1~~ P2912.9.1 and ~~P2911.9.2~~ P2912.9.2.

~~P2911.9.1~~ P2912.9.1 Influent diversion. A means shall be provided to divert storage tank influent to allow maintenance and repair of the storage tank system.

~~P2911.9.2~~ P2912.9.2 Backwater valve. Backwater valves shall be installed on each overflow and tank drain pipe to prevent unwanted water from draining back into the storage tank. If the overflow and drain piping arrangement is installed to physically not allow water to drain back into the tank, such as in the form of an air gap, backwater valves shall not be required. Backwater valves shall be constructed and installed in accordance with Section P3008.

~~P2911.10~~ P2912.10 Tests and inspections. Tests and inspections shall be performed in accordance with Sections ~~P2911.10.1~~ P2912.10.1 through ~~P2911.10.2~~ P2912.10.2.

~~P2911.10.1~~ P2912.10.1 Roof gutter inspection and test. Roof gutters shall be inspected to verify that the installation and slope is in accordance with Section ~~P2911.6.1~~ P2912.6.1. Gutters shall be tested by pouring a minimum of one gallon of water into the end of the gutter opposite the collection point. The gutter being tested shall not leak and shall not retain standing water.

~~P2911.10.2~~ P2912.10.2 Collection surface diversion test. A collection surface diversion test shall be performed by introducing water into the gutters or onto the collection surface area. Diversion of the first quantity of water in accordance with the requirements of Section ~~P2911.4~~ P2912.4 shall be verified.

75. Delete Sections P2912.11 through P2912.16.

76. Delete Section P2913 in its entirety.

~~405- 77.~~ Add Section ~~P3002.2.1~~ P3002.2.2 to read as follows and delete Section P3009 in its entirety:

~~P3002.2.1~~ P3002.2.2 Tracer wire. Nonmetallic sanitary sewer piping that discharges to public systems shall be locatable. An insulated copper tracer wire, 18 AWG minimum in size and suitable for direct burial or an equivalent product, shall be utilized. The wire shall be installed in the same trench as the sewer within 12 inches (305 mm) of the pipe and shall be installed from within five feet of the building wall to the point where the building sewer intersects with the public system. At a minimum, one end of the wire shall terminate above grade in an accessible location that is resistant to physical damage, such as with a cleanout or at the building wall.

~~406- 78.~~ Add an exception to Section P3301.1 to read:

Exception: Rainwater nonpotable water systems shall be permitted in accordance with the applicable provisions of Sections ~~P2909~~ P2910 and ~~2911~~ P2912.

~~443- 79.~~ Add Section E3601.8 to read:

E3601.8 Energizing service equipment. The building official shall give permission to energize the electrical service equipment of a one-family or two-family dwelling unit when all of the following requirements have been approved:

1. The service wiring and equipment, including the meter socket enclosure, shall be installed and the service wiring terminated.
2. The grounding electrode system shall be installed and terminated.
3. At least one receptacle outlet on a ground fault protected circuit shall be installed and the circuit wiring terminated.
4. Service equipment covers shall be installed.
5. The building roof covering shall be installed.
6. Temporary electrical service equipment shall be suitable for wet locations unless the interior is dry and protected from the weather.

~~444- 80.~~ Change Section E3802.4 to read:

E3802.4 In unfinished basements. Where Type SE or NM cable is run at angles with joists in unfinished basements, cable assemblies containing two or more conductors of sizes 6 AWG and larger and assemblies containing three or more conductors of sizes 8 AWG and larger shall not require additional protection where attached directly to the bottom of the joists. Smaller cables shall be run either through bored holes in joists or on running boards. Type NM or SE cable installed on the wall of an unfinished basement shall be permitted to be installed in a listed conduit or tubing or shall be protected in accordance with Table E3802.1. Conduit or tubing shall be provided with a suitable insulating bushing or adapter at the point the where cable enters the raceway. The sheath of the Type NM or SE cable shall extend through the conduit or tubing and into the outlet or device box not less than 1/4 inch (6.4 mm). The cable shall be secured within 12 inches (305 mm) of the point where the cable enters the conduit or tubing. Metal conduit, tubing, and metal outlet boxes shall be connected to an equipment grounding conductor complying with Section E3908.13.

~~445- 81.~~ Change Section ~~E3902.12~~ E3902.16 to read:

~~E3902.12~~ E3902.16 Arc-fault protection of bedroom outlets. ~~All branch~~ Branch circuits that supply 120-volt, single phase, 15-~~ampere~~ and 20-ampere outlets installed in bedrooms shall be protected by ~~a combination-type arc-fault circuit interrupter installed to provide protection of the branch circuit.~~ any of the following:

1. A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit.

2. A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.

3. A listed supplemental arc protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:

3.1. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.

3.2. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.

3.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.

4. A listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:

4.1. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.

4.2. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.

4.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.

4.4. The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination-type AFCI and shall be listed as such.

5. Where metal outlet boxes and junction boxes and RMC, IMC, EMT, Type MC or steel-armored Type AC cables meeting the requirements of Section E3908.8, metal wireways or metal auxiliary gutters are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit.

6. Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 2 inches (50.8 mm) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit.

~~Exceptions~~ Exception:

~~1. Where an outlet branch circuit Type AFCI is installed at the first outlet to provide protection for the remaining portion of the branch circuit, the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet shall be installed with metal outlet and junction boxes and RMC, IMC, EMT, Type MC or steel-armored Type AC cables meeting the requirements of Section E3908.8.~~

~~2. Where an outlet branch circuit Type AFCI is installed at the first outlet to provide protection for the remaining portion of the branch circuit, the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet shall be installed with metal or nonmetallic conduit or tubing that is encased in not less than 2 inches (51 mm) of concrete.~~

~~3.~~ AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel-sheathed armored cable Type AC, or Type MC meeting the requirements of Section E3908.8.

~~116.~~ 82. Add the following referenced ~~standards~~ standard to Chapter 44:

Standard Reference Number	Title	Referenced in Code Section Number
ICC-ISPSC-12	International Swimming Pool and Spa Code	R325.1
NFPA 13R-10	Installation of Sprinkler Systems in Residential Occupancies Up to and Including Four Stories in Height	R310.1
NSF 50-09	Equipment for Swimming Pools, Spas, Hot Tubs and Other Recreational Water Facilities	P2910.6.1 <u>P2911.6.1</u>

~~T.~~ S. Add "Marinas" to the list of occupancies in Section 312.1 of the IBC.

13VAC5-63-220. Chapter 4 Special Detailed Requirements Based on Use and Occupancy.

A. Delete Section 403.4.5 of the IBC.

B. Change Section 407.4.1.1 of the IBC to read:

407.4.1.1 Special locking arrangement. Means of egress doors shall be permitted to contain locking devices restricting the means of egress in areas in which the clinical needs of the patients require restraint of movement, where all of the following conditions are met:

1. The locks release upon activation of the fire alarm system or the loss of power.
2. The building is equipped with an approved automatic sprinkler system in accordance with Section 903.3.1.1.
3. A manual release device is provided at a nursing station responsible for the area.
4. A key-operated switch or other manual device is provided adjacent to each door equipped with the locking device. Such switch or other device, when operated, shall result in direct interruption of power to the lock -- independent of the control system electronics.
5. All staff shall have keys or other means to unlock the switch or other device or each door provided with the locking device.

C. Add Section 407.11 to the IBC to read:

407.11 Emergency power systems. Emergency power shall be provided for medical life support equipment, operating, recovery, intensive care, emergency rooms, fire detection and alarm systems in any Group I-2 occupancy licensed by the Virginia Department of Health as a hospital, nursing home or hospice facility.

D. Add Section 408.2.1 to the IBC to read:

408.2.1 Short-term holding areas. Short-term holding areas shall be permitted to comply with Section ~~427~~ 429.

E. Change Section 408.6 of the IBC to read:

408.6 Smoke barrier. Occupancies classified as Group I-3 shall have smoke barriers complying with Sections 408.8 and 709 to divide every story occupied by residents for sleeping, or any other story having an occupant load of 50 or more persons, into no fewer than two smoke compartments.

F. Change Section 408.9 of the IBC and add Sections 408.9.1 through 408.9.3 to the IBC to read:

408.9 Smoke control. Smoke control for each smoke compartment shall be in accordance with Sections 408.9.1 through 408.9.3.

Exception: Smoke compartments with operable windows or windows that are readily breakable.

408.9.1 Locations. An engineered smoke control system shall comply with Section 909 and shall be provided in the following locations:

1. Dormitory areas.
2. Celled areas.
3. General housing areas.
4. Intake areas.
5. Medical celled or medical dormitory areas.
6. Interior recreation areas.

408.9.2 Compliance. The engineered smoke control system shall provide and maintain a tenable environment in the area of origin and shall comply with all of the following:

1. Shall facilitate the timely evacuation and relocation of occupants from the area of origin.
2. Shall be independent of exhaust systems under Chapter 5 of the IMC.
3. Duration of operation in accordance with Section 909.4.6.
4. The pressurization method shall be permitted and shall provide a minimum of 24 air changes per hour of exhaust, and 20 air changes per hour of makeup, and shall comply with Section 909.6. If the pressurization method is not utilized, the exhaust method shall be provided and shall comply with Section 909.8.

408.9.3 Corridors. Egress corridors within smoke compartments shall be kept free and clear of smoke.

G. Add Section 414.1.1.1 to the IBC to read:

~~414.1.1.1 Amendments. The following changes shall be made to the IFC for the use of this section:~~

~~1. Change Section 2306.8.1 of the IFC and add Section 2306.8.6 to the IFC to read:~~

~~2306.8.1 Listed. Dispensers shall be listed in accordance with UL 87A. Hoses, nozzles, breakaway fittings, swivels, flexible connectors or dispenser emergency shutoff valves, vapor recovery systems, leak detection devices, and pumps used in alcohol blended fuel dispensing systems shall be listed for the specific purpose.~~

~~2306.8.6 Compatibility. Dispensers shall only be used with the fuels for which they have been listed, which are marked on the product. Field installed components including hose assemblies, breakaway couplings, swivel connectors, and hose nozzle valves shall be provided in accordance with the listing and the marking on the unit.~~

~~2. Add the following reference standard to Chapter 80 of the IFC:~~

-	<table><tr><th>Standard reference number</th><th>Title</th><th>Referenced in code section number</th></tr><tr><td> </td><td> </td><td> </td></tr></table>	Standard reference number	Title	Referenced in code section number				
Standard reference number	Title	Referenced in code section number						

UL 87A-12	Outline of Investigation for Power-Operated Dispensing Devices for Gasoline and Gasoline/Ethanol Blends with Nominal Ethanol Concentrations up to 85%	2306.8.1
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~~H.~~ Add Section 414.6.2 to the IBC to read:

414.6.2 Other regulations. The installation, repair, upgrade, and closure of underground and aboveground storage tanks subject to the Virginia State Water Control Board regulations 9VAC25-91 and 9VAC25-580 shall be governed by those regulations, which are hereby incorporated by reference to be an enforceable part of this code. Where differences occur between the provisions of this code and the incorporated provisions of the State Water Control Board regulations, the provisions of the State Water Control Board regulations shall apply. Provisions of the International Fire Code addressing closure of such tanks that are subject to the Virginia State Water Control Board regulations 9VAC25-91 and 9VAC25-580 shall not be applicable.

~~I.~~ Change the title of Section 420 and change Sections 420.1 and 420.4 of the IBC to read:

Section 420 Groups I-1, R-1, R-2, R-3, and R-4.

~~420.1 General. Occupancies in Groups I-1, R-1, R-2, R-3, and R-4 shall comply with the provisions of Sections 420.1 through 420.6 and other applicable provisions of this code.~~

~~420.4 Smoke barriers in Group I-1 Condition 2. Smoke barriers shall be provided in Group I-1 Condition 2 to subdivide every story used by persons receiving care or treatment or sleeping and to divide other stories, with an occupant load of 50 or more persons, into no fewer than two smoke compartments. Such stories shall be divided into smoke compartments with an area of not more than 22,500 square feet (2092 m²) and the travel distance from any point in a smoke compartment to a smoke barrier door shall not exceed 200 feet (60 960 mm). The smoke barrier shall be in accordance with Section 709.~~

~~J.~~ Add Section 420.4.1 to the IBC to read:

~~420.4.1 Refuge area. Refuge areas shall be provided within each smoke compartment. The size of the refuge area shall accommodate the occupants and care recipients from the adjoining smoke compartment. Where a smoke compartment is adjoined by two or more smoke compartments, the minimum area of the refuge area shall accommodate the largest occupant load of the adjoining compartments. The size of the refuge area shall provide the following:~~

- ~~1. Not less than 15 net square feet (1.4 m²) for each care recipient.~~
- ~~2. Not less than 6 net square feet (0.56 m²) for other occupants.~~

~~Areas or spaces permitted to be included in the calculation of the refuge area are corridors, lounge, or dining areas and other low-hazard areas.~~

~~K.~~ Change Section 420.5 of the IBC and add Section 420.6 to the IBC to read:

~~420.5 Automatic sprinkler system. Group R occupancies shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.2.8. Group I-1 occupancies shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.2.6. Quick response or residential automatic sprinklers shall be installed in accordance with Section 903.3.2.~~

~~420.6 Fire alarm systems and smoke alarms. Fire alarm systems and smoke alarms shall be provided in Groups I-1, R-1, R-2, and R-4 occupancies in accordance with Sections 907.2.6, 907.2.8, 907.2.9, and 907.2.10, respectively. Single-station or multiple-station smoke alarms shall be provided in Groups I-1, R-2, R-3, and R-4 in accordance with Section 907.2.11.~~

~~L.~~ H. Add IBC Section 425 427 Manufactured Homes and Industrialized Buildings.

~~M. I.~~ Add Section ~~425.1~~ 427.1 to the IBC to read:

~~425.1~~ 427.1 General. The provisions of this section shall apply to the installation or erection of manufactured homes subject to the Virginia Manufactured Home Safety Regulations (13VAC5-95) and industrialized buildings subject to the Virginia Industrialized Building Safety Regulations (13VAC5-91).

Note: Local building departments are also responsible for the enforcement of certain provisions of the Virginia Manufactured Home Safety Regulations (13VAC5-95) and the Virginia Industrialized Building Safety Regulations (13VAC5-91) as set out in those regulations.

~~N. J.~~ Add Section ~~425.2~~ 427.2 to the IBC to read:

~~425.2~~ 427.2 Site work for manufactured homes. Footing design, basements, grading, drainage, decks, stoops, porches and utility connections shall comply with the provisions of this code applicable to Group R-5 occupancies. Additionally, all applicable provisions of Chapter 1 of this code, including but not limited to requirements for permits, inspections, certificates of occupancy and requiring compliance, are applicable to the installation and set-up of a manufactured home. Where the installation or erection of a manufactured home utilizes components that are to be concealed, the installer shall notify the building official that an inspection is necessary and assure that an inspection is performed and approved prior to concealment of such components, unless the building official has agreed to an alternative method of verification.

~~O. K.~~ Add Section ~~425.2.1~~ 427.2.1 to the IBC to read:

~~425.2.1~~ 427.2.1 Relocated manufactured homes. Installation, set-up, and site work for relocated manufactured homes shall comply with the provisions of this code and shall include the option of using the manufacturer's installations instructions or the federal Model Manufactured Home Installation Standards (24 CFR Part 3285) for the technical requirements.

~~P. L.~~ Add Section ~~425.2.2~~ 427.2.2 to the IBC to read:

~~425.2.2~~ 427.2.2 Alterations and repairs to manufactured homes. Alterations and repairs to manufactured homes shall either be in accordance with federal Manufactured Home Construction and Safety Standards (24 CFR Part 3280) or in accordance with the alteration and repair provisions this code.

~~Q. M.~~ Add Section ~~425.2.3~~ 427.2.3 to the IBC to read:

~~425.2.3~~ 427.2.3 Additions to manufactured homes. Additions to manufactured homes shall comply with this code and shall be structurally independent of the manufactured home, or when not structurally independent, shall be evaluated by an RDP to determine that the addition does not cause the manufactured home to become out of compliance with federal Manufactured Home Construction and Safety Standards (24 CFR Part 3280).

~~R. N.~~ Add Section ~~425.3~~ 427.3 to the IBC to read:

~~425.3~~ 427.3 Wind load requirements for manufactured homes. Manufactured homes shall be anchored to withstand the wind loads established by the federal regulation for the area in which the manufactured home is installed. For the purpose of this code, Wind Zone II of the federal regulation shall include the cities of Chesapeake, Norfolk, Portsmouth, and Virginia Beach.

~~S. O.~~ Add Section ~~425.4~~ 427.4 to the IBC to read:

~~425.4~~ 427.4 Skirting requirements for manufactured homes. As used in this section, "skirting" means a weather-resistant material used to enclose the space from the bottom of the manufactured home to grade. In accordance with § 36-99.8 of the Code of Virginia, manufactured homes installed or relocated shall have skirting installed within 60 days of occupancy of the home. Skirting materials shall be durable, suitable for exterior exposures and installed in accordance with the manufacturer's installation instructions. Skirting shall be secured as necessary to ensure stability, to minimize vibrations, to minimize susceptibility to wind damage and to compensate for possible frost heave. Each manufactured home shall have a minimum of one opening in the skirting providing access to any water supply or sewer drain

connections under the home. Such openings shall be a minimum of 18 inches (457 mm) in any dimension and not less than three square feet (.28 m²) in area. The access panel or door shall not be fastened in a manner requiring the use of a special tool to open or remove the panel or door. On-site fabrication of the skirting by the owner or installer of the home shall be acceptable, provided that the material meets the requirements of this code. In addition, as a requirement of this code, skirting for the installation and set-up of a new manufactured home shall also comply with the requirements of 24 CFR Part 3285 – Model Manufactured Home Installation Standards.

~~T. P.~~ Add Section ~~425.5~~ 427.5 to the IBC to read:

~~425.5~~ 427.5 Site work for industrialized buildings. Site work for the erection and installation of an industrialized building shall comply with the manufacturer's installation instructions. To the extent that any aspect of the erection or installation of an industrialized building is not covered by the manufacturer's installation instructions, this code shall be applicable, including the use of the IRC for any construction work where the industrialized building would be classified as a Group R-5 building. In addition, all administrative requirements of this code for permits, inspections, and certificates of occupancy are also applicable. Further, the building official may require the submission of plans and specifications for details of items needed to comprise the finished building that are not included or specified in the manufacturer's instructions, including, but not limited to, footings, foundations, supporting structures, proper anchorage, and the completion of the plumbing, mechanical, and electrical systems. Where the installation or erection of an industrialized building utilizes components that are to be concealed, the installer shall notify the building official that an inspection is necessary and assure that an inspection is performed and approved prior to concealment of such components, unless the building official has agreed to an alternative method of verification.

Exception: Temporary family health care structures installed pursuant to § 15.2-2292.1 of the Code of Virginia shall not be required or permitted to be placed on a permanent foundation, but shall otherwise remain subject to all pertinent provisions of this section.

~~U. Q.~~ Add Section ~~425.6~~ 427.6 to the IBC to read:

~~425.6~~ 427.6 Relocated industrialized buildings; alterations and additions. Industrialized buildings constructed prior to January 1, 1972, shall be subject to Section 117 when relocated. Alterations and additions to any existing industrialized buildings shall be subject to pertinent provisions of this code. Building officials shall be permitted to require the submission of plans and specifications for the model to aid in the evaluation of the proposed alteration or addition. Such plans and specifications shall be permitted to be submitted in electronic or other available format acceptable to the building official.

~~V. R.~~ Add Section ~~425.7~~ 427.7 to the IBC to read:

~~425.7~~ 427.7 Change of occupancy of industrialized buildings. Change of occupancy of industrialized buildings is regulated by the Virginia Industrialized Building Safety Regulations (13VAC5-91). When the industrialized building complies with those regulations for the new occupancy, the building official shall issue a new certificate of occupancy under the USBC.

~~W. S.~~ Add IBC Section ~~426~~ 428 Aboveground Liquid Fertilizer Tanks.

~~X. T.~~ Add Sections ~~426.1~~ 428.1 through ~~426.6~~ 428.6 to the IBC to read:

~~426.1~~ 428.1 General. This section shall apply to the construction of ALFSTs and shall supersede any conflicting requirements in other provisions of this code. ALFSTs shall also comply with any applicable nonconflicting requirements of this code.

~~426.1.1~~ 428.1.1 When change of occupancy rules apply. A change of occupancy to use a tank as an ALFST occurs when there is a change in the use of a tank from storing liquids other than liquid fertilizers to a use of storing liquid fertilizer and when the type of liquid fertilizer being stored has a difference of at least 20% of the specific gravity or operating temperature, or both, or a significant change in the material's compatibility.

~~426.2~~ 428.2 Standards. Newly constructed welded steel ALFSTs shall comply with API 650 and TFI RMIP, as applicable. Newly constructed ALFSTs constructed of materials other than welded steel shall be constructed in

accordance with accepted engineering practice to prevent the discharge of liquid fertilizer and shall be constructed of materials that are resistant to corrosion, puncture or cracking. In addition, newly constructed ALFSTs constructed of materials other than welded steel shall comply with TFI RMIP, as applicable. For the purposes of this code, the use of TFI RMIP shall be construed as mandatory and any language in TFI RMIP, such as, but not limited to, the terms "should" or "may" which indicate that a provision is only a recommendation or a guideline shall be taken as a requirement. ALFSTs shall be placarded in accordance with NFPA 704.

Exception: Sections 4.1.4, 4.2.5, 5.1.2, 5.2.8, 5.3 and 8.1(d)(i) of TFI RMIP shall not be construed as mandatory.

~~426.3~~ 428.3 Secondary containment. When ALFSTs are newly constructed and when there is a change of occupancy to use a tank as an ALFST, a secondary containment system designed and constructed to prevent any liquid fertilizer from reaching the surface water, groundwater or adjacent land before cleanup occurs shall be provided. The secondary containment system may include dikes, berms or retaining walls, curbing, diversion ponds, holding tanks, sumps, vaults, double-walled tanks, liners external to the tank, or other approved means and shall be capable of holding up to 110% of the capacity of the ALFST as certified by an RDP.

~~426.4~~ 428.4 Repair, alteration and reconstruction of ALFSTs. Repair, alteration and reconstruction of ALFSTs shall comply with applicable provisions of API 653 and TFI RMIP.

~~426.5~~ 428.5 Inspection. Applicable inspections as required by and in accordance with API 653 and TFI RMIP shall be performed for repairs and alterations to ALFSTs, the reconstruction of ALFSTs and when there is a change of occupancy to use a tank as an ALFST. When required by API 653 or TFI RMIP, such inspections shall occur prior to the use of the ALFST.

~~426.6~~ 428.6 Abandoned ALFSTs. Abandoned ALFSTs shall comply with applicable provisions of Section 5704.2.13.2 of the IFC.

~~Y. U.~~ Add IBC Section ~~427~~ 429 Short-term Holding Areas.

~~Z. V.~~ Add Section ~~427.1~~ 429.1 to the IBC to read:

~~427.1~~ 429.1 General. In all groups other than Group E, short-term holding areas shall be permitted to be classified as the main occupancy, provided all of the following are met:

1. Provisions are made for the release of all restrained or detained occupants of short-term holding areas at all times.
2. Aggregate area of short-term holding areas shall not occupy more than 10% of the building area of the story in which they are located and shall not exceed the tabular values for building area in Table ~~503~~ 506.2, without building area increases.
3. Restrained or detained occupant load of each short-term holding area shall not exceed 20.
4. Aggregate restrained or detained occupant load in short-term holding areas per building shall not exceed 80.
5. Compliance with Sections 408.3.7, 408.3.8, 408.4, and 408.7, as would be applicable to I-3 occupancies.
6. Requirements of the main occupancy in which short-term holding areas are located shall be met.
7. Fire areas containing short-term holding areas shall be provided with a fire alarm system and automatic smoke detection system complying with Section 907.2.6.3, as would be applicable to I-3 occupancies.
8. Where each fire area containing short-term holding areas exceeds 12,000 square feet (1115 m²), such fire areas shall be provided with an automatic sprinkler system complying with Section 903.3.
9. Short-term holding areas shall be separated from other short-term holding areas and adjacent spaces by smoke partitions complying with Section 710.

13VAC5-63-225. ~~Chapter 5 General Building Heights and Areas. (Repealed.)~~

~~A. Change Section 504.2 of the IBC to read:~~

~~504.2 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the value specified in Table 503 for maximum building height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one. These increases are permitted in addition to the building area increase in accordance with Sections 506.2 and 506.3. For Group R buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2, the value specified in Table 503 for maximum building height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one, but shall not exceed 60 feet (18 288 mm) or four stories, respectively.~~

~~Exception: The use of an automatic sprinkler system to increase building heights shall not be permitted for the following conditions:~~

- ~~1. Buildings, or portions of buildings, classified as Group I-1 Condition 2, of Type IIB, III, IV, or V construction or Group I-2 occupancies of Type IIB, III, IV, or V construction.~~
- ~~2. Buildings, or portions of buildings, classified as a Group H-1, H-2, H-3, or H-5 occupancy.~~
- ~~3. Buildings where an automatic sprinkler system is substituted for fire-resistance-rated construction in accordance with Table 601, Note d.~~

~~B. Change Section 508.2.3 of the IBC to read:~~

~~508.2.3 Allowable building area and height. The allowable building area and height of the building containing accessory occupancies shall be based on the allowable building area and height for the main occupancy in accordance with Section 503.1. The building area of the accessory occupancies shall be in accordance with Section 508.2.1.~~

13VAC5-63-230. Chapter 7 Fire and Smoke Protection Features.

A. Change Section 703.7 of the IBC to read:

703.7 Fire-resistance assembly marking. Where there is a concealed floor, floor-ceiling, or attic space, the fire walls, fire barriers, fire partitions, smoke barriers, or any other wall required to have protected openings or penetrations shall be designated above ceilings and on the inside of all ceiling access doors that provide access to such fire-rated assemblies by signage having letters no smaller than one inch (25.4 mm) in height. Such signage shall indicate the fire-resistance rating of the assembly and the type of assembly and be provided at horizontal intervals of no more than eight feet (2438 mm).

Note: An example of suggested formatting for the signage would be "ONE HOUR FIRE PARTITION."

B. Change the exceptions to Section 705.2 of the IBC to read:

Exceptions:

1. Buildings on the same lot and considered as portions of one building in accordance with Section 705.3 are not required to comply with this section.
2. Decks and open porches of buildings of Groups R-3 and R-4.

C. Add Exception 4 to Section 706.5.2 of the IBC to read:

4. Decks and open porches of buildings in Groups R-3 and R-4.

~~D. Change Section 709.5 of the IBC to read:~~

~~709.5 Openings. Openings in a smoke barrier shall be protected in accordance with Section 716.~~

Exceptions:

~~1. In Group I-1 Condition 2, Group I-2, and ambulatory care facilities where doors are installed across corridors, a pair of opposite swinging doors without a center mullion shall be installed having vision panels with fire protection rated glazing materials in fire protection rated frames, the area of which shall not exceed that tested. The doors shall be close fitting within operational tolerances and shall not have undercuts in excess of 3/4 inch, louvers, or grilles. The doors shall have head and jamb stops, astragals, or rabbets at meeting edges and shall be automatic closing by smoke detection in accordance with Section 716.5.9.3. Where permitted by the door manufacturer's listing, positive latching devices are not required.~~

~~2. In Group I-1 Condition 2, Group I-2, and ambulatory care facilities, horizontal sliding doors installed in accordance with Section 1008.1.4.3 and protected in accordance with Section 716.~~

~~E. Delete Sections 713.14.1 and 713.14.1.1.~~

~~F. Change Section 716.5.3.1 of the IBC to read:~~

~~716.5.3.1 Smoke and draft control. Fire door assemblies located in smoke barrier walls shall also meet the requirements for a smoke and draft control door assembly tested in accordance with UL 1784. The air leakage rate of the door assembly shall not exceed 3.0 cubic feet per minute per square foot (0.01524 m³/s · m²) of door opening at 0.10 inch (24.9 Pa) of water for both the ambient temperature and elevated temperature tests. Louvers shall be prohibited. Installation of smoke doors shall be in accordance with NFPA 105.~~

~~13VAC5-63-235. Chapter 8 Interior Finishes.~~

~~Change Section 806.1.2 806.3 of the IBC to read:~~

~~806.1.2 806.3 Combustible decorative materials. The permissible amount of decorative materials meeting the flame propagation performance criteria of NFPA 701. In other than Group I-3, curtains, draperies, fabric hangings and similar combustible decorative materials suspended from walls or ceilings shall comply with Section 806.4 and shall not exceed 10% of the specific wall or ceiling area to which it is attached.~~

~~Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered interior finish, shall comply with Section 803 and shall not be considered decorative materials or furnishings.~~

Exceptions:

~~1. In auditoriums or similar types of spaces in Group A, the permissible amount of curtains, draperies, fabric hangings and similar combustible decorative material meeting the flame propagation performance criteria of NFPA 701 materials suspended from walls or ceilings shall not exceed 75% of the aggregate wall area where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, and where the material is installed in accordance with Section 803.11 803.13 of this code.~~

~~2. In auditoriums or similar types of spaces in Group A, the permissible amount of decorative materials suspended from the ceiling, located no more than 12 inches (305 mm) from the wall, not supported by the floor, and meeting the flame propagation performance criteria of NFPA 701, shall not exceed 75% of the aggregate wall area when the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.~~

~~3. In Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and similar decorative materials suspended from walls or ceiling shall not exceed 50% of the aggregate walls areas where the building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.~~

~~4. The In Group B and M occupancies, the amount of combustible fabric partitions suspended from the ceiling and not supported by the floor in Groups B and M occupancies shall comply with Section 806.4 and shall not be limited.~~

13VAC5-63-240. Chapter 9 Fire Protection Systems.

A. Add the following to the list of terms in Section 902.1 of the IBC:

Emergency communication equipment.

Emergency public safety personnel.

B. Change Section 903.2.1.2 of the IBC to read:

903.2.1.2 Group A-2. An automatic sprinkler system shall be provided for fire areas containing Group A-2 occupancies and intervening floors of the building where one of the following conditions exists:

1. The fire area exceeds 5,000 square feet (464.5m²);
2. The fire area has an occupant load of 100 or more in night clubs or 300 or more in other Group A-2 occupancies; ~~or~~
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The fire area contains a multitheater complex.

C. Change Item 2 of Section 903.2.1.3 of the IBC to read:

2. In Group A-3 occupancies other than places of religious worship, the fire area has an occupant load of 300 or more; ~~or~~

D. Change Section 903.2.3 of the IBC to read:

903.2.3 Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 20,000 square feet (1858 m²) in area.
2. Throughout every portion of educational buildings below the lowest level of exit discharge serving that portion of the building.

Exception: An automatic sprinkler system is not required in any area below the lowest level of exit discharge serving that area where every classroom throughout the building has at least one exterior exit door at ground level.

E. ~~Change~~ Add Exception 4 to Section 903.2.6 to read:

~~903.2.6 Group I. An automatic sprinkler system shall be provided throughout all buildings with a Group I fire area.~~

~~Exceptions:~~

- ~~1. An automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be permitted in Group I-1 Condition 1 facilities.~~
- ~~2. An automatic sprinkler system is not required where Group I-4 day care facilities are at the level of exit discharge and where every room where care is provided has at least one exit door.~~
- ~~3. In buildings where Group I-4 day care is provided on levels other than the level of exit discharge, an automatic sprinkler system in accordance with Section 903.3.1.1 shall be installed on the entire floor where care is provided and all floors between the level of care and the level of exit discharge and all floors below the level of exit discharge, other than areas classified as an open parking garage.~~

4. An automatic sprinkler system shall not be required for open-sided or chain link-sided buildings and overhangs over exercise yards 200 square feet (18.58 m²) or less in Group I-3 facilities, provided such buildings and overhangs are of noncombustible construction.

F. Change Section 903.2.7 of the IBC to read:

903.2.7 Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. A Group M fire area exceeds 12,000 square feet (1115 m²).
2. A Group M fire area is located more than three stories above grade plane.
3. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m²).

G. Change ~~Sections~~ Section 903.2.8, ~~903.2.8.1, and 908.2.8.2~~ of the IBC to read:

903.2.8 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area, except for Group R-2 occupancies listed in the exceptions to this section when the necessary water pressure or volume, or both, for the system is not available:

Exceptions:

1. Group R-2 occupancies that do not exceed two stories, including basements that are not considered as a story above grade, and with a maximum of 16 dwelling units per fire area. Each dwelling unit shall have at least one door opening to an exterior exit access that leads directly to the exits required to serve that dwelling unit.
2. Group R-2 occupancies where all dwelling units are not more than two stories above the lowest level of exit discharge and not more than one story below the highest level of exit discharge of exits serving the dwelling unit and a two-hour fire barrier is provided between each pair of dwelling units. Each bedroom of a dormitory or boarding house shall be considered a dwelling unit under this exception.

~~903.2.8.1 Group R-3. An automatic sprinkler system installed in accordance with Section 903.3.1.3 shall be permitted in Group R-3.~~

~~903.2.8.2 Group R-4 Condition 1. An automatic sprinkler system installed in accordance with Section 903.3.1.3 shall be permitted in Group R-4 Condition 1.~~

H. Add Sections 903.2.8.3, 903.2.8.3.1, 903.2.8.3.2, and 903.2.8.4 to the IBC to read:

~~903.2.8.3 Group R-4 Condition 2. An automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be permitted in Group R-4 Condition 2. Attics shall be protected in accordance with Section 903.2.8.3.1 or 903.2.8.3.2.~~

~~903.2.8.3.1 Attics used for living purposes, storage, or fuel fired equipment. Attics used for living purposes, storage, or fuel fired equipment shall be protected throughout with automatic sprinkler system installed in accordance with Section 903.3.1.2.~~

~~903.2.8.3.2 Attics not used for living purposes, storage, or fuel fired equipment. Attics not used for living purposes, storage, or fuel fired equipment shall be protected in accordance with one of the following:~~

~~1. Attics protected throughout by a heat detector system arranged to activate the building fire alarm system in accordance with Section 907.2.10.~~

~~2. Attics constructed of noncombustible materials.~~

~~3. Attics constructed of fire-retardant treated wood framing complying with Section 2303.2.~~

~~4. The automatic fire sprinkler system shall be extended to provide protection throughout the attic space.~~

~~903.2.8.4 Care facilities. An automatic sprinkler system installed in accordance with 903.3.1.3 shall be permitted in care facilities with 5 or fewer individuals in a single family dwelling.~~

~~I.~~ Add Section 903.3.1.2.2 to the IBC to read:

903.3.1.2.2 Attics. Sprinkler protection shall be provided for attics in buildings of Type III, IV or V construction in Group R-2 occupancies that are designed or developed and marketed to senior citizens 55 years of age or older and in Group I-1 occupancies in accordance with Section 7.2 of NFPA 13R.

~~J. Change Section 903.3.1.3 of the IBC to read:~~

~~903.3.1.3 NFPA 13D sprinkler systems. Automatic sprinkler systems installed in one family and two family dwellings, Group R-3, Group R-4 Condition 1 and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D.~~

~~K.~~ I. Change Section 903.4.2 of the IBC to read:

903.4.2 Alarms. Approved audible devices shall be connected to every automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Alarm devices shall be provided on the exterior of the building in an approved location. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system. Group R-2 occupancies that contain 16 or more dwelling units or sleeping units, any dwelling unit or sleeping unit two or more stories above the lowest level of exit discharge, or any dwelling unit or sleeping unit more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit shall provide a manual fire alarm box at an approved location to activate the suppression system alarm.

~~L.~~ J. Add an exception to Section 905.2 of the IBC to read:

Exception: The residual pressure of 100 psi for 2-1/2 inch hose connection and 65 psi for 1-1/2 inch hose connection is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and where the highest floor level is not more than 150 feet above the lowest level of fire department vehicle access.

~~M.~~ K. Change Item 1 of Section 906.1 of the IBC to read:

1. In Groups A, B, E, F, H, I, M, R-1, R-4, and S occupancies.

Exceptions:

1. In Groups A, B, and E occupancies equipped throughout with quick response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.

2. In Group I-3 occupancies, portable fire extinguishers shall be permitted to be located at staff locations and the access to such extinguishers shall be permitted to be locked.

~~N.~~ L. Change Section 907.2.1.1 of the IBC to read:

907.2.1.1 System initiation in Group A occupancies with an occupant load of 1,000 or more and in certain night clubs. Activation of the fire alarm in Group A occupancies with an occupant load of 1,000 or more and in night clubs with an occupant load of 300 or more shall initiate a signal using an emergency voice and alarm communications system in accordance with Section 907.5.2.2.

Exception: Where approved, the prerecorded announcement is allowed to be manually deactivated for a period of time, not to exceed three minutes, for the sole purpose of allowing a live voice announcement from an approved, constantly attended location.

~~Q. M.~~ Change Section 907.2.3 of the IBC to read:

907.2.3 Group E. A manual fire alarm system that activates the occupant notification system meeting the requirements of Section 907.5 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. When automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.

Exceptions:

1. A manual fire alarm system is not required in Group E occupancies with an occupant load of 50 or less.
2. Manual fire alarm boxes are not required in Group E occupancies where all of the following apply:
 - 2.1. Interior corridors are protected by smoke detectors.
 - 2.2. Auditoriums, cafeterias, gymnasiums, and similar areas are protected by heat detectors or other approved detection devices.
 - 2.3. Shops and laboratories involving dusts or vapors are protected by heat detectors or other approved detection devices.
3. Manual fire alarm boxes shall not be required in Group E occupancies where the building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, the occupant notification system will activate on sprinkler water flow and manual activation is provided from a normally occupied location.

~~P. Change Section 907.2.6.1 of the IBC to read:~~

~~907.2.6.1 Group I-1. In Group I-1 occupancies, an automatic smoke detection system shall be installed in corridors, waiting areas open to corridors, and habitable spaces other than sleeping units and kitchens. The system shall be activated in accordance with Section 907.5.~~

~~Exceptions:~~

- ~~1. For Group I-1 Condition 1, smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.~~
- ~~2. Smoke detection is not required for exterior balconies.~~

~~Q. N.~~ Add an exception to Section 907.5.2.1.1 of the IBC to read:

Exception: Sound pressure levels in Group I-3 occupancies shall be permitted to be limited to only the notification of occupants in the affected smoke compartment.

~~R. Change Sections 908.7 and 908.7.1 of the IBC and add Sections 908.7.2 and 908.7.3 to the IBC to read:~~

~~908.7 Carbon monoxide alarms. Carbon monoxide alarms shall comply with this section.~~

~~908.7.1 Group I or R. Group I or R occupancies located in a building containing a fuel burning appliance or in a building which has an attached garage shall be equipped with single station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in Chapter 2, or an enclosed parking garage ventilated in accordance with Section 404 of the IMC shall not be considered an attached garage.~~

~~Exception: Sleeping units or dwelling units which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:~~

- ~~1. The sleeping unit or dwelling unit is located more than one story above or below any story which contains a fuel-burning appliance or an attached garage;~~
- ~~2. The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and~~
- ~~3. The building is equipped with a common area carbon monoxide alarm system.~~

~~908.7.2 Group E. Classrooms in E-occupancies located in a building containing a fuel-burning appliance or in a building which has an attached garage or small engine or vehicle shop shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in Chapter 2, or an enclosed parking garage ventilated in accordance with Section 404 of the IMC shall not be considered an attached garage.~~

~~Exception: Classrooms which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:~~

- ~~1. The classroom is located more than 100 feet from the fuel-burning appliance or attached garage or located more than one story above or below any story which contains a fuel-burning appliance or attached garage; and~~
- ~~2. The classroom is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance.~~

~~908.7.3 Carbon monoxide detection systems. Carbon monoxide detection systems, which include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.~~

~~S. O.~~ Change Section 909.6 of the IBC to read:

909.6 Pressurization method. When approved by the building official, the means of controlling smoke shall be permitted by pressure differences across smoke barriers. Maintenance of a tenable environment is not required in the smoke-control zone of fire origin.

~~T. P.~~ Change Section 911.1.3 of the IBC to read:

911.1.3 Size. The fire command center shall be a minimum of 96 square feet (9 m²) in area with a minimum dimension of eight feet (2438 mm).

Exception: Where it is determined by the building official, after consultation with the fire chief, that specific building characteristics require a larger fire command center, the building official may increase the minimum required size of the fire command center up to 200 square feet (19 m²) in area with a minimum dimension of up to 10 feet (3048 mm).

Q. Replace Section 915 of the IBC with the following:

915.1 Carbon monoxide alarms. Carbon monoxide alarms shall comply with this section.

915.2 Group I or R. Group I or R occupancies located in a building containing a fuel-burning appliance or in a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in Chapter 2, or an enclosed parking garage ventilated in accordance with Section 404 of the IMC shall not be considered an attached garage.

Exception: Sleeping units or dwelling units which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:

1. The sleeping unit or dwelling unit is located more than one story above or below any story which contains a fuel-burning appliance or an attached garage;
2. The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and
3. The building is equipped with a common area carbon monoxide alarm system.

915.3 Group E. Classrooms in E occupancies located in a building containing a fuel-burning appliance or in a building which has an attached garage or small engine or vehicle shop shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in Chapter 2, or an enclosed parking garage ventilated in accordance with Section 404 of the IMC shall not be considered an attached garage.

Exception: Classrooms which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:

1. The classroom is located more than 100 feet from the fuel burning appliance or attached garage or located more than one story above or below any story which contains a fuel-burning appliance or attached garage; and
2. The classroom is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance.

915.4 Carbon monoxide detection systems. Carbon monoxide detection systems, which include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.

~~U. R.~~ Change the title of IBC Section ~~915~~ 916 to read:

In-Building Emergency Communications Coverage.

~~V. S.~~ Change Section ~~915.1~~ 916.1 of the IBC to read:

~~915.1~~ 916.1 General. For localities utilizing public safety wireless communications, dedicated infrastructure to accommodate and perpetuate continuous in-building emergency communication equipment to allow emergency public safety personnel to send and receive emergency communications shall be provided in new buildings and structures in accordance with this section.

Exceptions:

1. Buildings of Use Groups A-5, I-4, within dwelling units of R-2, R-3, R-4, R-5, and U.
2. Buildings of Types IV and V construction without basements, that are not considered unlimited area buildings in accordance with Section 507.
3. Above grade single story buildings of less than 20,000 square feet.
4. Buildings or leased spaces occupied by federal, state, or local governments, or the contractors thereof, with security requirements where the building official has approved an alternative method to provide emergency communication equipment for emergency public safety personnel.

5. Where the owner provides technological documentation from a qualified individual that the structure or portion thereof does not impede emergency communication signals.

~~W. T.~~ Add Sections ~~915.1.1, 915.1.2~~ 916.1.1, 916.1.2 and ~~915.1.3~~ 916.1.3 to the IBC to read:

~~915.1.1~~ 916.1.1 Installation. The building owner shall install radiating cable, such as coaxial cable or equivalent. The radiating cable shall be installed in dedicated conduits, raceways, plenums, attics, or roofs, compatible for these specific installations as well as other applicable provisions of this code. The locality shall be responsible for the installation of any additional communication equipment required for the operation of the system.

~~915.1.2~~ 916.1.2 Operations. The locality will assume all responsibilities for the operation and maintenance of the emergency communication equipment. The building owner shall provide sufficient operational space within the building to allow the locality access to and the ability to operate in-building emergency communication equipment.

~~915.1.3~~ 916.1.3 Inspection. In accordance with Section 113.3, all installations shall be inspected prior to concealment.

~~X. T.~~ Add Section ~~915.2~~ 916.2 to the IBC to read:

~~915.2~~ 916.2 Acceptance test. Upon completion of installation, after providing reasonable notice to the owner or their representative, emergency public safety personnel shall have the right during normal business hours, or other mutually agreed upon time, to enter onto the property to conduct field tests to verify that the required level of radio coverage is present at no cost to the owner. Any noted deficiencies in the installation of the radiating cable or operational space shall be provided in an inspection report to the owner or the owner's representative.

13VAC5-63-245. Chapter 10 Means of Egress.

A. Delete Section 1001.4 of the IBC.

B. Change Section 1004.3 of the IBC to read:

1004.3 Posting of occupant load. Every room or space that is an assembly occupancy and where the occupant load of that room or space is 50 or more shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.

C. Change ~~the exception to~~ Exception 1 of Section 1005.3.1 of the IBC to read:

~~Exception: 1.~~ For other than Groups H and I-2 occupancies, the capacity, in inches (mm), of means of egress stairways shall be calculated by multiplying the occupant load served by such stairway by a means of egress capacity factor of 0.2 inch (5.1 mm) per occupant in buildings equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

D. Change ~~the exception to~~ Exception 1 of Section 1005.3.2 of the IBC to read:

~~Exception: 1.~~ For other than Groups H and I-2 occupancies, the capacity, in inches (mm), of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.15 inch (3.8 mm) per occupant in buildings equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

E. Change Exception 1 of Section 1006.2.1 of the IBC to read:

1. In Group R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and the common path of egress travel does not exceed 125 feet (38 100 mm). This exception shall also apply to Group R-2 occupancies where Section 903.2.8, Exception 1 or 2 is applicable.

F. Change the number “49” to “50” in the “Maximum Occupant Load of Space” column in the “A^c, E, M”, “B”, “F”, and “U” rows of Table 1006.2.1 of the IBC.

G. Change the number “49” to “50” in the “Maximum Occupant Load per Story” column of the “A, B^b, E F, M, U” row of Table 1006.3.2(2).

H. Change Section ~~1007.6.2~~ 1009.6.4 of the IBC to read:

~~1007.6.2~~ 1009.6.4 Separation. Each area of refuge shall be separated from the remainder of the story by a smoke barrier complying with Section 709 or a horizontal exit complying with Section ~~1025~~ 1026. Each area of refuge shall be designed to minimize the intrusion of smoke.

Exceptions:

1. Areas of refuge located within an ~~exit~~ enclosure for interior exit stairways complying with Section 1023.
2. Areas of refuge in outdoor facilities where exit access is essentially open to the outside.
3. Areas of refuge where the area of refuge and areas served by the area of refuge are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

~~F. I.~~ Change Item 2 of Section ~~1008.1.9.3~~ 1010.1.9.3 of the IBC to read:

2. In buildings in occupancy Groups B, F, M and S, the main ~~exterior~~ door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:

- 2.1. The locking device is readily distinguishable as locked.
- 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN ~~BUILDING~~ THIS SPACE IS OCCUPIED. The sign shall be in letters one inch (25 mm) high on a contrasting background.
- 2.3. The use of the key-operated locking device is revokable by the building official for due cause.

~~G. J.~~ Delete Section ~~1008.1.9.6~~ 1010.1.9.6 of the IBC.

~~H. K.~~ Change Sections ~~1008.1.9.7~~ and ~~1008.1.9.8~~ of Add an exception to Section 1010.1.9.7 the IBC to read:

~~1008.1.9.7 Delayed egress locks. In other than Groups A, E, and H, approved, listed, delayed egress locks shall be permitted to be installed on doors in buildings which are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.~~

- ~~1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.~~
- ~~2. The doors unlock upon loss of power controlling the lock or lock mechanism.~~
- ~~3. The door locks shall have the capability of being unlocked by a signal from the fire command center.~~
- ~~4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.~~

~~Exception: Where approved, a delay of not more than 30 seconds is permitted.~~

~~5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 SECONDS.~~

~~Exception: Where approved, such sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 30 SECONDS.~~

~~6. Emergency lighting shall be provided at the door.~~

Exception: Approved, listed, delayed egress locks shall be permitted to be installed on doors serving Group A-3 airport facilities, provided they are installed in accordance with this section.

~~1008.1.9.8 Sensor release of electronically locked egress doors. The electric locks on sensor released doors located in a means of egress in buildings with an occupancy in Group A, B, E, I 1, I 2, I 4, M, R 1, or R 2 and entrance doors to tenant spaces in occupancies in Group A, B, E, I 1, I 2, I 4, M, R 1, or R 2 are permitted where installed and operated in accordance with all of the following criteria:~~

~~1. The sensor shall be installed on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.~~

~~2. Loss of power to the lock or locking system shall automatically unlock the doors.~~

~~3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within five feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock independent of locking system electronics and the doors shall remain unlocked for not less than 30 seconds.~~

~~4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.~~

~~5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.~~

~~6. The door locking system units shall be listed in accordance with UL 294.~~

~~I. L. Delete the exception in Change Section 4008.1.10 1010.1.10 of the IBC to read:~~

1010.1.10 Panic and fire exit hardware. Doors serving a Group H occupancy and doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Exception: Doors serving a Group A or E occupancy shall be permitted to be electromagnetically locked in accordance with Section 1010.1.9.9.

~~J. M. Add Section 4008.1.11 1010.1.11 to the IBC to read:~~

~~4008.1.11 1010.1.11 Locking certain residential sliding doors. In dwelling units of Group R-2 buildings, exterior sliding doors which are one story or less above grade, or shared by two dwelling units, or are otherwise accessible from the outside, shall be equipped with locks. The mounting screws for the lock case shall be inaccessible from the outside. The lock bolt shall engage the strike in a manner that will prevent it from being disengaged by movement of the door.~~

Exception: Exterior sliding doors which are equipped with removable metal pins or charlie bars.

~~K. N. Add Section 4008.1.12 1010.1.12 to the IBC to read:~~

~~4008.1.12 1010.1.12 Door viewers in certain residential buildings. Entrance doors to dwelling units of Group R-2 buildings shall be equipped with door viewers with a field of vision of not less than 180 degrees.~~

Exception: Entrance doors having a vision panel or side vision panels.

~~L. O.~~ Change Exception ~~5~~ 3 of Section ~~1009.7.2~~ 1011.5.2 of the IBC to read:

~~5. 3.~~ In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; the maximum riser height shall be 8.25 inches (210 mm); the minimum tread depth shall be 9 inches (229 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).

~~M. P.~~ Change Section ~~1013.8~~ 1015.8 of the IBC to read:

~~1013.8~~ 1015.8 Window ~~sills~~ openings. ~~In Occupancy Groups~~ Windows in Group R-2 and R-3, one-family and two-family and multiple-family dwellings buildings including dwelling units, where the ~~opening top~~ opening of the sill ~~portion~~ of an operable window opening is located less than 18 inches (457 mm) above the finished floor and more than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, the lowest part of the clear opening of the window shall be at a height not less than 18 inches (457 mm) above the finished floor surface of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch diameter (102 mm) sphere where such openings are located within 18 inches (457 mm) of the finished floor. shall comply with one of the following:

~~Exceptions:~~

1. Operable windows where the ~~top of the sill portion~~ top of the sill of the opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F 2006.
2. ~~Windows whose~~ Operable windows where the openings will not allow a 4-inch diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position.
3. ~~Openings that~~ Operable windows where the openings are provided with window fall prevention devices that comply with ASTM F 2090.
4. ~~Windows~~ Operable windows that are provided with window opening control devices that comply with Section ~~1013.8.1~~ 1015.8.1.

~~N. Q.~~ Add Exception 3 to Item 4 5 of Section ~~1014.2~~ 1016.2 of the IBC to read:

3. A maximum of one exit access is permitted to pass through kitchens, store rooms, closets or spaces used for similar purposes provided such a space is not the only means of exit access.

~~O.~~ Change Exception 1 in Item 1 of Section 1015.1 of the IBC to read:

~~1. In Groups R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. This exception shall also apply to Group R-2 occupancies where Section 903.2.8, Exception 1 or 2 is applicable.~~

~~P.~~ Change Table 1015.1 of the IBC to read:

-	Table 1015.1	
	Spaces With One Exit or Exit Access Doorway	
	Occupancy	Maximum Occupant Load
-	A, B, E, F, M, U	50

-	H-1, H-2, H-3	3
-	H-4, H-5, I-1, I-3, I-4, R	10
-	S	29

Q. ~~Change Exception 2 of Section 1015.2.1 of the IBC to read:~~

~~2. Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, the separation distance of the exit doors or exit access doorways shall not be less than one fourth of the length of the maximum overall diagonal dimension of the area served.~~

R. ~~Add Section 1016.2.2 to the IBC to read:~~

~~1016.2.2 Group F-1 and S-1 increase. The maximum exit access travel distance shall be 400 feet (122 m) in Group F-1 or S-1 occupancies where all of the following are met:~~

- ~~1. The portion of the building classified as Group F-1 or S-1 is limited to one story in height;~~
- ~~2. The minimum height from the finished floor to the bottom of the ceiling or roof slab or deck is 24 feet (7315 mm); and~~
- ~~3. The building is equipped throughout with an automatic fire sprinkler system in accordance with Section 903.3.1.1.~~

S. ~~Add the following text to footnote "a" of Table 1016.2 of the IBC to read:~~

~~Section 1016.2.2: For increase distance limitation in Group F-1 and Group S-1.~~

T. ~~Change Exception 2 of Section 1018.1 of the IBC to read:~~

~~2. A fire resistance rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group I-1 and Group R.~~

U. R. ~~Change Table 4018.1~~ 1020.1 of the IBC to read:

Table 4018.1 <u>1020.1</u> Corridor Fire-Resistance Rating			
Occupancy	Occupant Load Served By Corridor	Required Fire-Resistance Rating (hours)	
		Without sprinkler system	With sprinkler system ^b
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
R	Greater than 10	1	0.5
I-2 ^a , I-4	All	Not Permitted	0
I-1, I-3	All	Not Permitted	0
a. For requirements for occupancies in Group I-2, see Sections 407.2 and 407.3. b. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.			

V. S. ~~Add an additional row to Table 4018.2~~ 1020.2 of the IBC to read:

Occupancy	Width (minimum)
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In corridors of Group I-2 assisted living facilities licensed by the Virginia Department of Social Services serving areas with wheelchair, walker, and gurney traffic where residents are capable of self-preservation or where resident rooms have a means of egress door leading directly to the outside.	44 inches
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W. Change the first row in Table 1021.2(2) to read:

-	Story	Occupancy	Maximum Occupants per Story	Maximum Exit Access Travel Distance
-	First story or basement	A, B ^b , E, F ^b , M, U, S ^b	50 occupants	75 feet

X. T. Change Section ~~4022.9~~ 1023.9 of the IBC to read:

~~4022.9~~ 1023.9 Floor identification signs. A sign shall be provided at each floor landing in exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the exit enclosure and the identification of the stair or ramp by designation with a letter of the alphabet. The signage shall also state the story of, and the direction to, the exit discharge and the availability of roof access from the enclosure for the fire department. The sign shall be located five feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. Floor level identification signs in tactile characters complying with ICC A117.1 shall be located at each floor level landing adjacent to the door leading from the enclosure into the corridor to identify the floor level.

Y. U. Change Section ~~4024.4~~ 1025.1 of the IBC to read:

~~4024.4~~ 1025.1 General. Approved luminous egress path markings delineating the exit path shall be provided in buildings of Groups A, B, E, I, M and R-1 having occupied floors located more than 420 feet (128 016 mm) above the lowest level of fire department vehicle access in accordance with Sections ~~4024.4~~ 1025.1 through ~~4024.5~~ 1025.5.

Exception: Luminous egress path markings shall not be required on the level of exit discharge in lobbies that serve as part of the exit path in accordance with Section ~~4027.4~~ 1028.1, Exception 1.

13VAC5-63-250. Chapter 11 Accessibility.

A. Add an exception to Section 1101.2 of the IBC to read:

Exception: Wall-mounted visible alarm notification appliances in Group I-3 occupancies shall be permitted to be a maximum of 120 inches (3048 mm) above the floor or ground, measured to the bottom of the appliance. Such appliances shall otherwise comply with all applicable requirements.

B. Add Change Section ~~4403.2.16~~ to 1103.2.8 of the IBC to read:

~~4403.2.16~~ 1103.2.8 Raised and lowered areas in places of religious worship. Raised or lowered areas in places of religious worship are not required to be accessible or to be served by an accessible route provided such areas are used exclusively for the performance of religious ceremonies and are located within an accessible story or mezzanine.

C. Change Section 1106.1 of the IBC and replace Table 1106.1 of the IBC with Tables 1106.1(1) and 1106.1(2) to read:

1106.1 Required. Where parking is provided, accessible parking spaces shall be provided in compliance with Tables 1106.1(1) and 1106.1(2), as applicable, except as required by Sections 1106.2 through 1106.4. Where more than one parking facility is provided on a site, the number of parking spaces required to be accessible shall be calculated separately for each parking facility.

Exception: This section does not apply to parking spaces used exclusively for buses, trucks, other delivery vehicles, law-enforcement vehicles, or vehicular impound and motor pools where lots accessed by the public are provided with an accessible passenger loading zone.

Table 1106.1(1) Accessible Parking Spaces for Groups A, B, E, M, R-1, R-2, and I ^a	
Total Parking Spaces Provided	Required Minimum Number of Accessible Spaces
1 - 25	1
26 - 50	2
51 - 75	3
76 - 100	4
101 - 125	5
126 - 150	6
151 - 200	7
201 - 300	8
301 - 400	9
401 - 500	10
501 - 1,000	2.33% of total
1,001 and over	23, plus one for each 100, or fraction thereof, over 1,000
a. Condominium parking in Group R-2 occupancies where parking is part of the unit purchase shall be in accordance with Table 1106.1(2).	

Table 1106.1(2) Accessible Parking Spaces for Groups F, S, H, R-3, R-4, and U	
Total Parking Spaces Provided	Required Minimum Number of Accessible Spaces
1 - 25	1
26 - 50	2
51 - 75	3
76 - 100	4
101 - 150	5
151 - 200	6
201 - 300	7
301 - 400	8
401 - 500	9
501 - 1,000	2.0% of total
1,001 and over	20, plus one for each 100, or fraction thereof, over 1,000

D. Add Section 1106.8 to the IBC to read:

1106.8 Identification of accessible parking spaces. In addition to complying with applicable provisions of this chapter, all accessible parking spaces shall be identified by above grade signs. A sign or symbol painted or otherwise displayed on the pavement of a parking space shall not constitute an above grade sign. All above grade parking space signs shall have the bottom edge of the sign no lower than four feet (1219 mm) nor higher than seven feet (2133 mm) above the parking surface. All disabled parking signs shall include the following language: PENALTY, \$100-500 Fine, TOW-AWAY ZONE. Such language may be placed on a separate sign and attached below existing above grade disabled parking signs, provided that the bottom edge of the attached sign is no lower than four feet above the parking surface.

E. Add Sections 1109.16 and 1109.16.1 to the IBC to read:

1109.16 Dwellings containing universal design features for accessibility. Group R-5 occupancies not subject to Section R320.1 of the IRC and Group R-3 occupancies not subject to Section 1107.6.3 may comply with this section and be approved by the local building department as dwellings containing universal design features for accessibility.

1109.16.1 Standards for dwellings containing universal design features for accessibility. When the following requirements are met, approval shall be issued by the local building department indicating that a dwelling has been constructed in accordance with these standards and is deemed to be a dwelling containing universal design features for accessibility.

1. The dwelling must comply with the requirements for Type C units under Section 1005 of ICC A117.1 with the following changes to the those requirements:

1.1. That at least one bedroom be added to the interior spaces required by Section 1005.4 of ICC A117.1.

1.2. In the toilet room or bathroom required by Section 1005 of ICC A117.1, in addition to the lavatory and water closet, a shower or bathtub complying with Section 1004.11.3.2.3 of ICC A117.1 shall be provided and shall include reinforcement for future installation of grab bars in accordance with Section 1004.11.1 of ICC A117.1.

1.3. That the exception to Section 1005.4 of ICC A117.1 is not applicable.

1.4. That there be a food preparation area complying with Section 1005.7 of ICC A117.1 on the entrance level.

1.5. That any thermostat for heating or cooling on the entrance level comply with Section 1005.8 of ICC A117.1.

F. Change Item 1 of Section ~~1110.4~~ 1111.1 of the IBC to read:

1. Accessible parking spaces required by Section 1106.1.

13VAC5-63-260. Chapter 12 Interior Environment.

A. Add the following to the list of terms in Section 1202.1 of the IBC:

Day-night average sound level (Ldn).

Sound transmission class (STC) rating.

B. Add Section ~~1203.4.4~~ 1203.5.4 to the IBC to read:

~~1203.4.4~~ 1203.5.4 Insect screens in occupancies other than Group R. Every door, window and other outside opening for natural ventilation serving structures classified as other than a residential group containing habitable rooms, food preparation areas, food service areas, or any areas where products to be included or utilized in food for human consumption are processed, manufactured, packaged, or stored, shall be supplied with approved tightly fitting screens of not less than 16 mesh per inch (16 mesh per 25 mm) and every screen door used for insect control shall have a self-closing device.

Exception: Screen doors shall not be required for out swinging doors or other types of openings which make screening impractical, provided other approved means, such as air curtains or insect repellent fans are provided.

C. Add Section ~~1203.4.5~~ 1203.5.5 to the IBC to read:

~~1203.4.5~~ 1203.5.5 Insect screens in Group R occupancies. Every door, window and other outside opening required for natural ventilation purposes which serves a structure classified as a residential group shall be supplied with approved tightly fitted screens of not less than 16 mesh per inch (16 mesh per 25 mm) and every screen door used for insect control shall have a self-closing device.

D. Add Section ~~1203.6~~ 1203.7 to the IBC to read:

~~1203.6~~ 1203.7 Smoking areas in restaurants. Smoking areas in restaurants, as defined in § 15.2-2820 of the Code of Virginia, shall comply with the following:

1. The area where smoking may be permitted shall be structurally separated from the portion of the restaurant in which smoking is prohibited. For the purposes of this section, structurally separated means a stud wall covered with drywall or other building material or like barrier, which, when completed, extends from the floor to the ceiling, resulting in a physically separated room. Such wall or barrier may include portions that are glass or other gas-impervious building material and shall be permitted to have a door leading to areas in which smoking is prohibited, provided the door is capable of being closed at all times.

2. The area where smoking may be permitted shall be separately vented to prevent the recirculation of air from such area to the area of the restaurant where smoking is prohibited.

Exception: The above requirements do not apply if a restaurant is exempt from, or meets any of the exceptions to, the Virginia Indoor Clean Air Act (Chapter 28.2 of Title 15.2 (§ 15.2-2820 et seq.) of the Code of Virginia).

E. Change Section 1207.1 of the IBC to read:

1207.1 Scope. Sections 1207.2 and 1207.3 shall apply to common interior walls, partitions and floor/ceiling assemblies between adjacent dwelling units or between dwelling units and adjacent public areas such as halls, corridors, stairs or service areas. Section 1207.4 applies to the construction of the exterior envelope of Group R occupancies within airport noise zones and to the exterior envelope of Group A, B, E, I and M occupancies in any locality in whose jurisdiction, or adjacent jurisdiction, is located a United States Master Jet Base, a licensed airport or United States government or military air facility, when such requirements are enforced by a locality pursuant to § 15.2-2295 of the Code of Virginia.

F. Add Section 1207.4 to the IBC to read:

1207.4 Airport noise attenuation standards. Where the Ldn is determined to be 65 dBA or greater, the minimum STC rating of structure components shall be provided in compliance with Table 1207.4. As an alternative to compliance with Table 1207.4, structures shall be permitted to be designed and constructed so as to limit the interior noise level to no greater than 45 Ldn. Exterior structures, terrain and permanent plantings shall be permitted to be included as part of the alternative design. The alternative design shall be certified by an RDP.

G. Add Table 1207.4 to the IBC to read:

Table 1207.4 Airport Noise Attenuation Standards		
Ldn	STC of exterior walls and roof/ceiling assemblies	STC of doors and windows
65-69	39	25
70-74	44	33
75 or greater	49	38

13VAC5-63-264. Chapter 13 Energy Efficiency.

Add Section 1301.1.1.1 to the IBC to read:

1301.1.1.1 Changes to the IECC. The following changes shall be made to the IECC:

1. Add ~~Exception 3 to an exception to the first paragraph of~~ Section ~~C402.4.5.2~~ C403.2.4.3 to read:

~~3. Exception:~~ Any grease duct serving a Type I hood installed in accordance with IMC Section 506.3 shall not be required to have a motorized or gravity damper.

2. ~~Change Section C402.4.8 to read:~~

~~C402.4.8 Recessed lighting. Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC rated and labeled as having an air leakage rate or not more 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E 283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires installed in the thermal envelope shall be sealed with a gasket or caulk between the housing and interior wall or ceiling covering.~~

3. ~~Add Exception 4 to Section C403.2.4.4 to read:~~

~~4. Any grease duct serving a Type I hood installed in accordance with IMC Section 506.3 shall not be required to have a motorized or gravity damper.~~

4. ~~Change the exception to Section C405.1 to read:~~

~~Exception: Dwelling units within commercial buildings shall not be required to comply with Sections C405.2 through C405.5, provided that not less than 75% of the permanently installed luminaires, other than low voltage lighting, shall be fitted for, and contain only, high efficacy lamps.~~

5. ~~Change Section C405.6~~ C405.5 to read:

~~C405.6~~ C405.5 Exterior lighting (Mandatory). All exterior lighting, other than low-voltage landscape lighting, shall comply with ~~Sections C405.6.1 and Section C405.6.2~~ C405.5.1.

Exception: Where approved because of historical, safety, signage, or emergency considerations.

6. ~~3.~~ Delete Section R401.3.

7. ~~4.~~ Change the ceiling R-value and wood frame wall R-value categories for climate zone "4 except Marine" in Table ~~R402.1.1~~ R402.1.2 to read:

Ceiling R-Value	Wood Frame Wall R-Value
38	15 or 13 + 1"

8. ~~5.~~ Change the ceiling U-factor and frame wall U-factor categories for climate zone "4 except Marine" in Table ~~R402.1.3~~ R402.1.4 to read:

Ceiling U-Factor	Frame Wall U-Factor
0.030	0.079

9. ~~6.~~ Change ~~Sections R402.2.1 and~~ Section R402.2.4 to read:

~~R402.2.1 Ceilings with attic spaces. When Section R402.1.1 would require R-38 in the ceiling, installing R-30 over 100% of the ceiling area shall be deemed to satisfy the requirement for R-38 wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Similarly, when Section R402.1.1 would require R-49 in the ceiling, installing R-38 over 100% of the ceiling area shall be deemed to satisfy the requirement for R-49 wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the U-factor alternative approach in Section R402.1.3 and the total UA alternative in Section R402.1.4.~~

R402.2.4 Access hatches and doors. Access doors from conditioned spaces to unconditioned spaces (e.g., attics and crawl spaces) shall be weatherstripped and insulated in accordance with the following values:

1. Hinged vertical doors shall have a minimum overall R-5 insulation value;

2. Hatches and scuttle hole covers shall be insulated to a level equivalent to the insulation on the surrounding surfaces; and

3. Pull down stairs shall have a minimum of 75% of the panel area having R-5 rigid insulation.

Access shall be provided to all equipment that prevents damaging or compressing the insulation. A wood framed or equivalent baffle or retainer is required to be provided when loose fill insulation is installed, the purpose of which is to prevent the loose fill insulation from spilling into the living space when the attic access is opened and to provide a permanent means of maintaining the installed R-value of the loose fill insulation.

~~10. 7. Delete Section R402.3.6 and change Change Sections R402.4 and R402.4.1.1 to read:~~

R402.4 Air leakage. The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.4.

R402.4.1.1 Installation (Mandatory). The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.

~~11. 8. Change the title of the "Insulation Installation Criteria" category of Table R402.4.1.1; change the "Walls," "Shower/tub on exterior wall" and "Fireplace" categories category of Table R402.4.1.1, and add footnotes "b" and "c" to Table R402.4.1.1 to read:~~

Component	Criteria ^{a,b}
Walls	Cavities within corners and headers shall be insulated by completely filling the cavity with a material having a minimum thermal resistance of R-3 per inch. The junction of the foundation and sill plate shall be sealed. The junction of the top plate and top of exterior walls shall be sealed. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier. Knee walls shall be sealed.
Shower or tub on exterior wall ^c	Exterior walls adjacent to showers and tubs shall be insulated and an air barrier installed on the interior side of the exterior wall, adjacent to the shower or tub.
Fireplace	An air barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors or tight-fitting flue dampers.
b. Structural integrity of headers shall be in accordance with the applicable building code. c. Air barriers used behind showers and tubs on exterior walls shall be of a permeable material that does not cause the entrapment of moisture in the stud cavity.	

Component	Air Barrier Criteria	Insulation Installation Criteria ^c
Shower/tub on exterior wall ^c	The air barrier installed at exterior walls adjacent to showers and tubs shall be installed on the interior side and separate the exterior walls from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.
b. Structural integrity of headers shall be in accordance with the applicable building code. c. Air barriers used behind showers and tubs on exterior walls shall be of a permeable material that does not cause the entrapment of moisture in the stud cavity.		

~~12. 9. Change Section R402.4.1.2 and add Sections R402.4.1.2.1, R402.4.1.2.2, and R402.4.1.3 to read:~~

R402.4.1.2 Air sealing. Building envelope air tightness shall be demonstrated to comply with either Section R402.4.1.2.1 or R402.4.1.2.2.

R402.4.1.2.1 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 creation of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and doors and 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.

R402.4.1.2.2 Visual inspection option. Building envelope tightness shall be considered acceptable when the items listed in Table R402.4.1.1, applicable to the method of construction, are field verified. Where required by the building official, an approved party, independent from the installer, shall inspect the air barrier. When this option is chosen, the dwelling unit shall be ventilated by mechanical means in accordance with Section 403 of the IMC.

R402.4.1.3 Leakage rate (Prescriptive). The building or dwelling unit shall have an air leakage rate not exceeding 5 changes per hour as verified in accordance with Section R402.4.1.2.

~~13. Change Section R403.1.1 to read:~~

~~R403.1.1 Programmable thermostat. The thermostat controlling the primary heating or cooling system of the dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule to maintain different temperature set points at different times of the day. This thermostat shall include the capability to set back or temporarily operate the system to maintain zone temperatures down to 55°F (13°C) or up to 85°F (29°C). The thermostat shall initially be programmed with a heating temperature set point no higher than 70°F (21°C) and a cooling temperature set point no lower than 78°F (26°C).~~

~~14. 10. Change Section R403.2.2 R403.3.2 to read:~~

~~R403.2.2 R403.3.2 Sealing (Mandatory). Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with either the IMC or the IRC, as applicable. Verification of compliance with this section shall be in accordance with either Section R403.2.2.1 Sections R403.3.3 and R403.3.4 when the testing option is chosen, or Section R403.2.2.2 R403.3.5 when the visual inspection option is chosen.~~

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 pressures~~ For ducts having a static pressure of less than 2 inches of water column (500 Pa) pressure classification shall not require, additional closure systems shall not be required for continuously welded joints and seams, and locking-type joints and seams of other than the snap-lock and button-lock types.

15. 11. Change Section R403.2.2.1 R403.3.5 to read:

R403.2.2.1 Testing option. Duct tightness shall be verified by either of the following:

1. Post construction test: Total leakage shall be less than or equal to 6 cfm (169.9 L/min) per 100 square feet (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inch 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 5 cfm (141.5 L/min) per 100 square feet (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All register boots 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 5 cfm (141.5 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.

When this option is chosen, testing shall be performed by approved qualified individuals, testing agencies or contractors. Testing and results shall be as prescribed in Section R403.2.2 and approved recognized industry standards.

16. Add Section R403.2.2.2 to read:

R403.2.2.2 R403.3.5 Visual inspection option. In addition to the inspection of ducts otherwise required by this code, when the air handler and all ducts are not within conditioned space and this option is chosen to verify duct tightness, duct tightness shall be considered acceptable when the requirements of Section R403.2.2 R403.3.2 are field verified.

17. 12. Add Section R403.2.2.3 R403.3.6 to read:

R403.2.2.3 Sealed air handler. Air handlers shall have a manufacturer's designation for an air leakage of no more than 2.0% of the design air flow rate when tested in accordance with ASHRAE 193.

R403.3.6 Building cavities (Mandatory). Building framing cavities shall not be used as ducts or plenums.

18. Change Section R403.4.2 to read:

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 located outside the conditioned space.

4. Piping from the water heater to a distribution manifold.

5. Piping located under a floor slab.

6. Buried piping.

7. Supply and return piping in recirculation systems other than demand recirculation systems.

~~19. Delete Table R403.4.2.~~

~~20. 13.~~ Change Section ~~R403.6~~ R403.7 to read:

~~R403.6~~ R403.7 Equipment and appliance sizing. Heating and cooling equipment and appliances shall be sized in accordance with ACCA Manual S or other approved sizing methodologies 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 appliance sizing shall not be limited to the capacities determined in accordance with Manual S or other approved sizing methodologies 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 the approved heating and cooling methodology 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 the approved heating and cooling methodology and the next larger standard size unit is specified.
3. The specified equipment or appliance is the lowest capacity unit available from the specified manufacturer.

~~24. 14.~~ Change Section R404.1 to read:

R404.1 Lighting equipment (Mandatory). A minimum of 50% of the lamps in permanently installed luminaires shall be high-efficacy lamps or a minimum of 50% of the permanently installed luminaires shall contain only high-efficacy lamps.

Exception: Low-voltage lighting shall not be required to utilize high-efficiency lamps.

~~22. 15.~~ Change the "~~Glazing~~ Vertical fenestration other than opaque doors" and "Air exchange rate" categories of Table R405.5.2(1) to read:

Building Component	Standard Reference Design	Proposed Design
Glazing^a Vertical fenestration other than opaque doors	Total area ^b is 15% of the conditioned floor area.	As proposed
Glazing^a Vertical fenestration other than opaque doors	Orientation: equally distributed to four cardinal compass orientations (North, East, South & West).	As proposed
Glazing^a Vertical fenestration other than opaque doors	U-factor: from Table R402.1.3 <u>R402.1.4</u>	As proposed
Glazing^a Vertical fenestration other than opaque doors	SHGC: From Table R402.1.4 <u>R402.1.2</u> except that for climates with no requirement (NR) SHGC = 0.40 shall be used.	As proposed
Glazing^a Vertical fenestration other than opaque doors	Interior shade fraction: 0.92-(0.21 x SHGC for the standard reference design)	0.92-(0.21 x SHGC as proposed)
Glazing^a Vertical fenestration other than opaque doors	External shading: none.	As proposed
Air exchange rate	Air leakage rate of 5 air changes per hour 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 $0.01 \times \text{CFA} +$	For residences that are not tested, the same air leakage rate as the standard reference design. For tested

	$7.5 \times (N_{br} + 1)$ where: CFA = conditioned floor area N_{br} = number of bedrooms Energy recovery shall not be assumed for mechanical ventilation.	residences, the measured air exchange rate ^c . The mechanical ventilation rate ^d shall be in addition to the air leakage rate and shall be as proposed.
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16. Delete Section R503.1.1.1.

13VAC5-63-267. Chapter 14 Exterior Walls.

A. Delete Section 1403.5 of the IBC.

B. Add Section 1403.8 to the IBC to read:

1403.8 Air barriers. The exterior wall envelope shall be designed and constructed by providing air barriers that comply with the IECC.

C. Change Section 1407.10.4 of the IBC to read:

1407.10.4 Full-scale test. The MCM system shall be tested in accordance with, and comply with, the acceptance criteria of NFPA 285. Such testing shall be performed on the MCM system with the MCM in the maximum thickness intended for use. Where noncombustible materials or combustible materials permitted by Sections 603, 803, 806, or 1406 differ from assembly to assembly or within an assembly, multiple tests shall not be required.

Exception: The MCM system is not required to be tested in accordance with, and comply with, acceptance criteria of NFPA 285 in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

13VAC5-63-270. Chapter 16 Structural Design.

A. Change Section 1609.3 of the IBC to read:

1609.3 Basic wind speed. The ultimate design wind speed, V_{ult} , in miles per hour (mph), for the determination of the wind loads shall be determined by Figures ~~1609A~~ 1609.3(1), ~~1609B~~ 1609.3(2), and ~~1609C~~ 1609.3(3). The ultimate design wind speed, V_{ult} , for use in the design of Risk Category II buildings and structures shall be obtained from Figure ~~1609A~~ 1609.3(1). The ultimate design wind speed, V_{ult} , for use in the design of Risk Categories III and IV buildings and structures shall be obtained from Figure ~~1609B~~ 1609.3(2). The ultimate design wind speed, V_{ult} , for use in the design of Risk Category I buildings and structures shall be obtained from Figure ~~1609C~~ 1609.3(3). The ultimate design wind speeds for localities in special wind regions, near mountainous terrains, and near gorges shall be based on elevation. Areas at 4,000 feet in elevation or higher shall use 142 V mph (62.5 m/s) and areas under 4,000 feet in elevation shall use 116 V mph (51 m/s). Gorge areas shall be based on the highest recorded speed per locality or in accordance with local jurisdiction requirements determined in accordance with Section 26.5.1 of ASCE 7.

In nonhurricane-prone regions, when the ultimate design wind speed, V_{ult} , is estimated from regional climatic data, the ultimate design wind speed, V_{ult} , shall be determined in accordance with Section 26.5.3 of ASCE 7.

B. Add Section 1612.1.1 to the IBC to read:

1612.1.1 Elevation of manufactured homes. New or replacement manufactured homes to be located in any flood hazard zone shall be placed in accordance with the applicable elevation requirements of this code.

Exception: Manufactured homes installed on sites in an existing manufactured home park or subdivision shall be permitted to be placed so that the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches (914 mm) above grade in lieu of being elevated at or above the base flood elevation provided no manufactured home at the same site has sustained flood damage exceeding 50% of the market value of the home before the damage occurred.

13VAC5-63-280. Chapter 17 Special Inspections and Tests.

A. Change Section 1703.1 of the IBC to read:

1703.1 Approved agency. An approved agency responsible for laboratory testing or special inspections, or both, must comply with the qualification, certification and experience requirements of ASTM E329 or the alternatives listed herein.

B. Change Section 1703.1.1 of the IBC to read:

1703.1.1 Independence. An approved agency shall be objective and competent. The agency shall also disclose possible conflicts of interest so that objectivity can be confirmed. The special inspector and their agents shall be independent from the person, persons or contractor responsible for the physical construction of the project requiring special inspections.

C. Change Section 1703.1.3 of the IBC to read:

1703.1.3 Personnel. An approved agency shall employ experienced personnel educated in conducting, supervising and evaluating tests or inspections, or both. Upon request by the building official, documentation shall be provided demonstrating the applicable agency's accreditation as noted in ASTM E329 and individuals' resumes indicating pertinent training, certifications and other qualifications for special inspection personnel associated with the proposed construction requiring special inspections. The building official may prescribe the manner of qualification documentation and frequency of updating information regarding agency or individual inspector approval.

Firms providing special inspection services or individual inspectors seeking approval of alternative certifications or qualifications, or both, listed in ASTM E329 may submit documentation demonstrating equivalency. This documentation may include evidence of meeting other recognized standards or alternative certifications to demonstrate that the minimum qualifications, certification and experience intended by ASTM E329 have been met. The building official may, if satisfied that equivalency has been demonstrated, approve the credentials of the firm or individual.

D. Change Section 1704.2 of the IBC to read:

1704.2 Special inspections. Where application is made for construction as described in this section, the owner shall employ one or more special inspectors to provide inspections and tests during construction on the types of work listed under Section ~~1704~~ 1705. All individuals or agents performing special inspection functions shall operate under the direct supervision of an RDP in responsible charge of special inspection activities, also known as the "special inspector." The special inspector shall ensure that the individuals under their charge are performing only those special inspections or laboratory testing that are consistent with their knowledge, training and certification for the specified inspection or laboratory testing.

Exceptions:

1. Special inspections and tests are not required for ~~work~~ construction of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.

2. Special inspections are not required for building components unless the design involves the practice of professional engineering or architecture as defined by the laws of this Commonwealth and regulations governing the professional registration and certification of engineers and architects.

3. Unless otherwise required by the building official, special inspections are not required for occupancies in Groups R-3, R-4 or R-5 and occupancies in Group U that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.

4. Special inspections and tests are not required for portions of structures designed and constructed in accordance with the cold-formed steel light-frame construction provisions of Section 2211.7 or the conventional light-frame construction provisions of Section 2308.

5. The contractor is permitted to employ the approved agencies where the contractor is also the owner.

E. Change Section 1704.2.3 of the IBC to read:

1704.2.3 Statement of special inspections. The permit applicant shall submit a statement of special inspections prepared by the RDP in responsible charge in accordance with Section 111.1. This statement shall be in accordance with Section 1704.3.

~~Exceptions~~ Exception:

~~1. A statement of special inspections is not required for structures designed and constructed in accordance with the conventional construction provisions of Section 2308.~~

~~2.~~ The statement of special inspections is permitted to be prepared by a qualified person approved by the building official for construction not designed by a registered design professional.

F. Change category "12" of Table 1705.3 of the IBC to read:

Verification and inspection Type	Continuous Special Inspection	Periodic Special Inspection	Referenced Standard ^a	IBC Reference
12. Inspect formwork for shape, location and dimensions of the concrete member being formed, shoring and reshoring.	--	X	ACI 318: 6.1.4 <u>26.10.1(b)</u>	--

G. Delete Sections ~~1705.16~~ 1705.17, ~~1705.16.1~~ 1705.17.1, and ~~1705.16.2~~ 1705.17.2 of the IBC

13VAC5-63-290. Chapter 18 Soils and Foundations.

A. Change the exception to Section ~~1804.5~~ 1804.6 of the IBC to read:

Exception: Compacted fill material less than 12 inches (305 mm) in depth need not comply with an approved report, provided it is a natural non-organic material that is not susceptible to swelling when exposed to moisture and it has been compacted to a minimum of 90% Modified Proctor in accordance with ASTM D1557. The compaction shall be verified by a qualified inspector approved by the building official. Material other than natural material may be used as fill material when accompanied by a certification from an RDP and approved by the building official.

B. Add an exception to Section 1808.1 of the IBC to read:

Exception: One-story detached accessory structures not exceeding 256 square feet (23.78m²) of building area, provided all of the following conditions are met:

1. The building eave height is 10 feet (3048 mm) or less.
2. The maximum height from the finished floor level to grade does not exceed 18 inches (457.2 mm).
3. The supporting structural elements in direct contact with the ground shall be placed level on firm soil and when such elements are wood they shall be approved pressure preservative treated suitable for ground contact use.
4. The structure is anchored to withstand wind loads as required by this code.
5. The structure shall be of light-frame construction with walls and roof of light weight material, not slate, tile, brick or masonry.

13VAC5-63-295. Chapter 23 Wood.

A. Change Item ~~3.2~~ 2 of Section ~~2308.2~~ 2308.2.3 of the IBC to read:

3.2. Live loads shall not exceed 40 psf (1916 N/m²) for floors.

Exception: Concrete slab-on-grade live load limited only by allowable soil bearing pressure.

B. Change the indicated rows of Table 2308.8(1) of the IBC to read:

Joist Spacing (inches)	Species and Grade	Dead Load = 10 pounds per square foot				Dead Load = 20 pounds per square foot			
		2x6	2x8	2x10	2x12	2x6	2x8	2x10	2x12
		Maximum floor joist spans							
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	12-3	16-2	20-8	25-1	12-3	16-2	20-8	25-1
	Southern Pine #1	11-10	15-7	19-10	24-2	11-10	15-7	18-7	22-0
	Southern Pine #2	11-3	14-11	18-1	21-4	10-9	13-8	16-2	19-1
	Southern Pine #3	9-2	11-6	14-0	16-6	8-2	10-3	12-6	14-9
16	Southern Pine SS	11-2	14-8	18-9	22-10	11-2	14-8	18-9	22-10
	Southern Pine #1	10-9	14-2	18-0	21-4	10-9	13-9	16-1	19-1
	Southern Pine #2	10-3	13-3	15-8	18-6	9-4	11-10	14-0	16-6
	Southern Pine #3	7-11	10-0	12-1	14-4	7-1	8-11	10-10	12-10
19.2	Southern Pine SS	10-6	13-10	17-8	21-6	10-6	13-10	17-8	21-6
	Southern Pine #1	10-1	13-4	16-5	19-6	9-11	12-7	14-8	17-5
	Southern Pine #2	9-6	12-1	14-4	16-10	8-6	10-10	12-10	15-1
	Southern Pine #3	7-3	9-1	11-0	13-1	6-5	8-2	9-10	11-8
24	Southern Pine SS	9-9	12-10	16-5	19-11	9-9	12-10	16-5	19-8
	Southern Pine #1	9-4	12-4	14-8	17-5	8-10	11-3	13-1	15-7
	Southern Pine #2	8-6	10-10	12-10	15-1	7-7	9-8	11-5	13-6
	Southern Pine #3	6-5	8-2	9-10	11-8	5-9	7-3	8-10	10-5

C. Change the indicated rows of Table 2308.8(2) of the IBC to read:

Joist Spacing (inches)	Species and Grade	Dead Load = 10 pounds per square foot				Dead Load = 20 pounds per square foot			
		2x6	2x8	2x10	2x12	2x6	2x8	2x10	2x12
		Maximum floor joist spans							
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	11-2	14-8	18-9	22-10	11-2	14-8	18-9	22-10
	Southern Pine #1	10-9	14-2	18-0	21-11	10-9	14-2	16-11	20-1
	Southern Pine #2	10-3	13-6	16-2	19-1	9-10	12-6	14-9	17-5
	Southern Pine #3	8-2	10-3	12-6	14-9	7-5	9-5	11-5	13-6

16	Southern Pine SS	10-2	13-4	17-0	20-9	10-2	13-4	17-0	20-9
	Southern Pine #1	9-9	12-10	16-1	19-1	9-9	12-7	14-8	17-5
	Southern Pine #2	9-4	11-	14-0	16-6	8-6	10-10	12-10	15-1
	Southern Pine #3	7-1	10 8-11	10-10	12-10	6-5	8-2	9-10	11-8
19.2	Southern Pine SS	9-6	12-7	16-0	19-6	9-6	12-7	16-0	19-6
	Southern Pine #1	9-2	12-1	14-8	17-5	9-0	11-5	13-5	15-11
	Southern Pine #2	8-6	10-10	12-10	15-1	7-9	9-10	11-8	13-9
	Southern Pine #3	6-5	8-2	9-10	11-8	5-11	7-5	9-0	10-8
24	Southern Pine SS	8-10	11-8	14-11	18-1	8-10	11-8	14-11	18-0
	Southern Pine #1	8-6	11-3	13-1	15-7	8-1	10-3	12-0	14-3
	Southern Pine #2	7-7	9-8	11-5	13-6	7-0	8-10	10-5	12-4
	Southern Pine #3	5-9	7-3	8-10	10-5	5-3	6-8	8-1	9-6

D. Change the title and footnote "b" of Table 2308.9.5 of the IBC to read:

Table 2308.9.5

Header and Girder Spans^{a,b} for Exterior Bearing Walls

(Maximum Spans for Douglas Fir Larch, Hem Fir, Southern Pine, and Spruce Pine Fir and Required Number of Jack Studs)

b. Spans are based on minimum design properties for No. 2 Grade lumber of Douglas fir larch, hem fir, and spruce-pine fir. No. 1 or better grade lumber shall be used for southern pine.

E. Change the title and footnote "b" of Table 2308.9.6 of the IBC to read:

Table 2308.9.6

Header and Girder Spans^{a,b} for Interior Bearing Walls

(Maximum Spans for Douglas Fir Larch, Hem Fir, Southern Pine, and Spruce Pine Fir and Required Number of Jack Studs)

b. Spans are based on minimum design properties for No. 2 Grade lumber of Douglas fir larch, hem fir, and spruce-pine fir. No. 1 or better grade lumber shall be used for southern pine.

F. Change the indicated rows of Table 2308.10.2(1) of the IBC to read:

Ceiling Joist Spacing	Species and Grade	Dead Load = 5 pounds per square foot			
		2x4	2x6	2x8	2x10
		Maximum ceiling joist spans			
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	12-11	20-3	26-0	26-0
	Southern Pine #1	12-5	19-6	25-8	26-0
	Southern Pine #2	11-10	18-8	24-7	26-0
	Southern Pine #3	10-1	14-11	18-9	22-9
16	Southern Pine SS	11-9	18-5	24-3	26-0
	Southern Pine #1	11-3	17-8	23-4	26-0
	Southern Pine #2	10-9	16-11	21-7	25-7
	Southern Pine #3	8-9	12-11	16-3	19-9

19.2	Southern Pine SS Southern Pine #1 Southern Pine #2 Southern Pine #3	11-0 10-7 10-2 8-0	17-4 16-8 15-7 11-9	22-10 22-0 19-8 14-10	26-0 26-0 23-5 18-0
24	Southern Pine SS Southern Pine #1 Southern Pine #2 Southern Pine #3	10-3 9-10 9-3 7-2	16-1 15-6 13-11 10-6	21-2 20-5 17-7 13-3	26-0 24-0 20-11 16-1

G. Change the indicated rows of Table 2308.10.2(2) of the IBC to read:

Ceiling Joist Spacing	Species and Grade	Dead Load = 10 pounds per square foot			
		2x4	2x6	2x8	2x10
		Maximum ceiling joist spans			
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS Southern Pine #1 Southern Pine #2 Southern Pine #3	10-3 9-10 9-3 7-2	16-1 15-6 13-11 10-6	21-2 20-5 17-7 13-3	26-0 24-0 20-11 16-1
16	Southern Pine SS Southern Pine #1 Southern Pine #2 Southern Pine #3	9-4 8-11 8-0 6-2	14-7 14-0 12-0 9-2	19-3 17-9 15-3 11-6	24-7 20-9 18-1 14-0
19.2	Southern Pine SS Southern Pine #1 Southern Pine #2 Southern Pine #3	8-9 8-5 7-4 5-8	13-9 12-9 11-0 8-4	18-2 16-2 13-11 10-6	23-1 18-11 16-6 12-9
24	Southern Pine SS Southern Pine #1 Southern Pine #2 Southern Pine #3	8-1 7-8 6-7 5-1	12-9 11-5 9-10 7-5	16-10 14-6 12-6 9-5	21-6 16-11 14-9 11-5

H. Change the indicated rows of Table 2308.10.3(1) of the IBC to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 pounds per square foot					Dead Load = 20 pounds per square foot				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans									
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	11-3	17-8	23-4	26-0	26-0	11-3	17-8	23-4	26-0	26-0
	Southern Pine #1	10-10	17-0	22-5	26-0	26-0	10-6	15-8	19-10	23-2	26-0
	Southern Pine #2	10-4	15-7	19-8	23-5	26-0	9-0	13-6	17-1	20-3	23-10
	Southern Pine #3	8-0	11-9	14-10	18-0	21-4	6-11	10-2	12-10	15-7	18-6

16	Southern Pine SS	10-3	16-1	21-2	26-0	26-0	10-3	16-1	21-2	25-7	26-0
	Southern Pine #1	9-10	15-6	19-10	23-2	26-0	9-1	13-7	17-2	20-1	23-10
	Southern Pine #2	9-0	13-6	17-1	20-3	23-10	7-9	11-8	14-9	17-6	20-8
	Southern Pine #3	6-11	10-2	12-10	15-7	18-6	6-0	8-10	11-2	13-6	16-0
19.2	Southern Pine SS	9-8	15-2	19-11	25-5	26-0	9-8	15-2	19-7	23-4	26-0
	Southern Pine #1	9-3	14-3	18-1	21-2	25-2	8-4	12-4	15-8	18-4	21-9
	Southern Pine #2	8-2	12-3	15-7	18-6	21-9	7-1	10-8	13-6	16-0	18-10
	Southern Pine #3	6-4	9-4	11-9	14-3	16-10	5-6	8-1	10-2	12-4	14-7
24	Southern Pine SS	8-11	14-1	18-6	23-8	26-0	8-11	13-10	17-6	20-10	24-8
	Southern Pine #1	8-7	12-9	16-2	18-11	22-6	7-5	11-1	14-0	16-5	19-6
	Southern Pine #2	7-4	11-0	13-11	16-6	19-6	6-4	9-6	12-1	14-4	16-10
	Southern Pine #3	5-8	8-4	10-6	12-9	15-1	4-11	7-3	9-1	11-0	13-1

I. Change the indicated rows of Table 2308.10.3(2) of the IBC to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 pounds per square foot					Dead Load = 20 pounds per square foot				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans									
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	10-3	16-1	21-2	26-0	26-0	10-3	16-1	21-2	26-0	26-0
	Southern Pine #1	9-10	15-6	20-5	26-0	26-0	9-10	15-6	19-10	23-2	26-0
	Southern Pine #2	9-5	14-9	19-6	23-5	26-0	9-0	13-6	17-1	20-3	23-10
	Southern Pine #3	8-0	11-9	14-10	18-0	21-4	6-11	10-2	12-10	15-7	18-6
16	Southern Pine SS	9-4	14-7	19-3	24-7	26-0	9-4	14-7	19-3	24-7	26-0
	Southern Pine #1	8-11	14-1	18-6	23-2	26-0	8-11	13-7	17-2	20-1	23-10
	Southern Pine #2	8-7	13-5	17-1	20-3	23-10	7-9	11-8	14-9	17-6	20-8
	Southern Pine #3	6-11	10-2	12-10	15-7	18-6	6-0	8-10	11-2	13-6	16-0
19.2	Southern Pine SS	8-9	13-9	18-2	23-1	26-0	8-9	13-9	18-2	23-1	26-0

	Southern Pine #1	8-5	13-3	17-5	21-2	25-2	8-4	12-4	15-8	18-4	21-9
	Southern Pine #2	8-1	12-3	15-7	16-6	21-9	7-1	10-8	13-6	16-0	18-10
	Southern Pine #3	6-4	9-4	11-9	14-3	16-10	5-6	8-1	10-2	12-4	14-7
24	Southern Pine SS	8-1	12-9	16-10	21-6	26-0	8-1	12-9	16-10	20-10	24-8
	Southern Pine #1	7-10	12-3	16-2	18-11	22-6	7-6	11-1	14-0	16-5	19-6
	Southern Pine #2	7-4	11-0	13-11	16-6	19-6	6-4	9-6	12-1	14-4	16-10
	Southern Pine #3	5-8	8-4	10-6	12-9	15-1	4-11	7-3	9-1	11-0	13-1

J. Change the indicated rows of Table 2308.10.3(3) of the IBC to read:-

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 pounds per square foot					Dead Load = 20 pounds per square foot				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans									
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	9-10	15-6	20-5	26-0	26-0	9-10	15-6	20-5	25-4	26-0
	Southern Pine #1	9-6	14-10	19-0	22-3	26-0	9-0	13-5	17-0	19-11	23-7
	Southern Pine #2	8-7	12-11	16-4	19-5	22-10	7-8	11-7	14-8	17-4	20-5
	Southern Pine #3	6-7	9-9	12-4	15-0	17-9	5-11	8-9	11-0	13-5	15-10
16	Southern Pine SS	8-11	14-1	18-6	23-8	26-0	8-11	14-1	18-5	21-11	25-11
	Southern Pine #1	8-7	13-0	16-6	19-3	22-10	7-10	11-7	14-9	17-3	20-5
	Southern Pine #2	7-6	11-2	14-2	16-10	19-10	6-8	10-0	12-8	15-1	17-9
	Southern Pine #3	5-9	8-6	10-8	13-0	15-4	5-2	7-7	9-7	11-7	13-9
19.2	Southern Pine SS	8-5	13-3	17-5	22-3	26-0	8-5	13-3	16-10	20-0	23-7
	Southern Pine #1	8-0	11-10	15-1	17-7	20-11	7-1	10-7	13-5	15-9	18-8
	Southern Pine #2	6-10	10-2	12-11	15-4	18-1	6-1	9-2	11-7	13-9	16-2
	Southern Pine #3	5-3	7-9	9-9	11-10	14-0	4-8	6-11	8-9	10-7	12-6
24	Southern Pine SS	7-10	12-3	16-2	20-0	23-7	7-10	11-10	15-0	17-11	21-2
	Southern Pine #1	7-1	10-7	13-5	15-9	18-8	6-4	9-6	12-0	14-1	16-8

	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-5	8-2	10-4	12-3	14-6
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-2	6-2	7-10	9-6	11-2

K. Change the indicated rows of Table 2308.10.3(4) of the IBC to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 pounds per square foot					Dead Load = 20 pounds per square foot				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans									
		(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)	(ft.-in.)
12	Southern Pine SS	8-4	13-1	17-2	21-11	26-0	8-4	13-1	17-2	21-5	25-3
	Southern Pine #1	8-0	12-3	15-6	18-2	21-7	7-7	11-4	14-5	16-10	20-0
	Southern Pine #2	7-0	10-6	13-4	15-10	18-8	6-6	9-9	12-4	14-8	17-3
	Southern Pine #3	5-5	8-0	10-1	12-3	14-6	5-0	7-5	9-4	11-4	13-5
16	Southern Pine SS	7-6	11-10	15-7	19-11	23-7	7-6	11-10	15-7	18-6	21-10
	Southern Pine #1	7-1	10-7	13-5	15-9	18-8	6-7	9-10	12-5	14-7	17-3
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-8	8-5	10-9	12-9	15-0
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-4	6-5	8-1	9-10	11-7
19.2	Southern Pine SS	7-1	11-2	14-8	18-3	21-7	7-1	11-2	14-2	16-11	20-0
	Southern Pine #1	6-6	9-8	12-3	14-4	17-1	6-0	9-0	11-4	13-4	15-9
	Southern Pine #2	5-7	8-4	10-7	12-6	14-9	5-2	7-9	9-9	11-7	13-8
	Southern Pine #3	4-3	6-4	8-0	9-8	11-5	4-0	5-10	7-4	8-11	10-7
24	Southern Pine SS	6-7	10-4	13-8	16-4	19-3	6-7	10-0	12-8	15-2	17-10
	Southern Pine #1	5-10	8-8	11-0	12-10	15-3	5-5	8-0	10-2	11-11	14-1
	Southern Pine #2	5-0	7-5	9-5	11-3	13-2	4-7	6-11	8-9	10-5	12-3
	Southern Pine #3	3-10	5-8	7-1	8-8	10-3	3-6	5-3	6-7	8-0	9-6

L. Change the indicated rows of Table 2308.10.3(5) of the IBC to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 pounds per square foot					Dead Load = 20 pounds per square foot				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans									

		(ft.- in.-)	(ft.- in.-)	(ft.- in.-)	(ft.-in.-)	(ft.-in.-)	(ft.- in.-)	(ft.- in.-)	(ft.- in.-)	(ft.-in.-)	(ft.-in.-)
12	Southern Pine SS	8-11	14-1	18-6	23-8	26-0	8-11	14-1	18-6	23-8	26-0
	Southern Pine #1	8-7	13-6	17-10	22-3	26-0	8-7	13-5	17-0	19-11	23-7
	Southern Pine #2	8-3	12-11	16-4	19-5	22-10	7-8	11-7	14-8	17-4	20-5
	Southern Pine #3	6-7	9-9	12-4	15-0	17-9	5-11	8-9	11-0	13-5	15-10
16	Southern Pine SS	8-1	12-9	16-10	21-6	26-0	8-1	12-9	16-10	21-6	25-11
	Southern Pine #1	7-10	12-3	16-2	19-3	22-10	7-10	11-7	14-9	17-3	20-5
	Southern Pine #2	7-6	11-2	14-2	16-10	19-10	6-8	10-0	12-8	15-1	17-9
	Southern Pine #3	5-9	8-6	10-8	13-0	15-4	5-2	7-7	9-7	11-7	13-9
19.2	Southern Pine SS	7-8	12-0	15-10	20-2	24-7	7-8	12-0	15-10	20-0	23-7
	Southern Pine #1	7-4	11-7	15-1	17-7	20-11	7-1	10-7	13-5	15-9	18-8
	Southern Pine #2	6-10	10-2	12-11	15-4	18-1	6-1	9-2	11-7	13-9	16-2
	Southern Pine #3	5-3	7-9	9-9	11-10	14-0	4-8	6-11	8-9	10-7	12-6
24	Southern Pine SS	7-1	11-2	14-8	18-9	22-10	7-1	11-2	14-8	17-11	21-2
	Southern Pine #1	6-10	10-7	13-5	15-9	18-8	6-4	9-6	12-0	14-1	16-8
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-5	8-2	10-4	12-3	14-6
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-2	6-2	7-10	9-6	11-2

M. Change the indicated rows of Table 2308.10.3(6) of the IBC to read:

Rafter Spacing (inches)	Species and Grade	Dead Load = 10 pounds per square foot					Dead Load = 20 pounds per square foot				
		2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
		Maximum rafter spans									
		(ft.- in.-)	(ft.- in.-)	(ft.- in.-)	(ft.-in.-)	(ft.-in.-)	(ft.- in.-)	(ft.- in.-)	(ft.- in.-)	(ft.-in.-)	(ft.-in.-)
12	Southern Pine SS	7-6	11-0	15-7	19-11	24-3	7-6	11-10	15-7	19-11	24-3
	Southern Pine #1	7-3	11-5	15-0	18-2	21-7	7-3	11-4	14-5	16-10	20-0
	Southern Pine #2	6-11	10-6	13-4	15-10	18-8	6-6	9-9	12-4	14-8	17-3
	Southern Pine #3	5-5	8-0	10-1	12-3	14-6	5-0	7-5	9-4	11-4	13-5

16	Southern Pine SS	6-10	10-9	14-2	18-1	22-0	6-10	10-9	14-2	18-1	21-10
	Southern Pine #1	6-7	10-4	13-5	15-9	18-8	6-7	9-10	12-5	14-7	17-3
	Southern Pine #2	6-1	9-2	11-7	13-9	16-2	5-8	8-5	10-9	12-9	15-0
	Southern Pine #3	4-8	6-11	8-9	10-7	12-6	4-4	6-5	8-1	9-10	11-7
19.2	Southern Pine SS	6-5	10-2	13-4	17-0	20-9	6-5	10-2	13-4	16-11	20-0
	Southern Pine #1	6-2	9-8	12-3	14-4	17-1	6-0	9-0	11-4	13-4	15-9
	Southern Pine #2	5-7	8-4	10-7	12-6	14-9	5-2	7-9	9-9	11-7	13-8
	Southern Pine #3	4-3	6-4	8-0	9-8	11-5	4-0	5-10	7-4	8-11	10-7
24	Southern Pine SS	6-0	9-5	12-5	15-10	19-3	6-0	9-5	12-5	15-2	17-10
	Southern Pine #1	5-9	8-8	11-0	12-10	15-3	5-5	8-0	10-2	11-11	14-1
	Southern Pine #2	5-0	7-5	9-5	11-3	13-2	4-7	6-11	8-9	10-5	12-3
	Southern Pine #3	3-10	5-8	7-1	8-8	10-3	3-6	5-3	6-7	8-0	9-6

13VAC5-63-298. Chapter 26 Plastic.

Change Section 2603.5.5 of the IBC to read:

2603.5.5 Vertical and lateral fire propagation. Exterior wall assemblies shall be tested in accordance with, and comply with, acceptance criteria of NFPA 285. Where noncombustible materials or combustible materials permitted by Sections 603, 803, 806 or 1406 differ from assembly to assembly or within an assembly, multiple tests shall not be required.

~~Exception~~ Exceptions: ~~Exterior wall assemblies are not required to be tested in accordance with, and comply with, acceptance criteria of NFPA 285 where any of the following conditions are met:~~

1. One-story buildings complying with Section 2603.4.1.4.
2. Wall assemblies where the foam plastic insulation is covered on each face by ~~a minimum of~~ not less than 1-inch (25 mm) thickness of masonry or concrete ~~complying with either~~ and meeting one of the following:
 - 2.1. There is no air space between the insulation and the concrete or masonry; ~~or,~~
 - 2.2. The insulation has a flame spread index of not more than 25 as determined in accordance with ASTM E 84 or UL 723 and the maximum air space between the insulation and the concrete or masonry is not more than 1 inch (25 mm).
3. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

13VAC5-63-300. Chapter 27 Electrical.

A. Change Section 2701.1 of the IBC to read:

2701.1 Scope. This chapter governs the electrical components, equipment and systems used in buildings and structures covered by this code. Electrical components, equipment and systems shall be designed and constructed in accordance with the provisions of this code and NFPA 70.

B. Add Section 2701.1.1 to the IBC to read:

2701.1.1 Changes to NFPA 70. The following change shall be made to NFPA 70:

1. Change Sections 334.10(2) and 334.10(3) of NFPA 70 to read:

(2) Multifamily dwellings not exceeding four floors above grade and multifamily dwellings of any height permitted to be of Types III, IV and V construction except in any case as prohibited in 334.12.

(3) Other structures not exceeding four floors above grade and other structures of any height permitted to be of Types III, IV and V construction except in any case as prohibited in 334.12. In structures exceeding four floors above grade, cables shall be concealed within walls, floors or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.

For the purpose of Items 2 and 3 above, the first floor of a building shall be that floor that has 50% or more of the exterior wall surface area level with or above finished grade. One additional level that is the first level and not designed for human habitation and used only for vehicle parking, storage or similar use shall be permitted.

2. Change ~~Exception 2 to~~ Section ~~700.12(F)~~ 700.12(F)(2)(6) of NFPA 70 to read:

~~Exception No. 2~~ (6) Where the normal power branch circuits that supply luminaires providing illumination immediately on the inside and outside of exit doors are supplied by the same service or feeder, the remote heads providing emergency illumination for the exterior of an exit door shall be permitted to be supplied by the unit equipment serving the area immediately inside the exit door.

C. Add Section 2701.1.2 to the IBC to read:

2701.1.2 Temporary connection to dwelling units. The building official shall give permission to energize the electrical service equipment of a one-family or two-family dwelling unit when all of the following requirements have been approved:

1. The service wiring and equipment, including the meter socket enclosure, shall be installed and the service wiring terminated.
2. The grounding electrode system shall be installed and terminated.
3. At least one receptacle outlet on a ground fault protected circuit shall be installed and the circuit wiring terminated.
4. Service equipment covers shall be installed.
5. The building roof covering shall be installed.
6. Temporary electrical service equipment shall be suitable for wet locations unless the interior is dry and protected from the weather.

D. Add Section 2701.1.3 to the IBC to read:

2701.1.3 Assisted living facility generator requirements. Generators installed to comply with regulations for assisted living facilities licensed by the Virginia Department of Social Services shall be permitted to be optional standby systems.

E. Change Section 2702.2.17 of the IBC to read:

2702.2.17 Group I-2 and I-3 occupancies. Emergency power shall be provided in accordance with Section ~~407.11~~ 407.10 for Group I-2 occupancies licensed by the Virginia Department of Health as a hospital, nursing or hospice facility. Emergency power shall be provided for doors in Group I-3 occupancies in accordance with Section 408.4.2.

13VAC5-63-310. Chapter 28 Mechanical Systems.

A. Change Section 2801.1 of the IBC to read:

2801.1 Scope. Mechanical appliances, equipment and systems shall be constructed and installed in accordance with this chapter, the IMC and the IFGC. Masonry chimneys, fireplaces and barbecues shall comply with the IMC and Chapter 21 of this code.

Exception: This code shall not govern the construction of water heaters, boilers and pressure vessels to the extent which they are regulated by the Virginia Boiler and Pressure Vessel Regulations (16VAC25-50). However, the building official may require the owner of a structure to submit documentation to substantiate compliance with those regulations.

B. Add Section 2801.1.1 to the IBC to read:

2801.1.1 Required heating in dwelling units. Heating facilities shall be required in every dwelling unit or portion thereof which is to be rented, leased or let on terms, either expressed or implied, to furnish heat to the occupants thereof. The heating facilities shall be capable of maintaining the room temperature at 65°F (18°C) during the period from October 15 to May 1 during the hours between 6:30 a.m. and 10:30 p.m. of each day and not less than 60°F (16°C) during other hours when measured at a point three feet (914 mm) above the floor and three feet (914 mm) from the exterior walls. The capability of the heating system shall be based on the outside design temperature required for the locality by this code.

C. Add Section 2801.1.2 to the IBC to read:

2801.1.2 Required heating in nonresidential structures. Heating facilities shall be required in every enclosed occupied space in nonresidential structures. The heating facilities shall be capable of producing sufficient heat during the period from October 1 to May 15 to maintain a temperature of not less than 65°F (18°C) during all working hours. The required room temperature shall be measured at a point three feet (914 mm) above the floor and three feet (914 mm) from the exterior walls.

Processing, storage and operation areas that require cooling or special temperature conditions and areas in which persons are primarily engaged in vigorous physical activities are exempt from these requirements.

D. Add Section 2801.1.3 to the IBC to read:

2801.1.3 Changes to the IMC. The following changes shall be made to the IMC:

1. Change Section ~~403.3~~ 403.3.1.1 of the IMC to read:

~~403.3~~ 403.3.1.1 Outdoor airflow rate. Ventilation systems shall be designed to have the capacity to supply the minimum outdoor airflow rate determined in accordance with this section. In each occupiable space, the ventilation system shall be designed to deliver the required rate of outdoor airflow to the breathing zone. The occupant load utilized for design of the ventilation system shall not be less than the number determined from the estimated maximum occupant load rate indicated in Table ~~403.3~~ 403.3.1.1. Ventilation rates for occupancies not represented in Table ~~403.3~~ 403.3.1.1 shall be those for a listed occupancy classification that is most similar in terms of occupant density, activities and building construction; or shall be determined by an approved engineering analysis. The ventilation system shall be designed to supply the required rate of ventilation air continuously during the period the building is occupied, except as otherwise stated in other provisions of the code.

With the exception of smoking lounges and other designated areas where smoking is permitted, the ventilation rates in Table ~~403.3~~ 403.3.1.1 are based on the absence of smoking in occupiable spaces.

Exception: The occupant load is not required to be determined based on the estimated maximum occupant load rate indicated in Table ~~403.3~~ 403.3.1.1 where approved statistical data document the accuracy of an alternate anticipated occupant density.

2. Add the following areas to Table ~~403.3~~ 403.3.1.1 of the IMC in the occupancy classifications shown:

OCCUPANCY CLASSIFICATION	Occupant Density #/1000 ft ² ^a	People Outdoor Airflow Rate in Breathing Zone, R _p cfm/person	Area Outdoor Airflow Rate in Breathing Zone, R _a cfm/ft ^{2a}	Exhaust Airflow Rate Cfm/ft ^{2a}
Food and beverage service				
Bars or cocktail lounges designated as an area where smoking is permitted ^b	100	30	-	-
Cafeteria or fast food designated as an area where smoking is permitted ^b	100	20	-	-
Dining rooms designated as an area where smoking is permitted ^b	70	20	-	-
Public spaces				
Lounges designated as an area where smoking is permitted ^b	100	30	-	-

3. Change Section 505.1 of the IMC to read:

505.1 Domestic systems. Where domestic range hoods and domestic appliances equipped with downdraft exhaust are provided, such hoods and appliances shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum, or copper. Such ducts shall have smooth inner walls, shall be air tight, shall be equipped with a backdraft damper, and shall be independent of all other exhaust systems.

Exceptions:

1. In Group R buildings, where installed in accordance with the manufacturer's installation instructions and where mechanical or natural ventilation is otherwise provided in accordance with Chapter 4, listed and labeled ductless range hoods shall not be required to discharge to the outdoors.

2. Ducts for domestic kitchen cooking appliances equipped with downdraft exhaust systems shall be permitted to be constructed of Schedule 40 PVC pipe and fittings provided that the installation complies with all of the following:

2.1. The PVC duct shall be installed under a concrete slab poured on grade.

2.2. The underfloor trench in which the PVC duct is installed shall be completely backfilled with sand or gravel.

2.3. The PVC duct shall extend not more than 1 inch (25 mm) above the indoor concrete floor surface.

2.4. The PVC duct shall extend not more than 1 inch (25 mm) above grade outside of the building.

2.5. The PVC duct shall be solvent cemented.

4. ~~Add~~ Change Section ~~505.3~~ 505.4 to the IMC to read:

~~505.3~~ 505.4 Other than Group R. In other than Group R occupancies, where electric domestic cooking appliances are utilized for domestic purposes, such appliances shall be provided with domestic range hoods. Hoods and exhaust systems for such electric domestic cooking appliances shall be in accordance with Sections 505.1 and 505.2. In other than Group R occupancies, where fuel-fired domestic cooking appliances are utilized for domestic purposes, a Type I or

Type II hood shall be provided as required for the type of appliances and processes in accordance with Section ~~507.2~~ 507.1.

5. Change Section 507.2.3 of the IMC to read:

~~507.2.3 Domestic cooking appliances used for commercial purposes. Domestic cooking appliances utilized for commercial purposes shall be provided with a Type I or Type II hood as required for the type of appliances and processes in accordance with Sections 507.2, 507.2.1, and 507.2.2. Domestic cooking appliances utilized for domestic purposes shall comply with Section 505.~~

6. Change Section 908.5 of the IMC to read:

~~908.5 Water supply. Cooling towers, evaporative coolers, and fluid coolers shall be provided with an approved water supply and sized for peak demand. The quality of the water shall be provided in accordance the equipment manufacturer's recommendations. The piping system and protection of the potable water supply shall be installed as required by the IPC.~~

7. Change Item 4 of Section 928.1 of the IMC to read:

~~4. Be provided with an approved water supply and sized for peak demand. The quality of the water shall be provided in accordance the equipment manufacturer's recommendations. The piping system and protection of the potable water supply shall be installed as required by the IPC.~~

E. Add Section 2801.1.4 to the IBC to read:

2801.1.4 Changes to the IFGC. The following changes shall be made to the IFGC:

1. Change Section 301.1 of the IFGC to read:

301.1 Scope. This code shall apply to the installation of fuel gas piping systems, fuel gas utilization equipment, and related accessories as follows:

1. Coverage of piping systems shall extend from the point of delivery to the connections with gas utilization equipment. (See "point of delivery.")

2. Systems with an operating pressure of 125 psig (862 kPa gauge) or less.

Piping systems for gas-air mixtures within the flammable range with an operating pressure of 10 psig (69 kPa gauge) or less.

LP-Gas piping systems with an operating pressure of 20 psig (140 kPa gauge) or less.

3. Piping systems requirements shall include design, materials, components, fabrication, assembly, installation, testing and inspection.

4. Requirements for gas utilization equipment and related accessories shall include installation, combustion and ventilation air and venting.

This code shall not apply to the following:

1. Portable LP-Gas equipment of all types that are not connected to a fixed fuel piping system.

2. Installation of farm equipment such as brooders, dehydrators, dryers, and irrigation equipment.

3. Raw material (feedstock) applications except for piping to special atmosphere generators.

4. Oxygen-fuel gas cutting and welding systems.

5. Industrial gas applications using gases such as acetylene and acetylenic compounds, hydrogen, ammonia, carbon monoxide, oxygen, and nitrogen.
6. Petroleum refineries, pipeline compressor or pumping stations, loading terminals, compounding plants, refinery tank farms, and natural gas processing plants.
7. Integrated chemical plants or portions of such plants where flammable or combustible liquids or gases are produced by chemical reactions or used in chemical reactions.
8. LP-Gas installations at utility gas plants.
9. Liquefied natural gas (LNG) installations.
10. Fuel gas piping in power and atomic energy plants.
11. Proprietary items of equipment, apparatus, or instruments such as gas generating sets, compressors, and calorimeters.
12. LP-Gas equipment for vaporization, gas mixing, and gas manufacturing.
13. Temporary LP-Gas piping for buildings under construction or renovation that is not to become part of the permanent piping system.
14. Installation of LP-Gas systems for railroad switch heating.
15. Installation of LP-Gas and compressed natural gas (CNG) systems on vehicles.
16. Except as provided in Section 401.1.1, gas piping, meters, gas pressure regulators, and other appurtenances used by the serving gas supplier in the distribution of gas, other than undiluted LP-Gas.
17. Building design and construction, except as specified herein.

2. Add Section 404.11.3 to the IFGC to read:

404.11.3 Coating application. Joints in gas piping systems shall not be coated prior to testing and approval.

13VAC5-63-320. Chapter 29 Plumbing Systems.

A. Change Section 2901.1 of the IBC to read:

2901.1 Scope. The provisions of this chapter and the IPC shall govern the design and installation of all plumbing systems and equipment, except that as provided for in Section 103.10 for functional design, water supply sources and sewage disposal systems are regulated and approved by the Virginia Department of Health and the Virginia Department of Environmental Quality. The approval of pumping and electrical equipment associated with such water supply sources and sewage disposal systems shall, however, be the responsibility of the building official.

Note: See also the Memorandum of Agreement in the "Related Laws Package," which is available from DHCD.

B. Add Section 2901.1.1 to the IBC to read:

2901.1.1 Changes to the IPC. The following changes shall be made to the IPC:

1. Add the following definitions to the IPC to read:

Nonpotable fixtures and outlets. Fixtures and outlets that are not dependent on potable water for the safe operation to perform their intended use. Such fixtures and outlets may include, but are not limited to water closets, urinals, irrigation, mechanical equipment, and hose connections to perform operations, such as vehicle washing and lawn maintenance.

Nonpotable water systems. Water systems for the collection, treatment, storage, distribution, and use or reuse of nonpotable water. Nonpotable systems include reclaimed water, rainwater, and gray water systems.

~~Rainwater. Natural precipitation, including snow melt, from roof surfaces only.~~

~~Reclaimed water. Reclaimed water means water resulting from the treatment of domestic, municipal, or industrial wastewater that is suitable for a water reuse that would not otherwise occur. Specifically excluded from this definition is "gray water."~~

Stormwater. Precipitation that is discharged across the land surface or through conveyances to one or more waterways and that may include stormwater runoff, snow melt runoff, and surface runoff and drainage.

2. Change the following ~~definition~~ definitions in the IPC to read:

Gray water. Water discharged from lavatories, bathtubs, showers, clothes washers, and laundry trays.

Rainwater. Natural precipitation, including snow melt, from roof surfaces only.

Reclaimed water. Reclaimed water means water resulting from the treatment of domestic, municipal, or industrial wastewater that is suitable for a water reuse that would not otherwise occur. Specifically excluded from this definition is "gray water."

3. Change the exception to Section 301.3 of the IPC to read:

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved nonpotable gray water system in accordance with the applicable provisions of Chapter 13.

4. Delete Sections 311 and 311.1 of the IPC.

5. Modify the Group A-5 "Description" category of Table 403.1 of the IPC to read:

Stadiums, amusement parks, pools, bleachers, and grandstands for outdoor sporting events and activities^h

6. Add footnote "~~h~~" "f" to Table 403.1 of the IPC to read:

~~h. f.~~ The occupant load for pools shall be in accordance with the "Skating rinks, swimming pools" category of Table 1004.1.2 of the IBC.

7. Add Section 403.1.3 and Table 403.1.3 to the IPC to read:

403.1.3 Marina fixtures. Notwithstanding any provision to the contrary, plumbing fixtures shall be provided for marinas in the minimum number shown in Table 403.1.3. Fixtures shall be located within 500 feet walking distance from the shore end of any dock they serve. Separate facilities shall be provided for each sex with an equal number of fixtures of each type in each facility, except that separate facilities are not required where the number of slips is less than 25. Urinals may be substituted for up to 50% of water closets.

Table 403.1.3 Minimum Number of Required Plumbing Fixtures for Marinas			
Number of Slips	Plumbing Fixtures		
	Water Closets	Lavatories	Showers

1 - 24	1	1	1
25 - 49	4	4	2
50 - 99	6	4	2
100 - 149	8	6	4
150 - 199	10	8	4
200 - 249	12	10	6
250 or greater	Two additional fixtures of each type for each 100 additional slips.		

8. Change Section 403.3.3 of the IPC to read:

403.3.3 Location of toilet facilities in occupancies other than malls. In occupancies other than covered and open mall buildings, the required public and employee toilet facilities shall be located not more than one story above or below the space required to be provided with toilet facilities, and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m).

Exceptions:

1. The location and maximum ~~travel~~ distances of travel to required employee facilities in factory and industrial occupancies are permitted to exceed that required by this section, provided that the location and maximum travel distance are approved.

2. The location and maximum ~~travel~~ distances of travel to the required public facilities located on cemetery property are permitted to exceed that required by this section, provided that the location and maximum travel distance are located on the same property and approved.

9. Change Section 405.3.2 of the IPC to read:

405.3.2 Public lavatories. In employee and public toilet rooms, the required lavatory shall be located in the same room as the required water closet.

Exception: In educational use occupancies, the required lavatory shall be permitted to be located adjacent to the room or space containing the water closet provided that not more than one operational door is between the water closet and the lavatory.

10. Add Section 602.2.1 to the IPC to read:

602.2.1 Nonpotable fixtures and outlets. Nonpotable water shall be permitted to serve nonpotable type fixtures and outlets in accordance with Chapter 13.

11. Change Section 608.16.10 of the IPC to read:

608.16.10 Coffee machines and noncarbonated beverage dispensers. The water supply connection to coffee machines and noncarbonated beverage dispensers shall be protected against backflow by a backflow preventer conforming to ASSE 1022 or 1024, or by an air gap.

12. Delete Section ~~701.9~~ 701.8 of the IPC.

13. Add Section ~~703.6~~ 703.7 to the IPC to read:

~~703.6~~ 703.7 Tracer wire. Nonmetallic sanitary sewer piping that discharges to public systems shall be locatable. An insulated copper tracer wire, 18 AWG minimum in size and suitable for direct burial or an equivalent product, shall be utilized. The wire shall be installed in the same trench as the sewer within 12 inches (305 mm) of the pipe and shall be installed to within five feet (1524 mm) of the building wall to the point where the building sewer intersects with the

public system. At a minimum, one end of the wire shall terminate above grade in an accessible location that is resistant to physical damage, such as with a cleanout or at the building wall.

14. Add an exception to Section 1101.2 of the IPC to read:

Exception. Rainwater nonpotable water systems shall be permitted in accordance with Chapter 13.

15. ~~Change the title of Chapter 13 of the IPC to "Nonpotable Water Systems."~~

~~16. Change Sections 1301.1 through 1301.12 and add Sections 1301.13 through 1301.18, including subsections, to the IPC to read:~~

1301.1 Scope. The provisions of Chapter 13 shall govern the materials, design, construction, and installation of nonpotable water systems subject to this code. In addition to the applicable provision of this section, reclaimed water shall comply with the requirements of Section 1304.

1301.1.1 Design of nonpotable water systems. All portions of nonpotable water systems subject to this code shall be constructed using the same standards and requirements for the potable water systems or drainage systems as provided for in this code unless otherwise specified in this chapter.

1301.2 Makeup water. Makeup water shall be provided for all nonpotable water supply systems. The makeup water system shall be designed and installed to provide supply of water in the amounts and at the pressures specified in this code. The makeup water supply shall be potable and be protected against backflow in accordance with the applicable requirements of Section 608.

1301.2.1 Makeup water sources. Potable water shall be provided as makeup water for reclaimed water systems. Nonpotable water shall be permitted to serve as makeup water for gray water and rainwater systems.

1301.2.2 Makeup water supply valve. A full-open valve shall be provided on the makeup water supply line.

1301.2.3 Control valve alarm. Makeup water systems shall be fitted with a warning mechanism that alerts the user to a failure of the inlet control valve to close correctly. The alarm shall activate before the water within the storage tank begins to discharge into the overflow system.

1301.3 Sizing. Nonpotable water distribution systems shall be designed and sized for peak demand in accordance with approved engineering practice methods that comply with the applicable provisions of Chapter 6.

1301.4 Signage required. All nonpotable water outlets, other than water closets and urinals, such as hose connections, open-ended pipes, and faucets shall be identified at the point of use for each outlet with signage that reads as follows: "Nonpotable water is utilized for (insert application name). Caution: nonpotable water. DO NOT DRINK." The words shall be legibly and indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material or shall be indelibly printed on the fixture. The letters of the words shall be not less than 0.5 inches (12.7 mm) in height and in colors in contrast to the background on which they are applied. The pictograph shown in Figure 1301.4 shall appear on the signage required by this section.



1301.5 Potable water supply system connections. Where a potable water supply system is connected to a nonpotable water system, the potable water supply shall be protected against backflow in accordance with the applicable provisions of Section 608.

1301.6 Nonpotable water system connections. Where a nonpotable water system is connected and supplies water to another nonpotable water system, the nonpotable water system that supplies water shall be protected against backflow in accordance with the applicable provisions of Section 608.

1301.7 Approved components and materials. Piping, plumbing components, and materials used in the nonpotable water drainage and distribution systems shall be approved for the intended application and compatible with the water and any disinfection or treatment systems used.

1301.8 Insect and vermin control. Nonpotable water systems shall be protected to prevent the entrance of insects and vermin into storage and piping systems. Screen materials shall be compatible with system material and shall not promote corrosion of system components.

1301.9 Freeze protection. Nonpotable water systems shall be protected from freezing in accordance with the applicable provisions of Chapter 3.

1301.10 Nonpotable water storage tanks. Nonpotable water storage tanks shall be approved for the intended application and comply with Sections 1301.10.1 through 1301.10.12.

1301.10.1 Sizing. The holding capacity of storage tanks shall be sized for the intended use.

1301.10.2 Inlets. Storage tank inlets shall be designed to introduce water into the tank and avoid agitating the contents of the storage tank. The water supply to storage tanks shall be controlled by fill valves or other automatic supply valves designed to stop the flow of incoming water before the tank contents reach the overflow pipes.

1301.10.3 Outlets. Outlets shall be located at least 4 inches (102 mm) above the bottom of the storage tank and shall not skim water from the surface.

1301.10.4 Materials and location. Storage tanks shall be constructed of material compatible with treatment systems used to treat water. Above grade storage vessels shall be constructed using opaque, UV-resistant materials such as tinted plastic, lined metal, concrete, or wood or painted to prevent algae growth. Above grade storage tanks shall be protected from direct sunlight unless their design specifically incorporates the use of the sunlight heat transfer. Wooden storage tanks shall be provided with a flexible liner. Storage tanks and their manholes shall not be located directly under soil or waste piping or sources of contamination.

1301.10.5 Foundation and supports. Storage tanks shall be supported on a firm base capable of withstanding the storage tank's weight when filled to capacity. Storage tanks shall be supported in accordance with the applicable provisions of the IBC.

1301.10.5.1 Ballast. Where the soil can become saturated, an underground storage tank shall be ballasted, or otherwise secured, to prevent the effects of buoyancy. The combined weight of the tank and hold down ballast shall meet or exceed the buoyancy force of the tank. Where the installation requires a foundation, the foundation shall be flat and shall be designed to support the storage tank weight when full, consistent with the bearing capability of adjacent soil.

1301.10.5.2 Structural support. Where installed below grade, storage tank installations shall be designed to withstand earth and surface structural loads without damage.

1301.10.6 Overflow. The storage tank shall be equipped with an overflow pipe having a diameter not less than that shown in Table 606.5.4. The overflow outlet shall discharge at a point not less than 6 inches (152 mm) above the roof or roof drain, floor or floor drain, or over an open water-supplied fixture. The overflow outlet shall terminate through a check valve. Overflow pipes shall not be directed on walkways. The overflow drain shall not be equipped with a shutoff

valve. A minimum of one cleanout shall be provided on each overflow pipe in accordance with the applicable provisions of Section 708.

1301.10.7 Access. A minimum of one access opening shall be provided to allow inspection and cleaning of the tank interior. Access openings shall have an approved locking device or other approved method of securing access. Below grade storage tanks, located outside of the building, shall be provided with either a manhole not less than 24 inches (610 mm) square or a manhole with an inside diameter not less than 24 inches (610 mm). The design and installation of access openings shall prohibit surface water from entering the tank. Each manhole cover shall have an approved locking device or other approved method of securing access.

Exception: Storage tanks under 800 gallons (3028 L) in volume installed below grade shall not be required to be equipped with a manhole, but shall have an access opening not less than 8 inches (203 mm) in diameter to allow inspection and cleaning of the tank interior.

1301.10.8 Venting. Storage tanks shall be vented. Vents shall not be connected to sanitary drainage system. Vents shall be at least equal in size to the internal diameter of the drainage inlet pipe or pipes connected to the tank. Where installed at grade, vents shall be protected from contamination by means of a U-bend installed with the opening directed downward. Vent outlets shall extend a minimum of 12 inches (304.8 mm) above grade, or as necessary to prevent surface water from entering the storage tank. Vent openings shall be protected against the entrance of vermin and insects. Vents serving gray water tanks shall terminate in accordance with the applicable provisions of Sections 903 and 1301.8.

1301.10.9 Drain. Where drains are provided they shall be located at the lowest point of the storage tank. The tank drain pipe shall discharge as required for overflow pipes and shall not be smaller in size than specified in Table 606.5.7. A minimum of one cleanout shall be provided on each drain pipe in accordance with Section 708.

1301.10.10 Labeling and signage. Each nonpotable water storage tank shall be labeled with its rated capacity and the location of the upstream bypass valve. Underground and otherwise concealed storage tanks shall be labeled at all access points. The label shall read: "CAUTION: NONPOTABLE WATER – DO NOT DRINK." Where an opening is provided that could allow the entry of personnel, the opening shall be marked with the words: "DANGER – CONFINED SPACE." Markings shall be indelibly printed on a tag or sign constructed of corrosion-resistant waterproof material mounted on the tank or shall be indelibly printed on the tank. The letters of the words shall be not less than 0.5 inches (12.7 mm) in height and shall be of a color in contrast with the background on which they are applied.

1301.10.11 Storage tank tests. Storage tanks shall be tested in accordance with the following:

1. Storage tanks shall be filled with water to the overflow line prior to and during inspection. All seams and joints shall be left exposed and the tank shall remain watertight without leakage for a period of 24 hours.

2. After 24 hours, supplemental water shall be introduced for a period of 15 minutes to verify proper drainage of the overflow system and verify that there are no leaks.

3. Following a successful test of the overflow, the water level in the tank shall be reduced to a level that is at 2 inches (50.8 mm) below the makeup water offset point. The tank drain shall be observed for proper operation. The makeup water system shall be observed for proper operation, and successful automatic shutoff of the system at the refill threshold shall be verified. Water shall not be drained from the overflow at any time during the refill test.

4. Air tests shall be permitted in lieu of water testing as recommended by the tank manufacturer or the tank standard.

1301.10.12 Structural strength. Storage tanks shall meet the applicable structural strength requirements of the IBC.

1301.11 Trenching requirements for nonpotable water system piping. Underground nonpotable water system piping shall be horizontally separated from the building sewer and potable water piping by 5 feet (1524 mm) of undisturbed or compacted earth. Nonpotable water system piping shall not be located in, under, or above sewage systems cesspools, septic tanks, septic tank drainage fields, or seepage pits. Buried nonpotable system piping shall comply with the requirements of this code for the piping material installed.

Exceptions:

1. The required separation distance shall not apply where the bottom of the nonpotable water pipe within 5 feet (1524 mm) of the sewer is equal to or greater than 12 inches (305 mm) above the top of the highest point of the sewer and the pipe materials conforms to Table 702.3.

2. The required separation distance shall not apply where the bottom of the potable water service pipe within 5 feet (1524 mm) of the nonpotable water pipe is a minimum of 12 inches (305 mm) above the top of the highest point of the nonpotable water pipe and the pipe materials comply with the requirements of Table 605.4.

3. Nonpotable water pipe is permitted to be located in the same trench with building sewer piping, provided that such sewer piping is constructed of materials that comply with the requirements of Table 702.2.

4. The required separation distance shall not apply where a nonpotable water pipe crosses a sewer pipe, provided that the pipe is sleeved to at least 5 feet (1524 mm) horizontally from the sewer pipe centerline on both sides of such crossing with pipe materials that comply with Table 702.2.

5. The required separation distance shall not apply where a potable water service pipe crosses a nonpotable water pipe provided that the potable water service pipe is sleeved for a distance of at least 5 feet (1524 mm) horizontally from the centerline of the nonpotable pipe on both sides of such crossing with pipe materials that comply with Table 702.2.

1301.12 Outdoor outlet access. Sillcocks, hose bibs, wall hydrants, yard hydrants, and other outdoor outlets that are supplied by nonpotable water shall be located in a locked vault or shall be operable only by means of a removable key.

1301.13 Drainage and vent piping and fittings. Nonpotable drainage and vent pipe and fittings shall comply with the applicable material standards and installation requirements in accordance with provisions of Chapter 7.

1301.13.1. Labeling and marking. Identification of nonpotable drainage and vent piping shall not be required.

1301.14 Pumping and control system. Mechanical equipment, including pumps, valves, and filters, shall be accessible and removable in order to perform repair, maintenance, and cleaning. The minimum flow rate and flow pressure delivered by the pumping system shall be designed for the intended application in accordance with the applicable provisions of Section 604.

1301.15 Water-pressure reducing valve or regulator. Where the water pressure supplied by the pumping system exceeds 80 psi (552 kPa) static, a pressure-reducing valve shall be installed to reduce the pressure in the nonpotable water distribution system piping to 80 psi (552 kPa) static or less. Pressure-reducing valves shall be specified and installed in accordance with the applicable provisions of Section 604.8.

1301.16 Distribution pipe. Distribution piping utilized in nonpotable water stems shall comply with Sections 1301.16.1 through 1301.16.4.

1301.16.1 Materials, joints, and connections. Distribution piping and fittings shall comply with the applicable material standards and installation requirements in accordance with applicable provisions of Chapter 6.

1301.16.2 Design. Distribution piping shall be designed and sized in accordance with the applicable provisions of Chapter 6.

1301.16.3 Labeling and marking. Distribution piping labeling and marking shall comply with Section 608.8.

1301.16.4 Backflow prevention. Backflow preventers shall be installed in accordance with the applicable provisions of Section 608.

1301.17 Tests and inspections. Tests and inspections shall be performed in accordance with Sections 1301.17.1 through 1301.17.5.

1301.17.1 Drainage and vent pipe test. Drain, waste, and vent piping used for gray water and rainwater nonpotable water systems shall be tested in accordance with the applicable provisions of Section 312.

1301.17.2 Storage tank test. Storage tanks shall be tested in accordance with the Section 1301.10.11.

1301.17.3 Water supply system test. Nonpotable distribution piping shall be tested in accordance with Section 312.5.

1301.17.4 Inspection and testing of backflow prevention assemblies. The testing of backflow preventers and backwater valves shall be conducted in accordance with Section 312.10.

1301.17.5 Inspection of vermin and insect protection. Inlets and vent terminations shall be visually inspected to verify that each termination is installed in accordance with Section 1301.10.8.

1301.18 Operation and maintenance manuals. Operations and maintenance materials for nonpotable water systems shall be provided as prescribed by the system component manufacturers and supplied to the owner to be kept in a readily accessible location.

~~47- 16.~~ Change the title of Section 1302 of the IPC to "Gray Water Nonpotable Water Systems."

~~48- 17.~~ Change Sections 1302.1 through 1302.6, including subsections, of the IPC to read as follows and delete Sections 1302.7 through 1302.13:

1302.1 Gray water nonpotable water systems. This code is applicable to the plumbing fixtures, piping or piping systems, storage tanks, drains, appurtenances, and appliances that are part of the distribution system for gray water within buildings and to storage tanks and associated piping that are part of the distribution system for gray water outside of buildings. This code does not regulate equipment used for, or the methods of, processing, filtering, or treating gray water, that may be regulated by the Virginia Department of Health or the Virginia Department of Environmental Quality.

1302.1.1 Separate systems. Gray water nonpotable water systems, unless approved otherwise under the permit from the Virginia Department of Health, shall be separate from the potable water system of a building with no cross connections between the two systems except as permitted by the Virginia Department of Health.

1302.2 Water quality. Each application of gray water reuse shall meet the minimum water quality requirements set forth in Sections 1302.2.1 through 1302.2.4 unless otherwise superseded by other state agencies.

1302.2.1 Disinfection. Where the intended use or reuse application for nonpotable water requires disinfection or other treatment or both, it shall be disinfected as needed to ensure that the required water quality is delivered at the point of use or reuse.

1302.2.2 Residual disinfectants. Where chlorine is used for disinfection, the nonpotable water shall contain not more than 4 parts per million (4 mg/L) of free chlorine, combined chlorine, or total chlorine. Where ozone is used for disinfection, the nonpotable water shall not exceed 0.1 parts per million (by volume) of ozone at the point of use.

1302.2.3 Filtration. Water collected for reuse shall be filtered as required for the intended end use. Filters shall be accessible for inspection and maintenance. Filters shall utilize a pressure gauge or other approved method to indicate when a filter requires servicing or replacement. Shutoff valves installed immediately upstream and downstream of the filter shall be included to allow for isolation during maintenance.

1302.2.4 Filtration required. Gray water utilized for water closet and urinal flushing applications shall be filtered by a 100 micron or finer filter.

1302.3 Storage tanks. Storage tanks utilized in gray water nonpotable water systems shall comply with Section 1301.10.

1302.4 Retention time limits. Untreated gray water shall be retained in storage tanks for a maximum of 24 hours.

1302.5 Tank Location. Storage tanks shall be located with a minimum horizontal distance between various elements as indicated in Table 1302.5.1.

Table 1302.5.1 Location of Nonpotable Gray Water Reuse Storage Tanks	
Element	Minimum Horizontal Distance from Storage Tank (feet)
Lot line adjoining private lots	5
Sewage systems	5
Septic tanks	5
Water wells	50
Streams and lakes	50
Water service	5
Public water main	10

1302.6 Valves. Valves shall be supplied on gray water nonpotable water drainage systems in accordance with Sections 1302.6.1 and 1302.6.2.

1302.6.1 Bypass valve. One three-way diverter valve certified to NSF 50 or other approved device shall be installed on collection piping upstream of each storage tank, or drainfield, as applicable, to divert untreated gray water to the sanitary sewer to allow servicing and inspection of the system. Bypass valves shall be installed downstream of fixture traps and vent connections. Bypass valves shall be labeled to indicate the direction of flow, connection, and storage tank or drainfield connection. Bypass valves shall be provided with access for operation and maintenance. Two shutoff valves shall not be installed to serve as a bypass valve.

1302.6.2 Backwater valve. Backwater valves shall be installed on each overflow and tank drain pipe to prevent unwanted water from draining back into the storage tank. If the overflow and drain piping arrangement is installed to physically not allow water to drain back into the tank, such as in the form of an air gap, backwater valves shall not be required. Backwater valves shall be constructed and installed in accordance with Section 715.

~~49- 18.~~ Change the title of Section 1303 of the IPC to "Rainwater Nonpotable Water Systems."

~~20- 19.~~ Change Sections 1303.1 through 1303.10, including subsections, of the IPC to read as follows and delete Sections 1303.11 through 1303.16:

1303.1 General. The provisions of this section shall govern the design, construction, installation, alteration, and repair of rainwater nonpotable water systems for the collection, storage, treatment, and distribution of rainwater for nonpotable applications.

1303.2 Water quality. Each application of rainwater reuse shall meet the minimum water quality requirements set forth in Sections 1303.2.1 through 1303.2.4 unless otherwise superseded by other state agencies.

1303.2.1 Disinfection. Where the intended use or reuse application for nonpotable water requires disinfection or other treatment or both, it shall be disinfected as needed to ensure that the required water quality is delivered at the point of use or reuse.

1303.2.2 Residual disinfectants. Where chlorine is used for disinfection, the nonpotable water shall contain not more than 4 parts per million (4 mg/L) of free chlorine, combined chlorine, or total chlorine. Where ozone is used for disinfection, the nonpotable water shall not exceed 0.1 parts per million (by volume) of ozone at the point of use.

1303.2.3 Filtration. Water collected for reuse shall be filtered as required for the intended end use. Filters shall be accessible for inspection and maintenance. Filters shall utilize a pressure gauge or other approved method to indicate when a filter requires servicing or replacement. Shutoff valves installed immediately upstream and downstream of the filter shall be included to allow for isolation during maintenance.

1303.2.4 Filtration required. Rainwater utilized for water closet and urinal flushing applications shall be filtered by a 100 micron or finer filter.

1303.3 Collection surface. Rainwater shall be collected only from aboveground impervious roofing surfaces constructed from approved materials. Overflow or discharge piping from appliances or equipment, or both, including but not limited to evaporative coolers, water heaters, and solar water heaters shall not discharge onto rainwater collection surfaces.

1303.4 Collection surface diversion. At a minimum, the first 0.04 inches (1.016 mm) of each rain event of 25 gallons (94.6 L) per 1000 square feet (92.9 m²) shall be diverted from the storage tank by automatic means and not require the operation of manually operated valves or devices. Diverted water shall not drain onto other collection surfaces that are discharging to the rainwater system or to the sanitary sewer. Such water shall be diverted from the storage tank and discharged in an approved location.

1303.5 Pre-tank filtration. Downspouts, conductors, and leaders shall be connected to a pre-tank filtration device. The filtration device shall not permit materials larger than 0.015 inches (0.4 mm).

1303.6 Roof gutters and downspouts. Gutters and downspouts shall be constructed of materials that are compatible with the collection surface and the rainwater quality for the desired end use. Joints shall be made watertight.

1303.6.1 Slope. Roof gutters, leaders, and rainwater collection piping shall slope continuously toward collection inlets. Gutters and downspouts shall have a slope of not less than 1 unit in 96 units along their entire length and shall not permit the collection or pooling of water at any point.

Exception: Siphonic roof drainage systems installed in accordance with Chapter 11 shall not be required to have slope.

1303.6.2 Size. Gutters and downspouts shall be installed and sized in accordance with Section 1106.6 and local rainfall rates.

1303.6.3 Cleanouts. Cleanouts or other approved openings shall be provided to permit access to all filters, flushes, pipes, and downspouts.

1303.7 Storage tanks. Storage tanks utilized in rainwater nonpotable water systems shall comply with Section 1301.10.

1303.8 Location. Storage tanks shall be located with a minimum horizontal distance between various elements as indicated in Table 1303.8.1.

Table 1303.8.1 Location of Rainwater Storage Tanks	
Element	Minimum Horizontal Distance from Storage Tank (feet)
Lot line adjoining private lots	5
Sewage systems	5
Septic tanks	5

1303.9 Valves. Valves shall be installed in collection and conveyance drainage piping of rainwater nonpotable water systems in accordance with Sections 1303.9.1 and 1303.9.2.

1303.9.1 Influent diversion. A means shall be provided to divert storage tank influent to allow maintenance and repair of the storage tank system.

1303.9.2 Backwater valve. Backwater valves shall be installed on each overflow and tank drain pipe to prevent unwanted water from draining back into the storage tank. If the overflow and drain piping arrangement is installed to physically not allow water to drain back into the tank, such as in the form of an air gap, backwater valves shall not be required. Backwater valves shall be constructed and installed in accordance with Section 715.

1303.10 Tests and inspections. Tests and inspections shall be performed in accordance with Sections 1303.10.1 through 1303.10.2.

1303.10.1 Roof gutter inspection and test. Roof gutters shall be inspected to verify that the installation and slope is in accordance with Section 1303.6.1. Gutters shall be tested by pouring a minimum of one gallon of water into the end of the gutter opposite the collection point. The gutter being tested shall not leak and shall not retain standing water.

1303.10.2 Collection surface diversion test. A collection surface diversion test shall be performed by introducing water into the gutters or onto the collection surface area. Diversion of the first quantity of water in accordance with the requirements of Section 1303.4 shall be verified.

~~21. Add Section 1304 entitled "Reclaimed Water Systems" to the IPC.~~

~~22. 20. Add Change~~ Sections 1304.1 and 1304.2 to the IPC to read as follows and delete Sections 1304.3 and 1304.4:

1304.1 General. Reclaimed water, water reclamation systems, reclaimed water distribution systems, and allowable nonpotable reuses of reclaimed water are as defined or specified in and governed by the Virginia Water Reclamation and Reuse Regulation (9VAC25-740). Permits from the Virginia State Water Control Board are required for such systems and reuses. The provisions of Section 1304 shall govern the design, construction, installation, alterations, and repair of plumbing fixtures, piping or piping systems, storage tanks, drains, appurtenances, and appliances that are part of the distribution system for reclaimed water within buildings and to storage tanks for reclaimed water as defined in the Virginia Water Reclamation and Reuse Regulation (9VAC25-740) and associated piping outside of buildings that deliver reclaimed water into buildings. Where conflicts occur between this code and the Virginia Water Reclamation and Reuse Regulation (9VAC25-740), the provisions of the Virginia Water Reclamation and Reuse Regulation (9VAC25-740) shall apply unless determined otherwise by the Virginia Department of Environmental Quality and DHCD through a memorandum of agreement.

1304.2 Design of reclaimed water systems. The design of reclaimed water systems shall conform to applicable requirements of Section 1301.

Exception: The design of reclaimed water systems shall conform to applicable requirements of the Virginia Water Reclamation and Reuse Regulation (9VAC25-740) for the following:

1. Identification, labeling, and posting of signage for reclaimed water systems in lieu of signage requirements described in Section 1301.4.
2. Sizing of system storage as defined in the Virginia Water Reclamation and Reuse Regulation (9VAC25-740), in addition to storage sizing requirements described in Section 1301.10.1.
3. Signage and labeling for reclaimed water storage in addition to labeling and signage requirements described in Section 1301.10.10.
4. Minimum separation distances and configurations for in-ground reclaimed water distribution piping in lieu of trenching requirements for nonpotable water systems described in Section 1301.11.

~~23. Add the following referenced standard to Chapter 14 of the IPC:~~

Standard Reference Number	Title	Referenced in Code Section Number
NSF 50-09	Equipment for Swimming Pools, Spas, Hot Tubs and Other Recreational Water Facilities	1302.6.1

C. Modify the Group A-5 "Description" category of Table 2902.1 of the IBC to read:

Stadiums, amusement parks, pools, bleachers, and grandstands for outdoor sporting events and activities ^h
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D. Add footnote "h" to Table 2902.1 of the IBC to read:

h. The occupant load for pools shall be in accordance with the "Skating rinks, swimming pools" category of Table 1004.1.2.

13VAC5-63-330. Chapter 30 Elevators and Conveying Systems.

A. Change Section 3002.4 of the IBC to read:

3002.4 Elevator car to accommodate ambulance stretcher. Where elevators are provided in buildings four or more stories above, or four or more stories below, grade plane, at least one elevator shall be provided for fire department emergency access to all floors. The elevator car shall be of such a size and arrangement to accommodate an ambulance stretcher 24 inches by 84 inches (610 mm by 2134 mm) with not less than five-inch (127 mm) radius corners, in the horizontal, open position and shall be identified by the international symbol for emergency medical services (star of life). The symbol shall not be less than three inches (76 mm) high and shall be placed inside on both sides of the hoistway door frame on the designated and alternate landing floors required to be established by ASME A17.1.

Exception: Elevators in multistory dwelling units or guest rooms.

B. Change Section 3003.3 of the IBC to read:

3003.3 Fire service elevator keys. All elevators shall be equipped to operate with either a standardized or non-standardized fire service elevator key in accordance with the IFC.

C. Change Section ~~3006.4~~ 3005.4 of the IBC to read:

~~3006.4~~ 3005.4 Machine and control rooms, control spaces, and machinery spaces. Elevator machine rooms, rooms and spaces housing elevator controllers, and machinery spaces shall be enclosed with fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both. The fire-resistance rating shall not be less than the required rating of the hoistway enclosure. Openings in the fire barriers shall be protected with assemblies having a fire protection rating not less than that required for the hoistway enclosure doors.

Exception: In buildings four stories or less above grade plane when elevator machine rooms, rooms and spaces housing elevator controllers, and machinery spaces do not abut and have no openings to the hoistway enclosure they serve, the elevator machine rooms, rooms and spaces housing elevator controllers, and machinery spaces are not required to be fire-resistance rated.

D. Add Section ~~3006.7~~ 3005.7 to the IBC to read:

~~3006.7~~ 3005.7 Machine-room-less designs. Where machine-room-less designs are utilized they shall comply with the provisions of ASME A17.1 and incorporate the following:

1. Where the elevator car-top will be used as a work platform, it shall be equipped with permanently installed guards on all open sides. Guards shall be permitted to be of collapsible design, but otherwise must conform to all applicable requirements of this code for guards.

2. Where the equipment manufacturer's procedures for machinery removal and replacement depend on overhead structural support or lifting points, such supports or lifting points shall be permanently installed at the time of initial equipment installation.

3. Where the structure that the elevator will be located in is required to be fully sprinklered by this code, the hoistway that the elevator machine is located in shall be equipped with a fire suppression system as a machine room in accordance with NFPA 13. Smoke detectors for the automatic initiation of Phase I Emergency Recall Operation, and heat detectors or other approved devices that automatically disconnect the main line power supply to the elevators, shall be installed within the hoistway.

E. Delete Section 3006 of the IBC in its entirety.

F. Change Section 3008.1 of the IBC to read:

3008.1 General. Where elevators in buildings greater than 420 feet (128 016 mm) in building height are to be used for occupant self-evacuation during fires, all passenger elevators for general public use shall comply with this section.

13VAC5-63-336. Chapter 31 Special Construction.

A. Change the title of IBC Section 3109 to read:

Swimming Pools, Swimming Pool Enclosures, and Aquatic Recreational Facilities.

B. Change Section 3109.1 of the IBC to read as follows, add Section 3109.1.1 to the IBC to read as follows, and delete the remainder of Section 3109 of the IBC:

3109.1 General. Swimming pools, swimming pool enclosures, and aquatic recreational facilities, as that term is defined in the ISPSC, shall comply with applicable provisions of the ISPSC.

3109.1.1 Changes to the ISPSC. The following changes shall be made to the ISPSC:

1. Add Section 410.2 and related subsections to the ISPSC to read:

410.2 Showers. Showers shall be in accordance with Sections 410.2.1 through 410.2.5.

410.2.1 Deck hand shower or shower spray unit. Not less than one and not greater than half of the total number of showers required by Section 410.1 shall be a hand shower or spray shower unit located on the deck of or at the entrance of each pool.

410.2.2 Anti-scald device. Where heated water is provided to the showers, the shower water supply shall be controlled by an anti-scald device.

410.2.3 Water heater and mixing valve. Bather access to water heaters and thermostatically controlled mixing valves for showers shall be prohibited.

410.2.4 Flow rate. Each showerhead shall have a water flow of not less than 2 gallons per minute (7.6 lpm).

410.2.5 Temperature. At each showerhead, the heated shower water temperature shall not exceed 120oF (49°C) and shall not be less than 90oF (32°C).

2. Change the title of Section 609 of the ISPSC to read:

Dressing and Sanitary Facilities.

3. Change Section 609.3.1 of the ISPSC to read:

609.3.1 Deck hand shower or shower spray unit. Not less than one and not greater than half of the total number of showers required by Section 609.2 shall be a hand shower or shower spray unit located on the deck of or at the entrance of each pool.

13VAC5-63-340. Chapter 33 Safeguards During Construction.

Delete IBC Sections 3305 and 3305.1.

13VAC5-63-350. ~~Chapter 34 Existing Structures.~~ (Repealed.)

~~Delete Chapter 34 of the IBC in its entirety.~~

3VAC5-63-360. Chapter 35 Referenced Standards.

Change the referenced standards in Chapter 35 of the IBC as follows (standards not shown remain the same):

Standard reference number	Title	Referenced in code section number
ASTM E329-02	Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction	1703.1, 1703.1.3
API 650-09	Welded Steel Tanks for Oil Storage	426.2 <u>428.2</u>
API 653-09	Tank Inspection, Repair, Alteration and Reconstruction	426.4 <u>428.4</u> , 426.5 <u>428.5</u>
ASME A17.1-2010/CSA B44 – 10	Safety Code for Elevators and Escalators	907.3.3, 911.1.5, 1007.4, 1607.9.1, 3001.2, 3001.4, 3002.5, 3003.2, 3007.1, 3007.2, 3008.2, 3008.2.1, 3008.7.6m, 3008.8.1
ASME A18.1-2011	Safety Standard for Platform Lifts and Stairway Chairlifts	1109.8, 2702.2.6
ISPSC-12 <u>ISPSC-15</u>	International Swimming Pool and Spa Code	202, 3109.1, 3109.1.1
TFI RMIP-09	Aboveground Storage Tanks Containing Liquid Fertilizer, Recommended Mechanical Integrity Practices	426.2 <u>428.2</u> , 426.4 <u>428.4</u> , 426.5 <u>428.5</u>
UL 294-10	Access Control System Units	1008.1.9.8
UL 2075-13	Standard for Gas and Vapor Detectors and Sensors	908.7.3 <u>915.4</u>

13VAC5-63-365. Appendix E Supplementary Accessibility Requirements.

Appendix E of the IBC shall be part of this code.

13VAC5-63-370. Appendix F ~~Rodent Proofing~~ Rodentproofing.

The following provisions of Appendix F of the IBC are part of this code:

F101.2 Foundation wall ventilation openings.

F101.6 Pier and wood construction. (Includes all provisions.)

13VAC5-63-380. Appendix H Signs.

The following provisions of Appendix H of the IBC are part of this code:

H101.2 Signs exempt from permits.

H102 Definitions. (Includes all definitions.)

H103 Location. (Includes Section H103.1.)

H105 through H114. (Includes all provisions.)

13VAC5-63-390. Appendix I Patio Covers.

Appendix I of the IBC shall be part of this code.

Part II
Rehabilitation

13VAC5-63-400. Chapter 1 Administration; Section 101 General.

~~Part II. Rehabilitation~~

A. Section 101.1 Short title. The Virginia Uniform Statewide Building Code, Part II, Rehabilitation, may be cited as the "Virginia Rehabilitation Code," or as the "VRC."

B. Section 101.2 Incorporation by reference. Chapters 2 - 16 of the ~~2012~~ 2015 International Existing Building Code, published by the International Code Council, Inc., are adopted and incorporated by reference to be an enforceable part of the VRC. The term "IEBC" means the ~~2012~~ 2015 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.

C. Section 101.3 Numbering system. A dual numbering system is used in the VRC to correlate the numbering system of the Virginia Administrative Code with the numbering system of the IEBC. IEBC numbering system designations are provided in the catchlines of the Virginia Administrative Code sections and cross references between sections or chapters of the VRC use only the IEBC numbering system designations. The term "chapter" is used in the context of the numbering system of the IEBC and may mean a chapter in the VRC, a chapter in the IEBC or a chapter in a referenced code or standard, depending on the context of the use of the term. The term "chapter" is not used to designate a chapter of the Virginia Administrative Code, unless clearly indicated.

D. Section 101.4 Arrangement of code provisions. The VRC is comprised of the combination of (i) the provisions of Chapter 1, Administration, which are established herein, (ii) Chapters 2 - 16 of the IEBC, which are incorporated by reference in Section 101.2, and (iii) the changes to the text of the incorporated chapters of the IEBC that are specifically identified, including any new chapters added. The terminology "changes to the text of the incorporated chapters of the IEBC that are specifically identified, including any new chapters added" shall also be referred to as the "state amendments to the IEBC." Such state amendments to the IEBC are set out using corresponding chapter and section numbers of the IEBC numbering system. In addition, since Chapter 1 of the IEBC is not incorporated as part of the VRC, any reference to a provision of Chapter 1 of the IEBC in the provisions of Chapters 2 - 16 of the IEBC is generally invalid. However, where the purpose of such a reference would clearly correspond to a provision of Chapter 1 established herein, then the reference may be construed to be a valid reference to such corresponding Chapter 1 provision.

E. Section 101.5 Use of terminology and notes. The term "this code," or "the code," where used in the provisions of Chapter 1, in Chapters 2 - 16 of the IEBC, or in the state amendments to the IEBC, means the VRC, unless the context clearly indicates otherwise. The term "this code," or "the code," where used in a code or standard referenced in the IEBC, means that code or standard, unless the context clearly indicates otherwise. The term "USBC" where used in this code, means the VCC, unless the context clearly indicates otherwise. In addition, where the phrase "of the International Building Code under which the building was constructed" is used in the IEBC, it shall be construed to mean the USBC or other code that was in effect when the building was built. Further, the use of notes in Chapter 1 is to provide information only and shall not be construed as changing the meaning of any code provision. Notes in the IEBC, in the codes and standards referenced in the IEBC and in the state amendments to the IEBC, may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise.

F. Section 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 provisions of Chapters 2 - 16 of the IEBC that address the same subject matter and impose differing requirements.
2. The provisions of Chapter 1 of this code supersede any provisions of the codes and standards referenced in the IEBC that address the same subject matter and impose differing requirements.

3. The state amendments to the IEBC supersede any provisions of Chapters 2 - 16 of the IEBC that address the same subject matter and impose differing requirements.

4. The state amendments to the IEBC supersede any provisions of the codes and standards referenced in the IEBC that address the same subject matter and impose differing requirements.

5. The provisions of Chapters 2 - 16 of the IEBC supersede any provisions of the codes and standards referenced in the IEBC that address the same subject matter and impose differing requirements.

G. Section 101.7 Administrative provisions. The provisions of Chapter 1 establish administrative requirements, which include but are not limited to provisions relating to the scope and enforcement of the code. Any provisions of Chapters 2 - 16 of the IEBC or any provisions of the codes and standards referenced in the IEBC that address the same subject matter to a lesser or greater extent are deleted and replaced by the provisions of Chapter 1. Further, any administrative requirements contained in the state amendments to the IEBC shall be given the same precedence as the provisions of Chapter 1. Notwithstanding the above, where administrative requirements of Chapters 2 - 16 of the IEBC or of the codes and standards referenced in the IEBC are specifically identified as valid administrative requirements in Chapter 1 of this code or in the state amendments to the IEBC, then such requirements are not deleted and replaced.

Note: The purpose of this provision is to eliminate overlap, conflicts and duplication by providing a single standard for administrative, procedural and enforcement requirements of this code.

H. Section 101.8 Definitions. The definitions of terms used in this code are contained in Chapter 2 along with specific provisions addressing the use of definitions. Terms may be defined in other chapters or provisions of the code and such definitions are also valid.

13VAC5-63-410. Section 102 Purpose and Scope.

A. Section 102.1 Purpose. In accordance with § 36-99.01 of the Code of Virginia, the General Assembly of Virginia has declared that (i) there is an urgent need to improve the housing conditions of low and moderate income individuals and families, many of whom live in substandard housing, particularly in the older cities of the Commonwealth; (ii) there are large numbers of older residential buildings in the Commonwealth, both occupied and vacant, which are in urgent need of rehabilitation and must be rehabilitated if the state's citizens are to be housed in decent, sound, and sanitary conditions; and (iii) the application of those building code requirements currently in force to housing rehabilitation has sometimes led to the imposition of costly and time-consuming requirements that result in a significant reduction in the amount of rehabilitation activity taking place.

The General Assembly further declares that (i) there is an urgent need to improve the existing condition of many of the Commonwealth's stock of commercial properties, particularly in older cities; (ii) there are large numbers of older commercial buildings in the Commonwealth, both occupied and vacant, that are in urgent need of rehabilitation and that must be rehabilitated if the citizens of the Commonwealth are to be provided with decent, sound and sanitary work spaces; and (iii) the application of the existing building code to such rehabilitation has sometimes led to the imposition of costly and time-consuming requirements that result in a significant reduction in the amount of rehabilitation activity taking place.

B. Section 102.2 Scope. The provisions of this code shall control the rehabilitation, reconstruction, alteration, repair, and change of occupancy of existing buildings and structures in occupancies other than Group R-5 and shall be permitted to be used as an alternative to compliance with the VCC for additions to buildings in any occupancy classification and for reconstruction, alteration or repair in Group R-5 occupancies.

Exception: The use of this code shall not be permitted for change of occupancy involving Group I-2 or I-3.

13VAC5-63-420. Section 103 Application of Code.

A. Section 103.1 General. All administrative provisions of the VCC, including but not limited to, requirements for permits, inspections and approvals by the local building department, provisions for appeals from decisions of the local building department and the issuance of modifications, are applicable to the use of this code, except where this code sets

out differing requirements. Where there is a conflict between a general requirement and a specific requirement in the IEBC, the specific requirement shall govern.

B. Section 103.1.1 Use of performance code. Compliance with the provisions of a nationally recognized performance code when approved as a modification shall be considered to constitute compliance with this code. All documents submitted as part of such consideration shall be retained in the permanent records of the local building department.

C. Section 103.1.2 Preliminary meeting. When requested by a prospective permit applicant or when determined necessary by the code official, the code official shall meet with the prospective permit applicant prior to the application for a permit to discuss plans for the proposed work or change of occupancy in order to establish the specific applicability of the provisions of this code.

D. Section 103.2 Change of occupancy. No change of occupancy shall be made in any structure when the current USBC requires a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation, or sanitation. When such a greater degree is required, the owner or the owner's agent shall make written application to the local building department for a new certificate of occupancy and shall obtain the new certificate of occupancy prior to the new use of the structure.

When impractical to achieve compliance with this code for the new occupancy classification, the building official shall consider modifications upon application and as provided for in Section 106.3 of the VCC.

E. Section 103.3 Retrofit requirements. In accordance with Section 103.7 of the VCC, the local building department shall enforce the provisions of Section 1701 that require certain existing buildings to be retrofitted with fire protection systems and other safety equipment. Retroactive fire protection system requirements contained in the IFC shall not be applicable unless required for compliance with the provisions of Section 1701.

F. Section 103.4 Nonrequired equipment. The following criteria for nonrequired equipment is in accordance with § 36-103 of the Code of Virginia. Building owners may elect to install partial or full fire alarms or other safety equipment that was not required by the edition of the VCC in effect at the time a building was constructed without meeting current requirements of the code, provided the installation does not create a hazardous condition. Permits for installation shall be obtained in accordance with the VCC. In addition, as a requirement of this code, when such nonrequired equipment is to be installed, the building official shall notify the appropriate fire official or fire chief.

G. Section 103.4.1 Reduction in function or discontinuance of nonrequired fire protection systems. When a nonrequired fire protection system is to be reduced in function or discontinued, it shall be done in such a manner so as not to create a false sense of protection. Generally, in such cases, any features visible from interior areas shall be removed, such as sprinkler heads, smoke detectors, or alarm panels or devices, but any wiring or piping hidden within the construction of the building may remain. Approval of the proposed method of reduction or discontinuance shall be obtained from the building official.

H. Section 103.5 Equipment changes. Upon the replacement or new installation of any fuel-burning appliances or equipment in existing buildings, an inspection or inspections shall be conducted to ensure that the connected vent or chimney systems comply with the following:

1. Vent or chimney systems are sized in accordance with either the IRC, the IMC, or the IFGC, depending on which is applicable based on the fuel source and the occupancy classification of the structure.
2. Vent or chimney systems are clean, free of any obstruction or blockages, defects, or deterioration, and are in operable condition.

Where not inspected by the local building department, persons performing such changes or installations shall certify to the building official that the requirements of Items 1 and 2 of this section are met.

I. Section 103.6 Requirements relating to maintenance. Any requirements of the IEBC requiring the maintenance of existing buildings or structures are invalid.

Note: Requirements for the maintenance of existing buildings and structures and for unsafe conditions are contained in the VMC.

J. Section 103.7 Use of Appendix A. Appendix A of the IEBC provides guidelines for the seismic retrofit of existing buildings. The use of this appendix is not mandatory but shall be permitted to be utilized at the option of an owner, the owner's agent or the RDP involved in a rehabilitation project. However, in no case shall the use of Appendix A be construed to authorize the lowering of existing levels of health or safety in buildings or structures being rehabilitated.

K. Section 103.8 Use of Appendix B. Appendix B of the IEBC provides supplementary accessibility requirements for existing buildings and facilities. All applicable requirements of Appendix B shall be met in buildings and structures being rehabilitated.

L. Section 103.9 Use of Resource A. Resource A of the IEBC provides guidelines for the evaluation of fire resistance ratings of archaic materials and may be used in conjunction with rehabilitation projects.

13VAC5-63-430. Chapter 2 Definitions.

A. Change Section 201.3 of the IEBC to read:

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the other International Codes, such terms shall have the meanings ascribed to them in those codes, except that terms that are not defined in this code and that are defined in the VCC shall take precedence over other definitions.

B. Change the following definition in Section 202 of the IEBC to read:

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 USBC.

13VAC5-63-434. Chapter 8 Alterations -- Level 2.

A. Change Exception 2 of Section 805.2 to read:

2. Means of egress conforming to the requirements of the building code under which the building was constructed shall be considered compliant means of egress.

B. Change Item 7 of Section 805.3.1.1 of the IEBC to read:

7. In Groups R-2, H-4, H-5 and I occupancies and in rooming houses and childcare centers, a single exit is permitted in a one-story building with a maximum occupant load of 10 and the exit access travel distance does not exceed 75 feet (22 860 mm). In dwelling units within Group R-2 buildings, an occupant load of 12 shall be permitted to be substituted for the occupant load established above and, in addition, staff of such family day homes shall not be counted for the purposes of establishing occupant loads.

13VAC5-63-438. Chapter 12 Historic Buildings.

Change Section 1201.2 of the IEBC to read:

1201.2 Report. The code official shall be permitted to require that an historic building undergoing repair, alteration or change of occupancy be investigated and evaluated by an RDP or other qualified person or agency as a condition of determining compliance with this code.

13VAC5-63-440. Chapter 14 Performance Compliance Methods.

A. Change Section 1401.2 of the IEBC to read:

1401.2 Applicability. Work involving rehabilitation, additions, alterations or changes of occupancy shall be made to conform to the requirements of this chapter or the provisions of Chapters 5 through 13. The provisions in Sections

1401.2.1 through 1401.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, I-2, M, R, S and U. These provisions shall not apply to buildings with occupancies in Group H or ~~I-1, I-3 or I-4~~.

Exception: The provisions of this chapter shall not apply to changes of occupancy involving Group I-2.

B. Add an exception to Section 1401.2.1 of the IEBC to read:

Exception: Plumbing, mechanical and electrical systems in buildings undergoing a change of occupancy shall be subject to any applicable requirements of Chapter 10.

~~C. Change Section 1401.2.5 of the IEBC to read:~~

~~1401.2.5 Accessibility requirements. All portions of the buildings proposed for change of occupancy and all alterations to existing buildings shall conform to the applicable accessibility provisions of Section 410.~~

13VAC5-63-443. Chapter 16 Referenced Standards.

Change the referenced standards in Chapter 16 of the IEBC as follows (standards not shown remain the same):

Standard reference number	Title	Referenced in code section number
API 653-09	Tank Inspection, Repair, Alteration and Reconstruction	1701.16
TFI RMIP-09	Aboveground Storage Tanks Containing Liquid Fertilizer, Recommended Mechanical Integrity Practices	1701.16

13VAC5-63-445. Chapter 17 Retrofit Requirements.

A. Add IEBC Section 1701 General.

B. Add Section 1701.1 to the IEBC to read:

1701.1 Scope. In accordance with Section 103.7 of the VCC and as set out herein, the following buildings are required to be provided with certain fire protection equipment or systems or other retrofitted components.

C. Add Section 1701.2 to the IEBC to read:

1701.2 Smoke detectors in colleges and universities. In accordance with § 36-99.3 of the Code of Virginia, college and university buildings containing dormitories for sleeping purposes shall be provided with battery-powered or AC-powered smoke detector devices installed therein in accordance with this code in effect on July 1, 1982. All public and private college and university dormitories shall have installed such detectors regardless of when the building was constructed. The chief administrative office of the college or university shall obtain a certificate of compliance with the provisions of this subsection from the building official of the locality in which the college or university is located or, in the case of state-owned buildings, from the Director of the Virginia Department of General Services. The provisions of this section shall not apply to any dormitory at a state-supported military college or university that is patrolled 24 hours a day by military guards.

D. Add Section 1701.3 to the IEBC to read:

1701.3 Smoke detectors in certain juvenile care facilities. In accordance with § 36-99.4 of the Code of Virginia, battery-powered or AC-powered smoke detectors shall be installed in all local and regional detention homes, group homes, and other residential care facilities for children and juveniles that are operated by or under the auspices of the Virginia Department of Juvenile Justice, regardless of when the building was constructed, by July 1, 1986, in accordance with the provisions of this code that were in effect on July 1, 1984. Administrators of such homes and facilities shall be responsible for the installation of the smoke detector devices.

E. Add Section 1701.4 to the IEBC to read:

1701.4 Smoke detectors for the deaf and hearing-impaired. In accordance with § 36-99.5 of the Code of Virginia, smoke detectors providing an effective intensity of not less than 100 candela to warn a deaf or hearing-impaired individual shall be provided, upon request by the occupant to the landlord or proprietor, to any deaf or hearing-impaired occupant of any of the following occupancies, regardless of when constructed:

1. All dormitory buildings arranged for the shelter and sleeping accommodations of more than 20 individuals;
2. All multiple-family dwellings having more than two dwelling units, including all dormitories and boarding and lodging houses arranged for shelter and sleeping accommodations of more than 5 individuals; or
3. All buildings arranged for use as one-family or two-family dwelling units.

A tenant shall be responsible for the maintenance and operation of the smoke detector in the tenant's unit.

A hotel or motel shall have available no fewer than one such smoke detector for each 70 units or portion thereof, except that this requirement shall not apply to any hotel or motel with fewer than 35 units. The proprietor of the hotel or motel shall post in a conspicuous place at the registration desk or counter a permanent sign stating the availability of smoke detectors for the hearing impaired. Visual detectors shall be provided for all meeting rooms for which an advance request has been made.

F. Add Sections 1701.5, 1701.5.1, and 1701.5.2 to the IEBC to read:

1701.5 Assisted living facilities (formerly known as adult care residences or homes for adults). Existing assisted living facilities licensed by the Virginia Department of Social Services shall comply with this section.

1701.5.1 Fire protective signaling system and fire detection system. A fire protective signaling system and an automatic fire detection system meeting the requirements of the USBC, Volume I, 1987 Edition, Third Amendment, shall be installed in assisted living facilities by August 1, 1994.

Exception: Assisted living facilities that are equipped throughout with a fire protective signaling system and an automatic fire detection system.

1701.5.2 Single-station and multiple-station smoke detectors. Battery or AC-powered single-station and multiple-station smoke detectors meeting the requirements of the USBC, Volume I, 1987 Edition, Third Amendment, shall be installed in assisted living facilities by August 1, 1994.

Exception: Assisted living facilities that are equipped throughout with single-station and multiple-station smoke detectors.

G. Add Section 1701.6 to the IEBC to read:

1701.6 Smoke detectors in buildings containing dwelling units. AC-powered smoke detectors with battery backup or an equivalent device shall be required to be installed to replace a defective or inoperative battery-powered smoke detector located in buildings containing one or more dwelling units or rooming houses offering to rent overnight sleeping accommodations when it is determined by the building official that the responsible party of such building or dwelling unit fails to maintain battery-powered smoke detectors in working condition.

H. Add Section 1701.7 to the IEBC to read:

1701.7 Fire suppression, fire alarm, and fire detection systems in nursing homes and facilities. Fire suppression systems as required by the edition of this code in effect on October 1, 1990, shall be installed in all nursing facilities licensed by the Virginia Department of Health by January 1, 1993, regardless of when such facilities or institutions were constructed. Units consisting of certified long-term care beds located on the ground floor of general hospitals shall be exempt from the requirements of this section.

Fire alarm or fire detector systems, or both, as required by the edition of this code in effect on October 1, 1990, shall be installed in all nursing homes and nursing facilities licensed by the Virginia Department of Health by August 1, 1994.

I. Add Section 1701.8 to the IEBC to read:

1701.8 Fire suppression systems in hospitals. Fire suppression systems shall be installed in all hospitals licensed by the Virginia Department of Health as required by the edition of this code in effect on October 1, 1995, regardless of when such facilities were constructed.

J. Add Section 1701.9 to the IEBC to read:

1701.9 Identification of disabled parking spaces by above grade signage. All parking spaces reserved for the use of persons with disabilities shall be identified by above grade signs, regardless of whether identification of such spaces by above grade signs was required when any particular space was reserved for the use of persons with disabilities. A sign or symbol painted or otherwise displayed on the pavement of a parking space shall not constitute an above grade sign. Any parking space not identified by an above grade sign shall not be a parking space reserved for the disabled within the meaning of this section. All above grade disabled parking space signs shall have the bottom edge of the sign no lower than 4 feet (1219 mm) nor higher than 7 feet (2133 mm) above the parking surface. Such signs shall be designed and constructed in accordance with the provisions of Chapter 11 of this code. All disabled parking signs shall include the following language: "PENALTY, \$100-500 Fine, TOW-AWAY ZONE." Such language may be placed on a separate sign and attached below existing above grade disabled parking signs, provided that the bottom edge of the attached sign is no lower than 4 feet above the parking surface.

K. Add Section 1701.10 to the IEBC to read:

1701.10 Smoke detectors in hotels and motels. Smoke detectors shall be installed in hotels and motels as required by the edition of VR 394-01-22, USBC, Volume II, in effect on March 1, 1990, by the dates indicated, regardless of when constructed.

L. Add Section 1701.11 to the IEBC to read:

1701.11 Sprinkler systems in hotels and motels. By September 1, 1997, an automatic sprinkler system shall be installed in hotels and motels as required by the edition of VR 394-01-22, USBC, Volume II, in effect on March 1, 1990, regardless of when constructed.

M. Add Section 1701.12 to the IEBC to read:

1701.12 Fire suppression systems in dormitories. An automatic fire suppression system shall be provided throughout all buildings having a Group R-2 fire area that are more than 75 feet (22,860 mm) or 6 stories above the lowest level of exit discharge and are used, in whole or in part, as a dormitory to house students by any public or private institution of higher education, regardless of when such buildings were constructed, in accordance with the edition of this code in effect on August 20, 1997, and the requirements for sprinkler systems under the edition of the NFPA 13 standard referenced by that code. The automatic fire suppression system shall be installed by September 1, 1999. The chief administrative office of the college or university shall obtain a certificate of compliance from the building official of the locality in which the college or university is located or, in the case of state-owned buildings, from the Director of the Virginia Department of General Services.

Exceptions:

1. Buildings equipped with an automatic fire suppression system in accordance with Section 903.3.1.1 of the 1983 or later editions of NFPA 13.
2. Any dormitory at a state-supported military college or university that is patrolled 24 hours a day by military guards.
3. Application of the requirements of this section shall be modified in accordance with the following:

3.1. Building systems, equipment, or components other than the fire suppression system shall not be required to be added or upgraded except as necessary for the installation of the fire suppression system and shall only be required to be added or upgraded where the installation of the fire suppression system creates an unsafe condition.

3.2. Residential sprinklers shall be used in all sleeping rooms. Other sprinklers shall be quick response or residential unless deemed unsuitable for a space. Standard response sprinklers shall be used in elevator hoistways and machine rooms.

3.3. Sprinklers shall not be required in wardrobes in sleeping rooms that are considered part of the building construction or in closets in sleeping rooms when such wardrobes or closets (i) do not exceed 24 square feet (2.23 m²) in area, (ii) have the smallest dimension less than 36 inches (914 mm), and (iii) comply with all of the following:

3.3.1. A single-station smoke detector monitored by the building fire alarm system is installed in the room containing the wardrobe or closet that will activate the general alarm for the building if the single station smoke detector is not cleared within five minutes after activation.

3.3.2. The minimum number of sprinklers required for calculating the hydraulic demand of the system for the room shall be increased by two and the two additional sprinklers shall be corridor sprinklers where the wardrobe or closet is used to divide the room. Rooms divided by a wardrobe or closet shall be considered one room for the purpose of this requirement.

3.3.3. The ceiling of the wardrobe, closet, or room shall have a fire resistance rating of not less than 1/2 hour.

3.4. Not more than one sprinkler shall be required in bathrooms within sleeping rooms or suites having a floor area between 55 square feet (5.12 m²) and 120 square feet (11.16 m²), provided the sprinkler is located to protect the lavatory area and the plumbing fixtures are of a noncombustible material.

3.5. Existing standpipe residual pressure shall be permitted to be reduced when the standpipe serves as the water supply for the fire suppression system, provided the water supply requirements of NFPA 13-94 are met.

3.6. Limited service controllers shall be permitted for fire pumps when used in accordance with their listing.

3.7. Where a standby power system is required, a source of power in accordance with Section 701-11 (d) or 701-11 (e) of NFPA 70-96 shall be permitted.

N. Add Section 1701.13 to the IEBC to read:

1701.13 Fire extinguishers and smoke detectors in SRCFs. SRCFs shall be provided with at least one approved type ABC portable fire extinguisher with a minimum rating of 2A10BC installed in each kitchen. In addition, SRCFs shall provide at least one approved and properly installed battery operated smoke detector outside of each sleeping area in the vicinity of bedrooms and bedroom hallways and on each additional floor.

O. Add Section 1701.14 to the IEBC to read:

1701.14 Smoke detectors in adult day care centers. Battery-powered or AC-powered smoke detector devices shall be installed in all adult day care centers licensed by the Virginia Department of Social Services, regardless of when the building was constructed. The location and installation of the smoke detectors shall be determined by the provisions of this code in effect on October 1, 1990. The licensee shall obtain a certificate of compliance from the building official of the locality in which the center is located or, in the case of state-owned buildings, from the Director of the Virginia Department of General Services.

P. Add Section 1701.15 to the IEBC to read:

1701.15 Posting of occupant load. Every room or space that is an assembly occupancy, and where the occupant load of that room or space is 50 or more, shall have the occupant load of the room or space as determined by the building official posted in a conspicuous place, near the main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or owner's authorized agent.

Q. Add Section 1701.16 to the IEBC to read:

1701.16 ALFSTs. Existing ALFSTs, regardless of when constructed, shall by October 1, 2011, meet the applicable requirements of API 653 and TFI RMIP for suitability for service and inspections and shall provide a secondary containment system complying with Section 425.3 of the VCC.

R. Add Section 1701.17 to the IEBC to read:

1701.17 Standards for replacement glass. In accordance with § 36-99.2 of the Code of Virginia, any replacement glass installed in buildings constructed prior to the first edition of the USBC shall meet the quality and installation standards for glass installed in new buildings as are in effect at the time of installation. In addition, as a requirement of this code, the installation or replacement of glass in buildings constructed under any edition of the USBC shall be as required for new installations.

Part III
Maintenance

13VAC5-63-450. Chapter 1 Administration; Section 101 General.

Part III. Maintenance

A. Section 101.1 Short title. The Virginia Uniform Statewide Building Code, Part III, Maintenance, may be cited as the "Virginia Maintenance Code," or as the "VMC."

B. Section 101.2 Incorporation by reference. Chapters 2 - 8 of the ~~2012~~ 2015 International Property Maintenance Code, published by the International Code Council, Inc., are adopted and incorporated by reference to be an enforceable part of the VMC. The term "IPMC" means the ~~2012~~ 2015 International Property Maintenance Code, published by the International Code Council, Inc. Any codes and standards referenced in the IPMC 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.

C. Section 101.3 Numbering system. A dual numbering system is used in the VMC to correlate the numbering system of the Virginia Administrative Code with the numbering system of the IPMC. IPMC numbering system designations are provided in the catchlines of the Virginia Administrative Code sections and cross references between sections or chapters of the Virginia Maintenance Code use only the IPMC numbering system designations. The term "chapter" is used in the context of the numbering system of the IPMC and may mean a chapter in the VMC, a chapter in the IPMC or a chapter in a referenced code or standard, depending on the context of the use of the term. The term "chapter" is not used to designate a chapter of the Virginia Administrative Code, unless clearly indicated.

D. Section 101.4 Arrangement of code provisions. The VMC is comprised of the combination of (i) the provisions of Chapter 1, Administration, which are established herein, (ii) Chapters 2 - 8 of the IPMC, which are incorporated by reference in Section 101.2, and (iii) the changes to the text of the incorporated chapters of the IPMC which are specifically identified. The terminology "changes to the text of the incorporated chapters of the IPMC which are specifically identified" shall also be referred to as the "state amendments to the IPMC." Such state amendments to the IPMC are set out using corresponding chapter and section numbers of the IPMC numbering system. In addition, since Chapter 1 of the IPMC is not incorporated as part of the VMC, any reference to a provision of Chapter 1 of the IPMC in the provisions of Chapters 2 - 8 of the IPMC is generally invalid. However, where the purpose of such a reference would clearly correspond to a provision of Chapter 1 established herein, then the reference may be construed to be a valid reference to such corresponding Chapter 1 provision.

E. Section 101.5 Use of terminology and notes. The term "this code," or "the code," where used in the provisions of Chapter 1, in Chapters 2 - 8 of the IPMC, or in the state amendments to the IPMC, means the VMC, unless the context clearly indicates otherwise. The term "this code," or "the code," where used in a code or standard referenced in the IPMC, means that code or standard, unless the context clearly indicates otherwise. The term "USBC" where used in this code means the VCC unless the context clearly indicates otherwise. In addition, the use of notes in Chapter 1 is to provide information only and shall not be construed as changing the meaning of any code provision. Notes in the IPMC, in the codes and standards referenced in the IPMC, and in the state amendments to the IPMC, may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise.

F. Section 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 provisions of Chapters 2 - 8 of the IPMC that address the same subject matter and impose differing requirements.
2. The provisions of Chapter 1 of this code supersede any provisions of the codes and standards referenced in the IPMC that address the same subject matter and impose differing requirements.
3. The state amendments to the IPMC supersede any provisions of Chapters 2 - 8 of the IPMC that address the same subject matter and impose differing requirements.

4. The state amendments to the IPMC supersede any provisions of the codes and standards referenced in the IPMC that address the same subject matter and impose differing requirements.

5. The provisions of Chapters 2 - 8 of the IPMC supersede any provisions of the codes and standards referenced in the IPMC that address the same subject matter and impose differing requirements.

G. Section 101.7 Administrative provisions. The provisions of Chapter 1 establish administrative requirements, which include but are not limited to provisions relating to the scope of the code, enforcement, fees, permits, inspections and disputes. Any provisions of Chapters 2 - 8 of the IPMC or any provisions of the codes and standards referenced in the IPMC which address the same subject matter to a lesser or greater extent are deleted and replaced by the provisions of Chapter 1. Further, any administrative requirements contained in the state amendments to the IPMC shall be given the same precedence as the provisions of Chapter 1. Notwithstanding the above, where administrative requirements of Chapters 2 - 8 of the IPMC or of the codes and standards referenced in the IPMC are specifically identified as valid administrative requirements in Chapter 1 of this code or in the state amendments to the IPMC, then such requirements are not deleted and replaced.

Note: The purpose of this provision is to eliminate overlap, conflicts and duplication by providing a single standard for administrative, procedural and enforcement requirements of this code.

H. Section 101.8 Definitions. The definitions of terms used in this code are contained in Chapter 2 along with specific provisions addressing the use of definitions. Terms may be defined in other chapters or provisions of the code and such definitions are also valid.

Note: The order of precedence outlined in Section 101.6 may be determinative in establishing how to apply the definitions in the IPMC and in the referenced codes and standards.

13VAC5-63-460. Section 102 Purpose and Scope.

A. Section 102.1 Purpose. In accordance with § 36-103 of the Code of Virginia, the Virginia Board of Housing and Community Development may adopt and promulgate as part of the Virginia Uniform Statewide Building Code, building regulations that facilitate the maintenance, rehabilitation, development and reuse of existing buildings at the least possible cost to ensure the protection of the public health, safety and welfare. Further, in accordance with § 36-99 of the Code of Virginia, the purpose of this code is to protect the health, safety and welfare of the residents of the Commonwealth of Virginia, provided that buildings and structures should be permitted to be maintained at the least possible cost consistent with recognized standards of health, safety, energy conservation and water conservation, including provisions necessary to prevent overcrowding, rodent or insect infestation, and garbage accumulation; and barrier-free provisions for the physically handicapped and aged.

B. Section 102.2 Scope. In accordance with § 36-98 of the Code of Virginia, the VMC shall supersede the building codes and regulations of the counties, municipalities and other political subdivisions and state agencies.

C. Section 102.3 Exemptions. This code shall not regulate those buildings and structures specifically exempt from the VCC, except that existing industrialized buildings and manufactured homes shall not be exempt from this code.

13VAC5-63-470. Section 103 Application of Code.

A. Section 103.1 General. This code prescribes regulations for the maintenance of all existing buildings and structures and associated equipment, including regulations for unsafe buildings and structures.

B. Section 103.2 Maintenance requirements. Buildings and structures shall be maintained and kept in good repair in accordance with the requirements of this code and when applicable in accordance with the USBC under which such building or structure was constructed. No provision of this code shall require alterations to be made to an existing building or structure or to equipment unless conditions are present which meet the definition of an unsafe structure or a structure unfit for human occupancy.

C. 103.2.1 Maintenance of nonrequired fire protection systems. Nonrequired fire protection systems shall be maintained to function as originally installed. If any such systems are to be reduced in function or discontinued, approval shall be obtained from the building official in accordance with Section 103.8.1 of the VCC.

D. Section 103.3 Continued approval. Notwithstanding any provision of this code to the contrary, alterations shall not be required to be made to existing buildings or structures which are occupied in accordance with a certificate of occupancy issued under any edition of the USBC.

E. Section 103.4 Rental Inspections. In accordance with § 36-105.1:1 of the Code of Virginia, these provisions are applicable to rental inspection programs. For purposes of this section:

"Dwelling unit" means a building or structure or part thereof that is used for a home or residence by one or more persons who maintain a household.

"Owner" means the person shown on the current real estate assessment books or current real estate assessment records.

"Residential rental dwelling unit" means a dwelling unit that is leased or rented to one or more tenants. However, a dwelling unit occupied in part by the owner thereof shall not be construed to be a residential rental dwelling unit unless a tenant occupies a part of the dwelling unit that has its own cooking and sleeping areas, and a bathroom, unless otherwise provided in the zoning ordinance by the local governing body.

The local governing body may adopt an ordinance to inspect residential rental dwelling units for compliance with this code and to promote safe, decent and sanitary housing for its citizens, in accordance with the following:

1. Except as provided for in subdivision 3 of this subsection, the dwelling units shall be located in a rental inspection district established by the local governing body in accordance with this section; and

2. The rental inspection district is based upon a finding by the local governing body that (i) there is a need to protect the public health, safety and welfare of the occupants of dwelling units inside the designated rental inspection district; (ii) the residential rental dwelling units within the designated rental inspection district are either (a) blighted or in the process of deteriorating or (b) the residential rental dwelling units are in the need of inspection by the building department to prevent deterioration, taking into account the number, age and condition of residential dwelling rental units inside the proposed rental inspection district; and (iii) the inspection of residential rental dwelling units inside the proposed rental inspection district is necessary to maintain safe, decent and sanitary living conditions for tenants and other residents living in the proposed rental inspection district. Nothing in this section shall be construed to authorize one or more locality-wide rental inspection districts and a local governing body shall limit the boundaries of the proposed rental inspection districts to such areas of the locality that meet the criteria set out in this subsection; or

3. An individual residential rental dwelling unit outside of a designated rental inspection district is made subject to the rental inspection ordinance based upon a separate finding for each individual dwelling unit by the local governing body that (i) there is a need to protect the public health, welfare and safety of the occupants of that individual dwelling unit; (ii) the individual dwelling unit is either (a) blighted or (b) in the process of deteriorating; or (iii) there is evidence of violations of this code that affect the safe, decent and sanitary living conditions for tenants living in such individual dwelling unit.

For purposes of this section, the local governing body may designate a local government agency other than the building department to perform all or part of the duties contained in the enforcement authority granted to the building department by this section.

Before adopting a rental inspection ordinance and establishing a rental inspection district or an amendment to either, the governing body of the locality shall hold a public hearing on the proposed ordinance. Notice of the hearing shall be published once a week for two successive weeks in a newspaper published or having general circulation in the locality.

Upon adoption by the local governing body of a rental inspection ordinance, the building department shall make reasonable efforts to notify owners of residential rental dwelling units in the designated rental inspection district, or their designated managing agents, and to any individual dwelling units subject to the rental inspection ordinance, not

located in a rental inspection district, of the adoption of such ordinance, and provide information and an explanation of the rental inspection ordinance and the responsibilities of the owner thereunder.

The rental inspection ordinance may include a provision that requires the owners of dwelling units in a rental inspection district to notify the building department in writing if the dwelling unit of the owner is used for residential rental purposes. The building department may develop a form for such purposes. The rental inspection ordinance shall not include a registration requirement or a fee of any kind associated with the written notification pursuant to this subdivision. A rental inspection ordinance may not require that the written notification from the owner of a dwelling unit subject to a rental inspection ordinance be provided to the building department in less than 60 days after the adoption of a rental inspection ordinance. However, there shall be no penalty for the failure of an owner of a residential rental dwelling unit to comply with the provisions of this subsection, unless and until the building department provides personal or written notice to the property owner, as provided in this section. In any event, the sole penalty for the willful failure of an owner of a dwelling unit who is using the dwelling unit for residential rental purposes to comply with the written notification requirement shall be a civil penalty of up to \$50. For purposes of this subsection, notice sent by regular first-class mail to the last known address of the owner as shown on the current real estate tax assessment books or current real estate tax assessment records shall be deemed compliance with this requirement.

Upon establishment of a rental inspection district in accordance with this section, the building department may, in conjunction with the written notifications as provided for above, proceed to inspect dwelling units in the designated rental inspection district to determine if the dwelling units are being used as a residential rental property and for compliance with the provisions of this code that affect the safe, decent and sanitary living conditions for the tenants of such property.

If a multifamily development has more than 10 dwelling units, in the initial and periodic inspections, the building department shall inspect only a sampling of dwelling units, of not less than two and not more than 10% of the dwelling units, of a multifamily development, that includes all of the multifamily buildings that are part of that multifamily development. In no event, however, shall the building department charge a fee authorized by this section for inspection of more than 10 dwelling units. If the building department determines upon inspection of the sampling of dwelling units that there are violations of this code that affect the safe, decent and sanitary living conditions for the tenants of such multifamily development, the building department may inspect as many dwelling units as necessary to enforce these provisions, in which case, the fee shall be based upon a charge per dwelling unit inspected, as otherwise provided in the fee schedule established pursuant to this section.

Upon the initial or periodic inspection of a residential rental dwelling unit subject to a rental inspection ordinance, the building department has the authority under these provisions to require the owner of the dwelling unit to submit to such follow-up inspections of the dwelling unit as the building department deems necessary, until such time as the dwelling unit is brought into compliance with the provisions of this code that affect the safe, decent and sanitary living conditions for the tenants.

Except as provided for above, following the initial inspection of a residential rental dwelling unit subject to a rental inspection ordinance, the building department may inspect any residential rental dwelling unit in a rental inspection district, that is not otherwise exempted in accordance with this section, no more than once each calendar year.

Upon the initial or periodic inspection of a residential rental dwelling unit subject to a rental inspection ordinance for compliance with these provisions, provided that there are no violations of this code that affect the safe, decent and sanitary living conditions for the tenants of such residential rental dwelling unit, the building department shall provide, to the owner of such residential rental dwelling unit, an exemption from the rental inspection ordinance for a minimum of four years. Upon the sale of a residential rental dwelling unit, the building department may perform a periodic inspection as provided above, subsequent to such sale. If a residential rental dwelling unit has been issued a certificate of occupancy within the last four years, an exemption shall be granted for a minimum period of four years from the date of the issuance of the certificate of occupancy by the building department. If the residential rental dwelling unit becomes in violation of this code during the exemption period, the building department may revoke the exemption previously granted under this section.

A local governing body may establish a fee schedule for enforcement of these provisions, which includes a per dwelling unit fee for the initial inspections, follow-up inspections and periodic inspections under this section.

The provisions of this section shall not in any way alter the rights and obligations of landlords and tenants pursuant to the applicable provisions of Chapter 13 (§ 55-217 et seq.) or Chapter 13.2 (§ 55-248.2 et seq.) of Title 55 of the Code of Virginia.

The provisions of this section shall not alter the duties or responsibilities of the local building department under § 36-105 of the Code of Virginia to enforce the USBC.

Unless otherwise provided for in § 36-105.1:1 of the Code of Virginia, penalties for violation of this section shall be the same as the penalties provided for violations of other sections of the USBC.

13VAC5-63-480. Section 104 Enforcement, Generally.

A. Section 104.1 Scope of enforcement. This section establishes the requirements for enforcement of this code in accordance with subdivision 1 of subsection C of § 36-105 of the Code of Virginia. The local governing body may also inspect and enforce the provisions of the USBC for existing buildings and structures, whether occupied or not. Such inspection and enforcement shall be carried out by an agency or department designated by the local governing body.

~~¶~~ In accordance with subdivision 3 of subsection C of § 36-105 of the Code of Virginia, if the local building department receives a complaint that a violation of this code exists that is an immediate and imminent threat to the health or safety of the owner, tenant, or occupants of any building or structure, or the owner, occupant, or tenant of any nearby building or structure, and the owner, occupant, or tenant of the building or structure that is the subject of the complaint has refused to allow the code official or his agent to have access to the subject building or structure, the code official or his agent may present sworn testimony to make an affidavit under oath before a magistrate or a court of competent jurisdiction and request that the magistrate or court grant the code official or his agent an inspection warrant to enable the code official or his agent to enter the subject building or structure for the purpose of determining whether violations of this code exist. After issuing a warrant under this section, the magistrate or judge shall file the affidavit in a manner prescribed by § 19.2-54 of the Code of Virginia. After executing the warrant, the code official or his agents shall return the warrant to the clerk of the circuit court of the city or county wherein the inspection was made. The code official or his agent shall make a reasonable effort to obtain consent from the owner, occupant, or tenant of the subject building or structure prior to seeking the issuance of an inspection warrant under this section.

Note: Generally, official action must be taken by the local government to enforce the VMC. Consultation with the legal counsel of the jurisdiction when initiating or changing such action is advised.

B. Section 104.1.1 Transfer of ownership. In accordance with subdivision 4 of subsection C of § 36-105 of the Code of Virginia, if the local building department has initiated an enforcement action against the owner of a building or structure and such owner subsequently transfers the ownership of the building or structure to an entity in which the owner holds an ownership interest greater than 50%, the pending enforcement action shall continue to be enforced against the owner.

C. Section 104.2 Fees. In accordance with subdivision 7 of subsection C of § 36-105 of the Code of Virginia, fees may be levied by the local governing body in order to defray the cost of enforcement and appeals. For the purposes of this section, “defray the cost” may include the fair and reasonable costs incurred for such enforcement during normal business hours, but shall not include overtime costs unless conducted outside of the normal working hours established by the locality. A schedule of such costs shall be adopted by the local governing body in a local ordinance. A locality shall not charge overtime rate for inspections conducted during the normal business hours established by the locality. Nothing herein shall be construed to prohibit a private entity from conducting such inspections, provided the private entity has been approved to perform such inspections in accordance with the written policy of the code official for the locality.

D. Section 104.3 State buildings. In accordance with § 36-98.1 of the Code of Virginia, this code shall be applicable to state-owned buildings and structures. Acting through the Division of Engineering and Buildings, the Department of General Services shall function as the building official for state-owned buildings.

E. Section 104.3.1 Certification of state enforcement personnel. State enforcement personnel shall comply with the applicable requirements of Sections 104.4.2 ~~through 104.4.4~~ and 104.4.3 for certification, ~~periodic maintenance training, and continuing education.~~

Note: Continuing education and periodic training requirements for DHCD certifications are set out in the VCS.

F. Section 104.4 Local enforcing agency. In jurisdictions enforcing this code, the local governing body shall designate the agency within the local government responsible for such enforcement and appoint a code official. The local governing body may also utilize technical assistants to assist the code official in the enforcement of this code. A permanently appointed code official shall not be removed from office except for cause after having been afforded a full opportunity to be heard on specific and relevant charges by and before the appointing authority. DHCD shall be notified by the appointing authority within 30 days of the appointment or release of a permanent or acting code official and within 60 days after retaining or terminating a technical assistant.

Note: Code officials and technical assistants are subject to sanctions in accordance with the VCS.

G. Section 104.4.1 Qualifications of code official and technical assistants. The code official shall have at least five years of building experience as a licensed professional engineer or architect, building, fire or trade inspector, contractor, housing inspector or superintendent of building, fire or trade construction or at least five years of building experience after obtaining a degree in architecture or engineering, with at least three years in responsible charge of work. Any combination of education and experience that would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. The code official shall have general knowledge of sound engineering practice in respect to the design and construction of structures, the basic principles of fire prevention, the accepted requirements for means of egress and the installation of elevators and other service equipment necessary for the health, safety and general welfare of the occupants and the public. The local governing body may establish additional qualification requirements.

A technical assistant shall have at least three years of experience and general knowledge in at least one of the following areas: building construction, building, fire or housing inspections, plumbing, electrical or mechanical trades, fire protection, elevators or property maintenance work. Any combination of education and experience which would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. The locality may establish additional certification requirements.

H. Section 104.4.2 Certification of code official and technical assistants. An acting or permanent code official shall be certified as a code official in accordance with the VCS within one year after being appointed as acting or permanent code official. A technical assistant shall be certified in the appropriate subject area within 18 months after becoming a technical assistant. When required by a locality to have two or more certifications, a technical assistant shall obtain the additional certifications within three years from the date of such requirement.

Exception: A code official or technical assistant in place prior to April 1, 1995, shall not be required to meet the certification requirements in this section while continuing to serve in the same capacity in the same locality.

I. Section 104.4.3 Noncertified code official. Except for a code official exempt from certification under the exception to Section 104.4.2, any acting or permanent code official who is not certified as a code official in accordance with the VCS shall attend the core module of the Virginia Building Code Academy or an equivalent course in an individual or regional code academy accredited by DHCD within 180 days of appointment. This requirement is in addition to meeting the certification requirement in Section 104.4.2.

Note: Continuing education and periodic training requirements for DHCD certifications are set out in the VCS.

~~J. Section 104.4.4 Requirements for periodic maintenance training and education. Code officials and technical assistants shall attend periodic maintenance training as designated by DHCD. In addition to the periodic maintenance training required above, code officials and technical assistants shall attend 16 hours of continuing education every two years as approved by DHCD. If a code official or technical assistant possesses more than one BHCD certificate, the 16 hours shall satisfy the continuing education requirement for all BHCD certificates.~~

~~K. Section 104.4.5 Conflict of interest. The standards of conduct for code officials and technical assistants shall be in accordance with the provisions of the State and Local Government Conflict of Interests Act, Chapter 31 (§ 2.2-3100 et seq.) of Title 2.2 of the Code of Virginia.~~

~~L~~ K. Section 104.4.6 Records. The local enforcing agency shall retain a record of applications received, permits, certificates, notices and orders issued, fees collected and reports of inspections in accordance with The Library of Virginia's General Schedule Number Six.

~~M~~ L. Section 104.5 Powers and duties, generally. The code official shall enforce this code as set out herein and as interpreted by the State Review Board and shall issue all necessary notices or orders to ensure compliance with the code.

~~N~~ M. Section 104.5.1 Delegation of authority. The code official may delegate powers and duties except where such authority is limited by the local government. When such delegations are made, the code official shall be responsible for assuring that they are carried out in accordance with the provisions of this code.

~~O~~ N. Section 104.5.2 Issuance of modifications. Upon written application by an owner or an owner's agent, the code official may approve a modification of any provision of this code provided the spirit and intent of the code are observed and public health, welfare and safety are assured. The decision of the code official concerning a modification shall be made in writing and the application for a modification and the decision of the code official concerning such modification shall be retained in the permanent records of the local enforcing agency.

~~P~~ O. Section 104.5.2.1 Substantiation of modification. The code official may require or may consider a statement from a professional engineer, architect or other person competent in the subject area of the application as to the equivalency of the proposed modification.

~~Q~~ P. Section 104.5.3 Inspections. The code official may inspect buildings or structures to determine compliance with this code and shall carry proper credentials when performing such inspections. The code 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.

~~R~~ Q. Section 104.5.3.1 Observations. When, during an inspection, the code 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.

~~S~~ R. Section 104.5.3.2 Approved inspection agencies and individuals. The code official may accept reports of inspections or tests from individuals or inspection agencies approved in accordance with the code official's written policy required by Section 104.5.3.3. 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 this code have been met, and shall be certified by the individual inspector or by the responsible officer when the report is from an agency. The code official shall review and approve the report unless there is cause to reject it. Failure to approve a report shall be in writing within five working days of receiving it, stating the reasons for rejection.

~~T~~ S. Section 104.5.3.3 Third-party inspectors. Each code official charged with the enforcement of this code and who accepts third-party reports 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 code official.

~~U~~ T. Section 104.5.3.4 Qualifications. In determining third-party qualifications, the code 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.

~~V~~ U. Section 104.5.4 Notices, reports and orders. Upon findings by the code official that violations of this code exist, the code official shall issue a correction notice or notice of violation to the owner or the person responsible for the maintenance of the structure. Work done to correct violations of this code subject to the permit, inspection and approval provisions of the VCC shall not be construed as authorization to extend the time limits established for compliance with this code.

~~W.~~ V. Section 104.5.4.1 Correction notice. The correction notice shall be a written notice of the defective conditions. The correction notice shall require correction of the violation or violations within a reasonable time unless an emergency condition exists as provided under the unsafe building provisions of Section 105. Upon request, the correction notice shall reference the code section that serves as the basis for the defects and shall state that such defects shall be corrected and reinspected in a reasonable time designated by the code official.

~~X.~~ W. Section 104.5.4.2 Notice of violation. If the code official determines there are violations of this code other than those for unsafe structures, unsafe equipment or structures unfit for human occupancy under Section 105, the code official may issue a notice of violation to be communicated promptly in writing to the owner or the person responsible for the maintenance or use of the building or structure in lieu of a correction notice as provided for in Section 104.5.4.1. In addition, the code official shall issue a notice of violation for any uncorrected violation remaining from a correction notice established in Section 104.5.4.1. A notice of violation shall be issued by the code official before initiating legal proceedings unless the conditions violate the unsafe building conditions of Section 105 and the provisions established therein are followed. The code official shall provide the section numbers to the owner for any code provision cited in the notice of violation. The notice shall require correction of the violation or violations within a reasonable time unless an emergency condition exists as provided under the building provisions of Section 105. The owner or person to whom the notice of violation has been issued shall be responsible for contacting the code official within the time frame established for any reinspections to assure the violations have been corrected. The code official will be responsible for making such inspection and verifying the violations have been corrected. In addition, the notice of violation shall indicate the right of appeal by referencing the appeals section of this code.

~~Y.~~ X. Section 104.5.5 Coordination of inspections. The code official shall coordinate inspections and administrative orders with any other state or local agencies having related inspection authority and shall coordinate those inspections required by the Virginia Statewide Fire Prevention Code (13VAC5-51) for maintenance of fire protection devices, equipment and assemblies so that the owners and occupants will not be subjected to numerous inspections or conflicting orders.

Note: The Fire Prevention Code requires the fire official to coordinate such inspections with the code official.

~~Z.~~ Y. Section 104.5.6 Further action when violation not corrected. If the responsible party has not complied with the notice of violation, the code official shall submit a written request to the legal counsel of the locality to institute the appropriate legal proceedings to restrain, correct or abate the violation or to require the removal or termination of the use of the building or structure involved. In cases where the locality so authorizes, the code official may issue or obtain a summons or warrant.

~~AA.~~ Z. Section 104.5.7 Penalties and abatement. Penalties for violations of this code shall be as set out in § 36-106 of the Code of Virginia. The successful prosecution of a violation of the code shall not preclude the institution of appropriate legal action to require correction or abatement of a violation.

13VAC5-63-490. Section 105 Unsafe Structures or Structures Unfit for Human Occupancy.

A. Section 105.1 General. This section shall apply to existing structures which are classified as unsafe or unfit for human occupancy. All conditions causing such structures to be classified as unsafe or unfit for human occupancy shall be remedied or as an alternative to correcting such conditions, the structure may be vacated and secured against public entry or razed and removed. Vacant and secured structures shall still be subject to other applicable requirements of this code. Notwithstanding the above, when the code official determines that an unsafe structure or a structure unfit for human occupancy constitutes such a hazard that it should be razed or removed, then the code official shall be permitted to order the demolition of such structures in accordance with applicable requirements of this code.

Note: Structures which become unsafe during construction are regulated under the VCC.

B. Section 105.2 Inspection of unsafe or unfit structures. The code official shall inspect any structure reported or discovered as unsafe or unfit for human habitation and shall prepare a report to be filed in the records of the local enforcing agency and a copy issued to the owner. The report shall include the use of the structure and a description of the nature and extent of any conditions found.

C. Section 105.3 Unsafe conditions not related to maintenance. When the code official finds a condition that constitutes a serious and dangerous hazard to life or health in a structure constructed prior to the initial edition of the USBC and when that condition is of a cause other than improper maintenance or failure to comply with state or local building codes that were in effect when the structure was constructed, then the code official shall be permitted to order those minimum changes to the design or construction of the structure to remedy the condition.

D. Section 105.3.1 Limitation to requirements for retrofitting. In accordance with Section 103.2, this code does not generally provide for requiring the retrofitting of any structure. However, conditions may exist in structures constructed prior to the initial edition of the USBC because of faulty design or equipment that constitute a danger to life or health or a serious hazard. Any changes to the design or construction required by the code official under this section shall be only to remedy the serious hazard or danger to life or health and such changes shall not be required to fully comply with the requirements of the VCC applicable to newly constructed buildings or structures.

E. Section 105.4 Notice of unsafe structure or structure unfit for human occupancy. When a structure is determined to be unsafe or unfit for human occupancy by the code official, a written notice of unsafe structure or structure unfit for human occupancy shall be issued by personal service to the owner, the owner's agent or the person in control of such structure. The notice shall specify the corrections necessary to comply with this code, or if the structure is required to be demolished, the notice shall specify the time period within which the demolition must occur. Requirements in Section 104.5.4 for notices of violation are also applicable to notices issued under this section to the extent that any such requirements are not in conflict with the requirements of this section.

Note: Whenever possible, the notice should also be given to any tenants of the affected structure.

F. Section 105.4.1 Vacating unsafe structure. If the code official determines there is actual and immediate danger to the occupants or public, or when life is endangered by the occupancy of an unsafe structure, the code official shall be authorized to order the occupants to immediately vacate the unsafe structure. When an unsafe structure is ordered to be vacated, the code official shall post a notice with the following wording at each entrance: "THIS STRUCTURE IS UNSAFE AND ITS OCCUPANCY (OR USE) IS PROHIBITED BY THE CODE OFFICIAL." After posting, occupancy or use of the unsafe structure shall be prohibited except when authorized to enter to conduct inspections, make required repairs or as necessary to demolish the structure.

G. Section 105.5 Posting of notice. If the notice is unable to be issued by personal service as required by Section 105.4, then the notice shall be sent by registered or certified mail to the last known address of the responsible party and a copy of the notice shall be posted in a conspicuous place on the premises.

H. Section 105.6 Posting of placard. In the case of a structure unfit for human habitation, at the time the notice is issued, a placard with the following wording shall be posted at the entrance to the structure: "THIS STRUCTURE IS UNFIT FOR HABITATION AND ITS USE OR OCCUPANCY HAS BEEN PROHIBITED BY THE CODE OFFICIAL." In the case of an unsafe structure, if the notice is not complied with, a placard with the above wording shall be posted at the entrance to the structure. After a structure is placarded, entering the structure shall be prohibited except as authorized by the code official to make inspections, to perform required repairs or to demolish the structure. In addition, the placard shall not be removed until the structure is determined by the code official to be safe to occupy, nor shall the placard be defaced.

I. Section 105.7 Revocation of certificate of occupancy. If a notice of unsafe structure or structure unfit for human habitation is not complied with within the time period stipulated on the notice, the code official shall be permitted to request the local building department to revoke the certificate of occupancy issued under the VCC.

J. Section 105.8 Vacant and open structures. When an unsafe structure or a structure unfit for human habitation is open for public entry at the time a placard is issued under Section 105.6, the code official shall be permitted to authorize the necessary work to make such structure secure against public entry whether or not legal action to compel compliance has been instituted.

K. Section 105.9 Emergency repairs and demolition. To the extent permitted by the locality, the code official may authorize emergency repairs to unsafe structures or structures unfit for human habitation when it is determined that there is an immediate danger of any portion of the unsafe structure or structure unfit for human habitation collapsing or falling and when life is endangered. Emergency repairs may also be authorized where there is a code violation resulting

in the immediate serious and imminent threat to the life and safety of the occupants. The code official shall be permitted to authorize the necessary work to make the structure temporarily safe whether or not legal action to compel compliance has been instituted. In addition, whenever an owner of an unsafe structure or structure unfit for human habitation fails to comply with a notice to demolish issued under Section 105.4 in the time period stipulated, the code official shall be permitted to cause the structure to be demolished. In accordance with §§ 15.2-906 and 15.2-1115 of the Code of Virginia, the legal counsel of the locality may be requested to institute appropriate action against the property owner to recover the costs associated with any such emergency repairs or demolition and every such charge that remains unpaid shall constitute a lien against the property on which the emergency repairs or demolition were made and shall be enforceable in the same manner as provided in Articles 3 (~~§ 58.1-3490~~ § 58.1-3940 et seq.) and 4 (§ 58.1-3965 et seq.) of Chapter 39 of Title 58.1 of the Code of Virginia.

Note: Code officials and local governing bodies should be aware that other statutes and court decisions may impact on matters relating to demolition, in particular whether newspaper publication is required if the owner cannot be located and whether the demolition order must be delayed until the owner has been given the opportunity for a hearing. In addition, historic building demolition may be prevented by authority granted to local historic review boards in accordance with § 15.2-2306 of the Code of Virginia unless determined necessary by the code official.

L. Section 105.10 Closing of streets. When necessary for public safety, the code official shall be permitted to order the temporary closing of sidewalks, streets, public ways or premises adjacent to unsafe or unfit structures and prohibit the use of such spaces.

13VAC5-63-500. Section 106 Appeals.

A. Section 106.1 Establishment of appeals board. In accordance with § 36-105 of the Code of Virginia, there shall be established within each local enforcing agency a LBBCA. Whenever a county or a municipality does not have such a LBBCA, the local governing body shall enter into an agreement with the local governing body of another county or municipality or with some other agency, or a state agency approved by DHCD for such appeals resulting therefrom. Fees may be levied by the local governing body in order to defray the cost of such appeals. The LBBCA for hearing appeals under the VCC shall be permitted to serve as the appeals board required by this section. The locality is responsible for maintaining a duly constituted LBBCA prepared to hear appeals within the time limits established in this section. The LBBCA shall meet as necessary to assure a duly constituted board, appoint officers as necessary, and receive such training on the code as may be appropriate or necessary from staff of the locality.

B. Section 106.2 Membership of board. The LBBCA shall consist of at least five members appointed by the locality for a specific term of office established by written policy. Alternate members may be appointed to serve in the absence of any regular members and as such, shall have the full power and authority of the regular members. Regular and alternate members may be reappointed. Written records of current membership, including a record of the current chairman and secretary shall be maintained in the office of the locality. In order to provide continuity, the terms of the members may be of different length so that less than half will expire in any one-year period.

C. Section 106.3 Officers and qualifications of members. The LBBCA shall annually select one of its regular members to serve as chairman. When the chairman is not present at an appeal hearing, the members present shall select an acting chairman. The locality or the chief executive officer of the locality shall appoint a secretary to the LBBCA to maintain a detailed record of all proceedings. Members of the LBBCA shall be selected by the locality on the basis of their ability to render fair and competent decisions regarding application of the USBC and shall to the extent possible, represent different occupational or professional fields relating to the construction industry. At least one member should be an experienced builder; at least one member should be an RDP, and at least one member should be an experienced property manager. Employees or officials of the locality shall not serve as members of the LBBCA.

D. Section 106.4 Conduct of members. No member shall hear an appeal in which that member has a conflict of interest in accordance with the State and Local Government Conflict of Interests Act (§ 2.2-3100 et seq. of the Code of Virginia). Members shall not discuss the substance of an appeal with any other party or their representatives prior to any hearings.

E. Section 106.5 Right of appeal; filing of appeal application. Any person aggrieved by the local enforcing agency's application of this code or the refusal to grant a modification to the provisions of this code may appeal to the LBBCA. The applicant shall submit a written request for appeal to the LBBCA within 14 calendar days of the receipt of the

decision being appealed. The application shall contain the name and address of the owner of the building or structure and, in addition, the name and address of the person appealing, when the applicant is not the owner. A copy of the code official's decision shall be submitted along with the application for appeal and maintained as part of the record. The application shall be marked by the LBBCA to indicate the date received. Failure to submit an application for appeal within the time limit established by this section shall constitute acceptance of a code official's decision.

F. Section 106.6 Meetings and postponements. The LBBCA shall meet within 30 calendar days after the date of receipt of the application for appeal, except that a period of up to 45 calendar days shall be permitted where the LBBCA has regularly scheduled monthly meetings. A longer time period shall be permitted if agreed to by all the parties involved in the appeal. A notice indicating the time and place of the hearing shall be sent to the parties in writing to the addresses listed on the application at least 14 calendar days prior to the date of the hearing, except that a lesser time period shall be permitted if agreed to by all the parties involved in the appeal. When a quorum of the LBBCA is not present at a hearing to hear an appeal, any party involved in the appeal shall have the right to request a postponement of the hearing. The LBBCA shall reschedule the appeal within 30 calendar days of the postponement, except that a longer time period shall be permitted if agreed to by all the parties involved in the appeal.

G. Section 106.7 Hearings and decision. All hearings before the LBBCA shall be open meetings and the appellant, the appellant's representative, the locality's representative and any person whose interests are affected by the code official's decision in question shall be given an opportunity to be heard. The chairman shall have the power and duty to direct the hearing, rule upon the acceptance of evidence and oversee the record of all proceedings. The LBBCA shall have the power to uphold, reverse or modify the decision of the official by a concurring vote of a majority of those present. Decisions of the LBBCA shall be final if no further appeal is made. The decision of the LBBCA shall be by resolution signed by the chairman and retained as part of the record of the appeal. Copies of the resolution shall be sent to all parties by certified mail. In addition, the resolution shall contain the following wording:

"Any person who was a party to the appeal may appeal to the State Review Board by submitting an application to such Board within 21 calendar days upon receipt by certified mail of this resolution. Application forms are available from the Office of the State Review Board, 600 East Main Street, Richmond, Virginia 23219, (804) 371-7150."

H. Section 106.8 Appeals to the State Review Board. After final determination by the LBBCA in an appeal, any person who was a party to the appeal may further appeal to the State Review Board. In accordance with § 36-98.2 of the Code of Virginia for state-owned buildings and structures, appeals by an involved state agency from the decision of the code official for state-owned buildings or structures shall be made directly to the State Review Board. The application for appeal shall be made to the State Review Board within 21 calendar days of the receipt of the decision to be appealed. Failure to submit an application within that time limit shall constitute an acceptance of the code official's decision. For appeals from a LBBCA, a copy of the code official's decision and the resolution of the LBBCA shall be submitted with the application for appeal to the State Review Board. Upon request by the Office of the State Review Board, the LBBCA shall submit a copy of all pertinent information from the record of the appeal. In the case of appeals involving state-owned buildings or structures, the involved state agency shall submit a copy of the code official's decision and other relevant information with the application for appeal to the State Review Board. Procedures of the State Review Board are in accordance with Article 2 (§ 36-108 et seq.) of Chapter 6 of Title 36 of the Code of Virginia. Decisions of the State Review Board shall be final if no further appeal is made.

13VAC5-63-510. Chapter 2 Definitions.

A. Change Section 201.3 of the IPMC to read:

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the IBC, IFC, IFGC, IPC, IMC, International Existing Building Code, IRC, International Zoning Code or NFPA 70, such terms shall have the meanings ascribed to them as stated in those codes, except that terms defined in the VCC shall be used for this code and shall take precedence over other definitions.

B. Add the following definitions to Section 202 of the IPMC to read:

Structure unfit for human occupancy. An existing structure determined by the code official to be dangerous to the health, safety and welfare of the occupants of the structure or the public because (i) of the degree to which the structure

is in disrepair or lacks maintenance, ventilation, illumination, sanitary or heating facilities or other essential equipment, or (ii) the required plumbing and sanitary facilities are inoperable.

Unsafe equipment. Unsafe equipment includes any boiler, heating equipment, elevator, moving stairway, electrical wiring or device, flammable liquid containers or other equipment that is in such disrepair or condition that such equipment is determined by the code official to be dangerous to the health, safety and welfare of the occupants of a structure or the public.

Unsafe structure. An existing structure (i) determined by the code official to be dangerous to the health, safety and welfare of the occupants of the structure or the public, (ii) that contains unsafe equipment, or (iii) that is so damaged, decayed, dilapidated, structurally unsafe or of such faulty construction or unstable foundation that partial or complete collapse is likely. A vacant existing structure unsecured or open shall be deemed to be an unsafe structure.

13VAC5-63-520. Chapter 3 General Requirements.

A. Delete Section 302.1 of the IPMC.

B. Change Section 302.2 of the IPMC to read:

302.2 Grading and drainage. All premises shall be graded and maintained to protect the foundation walls or slab of the structure from the accumulation and drainage of surface or stagnant water in accordance with the VCC.

C. Change Section 302.3 of the IPMC to read:

302.3 Sidewalks and driveways. All sidewalks, walkways, stairs, driveways, parking spaces and similar spaces regulated under the VCC shall be kept in a proper state of repair, and maintained free from hazardous conditions. Stairs shall comply with the requirements of Sections 305 and 702.

D. Delete Section 302.4 of the IPMC.

E. Change Section 302.5 of the IPMC to read:

302.5 Rodent harborage. All structures and adjacent premises shall be kept free from rodent harborage and infestation where such harborage or infestation adversely affects the structures.

F. Delete Sections 302.8 and 302.9 of the IPMC.

G. Delete Section 304.1.1 of the IPMC.

H. Change Section 304.7 of the IPMC to read:

304.7 Roofs and drainage. The roof and flashing shall be sound, tight and not have defects that admit rain. Roof drainage shall be adequate to prevent dampness or deterioration in the walls or interior portion of the structure. Roof drains, gutters and downspouts shall be maintained in good repair and free from obstructions. Roof water shall be discharged in a manner to protect the foundation or slab of buildings and structures from the accumulation of roof drainage.

I. Change Section 304.14 of the IPMC to read:

304.14 Insect screens. During the period from April 1 to December 1, every door, window and other outside opening required for ventilation of habitable rooms, food preparation areas, food service areas or any areas where products to be included or utilized in food for human consumption are processed, manufactured, packaged or stored, shall be supplied with approved tightly fitting screens of not less than 16 mesh per inch (16 mesh per 25 mm) and every screen door used for insect control shall have a self-closing device in good working condition.

Exception: Screens shall not be required where other approved means, such as mechanical ventilation, air curtains or insect repellent fans, are used.

J. Delete Sections 304.18, 304.18.1, 304.18.2 and 304.18.3 of the IPMC.

K. Delete Section 305.1.1 of the IPMC.

L. Add Section 305.7 to the IPMC to read:

305.7 Carbon monoxide alarms. Carbon monoxide alarms shall be maintained as approved.

M. Delete Section 306 of the IPMC in its entirety.

N. Change Section 308.1 of the IPMC to read as follows and delete the remaining provisions of Section 308:

308.1 Accumulation of rubbish and garbage. The interior of every structure shall be free from excessive accumulation of rubbish or garbage.

O. Change Section 309.1 of the IPMC to read:

309.1 Infestation. This section shall apply to the extent that insect and rodent infestation adversely affects a structure. All structures shall be kept free from insect and rodent infestation. All structures in which insects or rodents are found shall be promptly exterminated by approved processes that will not be injurious to human health. After extermination, proper precautions shall be taken to prevent reinfestation.

P. Add IPMC Section 310 Lead-Based Paint.

Q. Add Section 310.1 to the IPMC to read:

310.1 General. Interior and exterior painted surfaces of dwellings and child care facilities, including fences and outbuildings, that contain lead levels equal to or greater than 1.0 milligram per square centimeter or in excess of 0.50% lead by weight shall be maintained in a condition free from peeling, chipping and flaking paint or removed or covered in an approved manner. Any surface to be covered shall first be identified by an approved warning as to the lead content of such surface.

R. Add IPMC Section 311 Aboveground Liquid Fertilizer Storage Tanks (ALFSTs).

S. Add Section 311.1 to the IPMC to read:

311.1 General. ALFSTs shall be maintained in accordance with the requirements of Section 1701.16 of the VRC and the requirements of the VCC applicable to such ALFSTs when newly constructed and the requirements of the VRC when undergoing a change of occupancy to an ALFST and when repaired, altered or reconstructed, including the requirements for inspections and for a secondary containment system.

13VAC5-63-530. Chapter 5 Plumbing Facilities and Fixture Requirements.

A. Add Section 505.5 to the IPMC to read:

505.5 Inspection and testing of backflow prevention assemblies. Inspection and testing shall comply with Sections 505.5.1 and 505.5.2.

B. Add Section 505.5.1 to the IPMC to read:

505.5.1 Inspections. Inspections shall be made of all backflow prevention assemblies and air gaps to determine whether they are operable.

C. Add Section 505.5.2 to the IMPC to read:

505.5.2 Testing. Reduced pressure principle backflow preventer assemblies, double check-valve assemblies, double-detector check valve assemblies and pressure vacuum breaker assemblies shall be tested at the time of installation, immediately after repairs or relocation and at least annually. The testing procedure shall be performed in accordance with one of the following standards: ASSE 5010-1013-1, Sections 1 and 2; ASSE 5010-1015-1, Sections 1 and 2; ASSE 5010-1015-2; ASSE 5010-1015-3, Sections 1 and 2; ASSE 5010-1015-4, Sections 1 and 2; ASSE 5010-1020-1, Sections 1 and 2; ASSE 5010-1047-1, Sections 1, 2, 3 and 4; ASSE 5010-1048-1, Sections 1, 2, 3 and 4; ASSE 5010-1048-2; ASSE 5010-1048-3, Sections 1, 2, 3 and 4; ASSE 5010-1048-4, Sections 1, 2, 3 and 4; or CAN/CSA B64.10.

D. Change Section 507.1 of the IPMC to read:

507.1 General. Drainage of roofs and paved areas, yards and courts, and other open areas on the premises shall be discharged in a manner to protect the buildings and structures from the accumulation of overland water runoff.

13VAC5-63-540. Chapter 6 Mechanical and Electrical Requirements.

A. Change Section 602 of the IPMC to read:

Section 602 Heating and Cooling Facilities.

B. Change Section 602.1 of the IPMC to read:

602.1 Facilities required. Heating and cooling facilities shall be maintained and operated in structures as required by this section.

C. Change Section 602.2 of the IPMC to read:

602.2 Heat supply. Every owner and operator of a Group R-2 apartment building or other residential dwelling who rents, leases or lets one or more dwelling unit, rooming unit, dormitory or guestroom on terms, either expressed or implied, to furnish heat to the occupants thereof shall supply heat during the period from October 15 to May 1 to maintain a temperature of not less than 65°F (18°C) in all habitable rooms, bathrooms, and toilet rooms. The code official may also consider modifications as provided in Section 104.5.2 when requested for unusual circumstances or may issue notice approving building owners to convert shared heating and cooling piping HVAC systems 14 calendar days before or after the established dates when extended periods of unusual temperatures merit modifying these dates.

Exception: When the outdoor temperature is below the winter outdoor design temperature for the locality, maintenance of the minimum room temperature shall not be required provided that the heating system is operating at its full design capacity. The winter outdoor design temperature for the locality shall be as indicated in Appendix D of the IPC.

D. Add Section 602.2.1 to the IPMC to read:

602.2.1 Prohibited use. In dwelling units subject to Section 602.2, one or more unvented room heaters shall not be used as the sole source of comfort heat in a dwelling unit.

E. Change Section 602.3 of the IPMC to read:

602.3 Occupiable work spaces. Indoor occupiable work spaces shall be supplied with heat during the period from October 1 to May 15 to maintain a temperature of not less than 65°F (18°C) during the period the spaces are occupied.

Exceptions:

1. Processing, storage and operation areas that require cooling or special temperature conditions.
2. Areas in which persons are primarily engaged in vigorous physical activities.

F. Change Section 602.4 of the IPMC to read:

602.4 Cooling supply. Every owner and operator of a Group R-2 apartment building who rents, leases or lets one or more dwelling units, rooming units or guestrooms on terms, either expressed or implied, to furnish cooling to the occupants thereof shall supply cooling during the period from May 15 to October 1 to maintain a temperature of not more than 80°F (27°C) in all habitable rooms. The code official may also consider modifications as provided in Section 104.5.2 when requested for unusual circumstances or may issue notice approving building owners to convert shared heating and cooling piping HVAC systems 14 calendar days before or after the established dates when extended periods of unusual temperatures merit modifying these dates.

Exception: When the outdoor temperature is higher than the summer design temperature for the locality, maintenance of the room temperature shall not be required provided that the cooling system is operating at its full design capacity. The summer outdoor design temperature for the locality shall be as indicated in the IECC.

G. Change the exception to Section 604.3.1.1 of the IPMC to read:

Exception: The following equipment shall be allowed to be repaired or reused where an inspection report from the equipment manufacturer, an approved representative of the equipment manufacturer, a third party licensed or certified electrician, or an electrical engineer indicates that the exposed equipment has not sustained damage that requires replacement:

1. Enclosed switches, rated 600 volts or less;
2. Busway, rated 600 volts or less;
3. Panelboards, rated 600 volts or less;
4. Switchboards, rated 600 volts or less;
5. Fire pump controllers, rated 600 volts or less;
6. Manual and magnetic motor controllers;
7. Motor control centers;
8. Alternating current high-voltage circuit breakers;
9. Low-voltage power circuit breakers;
10. Protective relays, meters and current transformers;
11. Low-voltage and medium-voltage switchgear;
12. Liquid-filled transformers;
13. Cast-resin transformers;
14. Wire or cable that is suitable for wet locations and whose ends have not been exposed to water;
15. Wire or cable, not containing fillers, that is suitable for wet locations and whose ends have not been exposed to water;
16. Luminaires that are listed as submersible;
17. Motors;
18. Electronic control, signaling and communication equipment.

H. Change Section 606.1 to the IPMC to read:

606.1 General. Elevators, dumbwaiters and escalators shall be maintained in compliance with ASME A17.1. The most current certificate of inspection shall be on display at all times within the elevator or attached to the escalator or dumbwaiter, be available for public inspection in the office of the building operator or be posted in a publicly conspicuous location approved by the code official. An annual periodic inspection and test is required of elevators and escalators. A locality shall be permitted to require a six-month periodic inspection and test. All periodic inspections shall be performed in accordance with Section 8.11 of ASME A17.1. The code official may also provide for such inspection by an approved agency or through agreement with other local certified elevator inspectors. An approved agency includes any individual, partnership or corporation who has met the certification requirements established by the VCS.

3/8/16

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
2015 VIRGINIA INDUSTRIALIZED BUILDING SAFETY REGULATIONS (IBSR) BASE DOCUMENT

Summary – This document is compiled by staff of the State Building Codes Office (SBCO) of the Division of Building and Fire Regulation. Its purpose is to make those changes necessary to the 2012 IBSR to utilize the 2015 editions of the International Codes and to review the existing IBSR for any changes necessary to comport with state law. Other substantive changes to the IBSR by interest groups or by SBCO staff are handled through proposals submitted through the department’s electronic code change system (cdpVA). Once the base document is approved by the Board of Housing and Community Development, any code change proposals which are approved by the Board of Housing and Community Development prior to the development of proposed regulations will be combined with the base document and brought back to the Board of Housing and Community Development as a separate “proposed regulations” document for review. The full text of the IBSR is not set out here as only § 160 needs to be modified to bring in the new editions of the International Codes. SBCO staff has reviewed the current law authorizing the IBSR and determined that no changes need to be made to the IBSR to comport with the law.

13VAC5-91-160. Use of Model Codes and Standards.

A. Industrialized buildings produced after the effective date of the ~~2012~~ 2015 edition of this chapter shall comply with all applicable requirements of the codes and standards listed in subsection B of this section except that the following codes and standards may be used for one year after the effective date of the ~~2012~~ 2015 edition of this chapter:

1. ICC International Building Code – ~~2009~~ 2012 Edition
2. ICC International Plumbing Code - ~~2009~~ 2012 Edition
3. ICC International Mechanical Code - ~~2009~~ 2012 Edition
4. National Fire Protection Association Standard Number 70 (National Electrical Code) - ~~2008~~ 2011 Edition
5. ICC International Fuel Gas Code – ~~2009~~ 2012 Edition
6. ICC International Energy Conservation Code – ~~2009~~ 2012 Edition
7. ICC International Residential Code - ~~2009~~ 2012 Edition

B. The following documents are adopted and incorporated by reference to be an enforceable part of this chapter:

1. ICC International Building Code - ~~2012~~ 2015 Edition
2. ICC International Plumbing Code - ~~2012~~ 2015 Edition
3. ICC International Mechanical Code - ~~2012~~ 2015 Edition
4. National Electrical Code – ~~2011~~ 2014 Edition
5. ICC International Fuel Gas Code - ~~2012~~ 2015 Edition
6. ICC International Energy Conservation Code - ~~2012~~ 2015 Edition
7. ICC International Residential Code - ~~2012~~ 2015 Edition

Note: As the ~~2012~~ 2015 editions of the International Codes are incorporated by reference as the construction standards for use with these regulations, this chapter is also referred to as the ~~2012~~ 2015 edition of the Virginia Industrialized Building Safety Regulations or the ~~2012~~ 2015 edition of this chapter.

The codes and standards referenced above may be procured from:

International Code Council, Inc.
500 New Jersey Avenue, NW, 6th Floor
Washington, DC 20001-2070

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C-101.5 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2012 Virginia Construction Code

101.5 Use of terminology and notes.

The provisions of this code shall be used as follows:

1. The term "this code," or "the code," where used in the provisions of Chapter [1](#), in Chapters [2-35](#) of the IBC or in the state amendments to the IBC means the USBC, unless the context clearly indicates otherwise.
2. The term "this code" or "the code" where used in a code or standard referenced in the IBC means that code or standard, unless the context clearly indicates otherwise.
3. The use of notes in Chapter [1](#) is to provide information only and shall not be construed as changing the meaning of any code provision.
4. Notes in the IBC, in the codes and standards referenced in the IBC and in the state amendments to the IBC may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise.

Reason: The proposed change revises the format (without changing the technical aspects or text) so that it is easier to read and understand. It also follows the same formatting being proposed for the VEBC.

Cost Impact: None.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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C-102.3(1) cdpVA-15

Proponent : Ronald Clements, Jr, Representing VBCOA Administrative committee (clementsro@chesterfield.gov)

2012 Virginia Construction Code

102.3 Exemptions. The following are exempt from this code:

1. Equipment, ~~related wiring, and poles and towers~~ supporting structures used for providing wired utility, telecommunications, information, or cable television service in accordance with all of the following conditions:

1.1. ~~¶~~The related equipment, wiring installed, and supporting structures are owned and controlled by a provider of publicly regulated utility service or a franchised cable television operator or its affiliates.

1.2. ~~and electrical~~ The equipment and related, wiring used for radio, broadcast or cable television, telecommunications or information service transmission. The exemption shall apply only if under applicable federal and state law the ownership and control of the equipment and wiring is by the service provider or its affiliates. Such exempt equipment and wiring shall be, and supporting structures are located on either rights-of-way or property for which the service provider has rights of occupancy and entry; however, the structures, including their service equipment,

1.3. Buildings housing or supporting such exempt equipment and wiring shall be subject to the USBC.

1.4. The installation of equipment and, wiring and supporting structures exempted by this section shall not create an unsafe condition prohibited by the USBC.

2. Electrical equipment, transmission equipment, and related wiring used for wireless transmission of radio, broadcast, telecommunications, or information service in accordance with all of the following conditions:

2.1. Buildings housing exempt equipment and wiring and structures supporting exempt equipment and wiring shall be subject to the USBC.

2.2. The equipment and wiring exempted by this section shall not create an unsafe condition prohibited by the USBC.

~~2- 3.~~ 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.

~~2-1-3.1.~~ Electrical equipment connected after the last disconnecting means.

~~2-2-3.2.~~ Plumbing piping and equipment connected after the last shutoff valve or backflow device and before the equipment drain trap.

~~2-3-3.3.~~ 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.

~~3-4.~~ Parking lots and sidewalks that are not part of an accessible route.

~~4-5.~~ Nonmechanized 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.

~~5-6.~~ Industrialized buildings subject to the Virginia Industrialized Building Safety Regulations (13VAC5-91) and manufactured homes subject to the Virginia Manufactured Home Safety Regulations (13VAC5-95); except as provided for in Section 425.

~~6-7.~~ Farm buildings and structures, except for a building or a portion of a building located on a farm that is operated as a restaurant as defined in Section 35.1-1 of the Code of Virginia and licensed as such by the Virginia Board of Health pursuant to Chapter 2 (Section 35.1-11 et seq.) of Title 35.1 of the Code of Virginia. However, farm buildings and structures lying within a flood plain or in a mudslide-prone area shall be subject to flood-proofing regulations or mudslide regulations, as applicable.

~~7-8.~~ Federally owned buildings and structures unless federal law specifically requires a permit from the locality. Underground storage tank installations, modifications and removals shall comply with this code in accordance with federal law.

~~8-9.~~ Off-site manufactured intermodal freight containers, moving containers, and storage containers placed on site temporarily or permanently for use as a storage container.

~~9-10.~~ Automotive lifts.

Reason: The current electrical utility and telecommunications code exemption detailed in exception #1 of section 102.3 has been a source of confusion because of the length of the single exception and the amount of qualifiers listed in the two sentences that make up the exception. This code change is intended to clarify the intent of the exception and is predominately editorial.

The existing exception is actually two exceptions in practice; therefore, the exception has been split in the proposal into two separate exceptions. The distinction between the two exceptions is #1 is for wired equipment and #2 is for wireless equipment. This distinction is because the allowance for exempting the supporting structures from the code only applies to wired systems.

The other change that is not editorial is that "poles and towers supporting the related wiring" has been changed to "supporting structures". "Supporting structures" is intended to be inclusive of poles and towers but also capture other supporting structures such as platforms supporting equipment at sub-stations. Buildings housing equipment are still within the scope of the building code.

Cost Impact: There is no cost impact because the code change is editorial.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-102.3(1) cdpVA-15

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C-102.3(2) cdpVA-15

Proponent : Michael Redifer, Representing VBCOA Admin Committee
(mredifer@nnva.gov)

2012 Virginia Construction Code

102.3 Exemptions.

The following are exempt from this code:

1. Equipment, related wiring, and poles and towers supporting the related wiring installed by a provider of publicly regulated utility service or a franchised cable television operator and electrical equipment and related wiring used for radio, broadcast or cable television, telecommunications or information service transmission. The exemption shall apply only if under applicable federal and state law the ownership and control of the equipment and wiring is by the service provider or its affiliates. Such exempt equipment and wiring shall be located on either rights-of-way or property for which the service provider has rights of occupancy and entry; however, the structures, including their service equipment, housing or supporting such exempt equipment and wiring shall be subject to the USBC. The installation of equipment and wiring exempted by this section shall not create an unsafe condition prohibited by the USBC.
2. Manufacturing, and processing and product handling machines and equipment that do not produce or process hazardous materials regulated by this code, including those portions of conveyor systems used exclusively for the transport of associated materials or products and 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.

3. Parking lots and sidewalks that are not part of an accessible route.
4. Nonmechanized 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.
5. Industrialized buildings subject to the Virginia Industrialized Building Safety Regulations (13VAC5-91) and manufactured homes subject to the Virginia Manufactured Home Safety Regulations (13VAC5-95); except as provided for in Section [425](#).
6. Farm buildings and structures, except for a building or a portion of a building

located on a farm that is operated as a restaurant as defined in Section 35.1-1 of the Code of Virginia and licensed as such by the Virginia Board of Health pursuant to Chapter 2 (Section 35.1-11 et seq.) of Title 35.1 of the Code of Virginia. However, farm buildings and structures lying within a flood plain or in a mudslide-prone area shall be subject to flood-proofing regulations or mudslide regulations, as applicable.

7. Federally owned buildings and structures unless federal law specifically requires a permit from the locality. Underground storage tank installations, modifications and removals shall comply with this code in accordance with federal law.
8. Off-site manufactured intermodal freight containers, moving containers and storage containers placed on site temporarily or permanently for use as a storage container.
9. Automotive lifts.

Reason: A need to further clarify additional components associated with manufacturing and processing machines as well as the intent to apply the exemption to machinery and equipment involving the handling of products or packages has been identified. It is not uncommon for such installations to incorporate material/product conveying systems which should also be exempted to the extent that they serve the exempt machinery exclusively. Foundation and structural support systems as well as any portions intended for use by service and/or maintenance personnel would not be exempt.

Cost Impact: There will be no impact on the cost of construction as these components are essential to the functionality of the machinery and provided regardless of whether they are regulated by the USBC.

Workgroup Recommendation

Workgroup 1 Recommendation: Consensus for Approval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-102.3(2) cdpVA-15

C-102.3(3) cdpVA-15

Proponent : Michael Dellinger, Representing VBCOA Region III
(mdellinger@shenandoahcountyva.us)

2012 Virginia Construction Code

102.3 Exemptions. The following are exempt from this code:

(Items 1-4 unchanged)

5. Industrialized buildings subject to the Virginia Industrialized Building Safety Regulations (13VAC5-91) and manufactured homes subject to the Virginia Manufactured Home Safety Regulations (13VAC5-95); except as provided for in Section 425 and in the case of demolition of such industrialized buildings or manufactured homes.

(Remaining items unchanged)

Reason: The current VCC does not address demolition in place of manufactured homes. Below is an excerpt from an email concerning this from DHCD where language was suggested to make it clear that demolition would be covered by the VCC:

"I got your voice mail about the lack of language in the VCC for the demolition of manufactured homes. It probably just wasn't contemplated. Manufactured homes are typically moved, not demolished. Because they are subject to federal regulation, they are generally left in one piece so that they can be used again, or they go to the manufactured home graveyard. As far as whether a VCC permit is necessary for moving a manufactured home out of a locality, there would be construction activities taking place that would require a permit such as the disconnection of the utilities.

In the odd event that someone actually wanted to demolish a manufactured home in place and haul away the debris, there does appear to be a gap in the language in the VCC, so that should probably be corrected. Maybe your VBCOA region would be willing to submit a proposal. I would add language to the exemption in 102.3, maybe as follows:

5. Industrialized buildings subject to the Virginia Industrialized Building Safety Regulations (13VAC5-91) and manufactured homes subject to the Virginia Manufactured Home Safety Regulations (13VAC5-95); except as provided for in Section 425 and in the case of demolition of such industrialized buildings or manufactured homes."

Cost Impact: The only cost impact will be the purchase of a demolition permit from the locality.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-102.3(3) cdpVA-15

C-103.3(2) cdpVA-15

Proponent : College Laboratory Sub-workgroup (of DHCD's Workgroup Two) DHCD Staff Contact: Vernon.Hodge@dhcd.virginia.gov

2012 Virginia Construction Code

103.3 Change of occupancy. No change of occupancy shall be made in any structure when the current USBC requires a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation or sanitation. When such a greater degree is required, the owner or the owner's agent shall comply with the following:

1. When involving Group I-2 or I-3, written application shall be made to the local building department for a new certificate of occupancy and the new certificate of occupancy shall be obtained prior to the new use of the structure. When impractical to achieve compliance with this code for the new occupancy classification, the building official shall consider modifications upon application and as provided for in Section 106.3. In addition, the applicable accessibility provisions of Section 1012.8 of Part II of the *Virginia Uniform Statewide Building Code*, also known as the "*Virginia Rehabilitation Code*," or the "VRC" shall be met.

Exception: This section shall not be construed to permit noncompliance with any applicable flood load or flood-resistant construction requirements of this code.

2. In other than Group I-2 or I-3, the provisions of the VRC for change of occupancy shall be met.

103.3.1 Group B teaching and research laboratories. Where the use of new or different hazardous materials or a change in the amount of hazardous materials in existing Group B teaching and research laboratories in educational occupancies above the 12th grade would constitute a change of occupancy, Section 302.6 of the VRC shall be permitted to be used as an acceptable alternative to compliance with change of occupancy requirements to permit the increased amounts of hazardous materials stipulated without the laboratories being classified as Group H.

SECTION 202 DEFINITIONS

CHEMICAL FUME HOOD. A ventilated enclosure designed to contain and exhaust fumes, gases, vapors, mists and particulate matter generated within the hood.

LABORATORY SUITE. A fire-rated enclosed laboratory area that will provide one or more laboratory spaces, within a Group B educational occupancy, that are permitted to include ancillary uses such as offices, bathrooms, and corridors that are contiguous with the laboratory area, and are constructed in accordance with section 427.3.

TEACHING AND RESEARCH LABORATORY. A building or portion of a building where hazardous materials are stored, used and handled for the purpose of testing, analysis, teaching, research or developmental activities on a nonproduction basis rather than in a manufacturing process.

2015 International Building Code

(As Part of the 2015 Virginia Construction Code)

[F] 414.2 Control areas. *Control areas* shall comply with Sections 414.2.1 through 414.2.5 and the *International Fire Code*.

Exception: Higher education teaching and research laboratories shall be permitted to comply with Section 427.

SECTION 427 HIGHER EDUCATION LABORATORIES

427.1 Scope. Group B teaching and research laboratories in educational occupancies above the 12th grade complying with the requirements of this section shall be permitted to comply with Tables 427.3, 427.4(1), or 427.4(2) without requiring classification as a Group H occupancy. Except as specified in this section, such laboratories shall comply with all applicable provisions of this code. In addition, as set out in Section 5001.7 of the SFPC, approval under this section is contingent upon operational requirements in the SFPC being complied with and maintained.

427.2 Application. The provisions of this section shall be applied as exceptions or additions to applicable requirements of this code.

427.3 Laboratory suite construction. Where laboratory suites are provided, they shall be constructed in accordance with this section. The number of laboratory suites and percentage of maximum allowable quantities of hazardous materials in laboratory suites shall be in accordance with Table 427.3.

427.3.1 Separation from adjacent areas. Laboratory suites shall be separated from other portions of the building in accordance with the most restrictive of either (i) Table 427.3 with fire barriers constructed in accordance with Section 707 and horizontal assemblies constructed in accordance with Section 711, or (ii) Section 508.4. Where individual laboratories within a laboratory suite are separated from each other, the separation shall consist of one-hour fire barriers.

Exception: Where an individual laboratory suite occupies more than one story, the fire resistance rating of intermediate floors contained within the laboratory suite shall comply with the requirements of this code.

427.3.2 Separation from other laboratory suites. Laboratory suites shall be separated from other laboratory suites in accordance with Table 427.3.

427.3.3 Floor assembly fire resistance. The floor assembly supporting the laboratory suite and the construction supporting the floor of the laboratory suite shall have a fire resistance rating of not less than 2 hours.

Exception: The floor assembly of the laboratory suite and the construction supporting the floor of the laboratory suite are allowed to be 1-hour fire resistance rated in buildings of Types IIA, IIIA and VA construction, provided that the building is 3 or fewer stories.

427.3.4 Maximum number. The maximum number of laboratory suites per floor shall be

in accordance with Table 427.3. Where a building contains both laboratory suites complying with Section 427.3 and control areas complying with Section 414.2, the total number of laboratory suites and control areas shall not exceed the maximum number of laboratory suites in accordance with Table 427.3.

427.3.5 Standby or emergency power. Standby or emergency power shall be provided in accordance with Section 414.5.2 where laboratory suites are located above the sixth story above grade plane or located in a story below grade plane.

427.3.6 Ventilation. Ventilation shall be in accordance with the International Mechanical Code. The design and installation of ducts from chemical fume hoods shall be in accordance with NFPA 91.

427.3.7 Liquid tight floor. Portions of the laboratory suite where hazardous materials are present shall be provided with a liquid tight floor.

427.3.8 Automatic fire sprinkler systems. Buildings shall be equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1.

427.3.9 Automatic fire alarm and detection system. Laboratory suites shall be equipped throughout with an automatic fire detection system in accordance with Section 907.2. The building shall be equipped throughout with an automatic fire alarm system in accordance with Section 907.2.

427.3.10 Percentage of maximum allowable quantity in each laboratory suite. The percentage of maximum allowable quantities in each laboratory suite shall be in accordance with Table 427.3.

**TABLE 427.3
DESIGN AND NUMBER OF LABORATORY SUITES PER FLOOR**

<u>Floor Level</u>		<u>Percentage of the Maximum Allowable Quantity per Lab Suite^a</u>	<u>Number of Lab Suites per Floor</u>	<u>Fire-Resistance Rating for Fire Barriers in Hours^b</u>
<u>Above Grade Plane</u>	<u>21+</u>	<u>5</u>	<u>1</u>	<u>2</u>
	<u>16-20</u>	<u>25</u>	<u>1</u>	<u>2</u>
	<u>11-15</u>	<u>50</u>	<u>1</u>	<u>2</u>
	<u>7-10</u>	<u>50</u>	<u>2</u>	<u>2</u>
	<u>4-6</u>	<u>75</u>	<u>4</u>	<u>1</u>
	<u>3</u>	<u>100</u>	<u>6</u>	<u>1</u>
	<u>1-2</u>	<u>100</u>	<u>8</u>	<u>1</u>
<u>Below Grade Plane</u>	<u>1</u>	<u>75</u>	<u>4</u>	<u>1</u>
	<u>2</u>	<u>50</u>	<u>2</u>	<u>1</u>
	<u>Lower than 2</u>	<u>Not Allowed</u>	<u>Not Allowed</u>	<u>Not Allowed</u>

a. Percentage shall be of the maximum allowable quantity per control area shown in Tables 307.1(1) and 307.1(2), with all increases allowed in the notes to those tables.

b. Fire barriers shall include walls, floors and ceilings necessary to provide separation from other portions of the building.

427.4 Teaching and research laboratories utilizing control areas. Group B teaching and research laboratories in educational occupancies above the 12th grade utilizing control areas are permitted to increase amounts of hazardous materials stipulated in 414.2 without the laboratories being classified as Group H. The percentage of maximum allowable quantities of hazardous materials per control area and the number of control areas permitted at each floor level within a building shall be permitted to comply with Table 427.4(1) in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or shall be permitted to comply with Table 427.4(2) in buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. In addition, as set out in Section 5001.7 of the SFPC, approval under this section is contingent upon operational requirements in the SFPC being complied with and maintained.

TABLE 427.4(1)

DESIGN AND NUMBER OF CONTROL AREAS IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 WITH GROUP B TEACHING AND RESEARCH LABORATORIES IN EDUCATIONAL OCCUPANCIES ABOVE THE 12TH GRADE

<u>Floor Level</u>		<u>Percentage of the Maximum Allowable Quantity per Control Area^a</u>	<u>Number of Control Areas per Floor</u>	<u>Fire-Resistance Rating for Fire Barriers and Horizontal Assemblies in Hours^b</u>
<u>Above Grade Plane</u>	<u>Higher than 20</u>	<u>5</u>	<u>1</u>	<u>2</u>
	<u>11-20</u>	<u>10</u>	<u>1</u>	<u>2</u>
	<u>7-10</u>	<u>25</u>	<u>2</u>	<u>2</u>
	<u>4-6</u>	<u>50</u>	<u>2</u>	<u>2</u>
	<u>3</u>	<u>75</u>	<u>3</u>	<u>1</u>
	<u>1-2</u>	<u>100</u>	<u>4</u>	<u>1</u>
<u>Below Grade Plane</u>	<u>1</u> <u>2</u> <u>Lower than 2</u>	<u>75</u> <u>50</u> <u>Not Allowed</u>	<u>3</u> <u>2</u> <u>Not Allowed</u>	<u>1</u> <u>1</u> <u>Not Allowed</u>

a. Percentage shall be of the maximum allowable quantity per control area shown in Tables 307.1(1) and 307.1(2), with all increases allowed in the notes to those tables.

b. Separation shall include fire barriers and horizontal assemblies as necessary to provide separation from other portions of the building.

TABLE 427.4(2)

DESIGN AND NUMBER OF CONTROL AREAS IN BUILDINGS NOT EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 WITH GROUP B TEACHING AND RESEARCH LABORATORIES IN EDUCATIONAL OCCUPANCIES ABOVE THE 12TH GRADE

	<u>Percentage of the Maximum Allowable Quantity</u>	<u>Number</u>	<u>Fire-Resistance Rating for Fire Barriers and</u>
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<u>Floor Level</u>		<u>per Control Area^a</u>	<u>of Control Areas per Floor</u>	<u>Horizontal Assemblies in Hours^b</u>
<u>Above Grade Plane</u>	Higher than 9	<u>5</u>	<u>1</u>	<u>2</u>
	<u>7-9</u>	<u>10</u>	<u>2</u>	<u>2</u>
	<u>4-6</u>	<u>25</u>	<u>2</u>	<u>2</u>
	<u>3</u>	<u>75</u>	<u>2</u>	<u>1</u>
	<u>1-2</u>	<u>100</u>	<u>4</u>	<u>1</u>
<u>Below Grade Plane</u>		<u>75</u> <u>50</u> Not Allowed	<u>3</u> <u>2</u> Not Allowed	<u>1</u> <u>1</u> Not Allowed
	<u>1</u> <u>2</u> Lower than 2			

a. Percentage shall be of the maximum allowable quantity per control area shown in Tables 307.1(1) and 307.1(2), with all increases allowed in the notes to those tables.

b. Separation shall include fire barriers and horizontal assemblies as necessary to provide separation from other portions of the building.

427.4.1 Separation requirements. Control areas shall be separated from each other and from other non-control areas by fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.

427.4.2 Fire-resistance-rating requirements. The required fire-resistance rating for fire barriers shall be in accordance with Table 427.4(1) in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or in accordance with Table 427.4(2) in buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. The floor assembly of the control area and the construction supporting the floor of the control area shall have a fire-resistance rating in accordance with Table 427.4(1) in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or in accordance with Table 427.4(2) in buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Exception: The floor assembly of the control area and the construction supporting the floor of the control area are allowed to be 1-hour fire resistance rated in buildings of Types IIA, IIIA and VA construction, provided that the building is 3 or fewer stories.

427.4.3 Standby or emergency power. Standby or emergency power shall be provided where control areas are located above the sixth floor level above grade plane or located in a floor level below grade plane.

427.4.4 Restricted materials in storage and use. Where approved by the building official, the storage and use of the following hazardous materials prohibited by Table 307.1.1 in buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, shall be allowed within a control area at 25% of Table 307.1.1 limits for a building equipped throughout with an automatic sprinkler system:

1. Pyrophorics
2. Class 4 Oxidizers

No additional quantity increases shall be allowed. All such materials shall be stored and used in accordance with Section 5001.7 of the SFPC.

427.4.5 Automatic fire alarm and detection system. The building shall be equipped throughout with an automatic fire alarm system in accordance with Section 907.2 and control areas where hazardous materials are used or stored shall be equipped throughout with an automatic fire detection system in accordance with Section 907.2.

427.4.6 Ventilation. Ventilation shall be in accordance with the International Mechanical Code.

[F] 907.2.2 Group B. An automatic fire alarm and detection system shall be provided in Group B occupancies where an increase in hazardous materials is allowed in accordance with Section 427. A manual fire alarm system shall be installed in Group B occupancies where one of the following conditions exists:

1. The combined Group B *occupant load* of all floors is 500 or more.
2. The Group B *occupant load* is more than 100 persons above or below the lowest *level of exit discharge*.
3. The *fire area* contains an ambulatory care facility.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

CHAPTER 35 REFERENCED STANDARDS

NFPA 45-15 Standard on Fire Protection for Laboratories Using Chemicals

NFPA 91-15 Standard for Exhaust Systems for Air Conveying of Vapors, Mists, and Particulate Solids

2015 International Existing Building Code

(As Part of the 2015 Virginia Rehabilitation Code)

302.6 Change of occupancy in existing Group B teaching and research laboratories. Where the use of new or different hazardous materials or a change in the amount of hazardous materials in existing Group B testing and research laboratories in educational occupancies above the 12th grade would constitute a change of occupancy, this section shall be permitted to be used as an acceptable alternative to compliance with change of occupancy requirements to permit the increased amounts of hazardous materials stipulated without the laboratories being classified as Group H. In addition, as set out in Section 5001.7 of the SFPC, approval under this section is contingent upon operational requirements in the SFPC being complied with and maintained.

302.6.1 Hazardous materials in existing Group B teaching and research laboratories. The percentage of maximum allowable quantities of hazardous

materials per control area and the number of control areas permitted at each floor level within an existing building shall be permitted to comply with Table 302.6.1(1) in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the VCC or shall be permitted to comply with Table 302.6.1(2) in buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the VCC.

TABLE 302.6.1(1)
DESIGN AND NUMBER OF CONTROL AREAS IN EXISTING BUILDINGS
EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN
ACCORDANCE WITH SECTION 903.3.1.1 OF THE VCC WITH GROUP B
TEACHING AND RESEARCH LABORATORIES IN EDUCATIONAL OCCUPANCIES
ABOVE THE 12TH GRADE

<u>Floor Level</u>		<u>Percentage of the Maximum Allowable Quantity per Control Area^a</u>	<u>Number of Control Areas per Floor</u>	<u>Fire-Resistance Rating for Fire Barriers and Horizontal Assemblies in Hours^b</u>
<u>Above Grade Plane</u>	<u>Higher than 20</u>	<u>5</u>	<u>1</u>	<u>2</u>
	<u>10-20</u>	<u>10</u>	<u>1</u>	<u>2</u>
	<u>7-9</u>	<u>25</u>	<u>2</u>	<u>2</u>
	<u>4-6</u>	<u>50</u>	<u>2</u>	<u>2</u>
	<u>3</u>	<u>75</u>	<u>2</u>	<u>1</u>
	<u>2</u>	<u>100</u>	<u>3</u>	<u>1</u>
	<u>1</u>	<u>100</u>	<u>4</u>	<u>1</u>
<u>Below Grade Plane</u>	<u>1</u> <u>2</u> <u>Lower than 2</u>	<u>75</u> <u>50</u> <u>Not Allowed</u>	<u>3</u> <u>2</u> <u>Not Allowed</u>	<u>1</u> <u>1</u> <u>Not Allowed</u>

a. Percentage shall be of the maximum allowable quantity per control area shown in Tables 307.1(1) and 307.1(2) of the VCC, with all increases allowed in the notes to those tables.

b. Separation shall include fire barriers and horizontal assemblies as necessary to provide separation from other portions of the building.

TABLE 302.6.1(2)
DESIGN AND NUMBER OF CONTROL AREAS IN EXISTING BUILDINGS NOT
EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN
ACCORDANCE WITH SECTION 903.3.1.1 OF THE VCC WITH GROUP B
TEACHING AND RESEARCH LABORATORIES IN EDUCATIONAL OCCUPANCIES
ABOVE THE 12TH GRADE

		<u>Percentage of the Maximum Allowable Quantity</u>	<u>Number of Control Areas per</u>	<u>Fire-Resistance Rating for Fire Barriers and</u>
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<u>Floor Level</u>		<u>per Control Area^a</u>	<u>Floor</u>	<u>Horizontal Assemblies in Hours^b</u>
<u>Above Grade Plane</u>	Higher than 9	5	1	2
	7-9	10	2	2
	4-6	25	2	2
	3	75	2	1
	2	100	3	1
	1	100	4	1
<u>Below Grade Plane</u>		75	3	1
		50	2	1
		Not Allowed	Not Allowed	Not Allowed

a. Percentage shall be of the maximum allowable quantity per control area shown in Tables 307.1(1) and 307.1(2) of the VCC, with all increases allowed in the notes to those tables.

b. Separation shall include fire barriers and horizontal assemblies as necessary to provide separation from other portions of the building.

302.6.1.1 Automatic fire alarm and detection systems. An automatic fire alarm system shall be provided throughout the building in accordance with Section 907 of the VCC. An automatic fire detection system shall be provided in the control area in accordance with Section 907 of the VCC where pyrophics or Class 4 oxidizers are used and the building is not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the VCC.

302.6.1.2 System supervision and monitoring. Automatic fire detection systems shall be electronically supervised and monitored by an approved supervising station or, where approved, shall initiate an audible and visual signal at a constantly attended on-site location.

CHAPTER 16 REFERENCED STANDARDS

NFPA 45-15 Standard on Fire Protection for Laboratories Using Chemicals

2015 International Fire Code

(As Part of the 2015 Virginia Statewide Fire Prevention Code)

CHEMICAL FUME HOOD. A ventilated enclosure designed to contain and exhaust fumes, gases, vapors, mists and particulate matter generated within the hood.

LABORATORY SUITE. A fire-rated enclosed laboratory area that will provide one or more laboratory spaces, within a Group B educational occupancy, that are permitted to include ancillary uses such as offices, bathrooms, and corridors that are contiguous with

the laboratory area, and are constructed in accordance with Section 427.3 of the VCC.

SPECIAL EXPERT. An individual who has demonstrated qualifications in a specific area, outside the practice of architecture or engineering, through education, training and experience.

TEACHING AND RESEARCH LABORATORY. A building or portion of a building where hazardous materials are stored, used and handled for the purpose of testing, analysis, teaching, research or developmental activities on a nonproduction basis rather than in a manufacturing process.

5001.7 Operational requirements for Group B teaching and research

laboratories. Teaching and research laboratories in Group B educational occupancies above the 12th grade utilizing Section 427 of the VCC or Section 302.6 of the VRC shall comply with this section and other applicable requirements of this code. In the case of conflicts between the requirements of Section 427 of the VCC or Section 302.6 of the VRC and provisions of this code other than those set out in this section, Section 427 of the VCC or Section 302.6 of the VRC, as applicable, shall govern.

5001.7.1 Chemical safety reviews. Operating and emergency procedures planning and documentation shall be as set out in Sections 5001.3.3.11 through 5001.3.3.17. Such documentation shall be prepared by laboratory safety personnel or special experts, and shall be made available in the workplace for reference and review by employees. Copies of such documentation shall be furnished to the fire code official for review upon request.

5001.7.2 Hazardous materials handling. Receiving, transporting on site, unpacking and dispensing of hazardous materials shall be carried out by persons trained in proper handling of such materials and shall be performed in accordance with Chapters 50 through 67, as applicable.

5001.7.3 Hazard identification signage. Warning signs for other than building components shall be provided in accordance with Section 5003.5.

5001.7.4 Maintenance of equipment, machinery and processes. Maintenance of equipment, machinery and processes used with hazardous materials shall comply with Section 5003.2.6.

5001.7.5 Time sensitive materials. Containers of materials that have the potential to become hazardous during prolonged storage shall be dated when first opened, and shall be managed in accordance with NFPA 45 Section 8.2.4.4.1.

5001.7.6 Maintenance of storage, dispensing, use and handling requirements. Storage, dispensing, use and handling requirements in the VCC or VRC shall be maintained. Operational requirements not affecting the manner of construction shall comply with this chapter and Chapters 51 through 67, as applicable.

5001.7.7 Hazardous wastes. Storage, dispensing, use and handling of hazardous waste shall comply with this chapter and Chapters 51 through 67, as applicable.

5001.7.8 Container Size. The maximum container size for all hazardous materials shall be 5.3 gallons for liquids, 50 pounds for solids, 100 cf. for health hazard gases per table 5003.1.1(2) and 500 cf. for all other gases in accordance with Table 5003.1.1(1).

Exception: Hazardous waste collection containers, for other than Class I and Class II flammable liquids, are permitted to exceed 5.3 (20L) gallons where approved.

5001.7.9 Density. Quantities of Class I, II & IIIA combustible or flammable liquids in storage and use within control areas or laboratory suites shall not exceed 8 gallons (30 liters) per 100 square feet of floor area, with not more than 4 gallons (15 liters) per 100 square foot being in use. Quantities of Class I flammable liquids in storage and use shall not exceed 4 gallons per 100 sf of floor area with not more than 2 gallons (7.5 liters) being in use. The maximum in use in open systems is limited to 10% of these quantities. Densities shall be reduced by 25 percent on the 4th through 6th floor levels above grade plane of the building and 50% above the 6th floor level. The density is to be reduced to 50% of these values for buildings that are not protected throughout with an approved automatic fire sprinkler system. Regardless of the density, the maximum allowable quantity per control area or laboratory suite shall not be exceeded.

Exception: Density limits may be exceeded in designated hazardous waste collection areas or rooms within a control area or laboratory suite, but stored quantities shall not exceed the maximum allowable quantity per laboratory suite or control area.

5001.7.10 Restricted materials in storage. Storage of pyrophorics and Class 4 oxidizers prohibited by Table 5003.1.1(1) in existing buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the VCC shall be allowed within a control area at 25 percent of the limits in Table 5003.1.1(1) for a building equipped throughout with an automatic sprinkler system, with no additional increases allowed, provided that such materials are stored in accordance with all of the following:

1. Containers shall be completely sealed and stored according to the manufacturer's recommendations.
2. Storage shall be within approved hazardous materials storage cabinets in accordance with Section 5003.8.7, or shall be located in an inert atmosphere glove box in accordance with NFPA 45 Section 7.11.
3. The storage cabinet or glove box shall not contain any storage of incompatible materials.

5001.7.11 Restricted materials in use. Use of pyrophorics and Class 4 oxidizers prohibited by Table 5003.1.1(1) in existing buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the VCC shall be allowed within a control area at 25 percent of the limits in Table 5003.1.1(1) for buildings equipped throughout with an automatic sprinkler system, with no additional increases allowed, provided that such materials are used in accordance with all of the following:

1. Use shall be within an approved chemical fume hood listed in accordance with UL 1805, or in an inert atmosphere glove box in accordance with NFPA 45 Section 7.11, or other approved equipment designed for the specific hazard of the material.
2. Combustible materials shall be kept at least two feet (0.610 m) away from the work area, except for those items directly related to the research.
3. A portable fire extinguisher appropriate for the specific material shall be provided

within 20 feet of the use in accordance with Section 906.

CHAPTER 80 REFERENCED STANDARDS

NFPA 45-15 Standard on Fire Protection for Laboratories Using Chemicals

UL 1805-2002 Standard for Laboratory Hoods and Cabinets

Reason:

DHCD Staff Note: Changes to the proposal subsequent to the July 20, 2016 Workgroup Two meeting are outlined in the document below:

[Changes to Proposal](#)

This proposed code change attempts to address the limiting factors of MAQs within facilities (via the use of control areas) by answering the following questions:

1. How do we increase MAQs beyond those already allowed while still incorporating an acceptable level of safety, protection, and/or fire resistance ratings?
2. How do we apply these requirements to existing buildings?
3. How do we accomplish the first two without a large re-write of the code (i.e., Group L) or relying on a standard that may not be completely written in enforceable terms (i.e., NFPA 45)?

The answer to question #1 above is to allow for an increased number of control areas – which would in effect, allow for increased MAQs per floor level. Providing an acceptable level of safety is addressed by limiting this change to apply only to Group B labs and by considering the following:

- in Group B laboratories, the use of hazardous chemicals is generally limited to small quantities used on a short-term basis and in operations where the chemicals and procedures change frequently. 29 CFR 1910.1450, which is referred to as the 'Laboratory Standard' requires the development and implementation of a formal, written, and employee-accessible program, referred to as a Chemical Hygiene Plan (CHP), where this plan must be capable of protecting employees (and users) from health hazards associated with hazardous chemicals used in the laboratory, and
- where research funding is obtained from Agencies such as the National Institute of Health (NIH), development of a Chemical Hygiene Plan for Laboratory operations is already a requirement, and
- in such Group B labs, the students and faculty tend to be more careful in their handling of hazardous materials, and
- the students tend to be better educated and more closely supervised, and
- such facilities tend to undergo more inspections, and
- many Group B facilities (i.e., higher education) have dedicated departments whose mission is to ensure proper procedures and safety precautions are adhered to and implemented.

The level of protection and fire resistance ratings are addressed by requiring a minimum 2-hour enclosure from the 3rd floor level and higher (4th floor level or higher is allowed now). Also, since control areas are required to be compartmentalized and completely enclosed (all sides, top, and bottom), any additional control areas allowed under this code change proposal would be required to be completely separated from the remainder of the facility and from other control areas.

It has been said that approximately 90% of the current higher education laboratory facilities are 4 stories or less – including new and existing buildings, so the number of facilities this code change would affect would potentially be a smaller percentage (since the major benefit is for buildings 4 stories and higher).

Per the VDFP fire data "Tally" charts (http://vdfp.virginia.gov/fire_data_statistics/index.htm), within

the last ten years, when it comes to laboratories there have been:

- 0.03% frequency percentage of calls,
- zero deaths (civilian or fire fighters),
- two injuries (to fire fighters), and
- minimal property damage (approximately \$230,000 over the 10-year period with \$200,000 of that in one year alone - 2005).

Empirical data suggests that laboratories (including Group B higher education) appear to be relatively safe occupancies. The imposition of additional performance-based safety requirements in the SFPC where increased quantities will be allowed to be used further enhance the safety of operations using hazardous materials.

The answer to question #2 above is to allow existing facilities to benefit from the Virginia amendments and thus, existing Group B laboratories could utilize the proposed amendments included in this code change proposal, rather than be evaluated under the building code in which it was constructed.

If you accept the answers to #1 and #2, then the answer to question #3 above could be accomplished by adding a new subsection to 414.2 in the VCC and a new subsection 302.6 in the VRC.

The new definitions are provided to better describe what a "testing and research lab" is and also mimic the language use in 2015 IMC 510.1.

NATIONAL IFC WORKGROUP SUPPORTING STATEMENT: [copied verbatim without any edits and therefore, refers to information that is not a part of this code change proposal, but still conveys the conceptual approach]

There is quite possibly no industry more important to lives across the world than higher education academic institutions. The advance of technologies, science, medicine and our knowledge of the world often relies on having vibrant and successful academic institutions.

These academic institutions often have chemistry, biology, medical, engineering and other laboratories where hazardous materials are used. The IFC does not specifically address teaching and research laboratories, so users must try to apply general hazardous materials provisions, which oftentimes are not appropriate for specialized academic laboratory settings. The following is a list of several conditions typically present in academic laboratories

that make them unique:

1. Lower chemical density in individual research laboratories. In a teaching and research environment, there are often many small laboratories within a building that are using small quantities of hazardous materials in each location. Individually, they do not store or use a large quantity of hazardous materials, but together, they may often exceed the maximum allowable quantities for the control area. This lower chemical density often mitigates the overall risk, but the IFC currently has no provisions to recognize this condition.
2. Ongoing staff oversight from "Special Experts" in laboratory safety. Many higher education institutions have a full cadre of faculty and staff with chemical expertise. These "Special Experts" often include, but are not limited to: Fire Marshals, Industrial Hygienists, Radiation Safety Officers, Biological Safety Officers, Chemical Hygiene Officers and Environmental Health and Safety Officers. These individuals are an integral part of the preparation/review of laboratory safety documentations, as well as regularly scheduled safety audits. Fire and life safety expertise and oversight on our campuses is continually increasing with the addition of these highly capable professionals.
3. Limited, or "directed", funding streams. Also unique to academic institutions are the funding sources for research. In a "non-profit" teaching and research environment, the majority of research is funded through grants and endowments. Unfortunately, many grants only support the costs of research personnel and equipment, not structural upgrades to accommodate newer research processes.
4. Mixed-use occupancies. A typical university science building will house laboratories, office

space, storerooms, classrooms and lecture halls. The current limits on hazardous materials are so restrictive on upper floors that many universities are forced to locate classrooms and lecture halls on the upper floors so that they can take full advantage of the hazardous materials quantities allowed on the lower floors. This results in moving large numbers of students through hallways, past laboratories to get to the upper floors. They will also have to exit back down the same routes in the event of an emergency.

This proposal introduces a post-secondary academic laboratory chapter to address these unique circumstances. University fire and life safety professionals from across the United States have collaborated on writing this chapter. Conscientious effort has been made to balance the proposed IFC modifications with enhanced administrative, emergency planning and structural provisions.

This chapter also introduces some important provisions from NFPA 45, Fire Protection for Laboratories. Although the IFC references many national standards on specific topics, there are no such references currently for laboratories. This standard contains many laboratory specific requirements and design professionals rely heavily upon this national standard for current laboratory designs.

Specifically, the chapter addresses three primary needs: 1) increasing general laboratory safety requirements, 2) increasing MAQ's in large or multi-story laboratories, or laboratories located in multi-story buildings and, 3) allowing very small quantities of currently prohibited hazardous materials in non-sprinklered laboratory buildings. A brief description of each is as follows:

1. Increased general laboratory safety requirements: This proposal introduces a post-secondary academic laboratory chapter in to the IFC. Currently, there is no teaching/research laboratory specific chapter in the IFC, and there are no references to NFPA 45 (Fire Protection for Laboratories). This new chapter fills a much needed gap in the IFC, and provides for enhanced safety requirements in these academic laboratories.

2. Control Area Limitations: As post-secondary campuses across the world grow to meet increasing populations, they often are landlocked, and require that new buildings are built taller and/or larger. This is particularly true in large metropolitan areas. The current "Control Area" restrictions in the ICC codes severely restrict functioning laboratories on upper floor levels or in larger buildings.

In response to this critical issue, numerous jurisdictions have adopted state or local amendments to allow for greater numbers of control areas and larger percentages of MAQs in academic and /or non-production laboratories. Such jurisdictions include California, Arizona, Minnesota, Seattle and New York City. One of the primary purposes of this proposal is to provide standardized model code language to address this topic.

This chapter provides an alternate design approach for such scenarios where traditional control area limitations are not feasible, and where building Group H-Occupancies is not possible. The "Laboratory Suite" concept gives users an option to allow more flexibility in hazardous materials use, in exchange for additional administrative and structural safeguards, while still remaining a "B" occupancy.

3. Non-Sprinklered Limitations: There are thousands of existing post-secondary academic institutions, with some dating back to 1800's, where retrofitting automatic sprinklers is not practical. This proposal addresses a critically important issue to selected laboratories in existing, non-sprinklered buildings, who need very small quantities of materials that have blanket restrictions in non-sprinklered buildings. This proposal provides a limited exception to allow very small quantities of such materials when specific mitigation controls are provided.

PART 1 REASON:

Section 3801. Provides general scoping information. It clarifies that the chapter applies to both existing laboratories in existing buildings and new laboratories as referenced in the sections.

The definition used for laboratories mirrors the definition found in the International Mechanical Code, with the addition of language to clarify that the chapter is limited to "Laboratories in higher education institutions beyond the 12th grade".

Section 3802. Provides definitions for new terms introduced in this chapter. The term "Special Expert" is in the International Performance Code in the appendix. It was utilized in this chapter to reflect the high level of faculty and staff safety professionals available at many academic

institutions.

Section 3803. Requires additional safety pre-planning for all laboratories or laboratory suites utilizing this chapter, also consistent with laboratory safeguards found in NFPA 45. Enhanced safety requirements found in this section include:

1. New hazard analysis documentation shall include: Process Hazard Analysis, Pre-startup Safety Review, Operating and Emergency Procedures, Management of Change, Accident Procedures, Consequence Analysis and Safety Audits. Requires that such documentation shall be submitted to the fire code official. (IFC Section 5001).
2. Time-sensitive materials shall be dated and pro-actively managed. (NFPA 45).
3. Maximum container size of Class I flammable liquids is 5.3 gallons. (NFPA 45).
4. Density of Class I flammable liquids in storage and use shall be no greater than 8 gallons per 100 square feet of floor area. (NFPA45).

Section 3804. Provides the "Laboratory Suite" design option in addition to traditional control area options. Enhanced safety requirements in this section include:

1. All of those listed above in Section 3803.
2. Rated fire barriers for compartmentation of laboratory suites within buildings.
3. In laboratories above the 6th story, or in a story below grade plane, requirements for standby or emergency power for safety-related equipment and enhanced automatic sprinkler protection.
4. Automatic sprinkler design and density exceeding that which would be required by NFPA 45.

If the vertical fire barrier between lab suites is required to be two-hour rated, a fire rated duct enclosure, UL listed duct wrap, or multiple building shafts is required. Footnote c in the table allows the vertical fire barriers between laboratory suites on a floor to be one-hour rated because of the reduced quantities of hazardous materials in each laboratory suite on the floors above the 6th story, and additional safety provisions in Chapter 38 which apply to all laboratories utilizing this chapter. In addition, chemical exhaust ducts routed through the one-hour rated barriers would be permitted to be installed without fire dampers, where the duct needs to be routed to the nearest chemical exhaust shaft. Fire dampers are not installed in laboratory exhaust ducts to maintain exhaust ventilation in laboratories in the event of a fire. In the IBC, Section 714.1.1 and Section 717.5.2, Exception 3; and IMC 607.5.5 allow exhaust system ducts to penetrate fire rated barriers and fire rated shafts without a fire damper. These provisions carry significant importance and allow multiple laboratory suites per floor of a building. The footnote has no effect on other provisions of the code and does not change the structural fire resistance requirements of IBC Chapter 6, or the continuity requirements of IBC Chapter 7.

Historical fire data over the last 25 years has shown that the vast majority of laboratory fires do not typically extend beyond the area, or even the room of origin. This is primarily due to the limited quantities of hazardous materials in use, and the following safety features that are incorporated into laboratory designs:

1. Ventilation systems provide large volumes of airflow through laboratories to continuously remove hazardous vapors, fumes and gases.
2. Fume hoods provide local ventilation control for containment and removal of hazardous vapors, fumes and gases during the use of hazardous materials.
3. Automatic fire sprinkler systems can confine the fires to the room of origin
4. Fire alarm systems provide prompt notification to building occupants and/or emergency responders.

All of these structural safety features are required in some combination in laboratories utilizing this chapter, as well as the additional NFPA 45 requirements for monitoring of time-sensitive materials, limitations on container sizes and limiting the density of flammable liquids over the floor area of laboratory space.

Section 3805. Provides and clarifies general hazardous materials requirements for non-sprinklered laboratories. Provides an option to allow for very small quantities of prohibited materials in non-sprinklered laboratories. Enhanced safety requirements in this section include:

1. All of those listed above in Section 3803.
2. Enhanced storage requirements in accordance with NFPA 45.
3. Prohibition of storage of any incompatible materials.
4. Use of hazardous materials use must be in a chemical fume hood, glove box or other approved laboratory equipment designed for the specific hazard.
5. The work area must be free of all unnecessary combustible materials.
6. There must be an appropriate extinguishing media located within 20 feet.

Section 3806. Provides requirements for existing laboratories in existing sprinklered buildings. Enhanced safety requirements in this section include all of those in Section 3803, including complete hazard analysis and safety audits, and limits on container sizes for all hazardous materials and density limits on flammable liquids.

PART 2 REASON:

Modifies IBC 414.2 to identify that "Laboratory Suites" are an exception to traditional control area provisions.

PART 3 REASON:

Modifies IFC 604.2 to identify that "Laboratory Suites" require emergency or standby power.

PART 4 REASON:

Adds NFPA 45 as recognized standard.

This chapter was written and reviewed by a national taskforce made up of fire and life safety professionals from colleges, universities, municipal fire organizations and private industry across the United States. Taskforce members are individuals representing their own institutions, as well as members who were assigned participants by national college and university safety associations.

National endorsements:

Campus Safety, Health, and Environmental Management Association (CSHEMA)

This proposal [their proposal is similar (e.g., uses the new IBC but existing NFPA 45 concept of laboratory suites), but not identical to this code change proposal (e.g., which uses the existing IBC concept of control areas)] is submitted by the ICC Fire Code Action Committee (FCAC). The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire safety and hazardous materials in new and existing buildings and facilities and the protection of life and property in wildland urban interface areas. In 2014 and 2015 the Fire-CAC has held 5 open meetings. In addition, there were numerous conference calls, Regional Work Group and Task Group meetings for the current code development cycle, which included members of the committees as well as any interested parties, to discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website

Cost Impact: Although the cost of construction may increase (because you would be constructing more control areas that are separated by fire barriers and horizontal assemblies), such Group B laboratories may be in a much better position to apply for research grants and funding, and could possibly attract the top students and faculty that might otherwise go to other universities or businesses.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: 7/20/16 meeting: Kenny Payne spoke-approved at the national level by the fire officials-work group pretty much agrees with this proposal.

Vernon Hodge stated after talking with Zack Adams and Chris Raha, only substantiated changes

are needed and the comments can be placed in cdpVA.

Rick Witt stated that this is just an option since it is not mandated. I support this issue and there seems to be consensus and sees no reason why not to move this forward.

8/17/16 meeting: Zack spoke on the proposal-consensus for approval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-103.3(2) cdpVA-15

C-103.7 cdpVA-15

Proponent : Ronald Clements, Jr, Representing VBCOA Administrative code committee (clementsro@chesterfield.gov)

2012 Virginia Construction Code

103.7 Retrofit requirements.

The local building department shall enforce the provisions of Section [1701](#) of the VRC, ~~which require certain existing buildings to be retrofitted with fire protection systems and other safety equipment. Retroactive fire protection system requirements contained in the *International Fire Code* (IFC) shall not be applicable unless required for compliance with the provisions of Section [1701](#) of the VRC.~~

Reason: There are retrofit provisions regarding accessibility; therefore, it is not accurate or necessary to provide the commentary in the second part of the first sentence that is specific to fire protection and safety equipment. The retrofit requirements of VRC chapter 17 do not reference the retroactive provision of chapter 11 in the IFC; furthermore, chapter 11 of the IFC is deleted from the Virginia Statewide Fire Prevention code. Therefore, the second sentence is proposed for deletion.

Cost Impact: This is an editorial code change that has no impact on cost of construction.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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C-108.2(1) cdpVA-15

Proponent : Chip Dicks (chipdicks@futurelaw.net)

2012 Virginia Construction Code

108.2 Exemptions from application for permit.

Notwithstanding the requirements of Section [108.1](#), application for a permit and any related inspections shall not be required for the following; however, this section shall not be construed to exempt such activities from other applicable requirements of this code. In addition, when an owner or an owner's agent requests that a permit be issued for any of the following, then a permit shall be issued and any related inspections shall be required.

1. Installation of wiring and equipment that (i) operates at less than 50 volts, (ii) is for network powered broadband communications systems, or (iii) is exempt under Section 102.3(1), except when any such installations are located in a plenum, penetrate fire rated or smoke protected construction or are a component of any of the following:
 - 1.1. Fire alarm system.
 - 1.2. Fire detection system.
 - 1.3. Fire suppression system.
 - 1.4. Smoke control system.
 - 1.5. Fire protection supervisory system.
 - 1.6. Elevator fire safety control system.
 - 1.7. Access or egress control system or delayed egress locking or latching system.
 - 1.8. Fire damper.
 - 1.9. Door control system.
2. One story detached structures used as tool and storage sheds, playhouses or similar uses, provided the building area does not exceed 256 square feet (23.78 m²) and the structures are not classified as a Group F-1 or H occupancy.
3. Detached prefabricated buildings housing the equipment of a publicly regulated utility service, provided the floor area does not exceed 150 square feet (14 m²).
4. Tents or air-supported structures, or both, that cover an area of 900 square feet (84 m²) or less, including within that area all connecting areas or spaces with a common means of egress or entrance, provided such tents or structures have an occupant load of 50 or less persons.
5. Fences of any height unless required for pedestrian safety as provided for by Section [3306](#), or used for the barrier for a swimming pool.
6. Concrete or masonry walls, provided such walls do not exceed 6 feet (1829 mm) in height above the finished grade. Ornamental column caps shall not be considered to contribute to the height of the wall and shall be permitted to extend above the 6 feet (1829 mm) height measurement.
7. Retaining walls supporting less than 3 feet (914 mm) of unbalanced fill that are not constructed for the purpose of impounding Class I, II or III-A liquids or supporting a surcharge other than ordinary unbalanced fill.
8. Swimming pools that have a surface area not greater than 150 square feet

(13.95 m²), do not exceed 5,000 gallons (19 000 L) and are less than 24 inches (610 mm) deep.

9. Signs under the conditions in Section [H101.2](#) of Appendix H.
10. Replacement of above-ground existing LP-gas containers of the same capacity in the same location and associated regulators when installed by the serving gas supplier.
11. Flagpoles 30 feet (9144 mm) or less in height.
12. Temporary ramps serving dwelling units in Group R-3 and R-5 occupancies where the height of the entrance served by the ramp is no more than 30 inches (762 mm) above grade.
13. Construction work deemed by the building official to be minor and ordinary and which does not adversely affect public health or general safety.
14. Ordinary repairs that include the following:
 - 14.1. Replacement of windows and doors with windows and doors of similar operation and opening dimensions that do not require changes to the existing framed opening and that are not required to be fire rated in Group R-2 where serving a single dwelling unit and in Groups R-3, R-4 and R-5.
 - 14.2. Replacement of plumbing fixtures and well pumps in all groups without alteration of the water supply and distribution systems, sanitary drainage systems or vent systems.
 - 14.3. Replacement of general use snap switches, dimmer and control switches, 125 volt-15 or 20 ampere receptacles, luminaires (lighting fixtures) and ceiling (paddle) fans in Group R-2 where serving a single dwelling unit and in Groups R-3, R-4 and R-5.
 - 14.4. Replacement of mechanical appliances provided such equipment is not fueled by gas or oil in Group R-2 where serving a single-family dwelling and in Groups R-3, R-4 and R-5.
 - 14.5. Replacement of an unlimited amount of roof covering or siding in Groups R-3, R-4 or R-5 provided the building or structure is not in an area where the design (3 second gust) wind speed is greater than 100 miles per hour (160 km/hr) and replacement of 100 square feet (9.29 m²) or less of roof covering in all groups and all wind zones.
 - 14.6. Replacement of 100 square feet (9.29 m²) or less of roof decking in Groups R-3, R-4 or R-5 unless the decking to be replaced was required at the time of original construction to be fire-retardant-treated or protected in some other way to form a fire-rated wall termination.
 - 14.7. Installation or replacement of floor finishes in all occupancies.
 - 14.8. Replacement of Class C interior wall or ceiling finishes installed in Groups A, E and I and replacement of all classes of interior wall or ceiling finishes in other groups.
 - 14.9. Installation or replacement of cabinetry or trim.
 - 14.10. Application of paint or wallpaper.
 - 14.11. Other repair work deemed by the building official to be minor and ordinary which does not adversely affect public health or general safety.
15. Crypts, mausoleums and columbaria structures not exceeding 1,500 square feet (139.35 m²) in area if the building or structure is not for occupancy and

used solely for the interment of human or animal remains and is not subject to special inspections.

- **Exception:** Application for a permit may be required by the building official for the installation of replacement siding, roofing and windows in buildings within a historic district designated by a locality pursuant to Section 15.2-2306 of the Code of Virginia.

16. Billboard safety upgrades to add or replace steel catwalks, steel ladders or steel safety cable.

Reason:

This proposal is being submitted by Chip Dicks on behalf of Lamar Advertising Company.

The Occupational Safety and Health Act ("OSHA") requires that the billboard industry comply with applicable 1910 General Industry Standards and the 1926 Construction Industry Standards. The Virginia Department of Labor and Industry through its Virginia Occupational Safety and Health Program ("VOSH") has adopted the 1910 and 1926 OSHA Standards for health and safety.

One of the most common hazards found in the billboard industry is the risk of a worker falling from a billboard sign structure. Lamar developed a corporate "Fall Protection Program" to help protect its employees from the jobsite risks, a copy of which is attached to this proposal. VOSH advises that it recommends that billboard companies in Virginia follow the Lamar Fall Protection Program.

Billboard structures that contain steel catwalks enable workers to more safely move about the billboard face for installation of advertising, or for maintenance or repairs to that billboard structure. Steel catwalks are generally accessed by a steel ladder from the ground to the catwalk. On the steel access platform or walkway, there is a steel safety cable across the back so the workers can attach to the safety cable while they are working from the steel platform or walkway.

Where an existing steel catwalk needs replacement, the existing catwalk will be removed and a new or used steel catwalk will be bolted onto the billboard structure. If no catwalk exists (Lamar has purchased a billboard from another billboard company which did not have a safety policy similar to Lamar's safety policy), a steel catwalk system would be bolted onto the billboard. The steel catwalk system would include the catwalk, platform or walkway, safety cables and ladder. There are no construction drawings for these pieces of equipment which are part of a steel catwalk system. Steel catwalk systems are generally bolted onto the billboard structure. Lamar has a number of used catwalk systems available from its inventory and new catwalk systems are available for purchase from third party vendors.

Many billboard structures are nonconforming, either by state or local law. The VDOT "Nonconforming Billboard Process" controls repairs to nonconforming billboards, notwithstanding any local ordinance to the contrary. (See Section 33.2-1200). The Federal Highway Administration ("FHWA") issued guidance to the State Departments of Transportation (the "State DOTs") directing that safety upgrades are to be approved to conforming and nonconforming billboard structures to help achieve the goal of enhanced worker safety under OSHA.

The adoption of this proposal will not change the requirements of state and federal law with respect to safety upgrades to nonconforming billboards. Adoption of this proposal will enhance worker safety.

Lamar respectfully requests adoption of this proposal. For further information or if there are questions, please contact Chip Dicks, FutureLaw, LLC, 1802 Bayberry Court, Suite 403, Richmond, Virginia 23226; chipdicks@futurelaw.net; 804-225-5507.

Thank you for your consideration.

Chip Dicks

Attachment:

Cost Impact: There are no known costs associated with adoption of this proposal.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: Approved as amended without OSHA language.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-108.2(1) cdpVA-15

C-117.2 cdpVA-15

Proponent : Ronald Clements, Jr, Representing VBCOA VRC Committee (clementsro@chesterfield.gov); Kenney Payne, Representing AIA-VA (kpayne@moseleyarchitects.com)

2012 Virginia Construction Code

117.2 Moved buildings and structures.

Any building or structure moved into a locality or moved to a new location within a locality shall not be occupied or used until a certification of occupancy is issued for the new location. Such moved buildings or structures shall be required to comply with the requirements of ~~this code for a newly constructed building or structure unless meeting all of the following requirements relative to the new location:~~ VRC.

- ~~1. There is no change in the occupancy classification from its previous location.~~
- ~~2. The building or structure was in compliance with all state and local requirements applicable to it in its previous location and is in compliance with all state and local requirements applicable if originally constructed in the new location.~~
- ~~3. The building or structure did not become unsafe during the moving process due to structural damage or for other reasons.~~
- ~~4. Any alterations, reconstruction, renovations or repairs made pursuant to the move are in compliance with applicable requirements of the VRC.~~

2015 International Existing Building Code

SECTION 202 DEFINITIONS

~~RELOCATABLE BUILDING.~~

~~A partially or completely assembled building constructed and designed to be reused multiple times and transported to different building sites.~~

301.1 General. ~~The repair, alteration, change of occupancy or addition or relocation of all existing buildings shall comply with one of the methods listed in Sections 301.1.1 through 301.1.3 as selected by the applicant. Sections 301.1.1 through 301.1.3 shall not be applied in combination with each other.~~ Moved buildings and structures shall comply with chapter 13 of this code. Where this code requires consideration of the seismic forces resisting system of an *existing building* subject to *repair, alteration, change of occupancy, addition or relocation of existing buildings*, the seismic evaluation and design shall be based on Section 301.1.4 regardless of which compliance method is used.

- **Exception:** Subject to the approval of the *code official*, *alterations* complying with the laws in existence at the time the building or the affected portion of the building was built shall be considered in compliance with the provisions of this code unless the building is undergoing more than a limited structural *alteration* as defined in Section 907.4.4. New structural members added as part of the

alteration shall comply with the International Building Code. Alterations of existing buildings in flood hazard areas shall comply with Section 701.3.

301.1.2 Work area compliance method. *Repairs, alterations, additions, and changes in occupancy ~~and relocated buildings~~ complying with the applicable requirements of Chapters 5 through ~~13-12~~ of this code shall be considered in compliance with the provisions of this code.*

301.1.3 Performance compliance method. *Repairs, alterations, additions, and changes in occupancy ~~and relocated buildings~~ complying with Chapter 14 of this code shall be considered in compliance with the provisions of this code.*

~~SECTION 409 MOVED STRUCTURES~~

~~409.1 Conformance.~~ *Structures moved into or within the jurisdiction shall comply with the provisions of this code for new structures.*

501.1 Scope. The provisions of this chapter shall be used in conjunction with Chapters 6 through ~~13-12~~ and shall apply to the *alteration, repair, addition and change of occupancy* of existing structures, including historic ~~and moved~~ structures, as referenced in Section 301.1.2. The work performed on an *existing building* shall be classified in accordance with this chapter.

~~SECTION 509 RELOCATED BUILDINGS~~

~~509.1 Scope.~~ *Relocated building provisions shall apply to relocated or moved buildings.*

~~509.2 Application.~~ *Relocated buildings shall comply with the provisions of Chapter ~~13~~.*

1301.1 Scope. This chapter provides requirements for ~~relocated or moved structures, including relocatable buildings as defined in Chapter 2, and structures.~~

1401.1 Scope. The provisions of this chapter shall apply to the *alteration, repair, addition and change of occupancy* of existing structures, including historic ~~and moved~~ structures, as referenced in Section 301.1.3. The provisions of this chapter are intended to maintain or increase the current degree of public safety, health and general welfare in *existing buildings* while permitting *repair, alteration, addition and change of occupancy* without requiring full compliance with Chapters 5 through ~~13-12~~, except where compliance with other provisions of this code is specifically required in this chapter.

Reason: VRC chapter 13 addresses moved buildings and structures. The existing requirements of 117.2 are still basically the same as they were prior to the adoption of the VRC. The section needs to be updated to address the scope of the VRC for existing buildings and VRC chapter 13 specifically for moved buildings. The four requirements, numbered 1-4, listed in VCC section 117.2 are proposed to be deleted because they are addressed in VRC chapter 13. VCC section 117.2 requirements #1, #2 and #4 are addressed in VRC 1301.2; #3 is addressed in VRC 1302.7. The proposed deletion of the "relocatable building" definition, and the reference in the scope of VRC 1301.1, from the 2015 IEBC is because the definition will have no use in the VRC (USBC part 3). The definition was added to the IEBC as a prelude to developing code provisions to address industrialized buildings and manufactured homes. Many states that adopt the IEBC do not have separate state regulations for industrialized buildings and manufactured homes, as does Virginia; therefore, relocatable buildings were added to the IEBC to address that issue in those states. With VCC section 102.3 #5 deleting industrialized buildings and manufactured homes from the USBC relocatable buildings will not be within the scope of the VRC. In Virginia the Virginia Industrialized Building Safety Regulations and Virginia Manufactured Home Safety Regulations govern installation and relocation of those types of structures.

The prescriptive method addresses moved buildings by referring to using the VRC provisions for new construction, which is inaccurate, and the performance method addresses moved buildings by sending you back to chapter 13 in the work area method. This proposed code change takes chapter 13 out of the work area method and sets it up as the chapter to use for all moved buildings per section 301. Chapter 13 section 1301.2 already requires compliance with the VRC for repairs, alterations and changes of occupancy.

Cost Impact: There is no cost impact. This change does not affect the manner of construction.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: So we will move forward as consensus for approval with submitting another proposal to deal with the change.

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: VRC Chapter 13 addresses moved buildings and structures. The existing requirements of 117.2 are still basically the same as they were prior to the adoption of the VRC. The section needs to be updated to address the scope of the VRC for existing buildings and VRC Chapter 13 specifically for moved buildings. Ron Clements gave an overview of the proposal.

Comments:

Kris Bridges asked in the case of an Industrialized Building that is not recognized by Virginia, is that a moved structure?

Ron Clements stated that in VA, we have an Industrialized Building Safety Regulation

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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CB-202 cdpVA-15

Proponent : Ronald Clements, Jr (clementsro@chesterfield.gov)

2012 Virginia Construction Code

SECTION 202 DEFINITIONS

AMBULATORY HEALTH CARE FACILITY.

Buildings or portions thereof used to provide *medical care* on less than a 24-hour basis that are licensed by the Virginia Department of Health as outpatient surgical hospitals.

CLINIC, OUTPATIENT.

Buildings or portions thereof used to provide *medical care* on less than a 24-hour basis ~~to persons who~~ that are not rendered *incapable of self-preservation* licensed by the ~~services provided.~~

Virginia Department of Health as outpatient surgical hospitals.

Reason: The IBC was amended to address medical care facilities that care for patients for less than 24 hours as group B occupancies. A distinction was made between facilities that render the patients incapable of self-preservation (Ambulatory Health Care Facility) and those where patients are not rendered incapable of self-preservation (Outpatient Clinic). Though both defined types of facilities are group B occupancies, ambulatory health care facilities require additional fire safety features. The two definitions are intended to be companion definitions in the IBC with the distinction being whether or not patients are rendered incapable of self-preservation. As part of the 2012 USBC code update the definition of ambulatory care facility was changed to:

Ambulatory Health Care Facility . Buildings or portions thereof that are licensed by the Virginia Department of Health as outpatient surgical hospitals.

Based on review of the USBC code change proposals, the intent of the change from the IBC distinction was to prevent classification of dental and doctor's offices as ambulatory health care facilities. For example, under the IBC if an oral surgeon puts one patient at a time under sedation on the second floor of a 2 story office building then the building must be sprinklered.

The problem caused was the definition of outpatient clinic was not changed to have the same distinction so the definitions are no longer companions and have different distinctions. One is based on the type of licensed issued and the other is based on self-preservation capability. This code change will coordinate the two definitions based on the Virginia distinction based on VHD licensure.

Cost Impact: There is no cost impact this is making two related definitions consistent.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Ron is trying to cleanup the two definitions, Emory stated Ron's change is consistent with the boards action that they did not want doctors and dentist offices included in this category.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-202 cdpVA-15

CB-303.1.1 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2015 International Building Code

303.1.1 Small buildings and tenant spaces. A building or tenant space used for assembly purposes with an *occupant load* of less than 50 persons shall be permitted to be classified as a Group B occupancy.

303.1.2 Small assembly spaces. The following rooms and spaces shall ~~not be permitted to be~~ classified as Assembly Group B occupancies or as part of that occupancy:

1. A room or space used for assembly purposes with an *occupant load* of less than 50 persons and accessory ancillary to another occupancy ~~shall be classified as a Group B occupancy or as part of that occupancy.~~
2. A room or space used for assembly purposes that is less than 750 square feet (70 m²) in area and accessory ancillary to another occupancy ~~shall be classified as a Group B occupancy or as part of that occupancy.~~

Reason: Although it was discussed to consider going back to the 2009 IBC format where these subsections were handled as exceptions, we decided against that approach. Although it may not seem like it, it is the opinion of AIA-VA to try to be as consistent with the I-codes as possible, and if proposing changes, try to work with the existing formatting as much as possible unless a different format enhances the code change. In this case, there are no substantive changes other than deleting the "shall" provision and substituting "permitted", thus a complete reformatting was not considered beneficial in this instance.

Regarding 303.1.1:

The section requires one to classify such occupancies as 'B'. Doing so, could potentially require more plumbing fixtures compared to classifying such occupancies as 'A.' Why not allow the designer/owner some flexibility and allow classification as either an 'A' or 'B'? The 2009 IBC handled such spaces as an "exception," so the designer/owner had an option of whether to use the exception and classify such spaces as 'B' or keep them classified as 'A'.

The 2009 IBC code text was as follows:

Exceptions:

1. A building or tenant space used for assembly purposes with an *occupant load* of less than 50 persons shall be classified as a Group B occupancy.
2. A room or space used for assembly purposes with an *occupant load* of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.
3. A room or space used for assembly purposes that is less than 750 square feet (70 m²) in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

4 and 5. Not a part of this code change.

Regarding 303.1.2:

This may be conflicting. The charging paragraph says "shall not be classified as Assembly" yet both #1 and #2 allows the classification of such rooms or spaces as "part of that occupancy" – does the word "that" refer to 'A' or 'B'? If it could be interpreted to mean 'A' then that appears to be in conflict with the charging paragraph.

Why not allow the designer/owner some flexibility and allow classification as either an 'A' or 'B'? The 2009 IBC handled such spaces as an "exception," so the designer/owner had an option of whether to use the exception and classify such spaces as 'B' or keep them classified as 'A'.

The use of the term "accessory" oftentimes leads to confusion and/or inconsistent interpretations. "Accessory," to some, means the 10% rule. Per the Commentary, this is clearly not the case. However, the Commentary is not code. The use of the term "ancillary" is more appropriate and eliminates the possible confusion and application of the 10% rule (the term "ancillary" is used throughout the IBC already, including IBC 508.2).

Cost Impact: May actually REDUCE costs as they relate to the number of minimum plumbing fixtures that may otherwise be required if a space or small building were required to be classified as Group B in lieu of Group A.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: 1 st workgroup meeting:

Kenney Payne - gave an overview of proposal and asked that we delete 303.4 for today.

Chris Snidow stated this should be an option, Cindy Davis said we could leave accessory or subordinate and hope that accessory was understood. William King asked what the occupancy would be in 303.1.2 Group B. He didn't feel it was clear. George Hollingsworth said he would support this change, Cindy Davis - **move forward as pending**

2nd workgroup meeting: Kenny spoke-consensus for approval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-303.1.1 cdpVA-15

CB-307.1 cdpVA-15

[F] 307.1

Proponent : William Dodson, Jr., DMD (wyzj001@gmail.com), representing the craft distillery industry

Co-Proponent: Ron Clements (ClementsRo@chesterfield.gov), representing Chesterfield County

2015 International Building Code

[F] 307.1 High-hazard Group H. High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in *control areas* complying with Section 414, based on the maximum allowable quantity limits for *control areas* set forth in Tables 307.1(1) and 307.1(2). Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this section, the requirements of Section 415 and the *International Fire Code*. Hazardous materials stored, or used on top of roofs or canopies, shall be classified as outdoor storage or use and shall comply with the *International Fire Code*.

[F] 307.1.1 Uses other than Group H. An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.

1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 and the *International Fire Code*.
2. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to the *International Fire Code*.
3. Closed piping system containing flammable or combustible liquids or gases utilized for the operation of machinery or equipment.
4. Cleaning establishments that utilize combustible liquid solvents having a flash point of 140°F (60°C) or higher in closed systems employing equipment listed by an approved testing agency, provided that this occupancy is separated from all other areas of the building by 1-hour fire barriers constructed in accordance with Section 707 or 1-hour horizontal assemblies constructed in accordance with Section 711, or both.
5. Cleaning establishments that utilize a liquid solvent having a flash point at or above 200°F (93°C).
6. Liquor stores and distributors without bulk storage.

7. Refrigeration systems.
8. The storage or utilization of materials for agricultural purposes on the premises.
9. Stationary batteries utilized for facility emergency power, uninterruptable power supply or telecommunication facilities, provided that the batteries are provided with safety venting caps and ventilation is provided in accordance with the International Mechanical Code.
10. Corrosive personal or household products in their original packaging used in retail display.
11. Commonly used corrosive building materials.
12. Buildings and structures occupied for aerosol storage shall be classified as Group S-1, provided that such buildings conform to the requirements of the International Fire Code.
13. Display and storage of nonflammable solid and nonflammable or noncombustible liquid hazardous materials in quantities not exceeding the maximum allowable quantity per control area in Group M or S occupancies complying with Section 414.2.5.
14. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in the International Fire Code.
15. The storage of distilled spirits and wines in wooden barrels and casks. Distillation, blending, bottling, and other hazardous materials storage or processing, shall be in separate control areas complying with Section 414.2.

(Changes to Table 307.1 as shown below to add new footnote "r")

MATERIAL	USE-OPEN SYSTEMS^b	
	Solid pounds (cubic feet)	Liquid gallons (pounds)
Flammable liquid, combination (IA, IB, IC)	NA	30 ^{d, h, r}

r. The tabular value for distilled spirit distillation and blending rooms is 120 gallons.

Reason: Craft distillery operations in the State of Virginia are still hindered even after passage of

the recent Virginia Bill allowing distilleries on farms. The 'allowance' on farmland does not also grant distilleries 'ag by right' status and therefore the distilleries are still held to 'high hazard' building and fire codes. These codes state a maximum of 4 rooms with a maximum allowable capacity of 120 gallons per room of spirits per facility, and a maximum of 30gals open on the floor at any time for processing. This is the equivalent of 2 barrels of spirits per room, each room with a minimum 1hr firewall and door. The door alone is over \$1000. This is not economically feasible for a profitable operation. There are some exceptions.

Exception 1, the capacity can be expanded to 240 gallons per room if a sprinkler system is installed. Again, there is not usually access to high pressure public water on a farm, therefore the code requires a 400,000 (?) gallon reservoir tank, a special type of expensive pressure pump, and an expensive high reliability generator to install a sprinkler system. Again, this is not economically feasible and is not seen elsewhere in the industry outside of Virginia.

Exception 2, code allows for storage of up to 1500 gallons in containers over 1.3 gallon containers if the product is ready for sale. Since Distillers often trade/sell casks to other distilleries, this exception is applied to wood barrels (i.e. 5 to 55gal) to get 'aging' space by craft distillers. Still, 1500 gallons is not enough to operate a profitable distillery and is not the method seen elsewhere in the country.

In some distilleries, this is not a problem. They do not need barrels to store or age their product (i.e. Rum, Vodka, Gin). These can be produced under the 120gal/240gal requirements and immediately bottled. Bottled spirits in containers less than 1.3 gallons are exempt from code. There does not seem to be a problem processing clear spirits. But clear spirits are not the history of Virginia, the father of Bourbon and Moonshine was invented here in Virginia, along the James River. The first truly American whiskey was born in Virginia when Corn (Indian Maise) was added to British Ale and then distilled. The history of of American Bourbon, the spirit that is quickly becoming a world phenomenon was born here. So why then can't we make it here? Why can't we birth craft distilleries in the land where it started? Cost. The only economical method is to find an older building that can meet a 4 hour fire code and that has sprinklers. New building construction seems cost prohibitive for this application as the aging process can take 1 to 18 years with around half the product being lost to the 'angels share'.

Solutions to allow distilleries to operate on farms?

1. Allow for ag by right for distilleries for all parts of the operation except for the distillation process. Most of the industry will agree that the distillation part of the process needs to be controlled. If controlled, allow exception to 120 gals in the control area instead of the current 30 gals.
2. Allow for barrel storage to be exempt under the Virginia Construction Code, as it is already allowed under the Virginia Statewide Fire Prevention Code section 5001.1 exception #10. This would again keep the distillation part of the process controlled. This might be further specified that the barrels not be stored in the processing (distillation) room.
3. Expanding the 120gal/240gal per room and 30gals open rules would also allow for ease of operation, possibly to 120 gals in the processing room with 120 gals allowed open for processing (instead of 30 gallons) and allow the other 3 control rooms to expand to 480 gals/room to allow for improved blending of batches. Again allowing for barrels to be exempt when stored in a room other than the processing room.

Cost Impact: This code change will reduce the cost of construction for small craft distilleries by raising the thresholds that require fire rated construction to create control areas and the threshold that requires sprinkler system installation.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Proponent simply is asking for uniformity, Mike Redifer asked if anyone had issues with unlimited, Robbie Dawson expressed concerns, Ron Clements clarified the proposal is word for word from the fire code-outcome of ICC decision in Louisville.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-307.1 cdpVA-15

CB-717.5.3 cdpVA-15

Proponent : Richard Grace (richard.grace@fairfaxcounty.gov); Shawn Strausbaugh (plumbers96@yahoo.com)

2015 International Building Code

717.5.3 Shaft enclosures. Shaft enclosures that are permitted to be penetrated by ducts and air transfer openings shall be protected with *approved* fire and smoke dampers installed in accordance with their listing.

- **Exceptions:**

1. Fire and smoke dampers are not required where steel exhaust subducts extend at least 22 inches (559 mm) vertically in exhaust shafts, provided there is a continuous airflow upward to the outside.
2. Firedampers are not required at where penetrations of shafts where any are tested in accordance with ASTM E 119 as part of the following criteria are met: fire-resistance-rated assembly.
3. ~~Smoke~~Fire and smoke dampers are not required at penetrations of shafts where ducts are used as part of an *approved* mechanical smoke-control system designed in accordance with Section 909 and where the smoke damper will interfere with the operation of the smoke control system.
4. ~~Smoke~~Fire and smoke dampers are not required at penetration of where the penetrations are in parking garage exhaust or supply shafts in parking garages that are separated from other building shafts by not less than 2-hour fire-resistance-rated construction.
5. ~~Fire dampers and combination fire/smokedampers are not required in kitchen and clothes dryer exhaust systems where installed in accordance with the International Mechanical Code.~~
6. ~~In Group B and R occupancies~~Smoke dampers are not required where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, ~~smokedampers are not required at penetrations of shafts where all of the following criteria are met:~~

2015 International Mechanical Code

[BF] 607.5.5 Shaft enclosures. Shaft enclosures that are permitted to be penetrated by ducts and air transfer openings shall be protected with *approved* fire and smoke dampers installed in accordance with their listing.

- **Exceptions:**

1. ~~In Group B~~Fire and R occupancies equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the International Building Code, smoke dampers are not required at penetrations of shafts where kitchen, clothes dryer, bathroom and toilet room exhaust openings with steel exhaust subducts, having a minimum thickness of 0.0187 inch (0.4712 mm) (No. 26 gage), extend

~~not less than at least 22 inches (559 mm) vertically and the~~ exhaust fan at the upper terminus shafts, provided there is ~~powered~~ continuously in accordance with the provisions of Section 909.11 of the ~~International Building Code~~, and maintains air flow a continuous airflow upward to the outdoors~~outside~~.

2. Fire dampers are not required ~~at where~~ penetrations of shafts where ~~any are~~ tested in accordance with ASTM E 119 as part of the following ~~apply~~: fire-resistance-rated assembly.
3. Fire dampers and combination fire/smoke dampers are not required in kitchen and clothes dryer exhaust systems installed ~~where~~ ducts are used as part of an approved smoke-control system in accordance with this code. Section 909.
4. ~~Smoke~~Fire and smoke dampers are not required ~~at where~~ the penetrations of ~~are in~~ parking garage exhaust or supply shafts in parking garages that are separated from other building shafts by not less than 2-hour fire-resistance-rated construction.
5. Smoke dampers are not required ~~at penetrations of shafts where~~ ducts are used as part of the building is equipped throughout with an ~~approved mechanical smoke control~~ automatic sprinkler system designed in accordance with Section ~~909 of the International Building Code~~ and where the smoke damper will interfere with the operation of the smoke control system. 903.3.1.1.

Reason: We are submitting this proposal for only the simple reason that we have adopted this requirement through the USBC technical amendment process since the adoption of the International Building Codes (starting with edition 2000). It is not clear why this was not included/adopted in the 2012 edition of the Virginia Construction Code (VCC), other than it was an oversight. The language contained in the 2012 edition of the VCC is significant in that, for example, it requires combination fire/smoke dampers where previously only fire dampers were required. There was no reason statement submitted for eliminating this long-standing language/requirement, and I have no stake in either direction that it goes; only wanted to bring it to the attention of those technical experts qualified to make this decision.

Cost Impact: Decreases the cost of construction by eliminating certain smoke damper requirements.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-1008.1.6 cdpVA-15

Proponent : William King (william.king@alexandriava.gov)

2012 Virginia Construction Code

1008.1.6 Landings at doors.

Landings shall have a width not less than the width of the *stairway* or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). When a landing serves an *occupant load* of 50 or more, other doors, gates, or turnstiles in any position shall not reduce the landing to less than one-half its required width nor prevent a door, gate or turnstile from opening to less than one-half of the required landing width. Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

- **Exception:** Landing length in the direction of travel in Groups R-3 and U and within individual units of Group R-2 need not exceed 36 inches (914 mm).

1009.8 Stairway landings.

There shall be a floor or landing at the top and bottom of each *stairway*. The width of landings shall not be less than the width of *stairways* they serve. Every landing shall have a minimum width measured perpendicular to the direction of travel equal to the width of the *stairway*. Where the *stairway* has a straight run the depth need not exceed 48 inches (1219 mm). Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches (178 mm) into a landing. When *wheelchair spaces* are required on the *stairway* landing in accordance with Section [1007.6.1](#), the *wheelchair space* shall not be located in the required width of the landing and doors shall not swing over the *wheelchair spaces*.

~~**Exception:** Aisle stairs complying with Section [1028](#).~~

Exceptions:

1. Aisle stairs complying with Section [1028](#).

2. A floor or landing is not required at the top of an interior flight of exit access stairs within individual dwellings units and sleeping units of Group R-2 occupancies and dwelling units of Group R-3 occupancies, including stairs in an enclosed private garage serving only an individual dwelling unit, provide that a door does not swing over the stairs.

Reason: This new exception is designed to mimic the exception to IRC R311.7.6. This also coordinates with numerous exceptions contained within Chapter 10 that treat egress within individual dwelling units in a manner similar to that required by the IRC.

The modification to Section 1008.1.6, Landings is to address the same issue and address the broader issue to allow a door to swing over its own landing which currently would appear to be prohibited.

The intent of this section is to prevent encroachment into the required egress width in a manner similar to corridors, aisles, exit passageways, etc. The fundamental issue with the

current language though is that a door must inherently swing over its own landing which is at odds with the current language. This change would allow the door to swing over its own landing while preventing other doors from blocking the landing and/or keeping the door from opening to at least half of its required width.

Cost Impact: This will reduce the cost of construction.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: This new exception is designed to mimic the exception to IRC R311.7.6. This also coordinates with numerous exceptions contained within Chapter 10 that treat egress within individual dwelling units in a manner similar to that required by the IRC. William King gave an overview of proposal. He was trying to clean up the language.

Comments: None

Cindy Davis - **Move forward as consensus**

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-1008.1.6 cdpVA-15

CB-2308.4.1.1 cdpVA-15

Proponent : Matthew Hunter, Representing American Wood Council (mhunter@awc.org); John Catlett, Representing American Wood Council (jcatlett@awc.org)

2015 International Building Code

TABLE 2308.4.1.1(1)

HEADER AND GIRDER SPANS^{a, b} FOR EXTERIOR BEARING WALLS (Maximum spans for Douglas Fir-Larch, Hem-Fir, Southern Pine and Spruce-Pine-Fir^b and required number of jack studs)

GIRDERS AND HEADERS SUPPORTING	SIZE	GROUND SNOW LOAD (psf) ^e																	
		30						50						70					
		Building width ^c (feet)																	
		2012		2824		36		2012		2824		36		12		24		36	
		Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d
Roof and ceiling	1- 2×6	4-0	1	3-1	2	2-7	2	3-5	1	2-8	2	2-3	2	3-0	2	2-4	2	2-0	2
	1- 2×8	5-1	2	3-11	2	3-3	2	4-4	2	3-4	2	2-10	2	3-10	2	3-0	2	2-6	3
	1- 2×10	6-0	2	4-8	2	3-11	2	5-2	2	4-0	2	3-4	2	4-7	2	3-6	3	3-0	3
	1- 2×12	7-1	2	5-5	2	4-7	3	6-1	2	4-8	3	3-11	3	5-5	2	4-2	3	3-6	3
	2- 2×4	3-6 4-0	1	3-23-1	1	2-10 2-7	1	3-23-5	1	2-9 2-7	1	2-6 2-2	1	3-0	1	2-4	1	2-0	1
	2- 2×6	5-5 6-0	1	4-8 4-7	1	4-23-10	1	4-8 5-1	1	4-13-11	1	3-8 3-3	2	4-6	1	3-6	2	2-11	2
	2- 2×8	6-10 7-1	1	5-11 5-9	2	5-4 4-10	2	5-11 6-5	2	5-25-0	2	4-7 4-2	2	5-9	1	4-5	2	3-9	2
	2- 2×10	8-5 9-0	2	7-3 6-10	2	6-6 5-9	2	7-3 7-8	2	6-3 5-11	2	5-7 4-11	2	6-9	2	5-3	2	4-5	2
	2- 2×12	9-9 10-7	2	8-5 8-1	2	7-6 6-10	2	8-5 9-0	2	7-3 6-11	2	6-6 5-10	2	8-0	2	6-2	2	5-2	3
	3- 2×8	8-4 9-5	1	7-5 7-3	1	6-8 6-1	1	7-5 8-1	1	6-5 6-3	2	5-9 5-3	2	7-2	1	5-6	2	4-8	2
	3- 2×10	10-6 11-3	1	9-4 8-7	2	8-2 7-3	2	9-4 9-7	2	7-10 7-4	2	7-0 6-2	2	8-6	1	6-7	2	5-6	2
	3- 2×12	12-2 13-2	2	10-7 10-1	2	9-5 8-6	2	10-7 11-3	2	9-2 8-8	2	8-2 7-4	2	10-0	2	7-9	2	6-6	2
	4- 2×8	9-2 10-11	1	8-4	1	7-8 7-0	1	8-4 9-4	1	7-5 7-2	1	6-8 6-0	1	8-3	1	6-4	1	5-4	2
	4- 2×10	11-8 12-11	1	10-6 9-11	1	9-5 8-4	2	10-6 11-1	1	9-4 8-6	2	8-2 7-2	2	9-10	1	7-7	2	6-4	2
	4- 2×12	14-1 15-3	1	12-2 11-8	2	10-4 9-10	2	12-2 13-0	2	10-7 10-0	2	9-5 8-5	2	11-7	1	8-11	2	7-6	2
	1- 2×6	3-3	1	2-7	2	2-2	2	3-0	2	2-4	2	2-0	2	2-9	2	2-2	2	1-10	2
	1- 2×8	4-1	2	3-3	2	2-9	2	3-9	2	3-0	2	2-6	3	3-6	2	2-9	2	2-4	3
	1- 2×10	4-11	2	3-10	2	3-3	3	4-6	2	3-6	3	3-0	3	4-1	2	3-3	3	2-9	3

Roof, ceiling and one center-bearing floor	1- 2x12	5-9	2	4-6	3	3-10	3	5-3	2	4-2	3	3-6	3	4-10	3	3-10	3	3-3	4
	2- 2x4	3-43-3	1	2-92-6	1	2-52-2	1	2-93-0	1	2-52-4	1	2-22-0	1	2-8	1	2-2	1	1-10	1
	2- 2x6	4-64- 10	1	4-03-9	1	3-73-3	2	4-14-5	1	3-73-6	2	3-33-0	2	4-1	1	3-3	2	2-9	2
	2- 2x8	5-96-1	21	5-04- 10	2	4-64-1	2	5-25-7	2	4-64-5	2	4-13-9	2	5-2	2	4-1	2	3-6	2
	2- 2x10	7-07-3	2	6-25-8	2	5-64- 10	2	6-46-8	2	5-65-3	2	5-04-5	2	6-1	2	4-10	2	4-1	2
	2- 2x12	8-48-6	2	7-16-8	2	6-55-8	2	7-47- 10	2	6-56-2	2	5-95-3	3	7-2	2	5-8	2	4-10	3
	3- 2x8	7-27-8	1	6-36-0	21	5-85-1	2	6-57-0	21	5-85-6	2	5-14-8	2	6-5	1	5-1	2	4-4	2
	3- 2x10	8-99-1	21	7-87-2	2	6-116- 1	2	7-118- 4	21	6-116- 7	2	6-35-7	2	7-8	2	6-1	2	5-2	2
	3- 2x12	10- 210-8	2	8-118- 5	2	8-07-2	2	9-29- 10	2	8-07-8	2	7-36-7	2	9-0	2	7-1	2	6-1	2
	4- 2x8	8-48- 10	1	7-36- 11	1	6-75- 11	1	7-58-1	1	6-66-4	1	5-115- 5	2	7-5	1	5-11	1	5-0	2
	4- 2x10	10- 410-6	1	8-108- 3	2	8-07-0	2	9-19-8	21	8-07-7	2	7-26-5	2	8-10	1	7-0	2	6-0	2
	4- 2x12	11- 912-4	21	10-39- 8	2	9-38-3	2	10- 711-4	2	9-38- 11	2	8-47-7	2	10-4	2	8-3	2	7-0	2
Roof, ceiling and one clear span floor	1- 2x6	2-11	2	2-3	2	1-11	2	2-9	2	2-1	2	1-9	2	2-7	2	2-0	2	1-8	2
	1- 2x8	3-9	2	2-10	2	2-5	3	3-6	2	2-8	2	2-3	3	3-3	2	2-6	3	2-2	3
	1- 2x10	4-5	2	3-5	3	2-10	3	4-2	2	3-2	3	2-8	3	3-11	2	3-0	3	2-6	3
	1- 2x12	5-2	2	4-0	3	3-4	3	4-10	3	3-9	3	3-2	4	4-7	3	3-6	3	3-0	4
	2- 2x4	2-82- 11	1	2-42-3	1	2-11- 10	1	2-72-9	1	2-32-1	1	2-01-9	1	2-7	1	2-0	1	1-8	1
	2- 2x6	3-114- 4	1	3-53-4	2	3-02- 10	2	3-104- 1	21	3-43-2	2	3-02-8	2	3-10	1	3-0	2	2-6	2
	2- 2x8	5-05-6	2	4-44-3	2	3-103- 7	2	4-105- 2	2	4-24-0	2	3-93-4	2	4-10	2	3-9	2	3-2	2
	2- 2x10	6-16-7	2	5-35-0	2	4-84-2	2	5-116- 1	2	5-14-9	2	4-74-0	32	5-9	2	4-5	2	3-9	3
	2- 2x12	7-17-9	2	6-15- 11	32	5-54- 11	3	6-107- 2	2	5-115- 7	32	5-44-8	3	6-9	2	5-3	3	4-5	3
	3- 2x8	6-36- 11	21	5-55-3	2	4-104- 5	2	6-16-5	21	5-35-0	2	4-84-2	2	6-1	1	4-8	2	4-0	2
	3- 2x10	7-78-3	2	6-76-3	2	5-115- 3	2	7-57-8	2	6-55- 11	2	5-95-0	2	7-3	2	5-7	2	4-8	2
	3- 2x12	8-109- 8	2	7-87-5	2	6-106- 2	2	8-79-0	2	7-57-0	2	6-85- 10	2	8-6	2	6-7	2	5-6	3
	4- 2x8	7-28-0	1	6-36-1	21	5-75-1	2	7-07-5	1	6-15-9	2	5-54- 10	2	7-0	1	5-5	2	4-7	2
	4- 2x10	8-99-6	21	7-77-3	2	6-106- 1	2	8-78- 10	21	7-56- 10	2	6-75-9	2	8-4	1	6-5	2	5-5	2
	4- 2x12	10- 211-2	2	8-108- 6	2	7-117- 2	2	9- 4110-5	2	8-78-0	2	7-86-9	2	9-10	2	7-7	2	6-5	2

GIRDERS AND HEADERS SUPPORTING	SIZE	GROUND SNOW LOAD (psf) ^e																	
		30						50						70					
		Building width ^c (feet)																	
		2012		2824		36		2012		2824		36		12		24		36	
		Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d
Roof, ceiling and two center- bearing floors	1- 2×6	2-8	2	2-1	2	1-10	2	2-7	2	2-0	2	1-9	2	2-5	2	1-11	2	1-8	2
	1- 2×8	3-5	2	2-8	2	2-4	3	3-3	2	2-7	2	2-2	3	3-1	2	2-5	3	2-1	3
	1- 2×10	4-0	2	3-2	3	2-9	3	3-10	2	3-1	3	2-7	3	3-8	2	2-11	3	2-5	3
	1- 2×12	4-9	3	3-9	3	3-2	4	4-6	3	3-7	3	3-1	4	4-3	3	3-5	3	2-11	4
	2- 2×4	2-72-8	1	2-32-1	1	2-01-9	1	2-6	1	2-22-0	1	4-111-8	1	2-5	1	1-11	1	1-7	1
	2- 2×6	3-94-0	21	3-33-2	2	2-112-8	2	3-83-9	21	3-23-0	2	2-102-7	2	3-7	1	2-10	2	2-5	2
	2- 2×8	4-95-0	2	4-24-0	2	3-93-5	2	4-74-10	2	4-03-10	2	3-83-3	2	4-7	2	3-7	2	3-1	2
	2- 2×10	5-96-0	2	5-14-9	2	4-74-0	32	5-8	2	4-114-6	2	4-53-10	3	5-5	2	4-3	2	3-8	3
	2- 2×12	6-87-0	2	5-105-7	32	5-34-9	3	6-66-8	2	5-95-4	3	5-24-6	3	6-4	2	5-0	3	4-3	3
	3- 2×8	5-116-4	21	5-25-0	2	4-84-3	2	5-96-0	21	5-14-9	2	4-74-1	2	5-8	2	4-6	2	3-10	2
	3- 2×10	7-37-6	2	6-45-11	2	5-85-1	2	7-1	2	6-25-8	2	5-74-10	2	6-9	2	5-4	2	4-7	2
	3- 2×12	8-58-10	2	7-47-0	2	6-75-11	2	8-28-5	2	7-26-8	2	6-55-8	3	8-0	2	6-4	2	5-4	3
	4- 2×8	6-107-3	1	6-05-9	21	5-54-11	2	6-85-11	1	5-105-6	2	5-34-8	2	6-7	1	5-2	2	4-5	2
	4- 2×10	8-48-8	21	7-46-10	2	6-75-10	2	8-28-3	2	7-26-6	2	6-55-7	2	7-10	2	6-2	2	5-3	2
	4- 2×12	9-810-2	2	8-68-1	2	7-86-10	2	9-59-8	2	8-37-8	2	7-56-7	2	9-2	2	7-3	2	6-2	2
Roof, ceiling, and two clear- span floors	1- 2×6	2-3	2	1-9	2	1-5	2	2-3	2	1-9	2	1-5	3	2-2	2	1-8	2	1-5	3
	1- 2×8	2-10	2	2-2	3	1-10	3	2-10	2	2-2	3	1-10	3	2-9	2	2-1	3	1-10	3
	1- 2×10	3-4	2	2-7	3	2-2	3	3-4	3	2-7	3	2-2	4	3-3	3	2-6	3	2-2	4
	1- 2×12	4-0	3	3-0	3	2-7	4	4-0	3	3-0	4	2-7	4	3-10	3	3-0	4	2-6	4
	2- 2×4	2-12-3	1	1-8	1	4-61-4	21	2-02-3	1	1-8	1	4-51-4	21	2-2	1	1-8	1	1-4	2
	2- 2×6	3-13-4	21	2-82-6	2	2-42-2	2	3-03-4	2	2-72-6	2	2-32-2	2	3-3	2	2-6	2	2-1	2
	2- 2×8	3-104-3	2	3-43-3	2	3-02-8	32	3-104-3	2	3-43-3	2	2-112-8	32	4-1	2	3-2	2	2-8	3
	2- 2×10	4-95-0	2	4-13-10	32	3-83-2	3	4-85-0	2	4-03-10	32	3-73-2	32	4-10	2	3-9	3	3-2	3

2- 2x12	5-65- 11	32	4-94- 6	3	4-33- 9	3	5-55- 11	32	4-84- 6	3	4-23- 9	3	5-8	2	4-5	3	3-9	3
3- 2x8	4-105- 3	21	4-24- 0	2	3-93- 5	2	4-95- 3	2	4-14- 0	2	3-83- 5	2	5-1	2	3-11	2	3-4	2
3- 2x10	5-116- 3	2	5-14- 9	2	4-74- 0	32	5-106- 3	2	5-04- 9	2	4-64- 0	32	6-1	2	4-8	2	4-0	3
3- 2x12	6-107- 5	2	5-115- 8	32	5-44- 9	3	6-97- 5	2	5-105- 8	32	5-34- 9	3	7-2	2	5-6	3	4-8	3
4- 2x8	5-76- 1	21	4-104- 8	2	4-43- 11	2	5-66- 1	21	4-94- 8	2	4-33- 11	2	5-11	1	4-7	2	3-11	2
4- 2x10	6-107- 3	2	5-115- 6	2	5-34- 8	2	6-97- 3	2	5-105- 6	2	5-24- 8	2	7-0	2	5-5	2	4-7	2
4- 2x12	7-118- 6	2	6-106- 6	2	6-25- 6	32	7-98- 6	2	6-96- 6	2	6-05- 6	32	8-3	2	6-4	2	5-4	3

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

a. Spans are given in feet and inches.

b. Spans are based on minimum design properties for No. 2 grade lumber of Douglas Fir-Larch, Hem-Fir, Southern Pine, and Spruce-Pine Fir. ~~No. 4 or better grade lumber shall be used for Southern Pine.~~

c. Building width is measured perpendicular to the ridge. For widths between those shown, spans are permitted to be interpolated.

d. NJ - Number of jack studs required to support each end. Where the number of required jack studs equals one, the header is permitted to be supported by an approved framing anchor attached to the full-height wall stud and to the header.

e. Use 30 psf ground snow load for cases in which ground snow load is less than 30 psf and the roof live load is equal to or less than 20 psf.

f. Spans are calculated assuming the top of the header or girder is laterally braced by perpendicular framing. Where the top of the header or girder is not laterally braced (e.g. cripple studs bearing on the header), tabulated spans for headers consisting of 2x8, 2x10, or 2x12 sizes shall be multiplied by 0.70 or the header shall be designed.

TABLE 2308.4.1.1(2)

HEADER AND GIRDER SPANS^{a, b} FOR INTERIOR BEARING WALLS (Maximum spans for Douglas Fir-Larch, Hem-Fir, Southern Pine and Spruce-Pine-Fir^b and required number of jack studs)

HEADERS AND GIRDERS SUPPORTING	SIZE	BUILDING Width ^c (feet)					
		2012		2024		36	
		Span ^e	NJ ^d	Span ^e	NJ ^d	Span ^e	NJ ^d
One floor only	2-2 × 4	3-14-1	1	2-82-10	1	2-52-4	1
	2-2 × 6	4-66-1	1	3-114-4	1	3-6	1
	2-2 × 8	5-97-9	1	5-05-5	21	4-5	2
	2-2 × 10	7-09-2	21	6-16-6	2	5-55-3	2
	2-2 × 12	8-110-9	21	7-07-7	2	6-3	2
	3-2 × 8	7-29-8	1	6-36-10	1	5-7	21
	3-2 × 10	8-911-5	1	7-78-1	21	6-96-7	2
	3-2 × 12	10-213-6	21	8-109-6	2	7-107-9	2
	4-2 × 8	9-011-2	1	7-87-11	1	6-96-5	1
	4-2 × 10	10-113-3	1	8-99-4	1	7-107-8	21
	4-2 × 12	11-915-7	1	10-211-0	21	9-19-0	2
Two floors	2-2 × 4	2-22-7	1	1-101-11	1	1-7	1
	2-2 × 6	3-23-11	21	2-92-11	2	2-5	2
	2-2 × 8	4-15-0	21	3-63-8	2	3-23-1	2
	2-2 × 10	4-115-11	2	4-34-4	2	3-103-7	32
	2-2 × 12	5-96-11	2	5-05-2	32	4-54-3	3
	3-2 × 8	5-16-3	21	4-54-7	2	3-113-10	2

	3-2 × 10	6-27-5	21	5-45-6	2	4-104-6	2
	3-2 × 12	7-28-8	2	6-36-5	2	5-75-4	32
	4-2 × 8	6-17-2	1	5-35-4	21	4-84-5	2
	4-2 × 10	7-28-6	21	6-26-4	2	5-65-3	2
	4-2 × 12	8-410-1	21	7-27-5	2	6-56-2	2

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

a. Spans are given in feet and inches.

b. Spans are based on minimum design properties for No. 2 grade lumber of Douglas Fir-Larch, Hem-Fir, Southern Pine, and Spruce-Pine Fir. ~~No. 1 or better grade lumber shall be used for Southern Pine.~~

c. Building width is measured perpendicular to the ridge. For widths between those shown, spans are permitted to be interpolated.

d. NJ - Number of jack studs required to support each end. Where the number of required jack studs equals one, the header is permitted to be supported by an approved framing anchor attached to the full-height wall stud and to the header.

e. Spans are calculated assuming the top of the header or girder is laterally braced by perpendicular framing. Where the top of the header or girder is not laterally braced (e.g. cripple studs bearing on the header), tabulated spans for headers consisting of 2x8, 2x10, or 2x12 sizes shall be multiplied by 0.70 or the header shall be designed.

Reason: The update of Table 2308.4.1.1(1) Girder Spans and Header Spans for Exterior Bearing Walls is proposed. Updated spans address use of Southern Pine No. 2 in lieu of Southern Pine No. 1. Footnote "f" is added to clarify that header spans are based on laterally braced assumption such as when the header is raised. For dropped headers consisting of 2x8, 2x10, or 2x12 sizes that are not laterally braced, a factor of 0.7 can be applied to determine the spans or alternatively the header or girder can be designed to include any adjustment for potential buckling. Laterally braced (raised) and not laterally braced (dropped) header conditions and building widths for which header spans are tabulated represent the same conditions used to develop header span tables in the Wood Frame Construction Manual (WFCM).

The update of Table 2308.4.1.1(2) Girder Spans and Header Spans for Interior Bearing Walls is proposed. Updated spans address use of Southern Pine No. 2 in lieu of Southern Pine No. 1. Footnote "e" is added to clarify that header spans are based on laterally braced assumption such as when the header is raised. For dropped headers consisting of 2x8, 2x10, or 2x12 sizes that are not laterally braced, a factor of 0.7 can be applied to determine the spans or alternatively the header or girder can be designed to include any adjustment for potential buckling. Laterally braced (raised) and not laterally braced (dropped) header conditions and building widths for which header spans are tabulated represent the same conditions used to develop header span tables in the Wood Frame Construction Manual (WFCM).

Cost Impact: Increased cost may be associated with reduced spans that result from the not laterally braced condition and application of footnote f (in Table 2308.4.1.1(1)) or e (in Table 2308.4.1.1(2)). Due to smaller building width column (12'), permissible use of Southern Pine No. 2, and the laterally braced assumption for tabulated spans, there are also cases where this change will not increase the cost of construction and may reduce the cost of construction.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: The update of Table 2308.4.1(1) Girder Spans and Header Spans for Exterior Bearing Walls is proposed. Updated spans address use of Southern Pine No. 2 in lieu of Southern Pine No. 1. Footnote "f" is added to clarify that header spans are based on laterally braced assumption such as when the header is raised.

Comments: None

Cindy Davis - **Moving forward as consensus**

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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CR-R602.7 cdpVA-15

Proponent : Matthew Hunter, Representing American Wood Council (mhunter@awc.org); John Catlett, Representing American Wood Council (jcatlett@awc.org)

2015 International Residential Code

TABLE R602.7(1)
GIRDER SPANS^a AND HEADER SPANS^a FOR EXTERIOR BEARING WALLS (Maximum spans for Douglas fir-larch, hem-fir, southern pine and spruce-pine-fir^b and required number of jack studs)

GIRDERS AND HEADERS SUPPORTING	SIZE	GROUND SNOW LOAD (psf) ^e																	
		30						50						70					
		Building width ^c (feet)																	
		2012		2824		36		2012		2824		36		2012		2824		36	
		Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d
Roof and ceiling	1- 2x6	4-0	1	3-1	2	2-7	2	3-5	1	2-8	2	2-3	2	3-0	2	2-4	2	2-0	2
	1- 2x8	4-65-1	42	3-103-11	42	3-53-3	42	3-94-4	42	3-23-4	42	2-10	2	3-10	2	3-0	2	2-6	3
	1- 2x10	5-86-0	42	4-114-8	42	4-43-11	42	4-95-2	42	4-14-0	42	3-73-4	2	4-7	2	3-6	3	3-0	3
	1- 2x12	6-117-1	42	5-115-5	2	5-34-7	23	5-96-1	2	4-8	23	3-83-11	23	5-5	2	4-2	3	3-6	3
	2- 2x4	3-64-0	1	3-23-1	1	2-102-7	1	3-23-5	1	2-92-7	1	2-62-2	1	2-103-0	1	2-62-4	1	2-32-0	1
	2- 2x6	5-56-0	1	4-84-7	1	4-23-10	1	4-85-1	1	4-13-11	1	3-83-3	2	4-24-6	1	3-83-6	2	3-32-11	2
	2- 2x8	6-107-7	1	5-115-9	21	5-44-10	2	5-116-5	21	5-25-0	2	4-74-2	2	5-45-9	21	4-74-5	2	4-13-9	2
	2- 2x10	8-59-0	21	7-36-10	2	6-65-9	2	7-37-8	2	6-35-11	2	5-74-11	2	6-66-9	2	5-75-3	2	5-04-5	2
	2- 2x12	9-910-7	2	8-58-1	2	7-66-10	2	8-59-0	2	7-36-11	2	6-65-10	2	7-68-0	2	6-66-2	2	5-105-2	3
	3- 2x8	8-49-5	1	7-57-3	1	6-86-1	1	7-58-1	1	6-56-3	21	5-95-3	2	6-87-2	1	5-95-6	2	5-24-8	2
	3- 2x10	10-611-3	1	9-18-7	21	8-27-3	2	9-19-7	21	7-107-4	2	7-06-2	2	8-28-6	21	7-06-7	2	6-45-6	2
	3- 2x12	12-213-2	21	10-710-1	2	9-58-6	2	10-711-3	2	9-28-8	2	8-27-4	2	9-510-0	2	8-27-9	2	7-46-6	2
	4- 2x8	9-210-11	1	8-4	1	7-87-0	1	8-49-4	1	7-57-2	1	6-86-0	1	7-88-3	1	6-86-4	1	5-115-4	2
	4- 2x10	11-812-11	1	10-69-11	1	9-58-4	21	10-611-1	1	9-18-6	21	8-27-2	2	9-59-10	21	8-27-7	2	7-36-4	2
	4- 2x12	14-115-3	1	12-211-8	21	10-119-10	2	12-213-0	21	10-710-0	2	9-58-5	2	10-1111-7	21	9-58-11	2	8-57-6	2
	1- 2x6	3-3	1	2-7	2	2-2	2	3-0	2	2-4	2	2-0	2	2-9	2	2-2	2	1-10	2
	1-	3-114-1	42	3-53-3	42	3-02-9	42	3-73-9	42	3-0	2	2-82-6	23	3-6	2	2-9	2	2-4	3

Roof, ceiling and one center-bearing floor	2×8	1																	
	1-2×10	5-04-11	2	4-43-10	2	3-103-3	23	4-6	2	3-113-6	23	3-43-0	23	—4-1	—2	—3-3	—3	—2-9	—3
	1-2×12	5-105-9	2	4-94-6	23	4-23-10	23	5-55-3	2	4-2	23	3-43-6	23	—4-10	—3	—3-10	—3	—3-3	—4
	2-2×4	3-13-3	1	2-92-6	1	2-52-2	1	2-93-0	1	2-52-4	1	2-22-0	1	2-72-8	1	2-32-2	1	2-01-10	1
	2-2×6	4-64-10	1	4-03-9	1	3-73-3	2	4-14-5	1	3-73-6	2	3-33-0	2	3-94-1	21	3-3	2	2-112-9	2
	2-2×8	5-96-1	21	5-04-10	2	4-64-1	2	5-25-7	2	4-64-5	2	4-13-9	2	4-95-2	2	4-24-1	2	3-93-6	2
	2-2×10	7-07-3	2	6-25-8	2	5-64-10	2	6-46-8	2	5-65-3	2	5-04-5	2	5-96-1	2	5-14-10	2	4-74-1	32
	2-2×12	8-18-6	2	7-16-8	2	6-55-8	2	7-47-10	2	6-56-2	2	5-95-3	3	6-87-2	2	5-105-8	32	5-34-10	3
	3-2×8	7-27-8	1	6-36-0	21	5-85-1	2	6-57-0	21	5-85-6	2	5-14-8	2	5-116-5	21	5-25-1	2	4-84-4	2
	3-2×10	8-99-1	21	7-87-2	2	6-116-1	2	7-118-4	21	6-116-7	2	6-35-7	2	7-37-8	2	6-46-1	2	5-85-2	2
	3-2×12	10-210-8	2	8-118-5	2	8-07-2	2	9-29-10	2	8-07-8	2	7-36-7	2	8-59-0	2	7-47-1	2	6-76-1	2
	4-2×8	8-18-10	1	7-36-11	1	6-75-11	1	7-58-1	1	6-66-4	1	5-115-5	2	6-107-5	1	6-05-11	21	5-55-0	2
	4-2×10	10-110-6	1	8-108-3	2	8-07-0	2	9-19-8	21	8-07-7	2	7-26-5	2	8-48-10	21	7-47-0	2	6-76-0	2
	4-2×12	11-912-4	21	10-39-8	2	9-38-3	2	10-711-4	2	9-38-11	2	8-47-7	2	9-810-4	2	8-68-3	2	7-77-0	2
Roof, ceiling and one clear span floor	1-2×6	2-11	2	2-3	2	1-11	2	2-9	2	2-1	2	1-9	2	—2-7	—2	—2-0	—2	—1-8	—2
	1-2×8	3-63-9	42	3-02-10	42	2-82-5	43	3-53-6	42	2-112-8	42	2-72-3	23	—3-3	—2	—2-6	—3	—2-2	—3
	1-2×10	4-64-5	42	3-103-5	43	3-32-10	43	4-44-2	42	3-93-2	43	3-12-8	23	—3-11	—2	—3-0	—3	—2-6	—3
	1-2×12	5-65-2	42	4-24-0	23	3-33-4	23	5-44-10	23	3-113-9	23	3-13-2	24	—4-7	—3	—3-6	—3	—3-0	—4
	2-2×4	2-82-11	1	2-42-3	1	2-11-10	1	2-72-9	1	2-32-1	1	2-01-9	1	2-52-7	1	2-12-0	1	1-101-8	1
	2-2×6	3-114-4	1	3-53-4	2	3-02-10	2	3-104-1	21	3-43-2	2	3-02-8	2	3-63-10	21	3-13-0	2	2-92-6	2
	2-2×8	5-05-6	2	4-44-3	2	3-103-7	2	4-105-2	2	4-24-0	2	3-93-4	2	4-64-10	2	3-113-9	2	3-63-2	2
	2-2×10	6-16-7	2	5-35-0	2	4-84-2	2	5-116-1	2	5-14-9	2	4-74-0	32	5-65-9	2	4-94-5	2	4-33-9	3
	2-2×12	7-17-9	2	6-15-11	32	5-54-11	3	6-107-2	2	5-115-7	32	5-44-8	3	6-46-9	2	5-65-3	3	5-04-5	3
	3-2×8	6-36-11	21	5-55-3	2	4-104-5	2	6-16-5	21	5-35-0	2	4-84-2	2	5-76-1	21	4-114-8	2	4-54-0	2
	3-2×10	7-78-3	2	6-76-3	2	5-115-3	2	7-57-8	2	6-55-11	2	5-95-0	2	6-107-3	2	6-05-7	2	5-44-8	2
	3-2×12	8-109-8	2	7-87-5	2	6-106-2	2	8-79-0	2	7-57-0	2	6-85-10	2	7-118-6	2	6-116-7	2	6-35-6	23
	4-	7-28-0	1	6-36-1	21	5-75-1	2	7-07-5	1	6-15-9	2	5-54-	2	6-67-0	1	5-85-5	2	5-14-7	2

	2×8										10								
	4- 2×10	8-99-6	21	7-77-3	2	6-106- 1	2	8-78- 10	21	7-56- 10	2	6-75-9	2	7-118- 4	21	6-116- 5	2	6-25-5	2
	4- 2×12	10- 211-2	2	8-108- 6	2	7-117- 2	2	9- 1110- 5	2	8-78-0	2	7-86-9	2	9-29- 10	2	8-07-7	2	7-26-5	2

GIRDERS AND HEADERS SUPPORTING	SIZE	GROUND SNOW LOAD (psf) ^e																	
		30						50						70					
		Building width ^c (feet)																	
		2012		2824		36		2012		2824		36		2012		2824		36	
		Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d	Span ^f	NJ ^d
Roof, ceiling and two center- bearing floors	1- 2×6	2-8	2	2-1	2	1-10	2	2-7	2	2-0	2	1-9	2	2-5	2	1-11	2	1-8	2
	1- 2×8	3-5	2	2-8	2	2-4	3	3-3	2	2-7	2	2-2	3	3-1	2	2-5	3	2-1	3
	1- 2×10	4-0	2	3-2	3	2-9	3	3-10	2	3-1	3	2-7	3	3-8	2	2-11	3	2-5	3
	1- 2×12	4-9	3	3-9	3	3-2	4	4-6	3	3-7	3	3-1	4	4-3	3	3-5	3	2-11	4
	2- 2×4	2-72-8	1	2-32-1	1	2-01-9	1	2-6	1	2-22-0	1	4-111-8	1	2-42-5	1	2-01-11	1	4-91-7	1
	2- 2×6	3-94-0	21	3-33-2	2	2-112-8	2	3-83-9	21	3-23-0	2	2-102-7	2	3-53-7	21	3-02-10	2	2-82-5	2
	2- 2×8	4-95-0	2	4-24-0	2	3-93-5	2	4-74-10	2	4-03-10	2	3-83-3	2	4-44-7	2	3-93-7	2	3-53-1	2
	2- 2×10	5-96-0	2	5-14-9	2	4-74-0	32	5-8	2	4-114-6	2	4-53-10	3	5-35-5	2	4-74-3	32	4-23-8	3
	2- 2×12	6-87-0	2	5-105-7	32	5-34-9	3	6-66-8	2	5-95-4	3	5-24-6	3	6-16-4	32	5-45-0	3	4-104-3	3
	3- 2×8	5-116-4	21	5-25-0	2	4-84-3	2	5-96-0	21	5-14-9	2	4-74-1	2	5-55-8	2	4-94-6	2	4-33-10	2
	3- 2×10	7-37-6	2	6-45-11	2	5-85-1	2	7-1	2	6-25-8	2	5-74-10	2	6-76-9	2	5-95-4	2	5-34-7	2
	3- 2×12	8-58-10	2	7-47-0	2	6-75-11	2	8-28-5	2	7-26-8	2	6-55-8	3	7-88-0	2	6-96-4	2	6-15-4	3
	4- 2×8	6-107-3	1	6-05-9	21	5-54-11	2	6-85-11	1	5-105-6	2	5-34-8	2	6-36-7	21	5-65-2	2	4-114-5	2
	4- 2×10	8-48-8	21	7-46-10	2	6-75-10	2	8-28-3	2	7-26-6	2	6-55-7	2	7-77-10	2	6-86-2	2	6-05-3	2
	4- 2×12	9-810-2	2	8-68-1	2	7-86-10	2	9-59-8	2	8-37-8	2	7-56-7	2	8-109-2	2	7-97-3	2	7-06-2	2
	1- 2×6	2-3	2	1-9	2	1-5	2	2-3	2	1-9	2	1-5	3	2-2	2	1-8	2	1-5	3
	1- 2×8	2-10	2	2-2	3	1-10	3	2-10	2	2-2	3	1-10	3	2-9	2	2-1	3	1-10	3
	1- 2×10	3-4	2	2-7	3	2-2	3	3-4	3	2-7	3	2-2	4	3-3	3	2-6	3	2-2	4
	1- 2×12	4-0	3	3-0	3	2-7	4	4-0	3	3-0	4	2-7	4	3-10	3	3-0	4	2-6	4
	2-	2-12-3	1	1-8	1	4-61-4	21	2-02-3	1	1-8	1	4-51-4	21	2-02-2	1	1-8	1	4-51-4	2

Roof, ceiling, and two clear- span floors	2×4																		
	2- 2×6	3-13- 4	21	2-82- 6	2	2-42- 2	2	3-03- 4	2	2-72- 6	2	2-32- 2	2	2-113- 3	2	2-72- 6	2	2-32- 1	2
	2- 2×8	3-104- 3	2	3-43- 3	2	3-02- 8	32	3-104- 3	2	3-43- 3	2	2-112- 8	32	3-94- 1	2	3-33- 2	2	2-112- 8	3
	2- 2×10	4-95- 0	2	4-13- 10	32	3-83- 2	3	4-85- 0	2	4-03- 10	32	3-73- 2	32	4-74- 10	32	4-03- 9	3	3-63- 2	3
	2- 2×12	5-65- 11	32	4-94- 6	3	4-33- 9	3	5-55- 11	32	4-84- 6	3	4-23- 9	3	5-45- 8	32	4-74- 5	3	4-13- 9	43
	3- 2×8	4-105- 3	21	4-24- 0	2	3-93- 5	2	4-95- 3	2	4-14- 0	2	3-83- 5	2	4-85- 1	2	4-13- 11	2	3-83- 4	2
	3- 2×10	5-116- 3	2	5-14- 9	2	4-74- 0	32	5-106- 3	2	5-04- 9	2	4-64- 0	32	5-96- 1	2	4-114- 8	2	4-54- 0	3
	3- 2×12	6-107- 5	2	5-115- 8	32	5-44- 9	3	6-97- 5	2	5-105- 8	32	5-34- 9	3	6-87- 2	2	5-95- 6	3	5-24- 8	3
	4- 2×8	5-76- 1	21	4-104- 8	2	4-43- 11	2	5-66- 1	21	4-94- 8	2	4-33- 11	2	5-55- 11	21	4-84-7	2	4-23- 11	2
	4- 2×10	6-107- 3	2	5-115- 6	2	5-34- 8	2	6-97- 3	2	5-105- 6	2	5-24- 8	2	6-77- 0	2	5-95-5	2	5-14- 7	2
	4- 2×12	7-118- 6	2	6-106- 6	2	6-25- 6	32	7-98- 6	2	6-96- 6	2	6-05- 6	32	7-88- 3	2	6-86- 4	2	5-115- 4	3

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.

a. Spans are given in feet and inches.

b. ~~No. 1 or better grade lumber shall be used for southern pine. Other tabulated values assume~~ Spans are based on minimum design properties for #2 grade lumber of Douglas Fir-Larch, Hem-Fir, Southern Pine, and Spruce-Pine-Fir.

c. Building width is measured perpendicular to the ridge. For widths between those shown, spans are permitted to be interpolated.

d. NJ = Number of jack studs required to support each end. Where the number of required jack studs equals one, the header is permitted to be supported by an approved framing anchor attached to the full-height wall stud and to the header.

e. Use 30 psf ground snow load for cases in which ground snow load is less than 30 psf and the roof live load is equal to or less than 20 psf.

f. Spans are calculated assuming the top of the header or girder is laterally braced by perpendicular framing. Where the top of the header or girder is not laterally braced (e.g. cripple studs bearing on the header), tabulated spans for headers consisting of 2x8, 2x10, or 2x12 sizes shall be multiplied by 0.70 or the header or girder shall be designed.

TABLE R602.7(2)

GIRDER SPANS^a AND HEADER SPANS^a FOR INTERIOR BEARING WALLS (Maximum spans for Douglas fir-larch, hem-fir, southern pine and spruce-pine-fir^b and required number of jack studs)

HEADERS AND GIRDERS SUPPORTING	SIZE	BUILDING Width ^c (feet)					
		2012		2824		36	
		Span ^e	NJ ^d	Span ^e	NJ ^d	Span ^e	NJ ^d
One floor only	2-2 × 4	3-14-1	1	2-82-10	1	2-52-4	1
	2-2 × 6	4-66-1	1	3-114-4	1	3-6	1
	2-2 × 8	5-97-9	1	5-05-5	21	4-5	2
	2-2 × 10	7-09-2	21	6-16-6	2	5-55-3	2
	2-2 × 12	8-110-9	21	7-07-7	2	6-3	2
	3-2 × 8	7-29-8	1	6-36-10	1	5-7	21
	3-2 × 10	8-911-5	1	7-78-1	21	6-96-7	2
	3-2 × 12	10-213-6	21	8-109-6	2	7-107-9	2
	4-2 × 8	9-011-2	1	7-87-11	1	6-96-5	1

	4-2 × 10	40-113-3	1	8-99-4	1	7-107-8	21
	4-2 × 12	41-915-7	1	10-211-0	21	9-19-0	2
Two floors	2-2 × 4	2-22-7	1	1-101-11	1	1-7	1
	2-2 × 6	3-23-11	21	2-92-11	2	2-5	2
	2-2 × 8	4-15-0	21	3-63-8	2	3-23-1	2
	2-2 × 10	4-115-11	2	4-34-4	2	3-103-7	32
	2-2 × 12	5-96-11	2	5-05-2	32	4-54-3	3
	3-2 × 8	5-16-3	21	4-54-7	2	3-113-10	2
	3-2 × 10	6-27-5	21	5-45-6	2	4-104-6	2
	3-2 × 12	7-28-8	2	6-36-5	2	5-75-4	32
	4-2 × 8	6-17-2	1	5-35-4	21	4-84-5	2
	4-2 × 10	7-28-6	21	6-26-4	2	5-65-3	2
	4-2 × 12	8-410-1	21	7-27-5	2	6-56-2	2

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

a. Spans are given in feet and inches.

b. ~~No. 1 or better grade lumber shall be used for southern pine. Other tabulated values assume~~ Spans are based on minimim design properties for #2 grade lumber Douglas Fir-Larch, Hem-Fir, Southern Pine, and Spruce-Pine-Fir.

c. Building width is measured perpendicular to the ridge. For widths between those shown, spans are permitted to be interpolated.

d. NJ = Number of jack studs required to support each end. Where the number of required jack studs equals one, the header is permitted to be supported by an approved framing anchor attached to the full-height wall stud and to the header.

e. Spans are calculated assuming the top of the header or girder is laterally braced by perpendicular framing. Where the top of the header or girder is not laterally braced (e.g. cripple studs bearing on the header), tabulated spans for headers consisting of 2x8, 2x10, or 2x12 sizes shall be multiplied by 0.70 or the header or girder shall be designed.

Reason: The update of Table R602.7(1) Girder Spans and Header Spans for Exterior Bearing Walls is proposed. Updated spans address use of Southern Pine No. 2 in lieu of Southern Pine No. 1. Footnote "f" is added to clarify that header spans are based on laterally braced assumption such as when the header is raised. For dropped headers consisting of 2x8, 2x10, or 2x12 sizes that are not laterally braced, a factor of 0.7 can be applied to determine the spans or alternatively the header or girder can be designed to include any adjustment for potential buckling. Laterally braced (raised) and not laterally braced (dropped) header conditions and building widths for which header spans are tabulated represent the same conditions used to develop header span tables in the Wood Frame Construction Manual (WFCM).

The update of Table R602.7(2) Girder Spans and Header Spands for Interior Bearing Walls is proposed. Updated spans address use of Southern Pine No. 2 in lieu of Southern Pine No. 1. Footnote "e" is added to clarify that header spans are based on laterally braced assumption such as when the header is raised. For dropped headers consisting of 2x8, 2x10, or 2x12 sizes that are not laterally braced, a factor of 0.7 can be applied to determine the spans or alternatively the header or girder can be designed to include any adjustment for potential buckling. Laterally braced (raised) and not laterally braced (dropped) header conditions and building widths for which header spans are tabulated represent the same conditions used to develop header span tables in the Wood Frame Construction Manual (WFCM).

Cost Impact: Increased cost may be associated with reduced spans that result from the not laterally braced condition and application of footnote f (in Table R602.7(1)) or e (in Table R602.7(2)). Due to smaller building width column (12'), permissible use of Southern Pine No. 2, and the laterally braced assumption for tabulated spans, there are also cases where this change will not increase the cost of construction and may reduce the cost of construction.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: The update of Table R602.7(1) Girder Spans and Header Spans for Exterior Bearing Walls is proposed. Updated spans address use of Southern Pine No. 2 in lieu of Southern Pine No. 1. Footnote "f" is added to clarify that header spans are based on laterally braced assumption such as when the header is raised.

Comments: None

Cindy Davis – **Moving forward as consensus**

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R602.7 cdpVA-15

CB-2603.5.5 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2012 Virginia Construction Code

2603.5.5 Vertical and lateral fire propagation. Exterior wall assemblies shall be tested in accordance with, and comply with, acceptance criteria of NFPA 285. Where noncombustible materials or combustible materials permitted by Sections 603, 803, 806 or 1406 differ from assembly to assembly or within an assembly, multiple tests shall not be required.

Exception: Exterior wall assemblies are not required to be tested in accordance with, and comply with, acceptance criteria of NFPA 285 where any of the following conditions are met:

1. One-story buildings ~~complying with Section 2603.4.1.4.~~
2. Wall assemblies where the foam plastic insulation is covered on each face by a minimum of 1-inch (25 mm) thickness of masonry or concrete complying with either of the following:
 - 2.1 There is no air space between the insulation and the concrete or masonry; or
 - 2.2 The insulation has a flame spread index of not more than 25 as determined in accordance with ASTM E 84 or UL 723 and the maximum air space between the insulation and the concrete or masonry is not more than 1 inch (25 mm).
3. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Reason: Exception #3 makes Exception #1 (as currently written) obsolete because 2603.4.1.4 already requires the building to be sprinkled. So, if a building is fully sprinkled, one would use Exception #3, not Exception #1.

Section 2603.4.1.4 is essentially a "carve out" for a particular type of building (e.g., metal storage buildings) and type of exterior wall construction (where the exterior wall itself is metal-faced panels without thermal barriers). This proposed change would not affect this building type. Refer to the images below:





The question that should be asked is whether one-story buildings should be subjected to the NFPA 285 test at all. The vast majority of one-story buildings throughout the commonwealth are not or would not be constructed per 2603.4.1.4, requiring **every one-story building** (that is not Type V construction) to comply with the NFPA 285 test.

This would include buildings such as: restaurants, Burger Kings, banks, strip shopping centers, spas, salons, Food Lions, car dealerships, big box stores, single-story offices, etc. – basically 95% or more of businesses in Virginia.

Given that the requirement for this test, or some form thereof, has been around since 1988, have all of the existing one-story buildings throughout the commonwealth gone through such tests? Assuming not – to what extent has the *foam plastic insulation* contributed to the spread of fire, or to what extent of property damage, injuries, or loss of life has been attributed to *foam plastic insulation* being in the exterior wall of one-story buildings?

The NFPA 285 test, in part, measures vertical propagation of fire (10'-0" from a window opening) - mostly to determine whether a fire on a lower floor would spread to an upper floor. There generally are no upper floors on single-story buildings.

Does Virginia believe such a test is necessary for all one-story buildings? Is this a solution looking for a problem?

Cost Impact: If the NFPA 285 test is required and enforced for all single-story buildings (other than Type V construction), this code change would result in potentially HUGE COST SAVINGS. Full-scale assembly tests cost approximately \$35-100,000 per assembly per test (variation in cost depends on the type and complexity of the assembly) – and such tests could potentially increase construction schedules by 6 months or more (the average time delay to have an NFPA 285 test conducted).

How many different exterior wall assemblies are there on a typical one-story building? One, two, three, four or more? How many are in the building you are in right now?

These potential increased costs assume each different assembly would pass the first time. If any assembly fails, the costs and time would increase accordingly until a passing test is achieved. Not only would the cost of construction increase if such tests were required on one-story buildings, but those costs would almost certainly be transferred to the consumers.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: Exception #3 makes Exception #1 (as currently written) obsolete because 2603.4.1.4 already requires the building to be sprinkled. So, if a building is fully sprinkled, one would use Exception #3, not Exception #1. Kenney Payne gave an overview of his proposal. He would like to propose that Virginia consider allowing one story buildings to be exempt from this test.

Comments:

Glenn Dean asked that we give Kenney a victory.

Cindy Davis - **Move forward as consensus**

Cindy Davis gave an overview regarding a letter that was sent to Governor McAuliffe. It was in opposition to this, however, we have had no proposal from her.

William Lloyd said they should follow the process.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-2603.5.5 cdpVA-15

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CE-R404.1 cdpVA-15

Proponent : Emory Rodgers (errpp1242@verizon.net)

2012 Virginia Energy Conservation Code

R404.1 Lighting equipment (Mandatory).

A minimum of ~~50~~ 75 percent of the lamps in permanently installed luminaires shall be high-efficacy lamps or a minimum of ~~50~~ 75 percent of the permanently installed luminaires shall contain only high-efficacy lamps.

- **Exception:** Low-voltage lighting shall not be required to utilize high-efficiency lamps.

2012 Virginia Residential Code

N1104.1 (R404.1) Lighting equipment (Mandatory).

A minimum of 75 percent of the lamps in permanently installed luminaires shall be high-efficacy lamps or a minimum of 75 percent of the permanently installed luminaires shall contain only high-efficacy lamps.

Exception: Low-voltage lighting shall not be required to utilize high-efficiency lamps.

Reason: There is no need to retain the 2009 IRC 50% of lamps. The federal DOE requires manufacturers to only produce the high efficacy lamps. By the time the 2015 USBC is effective in 2018 and the one year grace period in 2019; all lamps will be high efficacy lamps.

Cost Impact: Federal mandate for these lights.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: None

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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CR-R302.1 cdpVA-15

Proponent : Ronald Clements, Jr, Representing Chesterfield County
(clementsro@chesterfield.gov)

2012 Virginia Residential Code

R302.1 Exterior walls.

Construction, projections, openings and penetrations of *exterior walls* of *dwellings* and accessory buildings shall comply with Table [R302.1\(1\)](#); or *dwellings* equipped throughout with an *automatic sprinkler system* installed in accordance with Section [P2904](#) shall comply with Table [R302.1\(2\)](#).

- **Exceptions:**

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the *fire separation distance*.
2. Walls of *dwellings* and *accessory structures* located on the same *lot*.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the *lot*. Projections beyond the *exterior wall* shall not extend over the *lot line*.
4. Detached garages accessory to a *dwelling* located within 2 feet (610 mm) of a *lot line* are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.
6. Decks and open porches.
7. Walls of dwellings and accessory structures located on lots in subdivisions or zoning districts where building setbacks established by local ordinance prohibit the walls of the structures on adjacent lots from being closer than 10 feet to each other at any point along the exterior walls.

Reason: It has become a routine process to issue building code modifications on a sub-division wide basis to allow dwellings on adjacent lots to be constructed without the fire-resistance rating required by R302 because the local zoning ordinance prohibits dwellings from being closer than 10 feet from each other. The zoning ordinance established set-backs effectively satisfy the intent of the code. Since these pertinent ordinances, per the USBC, are legally established limits enforced by the locality it is reasonable to accept them as a code enforcement option to meet the intent of R302.

Cost Impact: There is no cost impact for localities already allowing this through code modification. For localities not allowing through modification I would estimate \$1000 to \$5000 depending on the size and configuration of the wall required to be fire rated.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: General support from workgroup, especially from building officials.
Greg Revels – in agreement.

Rick Witt – in agreement
Richard Bartell – in agreement

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R302.1 cdpVA-15

CR-R303.4 cdpVA-15

Proponent : Mike Moore (mmoore@newportventures.net)

2015 International Residential Code

R303.4 Mechanical ventilation. ~~Where the air infiltration rate of a dwelling unit is 5 air changes per hour or less where tested with a blower door at a pressure of 0.2 inch w.c (50 Pa) in accordance with Section N1102.4.1.2, the dwelling unit~~
Dwelling units shall be provided with whole house mechanical ventilation in accordance with Section ~~M1507.3~~M1507.

Reason: Virginia already requires whole house mechanical ventilation for low-rise dwelling units in all cases unless a builder follows the performance path of the energy code, has a blower door test result greater than 5 ACH50, and is still able to meet the performance requirements of the code. Achieving compliance with the performance path while maintaining building air leakage greater than 5 ACH50 is very difficult to do in practice. And, reaching a building air leakage greater than 5 ACH50 is very difficult to achieve if the builder is following the IECC's mandatory air sealing checklist. Nevertheless, this loop hole establishes an unintended incentive for builders to build leaky to avoid costs associated with mechanical ventilation. The code should be explicit and unconditional in its requirement to provide energy efficient homes with the tools necessary to achieve acceptable indoor air quality, including whole house mechanical ventilation and local exhaust. This proposal ensures that this message and requirement are clearly communicated and established.

Cost Impact: The intent of the 2012 and later versions of the model code is to require whole house mechanical ventilation for all tightly constructed dwelling units. So, no additional cost is assumed in this case. Regarding the local exhaust requirements (kitchen and bathroom) we estimate that over 90% of kitchens and bathrooms are already equipped with a bath fan or a kitchen hood/exhaust device. So again, the cost impact of this is expected to be minimal. Costs associated with negative health impacts of IAQ are far greater. The cost of asthma triggered by dampness and mold in U.S. residences has been estimated at \$3.5 billion annually¹, and asthma now affects one in five Americans². Even when you exclude radon and second hand smoke from the list of indoor pollutants, poor indoor air quality in U.S. residences is estimated to account for 14% of all years of life lost and years of disability associated with "noncommunicable and nonpsychiatric diseases."³ Other studies estimate that the total costs associated with negative health effects of poor indoor air quality in U.S. residences exceeds \$300 billion annually, which is over 10% of our nation's annual health care costs.^{3,4,5,6,7}

References:

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3. Logue JM, Price PN, Sherman MH, and Singer BC. 2012. A Method to Estimate the Chronic Health Impact of Air Pollutants in U.S. Residences. *Environmental Health Perspectives* 120(2): 216-222.
4. Turner WJN, Logue JM, and Wray CP. 2012. Commissioning Residential Ventilation Systems: A Combined Assessment of Energy and Air Quality Potential Values.
5. Brown DW. 2008. Economic value of disability-adjusted life years lost to violence: estimates for WHO Member States. *Rev. Panam Salud Publica*, 24, 203-209.

6. Lvovsky K, Huges G, Maddison D, Ostro B, and Pearce D. 2000. Environmental costs of fossil fuels: a rapid assessment method with application to six cities. Washington, D.C.: The World Bank Environment Department.

7. Highfill T and Bernstein E. 2014. Using Disability Adjusted Life Years to Value the Treatment of Thirty Chronic Conditions in the U.S. from 1987-2010. U.S. Department of Commerce Bureau of Economic Analysis WP 2014-9.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R303.4 cdpVA-15

CR-R311.2.1 cdpVA-15

Proponent : Ronald Clements, Jr, Representing Interior passage sub-workgroup (clementsro@chesterfield.gov)

2012 Virginia Residential Code

~~R311.2.1 Interior passage.~~

~~Where a dwelling unit has both a kitchen and a living or entertainment area on the same level as the egress door required by Section [R311.2](#), an interior passage route shall be provided from such egress door to the kitchen and the living or entertainment area and to at least one bedroom and at least one bathroom containing a water closet, lavatory and bathtub or shower, where such rooms are provided on that same level. Any doors or cased openings along such interior passage route providing access to the areas identified above shall comply with the following.~~

- ~~1. Cased openings shall provide a minimum 34 inch clear width.~~
- ~~1. Doors shall be, at a minimum, nominal 34 inch doors.~~

Exceptions:

- ~~1. Where a door or cased opening, and its associated molding or trim, is at the end and facing the length of a hallway and the width of the hallway is not wide enough to accommodate such doors or cased openings.~~
- ~~2. Closet doors or cased openings.~~
- ~~3. Pantry door or cased openings.~~
- ~~4. Bathrooms accessed directly from a bedroom that is not required to comply with this section.~~

SECTIONR202 Living Area.

R202 living area. Space within a dwelling unit utilized for living and entertainment including family rooms, great rooms, living rooms, dens, media rooms and similar spaces.

SECTIONR329 Interior Passage

R329.1 General. This section applies to new dwelling units that have both a kitchen and a living area on the same floor level as the egress door required by Section R311.2. This section is not applicable to additions, reconstruction, alteration, or repair.

R329.2 Kitchen. One interior passage route from the egress door to the kitchen shall comply with R329.6.

R329.3 Living area. One interior passage route from the egress door to at least one living area shall comply with R329.6.

R329.4 Bedroom. Where the dwelling unit has a bedroom on the same floor level as the egress door, one interior passage route from the egress door to at least one bedroom shall comply with R329.6.

R329.5 Bathroom. Where a dwelling unit has a bathroom on that same floor level as the egress door, and the bathroom contains a water closet, lavatory, and bathtub or shower, one interior passage route from the egress door to at least one bathroom shall

comply with R329.6. Bathroom fixture clearances shall comply with R307 and access to fixtures is not required to comply with R329.6.

R329.6 Opening widths. Opening widths along the interior passage route required by this section shall comply with the following.

1. Cased openings shall provide a minimum 34 inch clear width.

2. Doors shall be a nominal 34 inch minimum width. Double doors are permitted to be used to meet this requirement.

Reason: At the DHCD Work Group 3 meeting held on May 10, 2016 a number of attendees expressed an interest in meeting separately to discuss drafting a code change to clarify the interior passage (R311.2.1) code section in the USBC. The intent was to clarify the code provisions and address some questions that had developed out of enforcement of the provisions. The intent was not to change the intent of the provisions. The meeting was held on June 23, 2016 in Chesterfield. This code change is the product of that meeting. All of the attendees are listed below and all attendees agree with this code change proposal:

Ron Clements, Chesterfield BI

Mike Eustey, Hanover BI

Eric Leatherby, DHCD

Mike Maenner, DHCD

Jason Laws, Chesterfield BI

James Cale, Chesterfield BI

Rick Witt, Chesterfield BI

Chuck Bajnai, Chesterfield BI

David Owens, Boone Homes/HBAV

Rick Napier, Napier Signature Homes/HBAV

Steven LHeureux, Commonwealth Architects' AIAVA

Ross Trimmer, NVR/Ryan Homes

Dave Kusti, NVR/Ryan Homes

Mike Toolson, HBAV

Chris Davis, Chesterfield BI

Emory Rodgers

Tyler Craddock, Virginia Manufactured and Modular Housing Industry

Tony Sabatini, Main Street Homes

Jeremy Sparks, Main Street Homes

Bob Allen, Henrico BI

John Cattlett, American Wound Council

Living area definition- The interior passage must be provided to living areas but living areas are not defined. "Living spaces" is defined but it includes kitchens, bathrooms and bedrooms. This definition clarifies what "living area" includes for application of interior passage requirements.

Relocation of the section- We propose to relocate the section out of the R311 Means of Egress section because Interior passage is not a means of egress component. The interior passage provisions are to facilitate use of a dwelling by an occupant with mobility impairment. It is also not a full accessibility requirement; therefore we do not propose to place it in the accessibility section RB320. We have formatted the section into a stand-alone section 329. 329 was chosen

because it will not interfere with existing section numbering and it locates this Virginia specific provision with the other Virginia provisions at the end of chapter 3.

Reformat of the section- Many plan reviewers from multiple jurisdictions have struggled with the numerous qualifiers and variable requirements that are expressed in one long run-on sentence with confusing comma splices. To improve the readability and reduce misunderstanding this proposal divides the single section into multiple sub-sections specific to the various elements of the interior passage route.

R329.1 General-

Applicability-There is confusion regarding the base qualification to apply the section and how the required passage to various types of rooms is layered. Our interpretation is that the base requirement to provide an interior passage is triggered when the R311.2 egress door, and a living area, and kitchen (all three) are all provided and on the same floor level. If any of the three are on a different floor level, then the section does not apply. We also deleted "entertainment area" from the section and added into the new definition.

Alterations and additions- A significant area of confusion and variation in interpretation is the applicability of the requirement to reconstruction, alteration, repair and additions. The code section is silent on this issue. It is our understanding that it was not the intent to apply these provisions to existing dwelling units. VCC 103.4 and 103.5 state that the existing portions of the building not being altered cannot be required to comply with new provisions, so there is no way to require an interior passage to an altered or added on portion of a dwelling. This code change clarifies that the interior passage provisions only apply to newly constructed dwellings.

R329.2 Kitchen, R329.3 living area and R329.4 Bedroom. - These sections were just broken out into standalone sections.

R329.5 Bathroom- The significant clarification to the bathroom provisions was the inclusion of the last sentence in proposed section R329.5. There have been varied interpretations regarding doors to water closet and tub/shower compartments within the bathroom. If there is a door within the bathroom to a toilet compartment, must the door meet the 34" requirement? Our opinion is that the intent was to get the occupant into the bathroom but the passage stops at the door into the bathroom. Since R307 allows spaces in front of fixtures of 30", or less, 34" door openings within the bathroom would be of limited benefit.

R329.6 Opening widths. With the new format we propose to create a sub-section specific to the opening width requirements.

Item #2-There is confusion regarding double doors. The current text is specific to the doors, which shall be 34". This can be interpreted that a 60" door opening with double 30" doors would not be code compliant. The second sentence proposed permits double doors.

Exceptions-

Current exception 1 to R311.2.1 has been proposed for deletion. The unanimous consensus at the interior passage group meeting was to remove this very specific exception because it was very subjective in real world application. There is no definition of a "hallway" and the opinion was that the exception was not worth the trouble it created in application.

Current exceptions 2, 3 and 4 to R311.2.1 are proposed for deletion because they are not needed with the proposed format. Since the new wording is "one interior passage route from the egress door to... (the applicable area)", there is no confusion that doors along the route that are not part of the route "to" the area are not required to meet the minimum opening width. If passage through a door to the area is not required then the door does not need to meet the required width.

Cost Impact: There is no significant cost increase. There is the potential for a minor cost increase in limited cases where exception #1 is applicable.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R311.2.1 cdpVA-15

CR-R408.1 cdpVA-15

Proponent : Michael Eutsey (mjeutsey@hanovercounty.gov); Charles Bajnai (bajnaic@chesterfield.gov)

2012 Virginia Residential Code

R408.1 Ventilation- Requirements

The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a *basement*) shall have ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be less than 1 square foot (0.0929 m²) for each 150 square feet (14 m²) of under-floor space area. The total area, unless of ventilation openings is permitted to be reduced to 1/1500 of the under floor area where the ground surface is covered by with a Class 1 vapor retarder material. When a Class 1 vapor retarder material is used, and the minimum net area required openings are placed so as to provide cross ventilation of ventilation openings the space. The installation of operable louvers shall not be less than 1 square foot (0.0929 m²) for each 1,500 square feet (140 m²) of under floor space area permitted. One such ventilating opening shall be within 3 feet (914 mm) of each corner of the building.

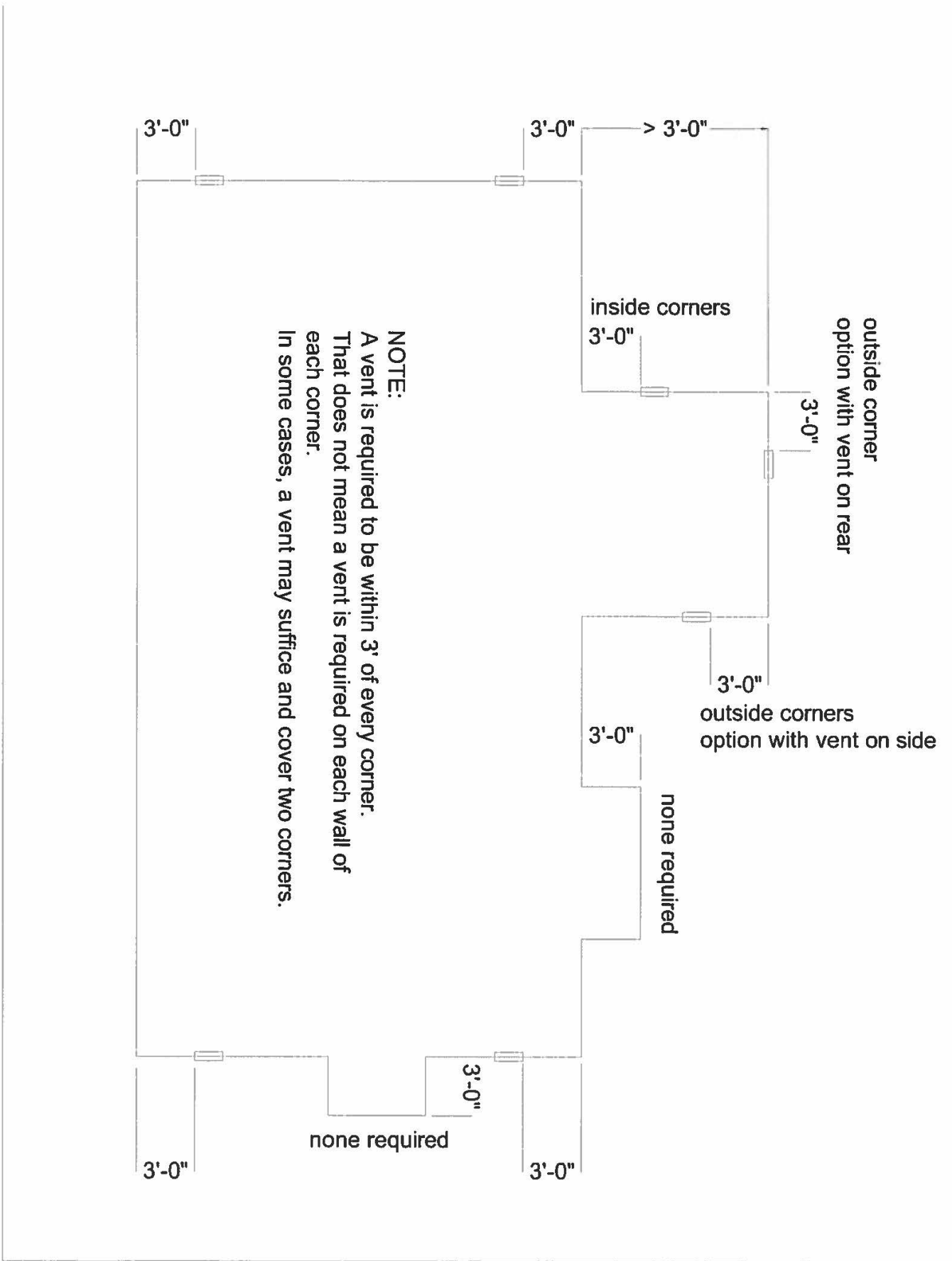
Exception Offsets in foundations that are 3 feet (914 mm) or less are not required to have ventilation regardless of length.

R408.2 Openings for under-floor ventilation.

~~The minimum net area of ventilation openings shall not be less than 1 square foot (0.0929 m²) for each 150 square feet (14 m²) of under floor area. One ventilation opening shall be within 3 feet (915 mm) of each corner of the building. Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed $\frac{1}{4}$ inch (6.4 mm):~~

1. Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.
2. Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.
3. Cast-iron grill or grating.
4. Extruded load-bearing brick vents.
5. Hardware cloth of 0.035 inch (0.89 mm) wire or heavier.
6. Corrosion-resistant wire mesh, with the least dimension being $\frac{1}{8}$ inch (3.2 mm) thick.
 - o _

Reason: The change in text for R408.1 now matches the VCC. The exception has been added to cover foundation offsets such as bumpouts created for a gas fireplace or a bay window.



The deleted text in R408.2 is already covered in Section R408.1.

Cost Impact: There will be no added cost of construction.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R408.1 cdpVA-15

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CTG-310.1 cdpVA-15

Proponent : Bob Torbin (bob.torbin@omegaflex.net)

2015 International Fuel Gas Code

310.1 Pipe and tubing ~~other than CSST.~~ Each aboveground portion of a gas *piping* system ~~other than corrugated stainless steel tubing (CSST)~~ that is likely to become energized shall be electrically continuous and bonded to an effective ground-fault current path. Gas *piping* ~~other than CSST~~ shall be considered to be bonded where it is connected to appliances that are connected to the *equipment* grounding conductor of the circuit supplying that *appliance*. Corrugated Stainless steel tubing (CSST) piping systems listed with an arc resistant jacket or coating system in accordance with ANSI LC-1 shall comply with this section. Where any CSST segments of a piping system are not listed with an arc resistant jacket or coating system in accordance with ANSI LC-1, Section 310.1.1 shall apply.

310.1.1 CSST without arc resistant jacket or coating system ~~Corrugated stainless steel tubing (~~ CSST ~~)~~ gas *piping* systems and piping systems containing one or more segments of CSST not listed with an arc resistant jacket or coating system in accordance with ANSI LC-1 shall be bonded to the electrical service grounding electrode system or, where provided, the lightning protection grounding electrode system and shall comply with Sections 310.1.1.1 through 310.1.1.5.

2015 International Residential Code

G2411.1 (310.1) Pipe and tubing ~~other than CSST.~~ Each above-ground portion of a gas *piping system* ~~other than corrugated stainless steel tubing (CSST)~~ that is likely to become energized shall be electrically continuous and bonded to an effective ground-fault current path. Gas *piping* ~~other than CSST~~ shall be considered to be bonded where it is connected to *appliances* that are connected to the equipment grounding conductor of the circuit supplying that *appliance*. Corrugated stainless steel tubing (CSST) piping systems listed with an arc resistant jacket or coating system in accordance with ANSI LC-1 shall comply with this section. Where any CSST segments of a piping system are not listed with an arc resistant jacket or coating system in accordance with ANSI LC-1, Section G2411.1.1 shall apply.

G2411.1.1 (310.1.1) CSST without arc resistant jacket or coating system. ~~Corrugated stainless steel tubing (~~ CSST ~~)~~ gas *piping* systems and piping systems containing one or more segments of CSST not listed with an arc resistant jacket or coating system in accordance with ANSI LC-1 shall be bonded to the electrical service grounding electrode system or, where provided, the lightning protection electrode system and shall comply with Sections G2411.1.1.1 through G2411.1.1.5.

Add new standard(s) as follows: ANSI LC-1-2014/CSA 6.26-2014 Fuel gas piping systems using corrugated stainless steel tubing

Reason:

The use of a CSST product with a protective, arc resistant jacket is an equivalent method of protection against electrical arcing damage caused by high voltage transient events such as lightning strikes. The protective jacket is designed to locally absorb and dissipate the arcing energy or conduct it away. 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 as confirmed by ICC ES PMG 1058. 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 CSA Technical Sub-Committee for national consensus standard ANSI LC-1 (2014) added performance criteria for arc resistant jackets in 2014 which is why this standard reference was updated. These criteria provide the ability to determine if the CSST jacket can resist damage from transient arcing currents under conditions associated with lightning strikes. The ANSI LC-1 Standard defines the experimental means to determine whether the protective jacket provides resistance to damage from lightning strikes without the need for additional bonding as prescribed currently in G2411.1.1 of the 2015 edition of the International Residential Code and Section 310.1.1 of the International Fuel Gas Code. In addition, the ANSI LC-1 standard includes performance criteria for jacket wear/tear resistance, resistance to low temperature embrittlement, and resistance (of metallic components) to corrosion (when applicable). The ICC Evaluation Service has also performed an assessment of the arc resistant jacket technology, and has issued PMG listings for all three commercially available "black" CSST products.

In support of the 2015 edition of the NFPA 54 Code, extensive testing was performed under the management of the Gas Technology Institute to demonstrate the effectiveness of the prescribed method of bonding for CSST. That report was submitted and accepted by the NFGC Technical Committee in support of modifications made to the 2012 CSST bonding requirements. That same report (and test conditions) was used as the basis for a new study (performed by PowerCET) to examine the ability of the arc resistant jacket to provide the equivalent level of protection (or better) against arcing damage. That report is included with this proposal, and demonstrates that arc-resistant jackets will provide equal or better protection against lightning induced arcing as the bonding of standard CSST.

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 over 125 million feet installed and only two confirmed cases of indirect or direct lightning damage to CSST piping systems using these black jackets. Currently, at least 15 states (as shown below) permit the installation of the arc resistant CSST without the need for additional bonding. Both conventional (yellow) and advanced (black) CSST products will continue to be commercially available and installed in new and existing buildings. Given that both methods of electrical protection of CSST systems have been demonstrated to be effective, they should be recognized and permitted in the Commonwealth of Virginia. The 2018 IFGC will include arc resistant CSST without the need for additional bonding when that language is extracted from the 2018 NFPA 54. We are asking that Virginia recognize those changes with the adoption of the 2015 IFGC.

States currently permitting black jacket CSST without additional bonding per Section 7.13.2:

Massachusetts	Oklahoma	Nebraska
Connecticut	Colorado	Montana
Rhode Island	New Jersey	Georgia
Wisconsin	North Dakota	Indiana
Michigan	Oregon	Maryland

Supporting Documentation:

http://media.iccsafe.org/cdpva/CSST_doc.pdf

Cost Impact: While arc-resistant CSST may cost 5-8 percent more per foot compared to conventional (yellow) CSST, there will be no negative cost impact to either the builder or the home owner. The additional cost of arc resistant CSST is offset by the savings associated with the cost of CSST bonding which includes two bonding clamps, 75-ft of #6 AWG copper conductor and the associated installation labor.

Workgroup Recommendation

Workgroup 4 Recommendation Recommendation: Consensus for Approval

Workgroup 4 Reason: 1st meeting: Torbin spoke on the code change proposal-Haywood asked about different fittings being used-Witt questioned language in NFPA 54 making it to the 2018 IFGC-Torbin stated will know in 2 weeks-Strausbaugh agreed
2nd meeting: consensus for approval

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: 1st meeting: Torbin not present-Dave Edler spoke for omegaflex-NFPA 54 committee has passed this up the ladder for approval for 2018 IFGC-LC1 should be followed by CSA6.6-Bartell asking why move forward until finalized with NFPA54-Gerber-field applied jacket? (No)
2nd meeting: consensus for approval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CTG-310.1 cdpVA-15

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CTP-603.3 cdpVA-15

Proponent : Carl Dale (carl.dale@scc.virginia.gov)

2015 International Plumbing Code

603.3 Tracer wire. Nonmetallic water service piping that connects to public systems shall be locatable. An insulated copper tracer wire, 18 AWG minimum in size and suitable for direct burial or an equivalent product shall be utilized. The wire shall be installed in the same trench as the water service piping and within 12 inches (305 mm) of the pipe and shall be installed to within five feet (1524 mm) of the building wall to the point where the building water service pipe intersects with the public water supply. At a minimum, one end of the wire shall terminate above grade to provide access to the wire in a location that is resistant to physical damage, such as with a meter vault or at the building wall.

Reason: In February 2014, a home exploded in Stafford County Virginia. The explosion was caused by damage to a nonmetallic water service utility line ("water lateral") that had not been installed with a tracer wire and had not been located prior to excavation. This excavation damaged the water lateral in the process of installing the natural gas utility service line. When the water was turned on for final occupancy permitting, the escaping water created an abrasive spray on the gas utility service line. The gas utility service line then ruptured due to the abrasive spray. Natural gas migrated into the home and found an ignition source which destroyed the home just days prior to occupancy.

The addition of a tracer wire requirement to non-metallic water piping in the Uniform Statewide Building Code ("USBC") will bring another layer of public safety inspection to construction sites across the Commonwealth. Local building inspectors would be empowered to inspect non-metallic water laterals for locatability as it pertains to the USBC at time of installation. These inspections would be similar to the inspection of non-metallic sewer utilities that are currently covered by the USBC.

Local building inspectors are regularly onsite at or near the time of installation of these water laterals during their construction. The building inspectors' ability to inspect/enforce this proposed requirement will minimize the chances of similar circumstances such as the Stafford explosion from occurring again by ensuring all non-metallic water laterals have tracer wires to facilitate excavators locating the water lateral for safe excavation around the water lateral.

This proposed change will also mirror the other requirements set forth in the Commonwealth under; § 56-257.1. "*Means of locating nonmetallic underground conduits*" and § 56-265.20:1. "*Locating nonmetallic underground utility lines*". It should also be noted that at least three municipalities, the Counties of Halifax^[1], Loudoun^[2], and the City of Charlottesville^[3] in the Commonwealth, require non-metallic water laterals to have tracer wires on them.

^[1] Halifax County Service Authority, "Minimum Requirements for Contractors performing work in relation to the Authority's Potable Water and Sanitary Sewer System", <http://www.hcsa.us/files/HCSA-Tracer-Wire---General-Construction-Requirements.pdf> (accessed December 16, 2014)

^[2] Loudoun Water, "Letter to the Industry, February 10, 2011" Loudoun County http://www.loudounwater.org/uploadedFiles/Loudoun_Water/Developers_and_New_Construction/trace (accessed December 16, 2014).

^[3] City of Charlottesville, *Potable Water and Sanitary Sewer Standard Specifications and Details*, (City of Charlottesville, January 2012) 24.

Cost Impact: The impact on both construction cost and time, along with the impact to the inspection process, would be minimal. Two large homebuilders in the Commonwealth have estimated total construction costs for installing tracer wire on water utility lines at .45 cents a foot for an estimated \$25-30 per water service line installed. Currently during the new home construction process, sanitary sewer and water utilities are inspected at or near the same time for other USBC requirements. This inspection would only require a nominal amount of time for inspecting for the presence and type of a tracer wire on a water lateral that is already being inspected under other USBC requirements.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: 1st meeting: Gerber stated won't really help the issue-Emory stated talk to local water authority
2nd meeting: consensus for approval

Workgroup 4 Recommendation Recommendation: Pending

Workgroup 4 Reason: Presentation provided by Mr Dale-impact cost is minimal-3 localities require this-tweaks needed to the language-accessible terminology needs work.VPMIA will work with proponent.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CTP-603.3 cdpVA-15

CR-P2602.3 cdpVA-15

2602.3 (New)

Proponent : Carl Dale (carl.dale@scc.virginia.gov)

2015 International Residential Code

2602.3 Tracer Wire. Nonmetallic water service piping that connects to public systems shall be locatable. An insulated copper tracer wire, 18 AWG minimum in size and suitable for direct burial or an equivalent product shall be utilized. The wire shall be installed in the same trench as the water service piping and within 12 inches (305 mm) of the pipe and shall be installed to within five feet (1524 mm) of the building wall to the point where the building water service pipe intersects with the public water supply. At a minimum, one end of the wire shall terminate above grade to provide access to the wire in a location that is resistant to physical damage, such as with a meter vault or at the building wall.

Reason: In February 2014, a home exploded in Stafford County Virginia. The explosion was caused by damage to a nonmetallic water service utility line ("water lateral") that had not been installed with a tracer wire and had not been located prior to excavation. This excavation damaged the water lateral in the process of installing the natural gas utility service line. When the water was turned on for final occupancy permitting, the escaping water created an abrasive spray on the gas utility service line. The gas utility service line then ruptured due to the abrasive spray. Natural gas migrated into the home and found an ignition source which destroyed the home just days prior to occupancy.

The addition of a tracer wire requirement to non-metallic water piping in the Uniform Statewide Building Code ("USBC") will bring another layer of public safety inspection to construction sites across the Commonwealth. Local building inspectors would be empowered to inspect non-metallic water laterals for locatability as it pertains to the USBC at time of installation. These inspections would be similar to the inspection of non-metallic sewer utilities that are currently covered by the USBC.

Local building inspectors are regularly on-site at or near the time of installation of these water laterals during their construction. The building inspectors' ability to inspect/enforce this proposed requirement will minimize the chances of similar circumstances such as the Stafford explosion from occurring again by ensuring all non-metallic water laterals have tracer wires to facilitate excavators locating the water lateral for safe excavation around the water lateral.

This proposed change will also mirror the other requirements set forth in the Commonwealth under; § 56-257.1. "*Means of locating nonmetallic underground conduits*" and § 56-265.20:1. "*Locating nonmetallic underground utility lines*". It should also be noted that at least three municipalities, the Counties of Halifax^[1], Loudoun^[2], and the City of Charlottesville^[3] in the Commonwealth, require non-metallic water laterals to have tracer wires on them.

^[1] Halifax County Service Authority, "Minimum Requirements for Contractors performing work in relation to the Authority's Potable Water and Sanitary Sewer System", <http://www.hcsa.us/files/HCSA-Tracer-Wire---General-Construction-Requirements.pdf> (accessed December 16, 2014)

^[2] Loudoun Water, "Letter to the Industry, February 10, 2011" Loudoun County http://www.loudounwater.org/uploadedFiles/Loudoun_Water/Developers_and_New_Construction/trace (accessed December 16, 2014).

^[3] City of Charlottesville, *Potable Water and Sanitary Sewer Standard Specifications and Details*, (City of Charlottesville, January 2012) 24.

Cost Impact: The impact on both construction cost and time, along with the impact to the inspection process, would be minimal. Two large homebuilders in the Commonwealth have estimated total construction costs for installing tracer wire on water utility lines at .45 cents a foot for an estimated \$25-30 per water service line installed. Currently during the new home construction process, sanitary sewer and water utilities are inspected at or near the same time for other USBC requirements. This inspection would only require a nominal amount of time for inspecting for the presence and type of a tracer wire on a water lateral that is already being inspected under other USBC requirements.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: 1st meeting: Proponent not present-Vernon explained the proposal-Tracer wire on plastic water pipes.

No more discussion, No consensus

Workgroup 4 Recommendation Recommendation: Consensus for Approval

Workgroup 4 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-P2602.3 cdpVA-15

CTM-607.6.2.2 cdpVA-15

Proponent : Thomas Clark, Representing VPMIA & VBCOA PMG Committee (tdclark@pwcgov.org)

2015 International Mechanical Code

607.6.2.2 Equipment shutdown. Where ceiling radiation dampers are listed as static dampers, the HVAC equipment shall be effectively shut down to stop the airflow prior to the damper closing using one of the following methods.

1. A duct detector installed in the return duct.
2. An area smoke detector interlocked with the HVAC equipment.
3. A listed heat sensor installed in the return duct.

Reason: The fire performance measured by ANSI/UL 263 is based upon the assumption that air movement will be effectively stopped at the start of a fire. See the attached guidelines for further information:

[Attachment 1](#)

[Attachment 2](#)

Cost Impact: Cost is based on method of shut down used.

Workgroup Recommendation

Workgroup 4 Recommendation Recommendation: Consensus for Approval

Workgroup 4 Reason: concensus for approval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CTM-607.6.2.2 cdpVA-15

Public Comments for CTM-607.6.2.2 cdpVA-15 : CTM-607.6.2.2 (NEW)-CLARK498

Thomas Clark

Public Comments for Proposal Id : 498

2 Comment(s)

By **Robert Adkins**

08-04-2016 08:24:55

607.6.2.2 Equipment Shut Down Where the ceiling radiation damper are listed as static dampers, the HVAC equipment must be effectively shut down to stop the air flow prior to the damper closing.

By **Robert Adkins**

07-29-2016 14:00:52

This is already a requirement of the damper listing but is missed in the field. All static dampers are assumed to close against no air flow.

CTM-504.8.2 cdVA-15

Proponent : Thomas Clark, Representing VPMIA & VBCOA PMG Committee (tdclark@pwcgov.org)

2015 International Mechanical Code

504.8.2 Duct installation. Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude ~~more than $\frac{1}{8}$ inch (3.2 mm)~~ into the inside of the duct.

2015 International Fuel Gas Code

[M] 614.8.2 Duct installation. Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude ~~more than $\frac{1}{8}$ inch (3.2 mm)~~ into the inside of the duct.

2015 International Residential Code

M1502.4.2 Duct installation. Exhaust ducts shall be supported at ~~intervals not to exceed 12 4 feet (3658 1219 mm)~~ intervals and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. ~~Exhaust duct joints shall be sealed in accordance with Section M1601.4.1 and shall be mechanically fastened.~~ Ducts shall not be joined with screws or similar fasteners that protrude ~~more than $\frac{1}{8}$ inch (3.2 mm)~~ into the inside of the duct.

G2439.7.2 (614.8.2) Duct installation. Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude ~~more than $\frac{1}{8}$ inch (3.2 mm)~~ into the inside of the duct.

Reason: The addition of screws or other fasteners would cause lint to be trapped and cause dryer vent fires.

DHCD Staff Note: Staff combined four proposals into one as all were making the same change to different codes. The proponent was also changing the support length in the IRC mechanical provision from 12 feet to 4 feet.

Cost Impact: There is a cost savings for the installer of not having to secure venting and removing the fasteners for inspection purposes.

Workgroup Recommendation

Workgroup 4 Recommendation Recommendation: Consensus for Approval

Workgroup 4 Reason: None

Workgroup 3 Recommendation Recommendation: Consensus for Approval

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CTM-504.8.2 cdVA-15

C-105.2.1.1 cdpVA-15

Proponent : Debra McMahon (debra.mcmahon@fairfaxcounty.gov)

2012 Virginia Construction Code

105.2.1.1 Qualifications of paraprofessional A paraprofessional shall have at least one year of experience and general knowledge in at least one of the following areas: building construction, building, fire or housing inspections; plumbing, electrical or mechanical trades or fire protection, elevator, property maintenance work or customer service/administrative skills. Any combination of education and experience that would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. Additional qualification and certification requirements may be determined by the locality.

SECTION 202 DEFINITIONS

Definitions PARAPROFESSIONAL. Any person employed by or under an extended contract to a local building department or local enforcing agency for enforcing the USBC such as permit technicians, engineering technicians, administrative assistants and engineering aides who review, process and issue building or trade permits.

Reason: The purpose of this proposed code addition is to get permit technicians recognized for their technical expertise on a state level. Permit technicians are responsible for reviewing, processsing and issuing build/trade permits per the provisions of the Virginia Construction Code. They are responsible for ensuring that minimum submission requirements are met based on each individual jurisdiction requirements. Often times, permit technicians are required to do cursory reviews of architectural and trade plan requiring skills equal to *technical assistants*.

Cost Impact: NONE

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Disapproval

Workgroup 1 Reason: After the first meeting the proposal was in "pending" status and the proponent was to rework the langauge which was done and during the second meeting Debbie was present-reworked her proposal-Bartel opposed-consensus for disapproval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-105.2.1.1 cdpVA-15

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C-108.2(3) cdpVA-15

Proponent : Michael Dellinger, Representing Region Three VBCOA
(mdellinger@shenandoahcountyva.us)

2012 Virginia Construction Code

108.2 Exemptions from application for permit.

Notwithstanding the requirements of Section [108.1](#), application for a permit and any related inspections shall not be required for the following; however, this section shall not be construed to exempt such activities from other applicable requirements of this code. In addition, when an owner or an owner's agent requests that a permit be issued for any of the following, then a permit shall be issued and any related inspections shall be required.

1. Installation of wiring and equipment that (i) operates at less than 50 volts, (ii) is for network powered broadband communications systems, or (iii) is exempt under Section 102.3(1), except when any such installations are located in a plenum, penetrate fire rated or smoke protected construction or are a component of any of the following:
 - 1.1. Fire alarm system.
 - 1.2. Fire detection system.
 - 1.3. Fire suppression system.
 - 1.4. Smoke control system.
 - 1.5. Fire protection supervisory system.
 - 1.6. Elevator fire safety control system.
 - 1.7. Access or egress control system or delayed egress locking or latching system.
 - 1.8. Fire damper.
 - 1.9. Door control system.
2. One story detached structures used as tool and storage sheds, playhouses or similar uses, provided the building area does not exceed 256 square feet (23.78 m²) and the structures are not classified as a Group F-1 or H occupancy. However, such structures lying within a flood plain or in a mudslide prone area shall be subject to flood proofing regulations or mudslide regulation, as applicable.
3. Detached prefabricated buildings housing the equipment of a publicly regulated utility service, provided the floor area does not exceed 150 square feet (14 m²). However, such structures lying within a flood plain or in a mudslide prone area shall be subject to flood proofing regulations or mudslide regulation, as applicable.
4. Tents or air-supported structures, or both, that cover an area of 900 square feet (84 m²) or less, including within that area all connecting areas or spaces with a common means of egress or entrance, provided such tents or structures have an occupant load of 50 or less persons.
5. Fences of any height unless required for pedestrian safety as provided for by Section [3306](#), or used for the barrier for a swimming pool.
6. Concrete or masonry walls, provided such walls do not exceed 6 feet (1829 mm) in height above the finished grade. Ornamental column caps shall not be considered to contribute to the height of the wall and shall be permitted

- to extend above the 6 feet (1829 mm) height measurement.
7. Retaining walls supporting less than 3 feet (914 mm) of unbalanced fill that are not constructed for the purpose of impounding Class I, II or III-A liquids or supporting a surcharge other than ordinary unbalanced fill.
 8. Swimming pools that have a surface area not greater than 150 square feet (13.95 m²), do not exceed 5,000 gallons (19 000 L) and are less than 24 inches (610 mm) deep.
 9. Signs under the conditions in Section [H101.2](#) of Appendix H.
 10. Replacement of above-ground existing LP-gas containers of the same capacity in the same location and associated regulators when installed by the serving gas supplier.
 11. Flagpoles 30 feet (9144 mm) or less in height.
 12. Temporary ramps serving dwelling units in Group R-3 and R-5 occupancies where the height of the entrance served by the ramp is no more than 30 inches (762 mm) above grade.
 13. Construction work deemed by the building official to be minor and ordinary and which does not adversely affect public health or general safety.
 14. Ordinary repairs that include the following:
 - 14.1. Replacement of windows and doors with windows and doors of similar operation and opening dimensions that do not require changes to the existing framed opening and that are not required to be fire rated in Group R-2 where serving a single dwelling unit and in Groups R-3, R-4 and R-5.
 - 14.2. Replacement of plumbing fixtures and well pumps in all groups without alteration of the water supply and distribution systems, sanitary drainage systems or vent systems.
 - 14.3. Replacement of general use snap switches, dimmer and control switches, 125 volt-15 or 20 ampere receptacles, luminaires (lighting fixtures) and ceiling (paddle) fans in Group R-2 where serving a single dwelling unit and in Groups R-3, R-4 and R-5.
 - 14.4. Replacement of mechanical appliances provided such equipment is not fueled by gas or oil in Group R-2 where serving a single-family dwelling and in Groups R-3, R-4 and R-5.
 - 14.5. Replacement of an unlimited amount of roof covering or siding in Groups R-3, R-4 or R-5 provided the building or structure is not in an area where the design (3 second gust) wind speed is greater than 100 miles per hour (160 km/hr) and replacement of 100 square feet (9.29 m²) or less of roof covering in all groups and all wind zones.
 - 14.6. Replacement of 100 square feet (9.29 m²) or less of roof decking in Groups R-3, R-4 or R-5 unless the decking to be replaced was required at the time of original construction to be fire-retardant-treated or protected in some other way to form a fire-rated wall termination.
 - 14.7. Installation or replacement of floor finishes in all occupancies.
 - 14.8. Replacement of Class C interior wall or ceiling finishes installed in Groups A, E and I and replacement of all classes of interior wall or ceiling finishes in other groups.
 - 14.9. Installation or replacement of cabinetry or trim.
 - 14.10. Application of paint or wallpaper.

- 14.11. Other repair work deemed by the building official to be minor and ordinary which does not adversely affect public health or general safety.
15. Crypts, mausoleums and columbaria structures not exceeding 1,500 square feet (139.35 m²) in area if the building or structure is not for occupancy and used solely for the interment of human or animal remains and is not subject to special inspections.
- **Exception:** Application for a permit may be required by the building official for the installation of replacement siding, roofing and windows in buildings within a historic district designated by a locality pursuant to Section 15.2-2306 of the Code of Virginia.

Reason: As indicated in Section 102.3, certain structures are required to comply with the code when they are located in hazardous places, i.e. floodplain, mudslide areas to assure additional safety due to water or mud forces. By adding the same language as in Section 102.3 this unifies the code for all structures located in these types of areas and assures that the proper engineering as required by the code is met through the permit process.

Cost Impact: The cost impact associated with this change should only be the cost of obtaining the building permit. Anyone who is placing structures in these locations should already have engineered designs so the engineering cost should not be a factor.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Disapproval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-108.2(3) cdpVA-15

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C-113.3 cdpVA-15

Proponent : Bill Einloth (einloth_engle@hotmail.com)

2012 Virginia Residential Code

113.3 Minimum Inspections The following minimum inspections shall be conducted by the building official when applicable to the construction or permit:

add inspection of non-vented crawl space to ensure compliance with IRC

2015 International Residential Code

R408.3 Unvented crawl space. Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where the following items are provided:

1. Exposed earth is covered with a continuous Class I vapor retarder. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend not less than 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall or insulation.
2. One of the following is provided for the under-floor space:
 - 2.1. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m²) of crawl space floor area, including an air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.11 of this code.
 - 2.2. *Conditioned air* supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m²) of under-floor area, including a return air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.11 of this code.
 - 2.3. Plenum in existing structures complying with Section M1601.5, if under-floor space is used as a plenum.

R408.5 Removal of debris. The under-floor *grade* shall be cleaned of all vegetation and organic material. All wood forms used for placing concrete shall be removed before a building is occupied or used for any purpose. All construction materials shall be removed before a building is occupied or used for any purpose.

N1102.1 (R402.1) General (Prescriptive). The *building thermal envelope* shall meet the requirements of Sections N1102.1.1 through N1102.1.4.

- **Exception:** The following low energy buildings, or portions thereof, separated from the remainder of the building by *building thermal envelope* assemblies complying with this section shall be exempt from the *building thermal envelope*

provisions of Section N1102.

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 of floor area for space conditioning purposes.
2. Those that do not contain *conditioned space*.

N1102.1.1 (R402.1.1) Vapor retarder. Wall assemblies in the *building thermal envelope* shall comply with the vapor retarder requirements of Section R702.7.

N1102.2.9 (R402.2.9) Basement walls. Walls associated with conditioned basements shall be insulated from the top of the *basement wall* down to 10 feet (3048 mm) below grade or to the basement floor, whichever is less. Walls associated with unconditioned basements shall meet this requirement unless the floor overhead is insulated in accordance with Sections N1102.1.2 and N1102.2.8.

N1102.2.11 (R402.2.11) Crawl space walls. As an alternative to insulating floors over crawl spaces, crawl space walls shall be permitted to be insulated when the crawl space is not vented to the outside. Crawl space wall insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and then vertically and/or horizontally for at least an additional 24 inches (610 mm). Exposed earth in unvented crawl space foundations shall be covered with a continuous Class I vapor retarder in accordance with this code. All joints of the vapor retarder shall overlap by 6 inches (153 mm) and be sealed or taped. The edges of the vapor retarder shall extend not less than 6 inches (153 mm) up the stem wall and shall be attached to the stem wall.

N1102.4.1 (R402.4.1) 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 (R402.4.1.1) Installation. 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 *building official*, an *approved third party* shall inspect all components and verify compliance.

TABLE N1102.4.1.1
(402.4.1.1) AIR BARRIER AND INSULATION INSTALLATION

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA
	A continuous air barrier shall be installed in the building	

General requirements	envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.	
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.
		Floor framing cavity

Floors (including above garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing; and extends from the bottom to the top of all perimeter floor framing members.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawl space walls.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.	
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.	

Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.	
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.	
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids	

	between fire sprinkler cover plates and walls or ceilings.	
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a. In addition, inspection of log walls shall be in accordance with the provisions of ICC 400.

Add new standard(s) as follows: VA Code 113.3 Minimum Inspections
IRC 2009 sections N1102.2.9, R408.3 and R408.5

Reason: A properly installed conditioned/encapsulation of a non-vented crawl space is critical to ensure homeowners do not become ill. Asthma, allergies, sore throats and other ailments have been proven to be caused by crawl spaces that are not properly conditioned per IRC 2009. The vapor barrier slows or prevents the evaporation of ground moisture into the crawl space which causes mold and other bacteria's to grow. Up to 40 percent of the air we breathe on the first floor of our homes comes from the crawl space. If the crawl space is allowing ground moisture to escape from the vapor barrier because it has not been taped at the seams and brought up the footer and columns with continuous plastic, you can expect health issues to arise just as my wife and I experienced in our new home. Upon finding mold growing in the window panes (see pictures) we knew action had to be taken to remedy the issue.

Attachments:

<https://va.cdpaccess.com/proposal/fileupload/get/39>

<https://va.cdpaccess.com/proposal/fileupload/get/22>

<https://va.cdpaccess.com/proposal/fileupload/get/40>

<https://va.cdpaccess.com/proposal/fileupload/get/41>

<https://va.cdpaccess.com/proposal/fileupload/get/42>

<https://va.cdpaccess.com/proposal/fileupload/get/43>

<https://va.cdpaccess.com/proposal/fileupload/get/44>

<https://va.cdpaccess.com/proposal/fileupload/get/45>

<https://va.cdpaccess.com/proposal/fileupload/get/46>

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<https://va.cdpaccess.com/proposal/fileupload/get/60>

<https://va.cdpaccess.com/proposal/fileupload/get/61>

Cost Impact: None to the builder since they would indicate in the Buyers Agreement that the floors will not be insulated and no vents will be provided in the foundation walls (unsaid, it has to be conditioned). The builder can save money by doing the encapsulation/conditioning when the home is under roof or for a modular, when the home is being set. Once the home is occupied and if not an inspected item, the cost to the homeowner will be in the \$15,000 to \$20,000 to do the crawl space work correctly.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Disapproval

Workgroup 1 Reason: 3-23-16 Meeting

Cindy Davis – For the purposes of this group here today the individual wanted a minimum inspection listed as a requirement for every single home in Virginia because he wanted to protect any other consumer from having this same problem.

General consensus that the language is unnecessary. Sean Farrell - VBCOA adhoc doesn't believe this is necessary issue, we believe the crawlspace is enough and don't feel like adding another issue.

No support

Workgroup 3 Recommendation Recommendation: Consensus for Disapproval

Workgroup 3 Reason: Mr Einloth spoke, Barell asked why not go to building official-Greg stated should be caught at the local level.

Board Decision

Board Decision: None

Board Reason: None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-113.3 cdpVA-15

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C-113.4.1 cdpVA-15

Proponent : Campbell Gilmour (Campbell.Gilmour@comcast.net)

2012 Virginia Construction Code

113.4.1 Testing of Radon Systems. When Section R324.1 of the state amendments to the IRC is applicable, all systems shall be tested for existing levels of radon, once the interior envelope of the dwelling is enclosed with all windows, doors, and any other portal covers. If safe levels are found to be exceeded as defined by the current EPA standards, additional mitigation steps shall be taken to bring levels into compliance with EPA standards of safe levels of radon.

-

Reason: Intent: To ensure mandatory radon mitigation systems are tested for effectiveness to certify the safety of the public.

Need and Impact: Radon is a silent killer. Virginia is known to have high levels of radon, and thus requires at a minimum, a passive radon mitigation system. Requiring radon mitigations systems without testing those systems to ensure they are working properly, leaves unsuspecting homeowners exposed to potentially dangerous levels of a known cancer causing agent. All the while homeowners believe the system is protecting the health of their families. The only way to guarantee a system is working correctly is to test its function and effectiveness once it is installed, and the interior envelope is encapsulated.

Cost Impact: Cost to Construction: Negligible. Testing kits can be obtained for as little as \$13 at local home improvement stores, which include the apparatus to test, professional lab testing, and documented results.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Disapproval

Workgroup 1 Reason: None.

Workgroup 3 Recommendation Recommendation: Consensus for Disapproval

Workgroup 3 Reason: Ron states this should be in the appendicies, opposes the testing because it does not say to what standard, Walter (Danville) said to open to all-builders disagree.

Workgroup 4 Recommendation Recommendation: Consensus for Disapproval

Workgroup 4 Reason: Mike Toalson stated work group 3 did not approve and takes the same position in WG 4-Skip stated issues with conditioned crawl spaces-system not needed

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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CB-905.2(1) cdpVA-15

Proponent : William Andrews (william.andrews@richmondgov.com)

2015 International Building Code

[F] 905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14. Pressure reducing valve settings shall be as approved by the local fire official. Fire department connections for standpipe systems shall be in accordance with Section 912.

Reason: NFPA 14 requires pressure reducing valves where discharge pressure over 175 psi (typically on lower levels in high rise building). Fire hose is harder to handle with high pressure, and standpipe discharges using pressure reducing valves often in narrow and turning spaces of stairwells. Fire official should have say in standpipe discharge pressure which firefighters use.

Cost Impact: No cost impact on construction. Minimal added labor to learn and set pressure reducing valves per local fire official.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Disapproval

Workgroup 1 Reason: Glenn Dean - As the AHJ for state enforced areas, I don't know this has been a problem.

Rodgers - William and Glenn really hit the bullet on this one. No support from the group.

Workgroup 2 Recommendation Recommendation: Consensus for Disapproval

Workgroup 2 Reason: Fire services see's this as an issue from a fire operation standpoint.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-905.2(1) cdpVA-15

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CB-905.2(2) cdpVA-15

Proponent : Timothy Anderson (tma@chesasprink.com)

2012 Virginia Construction Code

[F] 905.2 Installation standard.

Standpipe systems shall be installed in accordance with this section and NFPA 14.

- **Exception:** ~~A Manual wet standpipe shall be permitted if the residual pressure of 100 psi for 2¹/₂ inch hose connection and 65 psi for 1¹/₂ inch hose connection is not required in~~ buildings equipped throughout with an automatic sprinkler system in accordance with Section [903.3.1.1](#) or [903.3.1.2](#) ~~and where the highest floor level is not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access.~~

SECTION [Add Section # Here] [Add Title Here]

Add new standard(s) as follows: 2015 IBC section 905.2, 903.3.1.1 & 903.3.1.2. 2010 NFPA-14 7.7.2, 7.7.3, 7.7.4 & A7.10.1.2

Reason: In 1996 the VCC adopted the amendment to allow the automatic supply of standpipe systems to be omitted from buildings under 150' which are equipped throughout with an automatic sprinkler system. This proposed amendment would allow the automatic supply for standpipe systems to be omitted in any building below 150' and equipped throughout with an automatic sprinkler system. This will allow the elimination of the need for pressure regulating, restricting or reducing hose valves or control valves providing an uninterrupted supply to the responders from the local fire department pumper trucks. The 150' limitation is the height where any local pumper truck should be capable of supplying the standpipe demand. The reason I did not include a 150' limitation is because NFPA 14 requires that the standpipe demand for a manual system be calculated back to the local pumper truck and the elevation that it can overcome is dependent on a significant number of variables which NFPA 14 requires to be considered in the calculation. These variables, pumper truck rating, water flow and pressure at the fire hydrant, elevation of the pumper truck and the design and number of standpipes in the system have a significant impact on the actual height that can be achieved.

Cost Impact: There are two cost impacts. The first would be that since the automatic water supply would only need to meet the demand of the automatic sprinkler system an automatic fire pump could be reduced in size or eliminated. The second would be that pressure discharge from a required automatic fire pump could be reduced which could in turn reduce or eliminate the need for pressure regulating hose valves and/or control valves. The reduction or elimination of an automatic fire pump would also reduce the cost of the electrical system and/or service

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Disapproval

Workgroup 2 Reason: Robby Dawson – This is a stretch that a standpipe should be able to reach 150'. We don't need this greater capacity.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-905.2(2) cdpVA-15

CB-906.1 cdpVA-15

Proponent : Jim Tidwell, Representing Fire Equipment Manufacturers' Association (jimtidwell@tccfire.com)

2012 Virginia Construction Code

906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

1. In Groups A, B, E, F, H, I, M, R-1, R-4, and S occupancies.

Exceptions:

- ~~1. In Groups A, B, and E occupancies equipped throughout with quick response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.~~
- ~~2. In Group I-3 occupancies, portable fire extinguishers shall be permitted to be located at staff locations and the access to such extinguishers shall be permitted to be locked.~~

(remainder of section unchanged)

2012 Virginia Statewide Fire Prevention Code

906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

1. In Groups A, B, E, F, H, I, M, R-1, R-4, and S occupancies.

Exceptions:

- ~~1. In Groups A, B, and E occupancies equipped throughout with quick response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.~~
- ~~2. In Group I-3 occupancies, portable fire extinguishers shall be permitted to be located at staff locations and the access to such extinguishers shall be permitted to be locked.~~

(remainder of section unchanged)

Reason: The Virginia Building and Fire Codes require portable fire extinguishers in almost all occupancies (A, B, E, F, H, I, M, R-1, R-4, and S). However, the code provides an exception for three occupancies if they are equipped with quick response sprinklers (A, B, and E). The reason for this exception is unknown, and has no known data to support it. This proposed code change would remove the exception, which is consistent with the action of the ICC in the 2012 and 2015 model codes.

Portable fire extinguishers are an important and cost effective layer of fire protection. This

change is consistent with the International Building Code Requirements in the 2012 and 2015 editions. There is a plethora of data available to support this change, including the following:

If there is any question as to whether the citizenry in the United States is acting early to extinguish incipient fires, the report of the U.S. Consumer Products Safety Commission should put those doubts to rest. According their report, only 5-10 percent of fires are reported to fire departments in the U.S. This is a clear indication that people are extinguishing fires rather than just calling the fire department. We submit that, since people are, in fact, extinguishing fires in their incipient stage on a very regular basis, the code should provide for the proper tools to do so - that is, maintain the requirements for portable extinguishers. According this report, people used portable extinguishers on 371,000 residential fires in the U.S. annually. In this same report, the agency stated that extinguishers were effective in 80 percent of the cases where they were used. The entire 234 page report, published in 2009, can be found at <https://www.cpsc.gov/PageFiles/105297/UnreportedResidentialFires.pdf>.

The NFPA report on fires in sprinklered buildings published in 2010 states that, in fires reported in buildings equipped with sprinkler systems, the fire didn't grow large enough to activate the sprinklers in 65 percent of the cases (page 11). For Assemblies, the percentage was 68%; for educational occupancies, the percentage was 83% and for offices (Group B), the percentage was 75%. Based upon this data, Virginia has chosen to reduce the number of portable extinguishers in occupancies where the statistics show they can be of above average benefit. The fires cited in this report were large enough to be reported to the fire department; the sprinkler systems were operational and would have activated if the fire had grown larger, but were extinguished or otherwise mitigated prior to sprinkler activation. This report verifies that people are intervening when a fire is small, saving the property owner(s) substantial sums of money by putting the fire out before it grows larger, doing more damage. and before sprinklers activate. Some if these fires are extinguished using fire extinguishers; others are being extinguished with makeshift means. Extinguishers are the appropriate tool to use on incipient fires, and are far safer than other means that may be employed. Providing portable fire extinguishers in facilities greatly enhances safety, including the safety of those who choose to extinguish a fire in its incipient phase; extinguishers should be required in all buidlings.

Cost is always a consideration when determining whether fire protection should be provided. Portable fire extinguishers are, without a doubt, one of the most cost effective layers of fire protection available. A life cycle cost analysis was conducted in 2014 by Richard Bukowski, P.E, then working for RJA. In that study, the actual cost of portable extinguishers in several facilities was used to determine the real-world cost of these devices. Using 12 facilities, and the costs of initial purchase, installation, monthly and annual maintenance, as well as all associated maintenance required by NFPA-10 (the standard referenced in ICC Codes) was compiled and analyzed. According to this study, the actual costs of portable extinguishers in these facilities ranged from \$.015 (one and one half cent) to \$.04 (four cents) per square foot per year. His study also states that, if a facility was able to utilize the minimum number of extinguishers required by the Codes based upon coverage of an area, the costs would be between \$.005 (one half cent) and \$.01 (one cent) per square foot per year.

I would challenge anyone to document any layer of fire safety with such a small cost that returns such a great benefit.

Code Committees have rightly demanded data to support decisions related to code changes. I am unaware of a single data point for the removal of portable extinguisher requirements from the code; however, there is abundant data to support requiring these devices througout buildings and facilities.

Attachments:

[NFPA Sprinkler Report](#)
[Fact Sheet](#)

Cost Impact: This change will increase the cost of construction in Groups A, B, and E occupancies that are equipped with quick response sprinklers. The cost increase is between a half cent per square foot per year to approximately 4 cents per square foot per year, depending upon the type of extinguisher chosen, the contractor used, the floorplan of the building, etc. The savings in fire damage should more than offset this low cost.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Disapproval

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-906.1 cdpVA-15

Public Comments for CB-906.1 cdpVA-15 : CB-906.1-TIDWELL450

Glenn Dean

Public Comments for Proposal Id : 450

1 Comment(s)

By **Glenn Dean**

08-26-2016 09:22:39

This proposal should be approved as submitted. The proponent has correctly stated the state change was adopted without the benefit of data to support such deletion. In fact, there are a significant number of published reports on the successes of occupants using portable fire extinguishers that far outweigh any reports of failures and vandalism. For this reason alone the proposal is justified.

CE-R402.1.1(2) cdpVA-15

Proponent : Eric Lacey (eric@reca-codes.com)

2012 Virginia Energy Conservation Code

TABLE R402.1.1
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 & 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	38	20+5 or 13+5+4 ^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

For SI: 1 foot = 304.8 mm.

R402.1.3 U-factor alternative.

An assembly with a *U*-factor equal to or less than that specified in Table [R402.1.3](#) shall be permitted as an alternative to the *R*-value in Table [R402.1.1](#).

TABLE R402.1.3
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	0.030	0.060-0.079	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

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.

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 & 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	38	20 15 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

For SI: 1 foot = 304.8 mm.

TABLE N1102.1.3
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	0.030	0.060 0.079	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

a. Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

Reason: This proposal would make Virginia's energy code consistent with the 2015 IECC requirements for wall insulation. The U.S. DOE found both the 2012 and 2015 IECC to be cost-effective for Virginia (see https://www.energycodes.gov/development/residential/iecc_analysis/), and improvements to the thermal building envelope are important to the long-term efficiency and cost-effectiveness of new buildings.

The wall insulation R-values in the 2015 IECC do not require the use of any specific product, and can be achieved with either 2X4 or 2X6 wall construction. The two values in the prescriptive R-value table are only two of many different options. For additional wall insulation options, builders can use one of several compliance paths, each of which provides multiple options and combinations for meeting the code requirements:

- ○ ■ The U-factor alternative table (R402.1.4)
- The Total UA Alternative (R402.1.5)

- U.S. DOE's REScheck software (www.energycodes.gov)
- The Simulated Performance Alternative (R405)
- The Energy Rating Index (R406)

Wall insulation is easiest (and most cost-effective) to install during construction. Given that there may only be limited opportunities to upgrade the walls in the future, it is important to construct well-insulated walls from the very beginning. Better-insulated buildings are clearly an investment in Virginia's energy future. We recommend maintaining consistency with the 2015 IECC requirements.

This proposal also updates the equivalent U-factors to be consistent with the 2015 IRC/IECC, which is important for builders and design professionals who intend to use DOE's free REScheck compliance software. Virginia's reduced insulation requirements, among other weakening amendments in the 2012 Uniform Code, have made compliance via REScheck problematic. We recommend that Virginia adopt Equivalent U-factor values that will be consistent with the latest version of the IECC, both to maximize cost-effective energy efficiency and to maintain consistency with leading software compliance programs.

Cost Impact: This proposal may increase the cost of construction, depending on the compliance option selected.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Disapproval

Workgroup 2 Reason: Andrew spoke on this for Eric-Gerber opposed-consensus for disapproval

Workgroup 3 Recommendation: None

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CE-R402.1.1(2) cdpVA-15

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CR-R202 cdpVA-15

Proponent : Charles Bajnai, Representing Chesterfield County, (bajnaic@chesterfield.gov); Thomas Stanton (timbertrails.tv@gmail.com)

2015 International Residential Code

SECTION Chapter 2 : Definitions Tiny house.

A dwelling unit on a permanent foundation that is 399 square feet or less.

SECTION 202 DEFINITIONS

[RB] HABITABLE SPACE.

A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered *habitable spaces*. A mezzanine in a tiny house used for sleeping shall not be considered a habitable space.

R305.1 Minimum height. *Habitable space*, hallways and portions of *basements* containing these spaces shall have a ceiling height of not less than 7 feet (2134 mm). Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches (2032 mm).

- **Exceptions:**

1. For rooms with sloped ceilings, the required floor area of the room shall have a ceiling height of not less than 5 feet (1524 mm) and not less than 50 percent of the required floor area shall have a ceiling height of not less than 7 feet (2134 mm).
2. The ceiling height above bathroom and toilet room fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a ceiling height of not less than 6 feet 8 inches (2032 mm) above an area of not less than 30 inches (762 mm) by 30 inches (762 mm) at the showerhead.
3. Beams, girders, ducts or other obstructions in basements containing habitable space shall be permitted to project to within 6 feet 4 inches (1931 mm) of the finished floor.
4. For tiny houses the minimum headroom shall be 6'-6" below a mezzanine for a minimum of 50% of the room's floor area, and at least 6'-0" for the remaining area. The headroom above the mezzanine shall be 36 inches for a minimum of 9 square feet.

R310.2.5 Emergency escape and rescue opening from a tiny

house. Emergency escape and rescue opening from a tiny house mezzanine shall be by way of either a operable skylight of at least 5.7 square feet per section R308.6 or operable window with a net clear height of at least 18 inches.

R311.4 Vertical egress. Egress from habitable levels including habitable attics and *basements* not provided with an egress door in accordance with Section R311.2 shall be

by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7. Egress from a tiny house mezzanine shall be by either a stairway or ladder.

R311.7.1 Width. Stairways shall be not less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than $4\frac{1}{2}$ inches (114 mm) on either side of the stairway and the clear width of the stairway at and below the handrail height, including treads and landings, shall be not less than $31\frac{1}{2}$ inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.

-
Exception:

- ~~Exception:~~ 1. The width of spiral stairways shall be in accordance with Section R311.7.10.1.
- 2. The width of stairways in a tiny house shall be at least 24 inches.

R311.7.2 Headroom. The headroom in stairways shall be not less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.

• **Exceptions:**

1. Where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom not more than $4\frac{3}{4}$ inches (121 mm).
2. The headroom for spiral stairways shall be in accordance with Section R311.7.10.1.
3. The headroom for the top of a stairway in a tiny house shall be at least 36 inches.

Reason: The current trend is for a return to living in smaller structures, and commonalities for Tiny Houses imply the application of best practices for small space design that do not necessarily conflict with existing standards for general health and safety.

Cost Impact: There is no negative cost impact, and great upside for commercial interests.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Disapproval

Workgroup 3 Reason: Chuck explained the proposal-Bartell stated you can already build tiny homes-not a practical measure-John Ainsley-is a tree house a tiny house? Toalson opposed. Proponent now here.Gerber stated lowers safety level.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R202 cdpVA-15

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CR-R311.8.1 cdpVA-15

Proponent : Charles Bajnai (bajnaic@chesterfield.gov)

2012 Virginia Residential Code

R311.8.1 Width. Ramps, including landings, shall be not less than 36 inches in clear width at all points above the permitted handrail height. Handrails shall not project more than 4-1/2 inches on either side of the ramp and the clear width of the ramp at and below the handrail height shall not be less than 31-1/2 inches where the handrail is installed on one side and 27 inches where handrails are provided on both sides.

Reason: We have requirement for stair width, but not ramp width. We have always inferred the stair width of 36" would be the same for ramps.
This code proposal removes the "interpretation" and specifies that ramps have to be at least 36" wide.



Cost Impact: None. We have always inferred 36" ramp width

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Disapproval

Workgroup 3 Reason: Chuck explained-Catlett, Revels, Bartell, what is the problem-no support

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R311.8.1 cdpVA-15

CR-R507.1 cdpVA-15

Proponent : Charles Bajnai, Representing Chesterfield County,
(bajnaic@chesterfield.gov)

2015 International Residential Code

R507.1 Decks. ~~Wood framed decks shall be in accordance with this section or Section R301 for materials and conditions not prescribed herein. Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads.~~

~~Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self-supporting. For decks with cantilevered framing members connections to exterior walls or other framing members shall be designed and constructed to resist uplift resulting from the full live load specified in Table R301.5 acting on the cantilevered portion of the deck.~~

R507.2 Deck ledger connection to band joist. ~~Deck ledger connections to band joists shall be in accordance with this section, Tables R507.2 and R507.2.1, and Figures R507.2.1(1) and R507.2.1(2). For other grades, species, connection details and loading conditions, deck ledger connections shall be designed in accordance with Section R301.~~

R507.3 Plastic composite deck boards, stair treads, guards, or handrails. ~~Plastic composite exterior deck boards, stair treads, guards and handrails shall comply with the requirements of ASTM D 7032 and the requirements of Section 507.3.~~

R507.4 Decking. ~~Maximum allowable spacing for joists supporting decking shall be in accordance with Table R507.4. Wood decking shall be attached to each supporting member with not less than (2) 8d threaded nails or (2) No. 8 wood screws.~~

R507.5 Deck joists. ~~Maximum allowable spans for wood deck joists, as shown in Figure R507.5, shall be in accordance with Table R507.5. Deck joists shall be permitted to cantilever not greater than one fourth of the actual, adjacent joist span.~~

R507.6 Deck Beams. ~~Maximum allowable spans for wood deck beams, as shown in Figure R507.6, shall be in accordance with Table R507.6. Beam plies shall be fastened with two rows of 10d (3-inch x 0.128-inch) nails minimum at 16 inches (406 mm) on center along each edge. Beams shall be permitted to cantilever at each end up to one fourth of the actual beam span. Splices of multispan beams shall be located at interior post locations.~~

R507.7 Deck joist and deck beam bearing. ~~The ends of each joist and beam shall have not less than $1\frac{1}{2}$ inches (38 mm) of bearing on wood or metal and not less than 3 inches (76 mm) on concrete or masonry for the entire width of the beam. Joist~~

~~framing into the side of a ledger board or beam shall be supported by approved joist hangers. Joists bearing on a beam shall be connected to the beam to resist lateral displacement.~~

~~**R507.8 Deck posts.** For single-level wood framed decks with beams sized in accordance with Table R507.6, deck post size shall be in accordance with Table R507.8.~~

SECTION R508 DECKS

R508.1 Decks. Wood-framed decks shall be in accordance with this section or designed in accordance with Section R301 for materials and conditions not prescribed herein. Where joists or beams are cantilevered, the supporting framing shall be designed to resist uplift resulting from the live load specified in Table R301.5 acting on the cantilevered portion of the deck.

R508.1.1 Freestanding decks. Freestanding decks shall be self-supporting and constructed to provide a complete load path to transfer both vertical and lateral loads to their foundation. The lateral resistance shall be designed in accordance with accepted engineering practice.

R508.1.2 Decks attached to a structure. Decks which are not freestanding shall be attached to a structure that provides a complete load path for both vertical and lateral loads in accordance with Section R508.8. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where connections to the supporting structure in Section R508.8 cannot be verified, decks shall be freestanding in accordance with Section R508.1.1.

R508.2 Materials. Materials used for the construction of decks shall comply with this section.

R508.2.1 Wood materials. All wood materials shall be No.2 grade or better lumber, preservative-treated in accordance with Section R317 or approved, naturally durable lumber, and termite protected where required in accordance with Section R318. Where design in accordance with Section R301 is provided, all wood structural members shall be designed using the wet service factor defined in AWC NDS. All cuts, notches, and drilled holes of preservative treated wood members shall be treated in accordance with Section R317.1.1. All preservative-treated wood products in contact with the ground shall be labeled for such usage.

R508.2.1.1 Engineered wood products. Engineered wood products shall be in accordance with Section R502.

R508.2.2 Plastic composite deck boards, stair treads, guards and handrails. Plastic composite exterior deck boards, stair treads, guards and handrails

shall comply with this section and the requirements of ASTM D 7032.

R508.2.2.1 Labeling. Plastic composite deck boards and stair treads, or their packaging, shall bear a label that indicates compliance to ASTM D 7032 and includes the allowable load and maximum allowable span determined in accordance with ASTM D 7032. Plastic or composite handrails and guards, or their packaging, shall bear a label that indicates compliance to ASTM D 7032 and includes the maximum allowable span determined in accordance with ASTM D 7032.

R508.2.2.2 Flame spread index. Plastic composite deck boards, stair treads, guards, and handrails shall exhibit a flame spread index not exceeding 200 when tested in accordance with ASTM E 84 or UL 723 with the test specimen remaining in place during the test.

Exception: Plastic composites determined to be non- combustible.

R508.2.2.3 Decay resistance. Plastic composite deck boards, stair treads, guards and handrails containing wood, cellulosic or other biodegradable materials shall be decay resistant in accordance with ASTM D 7032.

R508.2.2.4 Termite resistance. Where required by Section 318, plastic composite deck boards, stair treads, guards and handrails containing wood, cellulosic or other biodegradable materials shall be termite resistant in accordance with ASTM D 7032.

R508.2.2.5 Installation of plastic composites. Plastic composite deck boards, stair treads, guards and handrails shall be installed in accordance with this code and the manufacturer's instructions.

R508.2.3 Fasteners and connectors. Metal fasteners and connectors used for all decks shall be in accordance with Section R317.3 and Table R507.2.3.

TABLE R508.2.3
FASTENER AND CONNECTOR SPECIFICATIONS FOR DECKS a,b,c

	BASIC FASTENER REQUIREMENTS		ALTERNATIVE MATERIALS, COATINGS AND FINISHES
ITEM	MATERIAL	MINIMUM FINISH/COATING	
Nails and timber rivets	In accordance with ASTM F1667	Hot-dipped galvanized per ASTM A 153	Stainless steel; silicon bronze, or 299

			copper
Bolts and lag screws (including nuts and washers)	In accordance with ASTM A 307	Hot-dipped galvanized per ASTM A153 Class C (Class D for 3/8" diameter or less) or mechanically galvanized per ASTM B 695, Class 55 or 410 stainless steel	Stainless steel; silicon bronze, or copper
Metal connectors	Per manufacturer's specification	ASTM A653 type G185 zinc coated galvanized steel or Hot-dipped galvanized per ASTM A123 providing average coating weight of 2.0 oz/ft ² (total both sides)	Stainless steel

a. Equivalent materials, coatings and finishes shall be subject to approval by the building official provided equivalent performance is demonstrated by the manufacturer of the fastener or connector.

b. Fasteners and connectors exposed to salt water or located within 300 feet of a salt water shoreline shall be stainless steel.

c. Holes for bolts shall be drilled a minimum 1/32" and a maximum 1/16" larger than the bolt.

d. Lag screws 1/2" and larger shall be predrilled to avoid wood splitting per National Design Specification (NDS) for Wood Construction.

e. Stainless steel driven fasteners shall be in accordance with ASTM F 1667.

R508.2.4 Flashing. Flashing shall be corrosion-resistant metal of minimum nominal 0.019 inch thickness or approved non-metallic material that is compatible with the substrate of the structure and the decking materials.

R508.2.5 Alternative materials. Alternative materials, including glass and metals shall be permitted.

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R508.3 Footings. Decks shall be supported on concrete footings or other approved structural systems designed to accommodate all loads according to Section R301.

Exception: Freestanding decks consisting of joists directly supported on grade over their entire length.









R508.3.1 Minimum size. The minimum size of concrete footings shall be in accordance with Table R508.3.1, based on the tributary area and allowable soil bearing pressure in accordance with Table R401.4.1.

R508.3.2 Minimum depth. Deck footings shall extend below the frost line specified in Table R301.2(1) in accordance with Section R403.1.4.1.

Exception:

1. Freestanding decks need not be provided with footings that extend below the frost line.
2. Freestanding decks that meet all of the following criteria:
 - a. The joists bear directly on precast concrete pier blocks at grade without support by beams or posts,
 - b. The area of the deck does not exceed 200 square feet (18.9 m²),
 - c. The walking surface is not more than 20 inches (616 mm) above grade at any point within 36 inches (914 mm) measured horizontally from the edge.

FIGURE 0
MINIMUM FOOTING SIZE FOR DECKS

MINIMUM FOOTING SIZE for DECKS ^{a, c, d} (sqft)													
LIVE or GROUND SNOW LOAD ^b (psf)	TRIBUTARY AREA ^e (sqft)	SOIL BEARING CAPACITY (psf)											
		1500			2000			2500			>3000		
		side of a square footing (in)	diameter of a round footing (in)	thickness (in)	side of a square footing (in)	diameter of a round footing (in)	thickness (in)	side of a square footing (in)	diameter of a round footing (in)	thickness (in)	side of a square footing (in)	diameter of a round footing (in)	thickness (in)
													
40	20	12	14	6	12	14	6	12	14	6	12	14	6
	40	14	16	6	12	14	6	12	14	6	12	14	6
	60	17	19	6	15	17	6	13	15	6	12	14	6
	80	20	22	7	17	19	6	15	17	6	14	16	6
	100	22	25	8	19	21	6	17	19	6	15	17	6
	120	24	27	9	21	23	7	19	21	6	17	19	6
	140	26	29	10	22	25	8	20	23	7	18	21	6
160	28	31	11	24	27	9	21	24	8	20	22	7	
50	20	12	14	6	12	14	6	12	14	6	12	14	6
	40	15	17	6	13	15	6	12	14	6	12	14	6
	60	19	21	6	16	18	6	14	16	6	13	15	6
	80	21	24	8	19	21	6	17	19	6	15	17	6
	100	24	27	9	21	23	7	19	21	6	17	19	6
	120	26	30	10	23	26	8	20	23	7	19	21	6
	140	28	32	11	25	28	9	22	25	8	20	23	7
160	30	34	12	26	30	10	24	27	9	21	24	8	
60	20	12	14	6	12	14	6	12	14	6	12	14	6
	40	16	19	6	14	16	6	13	14	6	12	14	6
	60	20	23	7	17	20	6	16	18	6	14	16	6
	80	23	26	9	20	23	7	18	20	6	16	19	6
	100	26	29	10	22	25	8	20	23	7	18	21	6
	120	28	32	11	25	28	9	22	25	8	20	23	7
	140	31	35	12	27	30	10	24	27	9	22	24	8
160	33	37	13	28	32	11	25	29	10	23	26	9	
70	20	12	14	6	12	14	6	12	14	6	12	14	6
	40	18	20	6	15	17	6	14	15	6	12	14	6
	60	21	24	8	19	21	6	17	19	6	15	17	6
	80	25	28	9	21	24	8	19	22	7	18	20	6
	100	28	31	11	24	27	9	21	24	8	20	22	7
	120	30	34	12	26	30	10	24	27	9	21	24	8
	140	33	37	13	28	32	11	25	29	10	23	26	9
160	35	40	15	30	34	12	27	31	11	25	28	9	

a. Interpolation permitted, extrapolation not permitted

b. Based on highest load case: Dead + Live or Dead + Snow

- c. Assumes minimum square footing to be 12" x 12" x 6" for 6x6 post.
- d. If the support is a brick or cmu pier, the footing shall have a minimum 2" projection on all sides.
- e. Area, in square feet, of deck surface supported by post and footing.

R508.4 Deck posts. For single-level wood-framed decks with beams sized in accordance with Table R508.6, deck post size shall be in accordance with Table R508.4.

R508.4.1 Deck post to deck footing connection. Posts shall bear on footings in accordance with Section R403 and Figure R508. 4.1. Posts shall be restrained to prevent lateral displacement at the bottom support. Where posts bear on concrete footings in accordance with Section R403 and Figure R508.4.1, such lateral restraint shall be provided by manufactured connectors or a minimum post embedment of 12 inches in surrounding soils or concrete piers. Other footing systems shall be permitted.

EXCEPTION: Where expansive, compressible, shifting or other questionable soils are present, surrounding soils shall not be relied upon for lateral support.

**TABLE R507.8R508.4
DECK POST HEIGHT^a**

DECK POST SIZE	MAXIMUM HEIGHT ^a
4 × 4	<u>6'-9"</u> ^c
4 × 6	<u>8'</u>
6 × 6	<u>14'</u>
<u>8 × 8</u>	<u>14'</u>

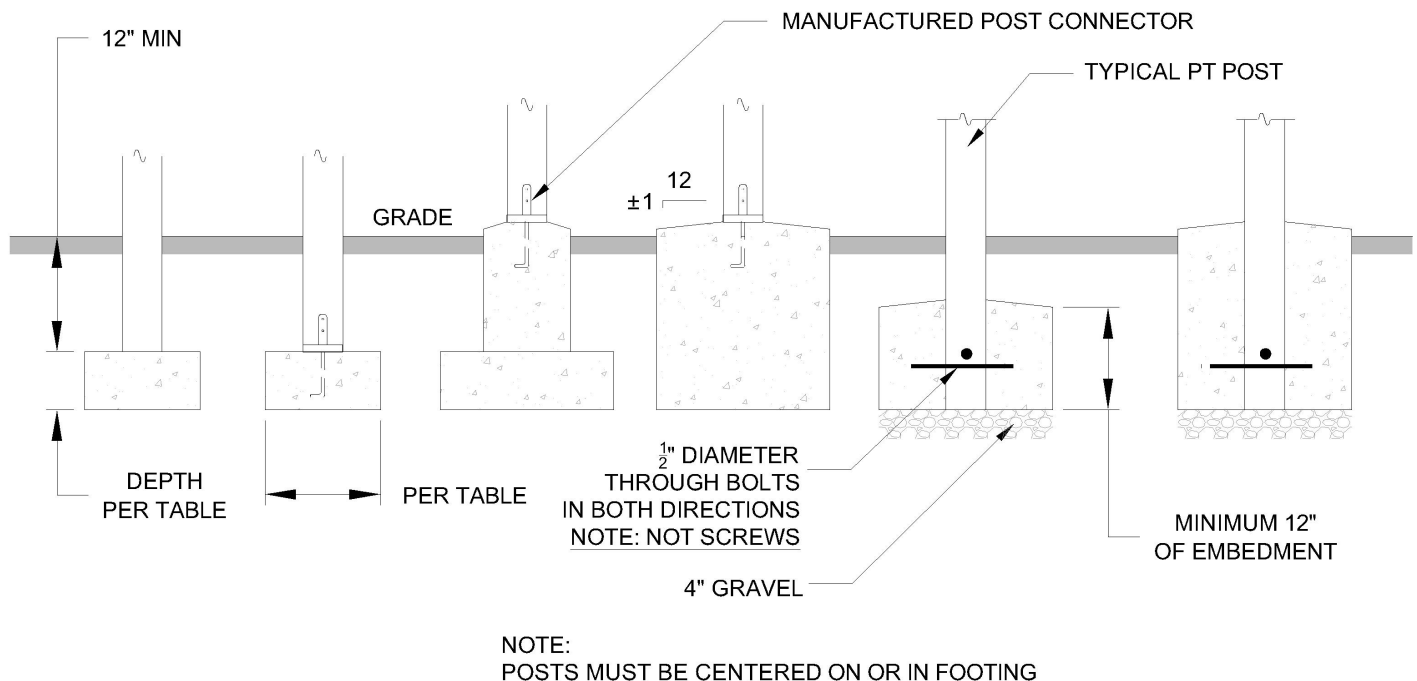
For SI: 1 foot = 304.8 mm.

a. Measured to the underside of the beam

b. Based on 40 psf live

c. Maximum permitted height is 8' for one-ply and two-ply beams. 6'-9" is the maximum permitted height for three-ply beams.

**FIGURE 0
DECK POST TO DECK FOOTING CONNECTION**



R508.5 Deck beams. Maximum allowable spans for wood deck beams, as shown in Figure R508.5, shall be in accordance with Table R508.5. Beam plies shall be fastened with two rows of 10d (3-inch x 0.128-inch) nails minimum at 16 inches (406 mm) on center along each edge. Beams shall be permitted to cantilever at each end up to one-fourth of the adjacent beam span. Splices of multispan beams shall be located at interior post locations.

R508.5.1 Deck post to deck beam connection. Deck beams shall be attached to deck posts in accordance with Figure R508.5.1 or by other equivalent means capable 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.

TABLE R507-6R508.5
DECK BEAM SPAN LENGTHS^{a, b} (ft. - in.)

SPECIES ^c	SIZE ^d	DECK JOIST SPAN LESS THAN OR EQUAL TO: (feet)						
		6	8	10	12	14	16	18

Southern pine	2 - 2 × 6	6-11	5-11	5-4	4-10	4-6	4-3	4-0
	2 - 2 × 8	8-9	7-7	6-9	6-2	5-9	5-4	5-0
	2 - 2 × 10	10-4	9-0	8-0	7-4	6-9	6-4	6-0
	2 - 2 × 12	12-2	10-7	9-5	8-7	8-0	7-6	7-0
	3 - 2 × 6	8-2	7-5	6-8	6-1	5-8	5-3	5-0
	3 - 2 × 8	10-10	9-6	8-6	7-9	7-2	6-8	6-4
	3 - 2 × 10	13-0	11-3	10-0	9-2	8-6	7-11	7-6
	3 - 2 × 12	15-3	13-3	11-10	10-9	10-0	9-4	8-10
Douglas fir- larch ^e , hem- fir ^e , spruce- pine-fir ^e , redwood, western cedars, ponderosa pine ^f , red pine ^f	3 × 6 or 2 - 2 × 6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3 × 8 or 2 - 2 × 8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3 × 10 or 2 - 2 × 10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3 × 12 or 2 - 2 × 12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4 × 6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4 × 8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4 × 10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4 × 12	11-5	9-11	8-10	8-1	7-6	7-0	6-7

	3 - 2 × 6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3 - 2 × 8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3 - 2 × 10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3 - 2 × 12	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, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.

a. Ground snow load, live load = 40 psf, dead load = 10 psf, $L/\Delta = 360$ at main span, $L/\Delta = 180$ at cantilever with a 220-pound point load applied at the end.

b. Beams supporting deck joists from one side only.

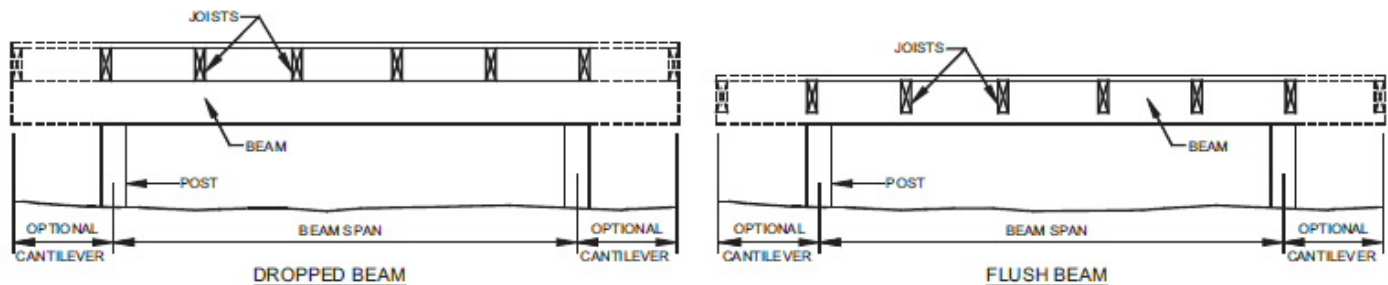
c. No. 2 grade, wet service factor.

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

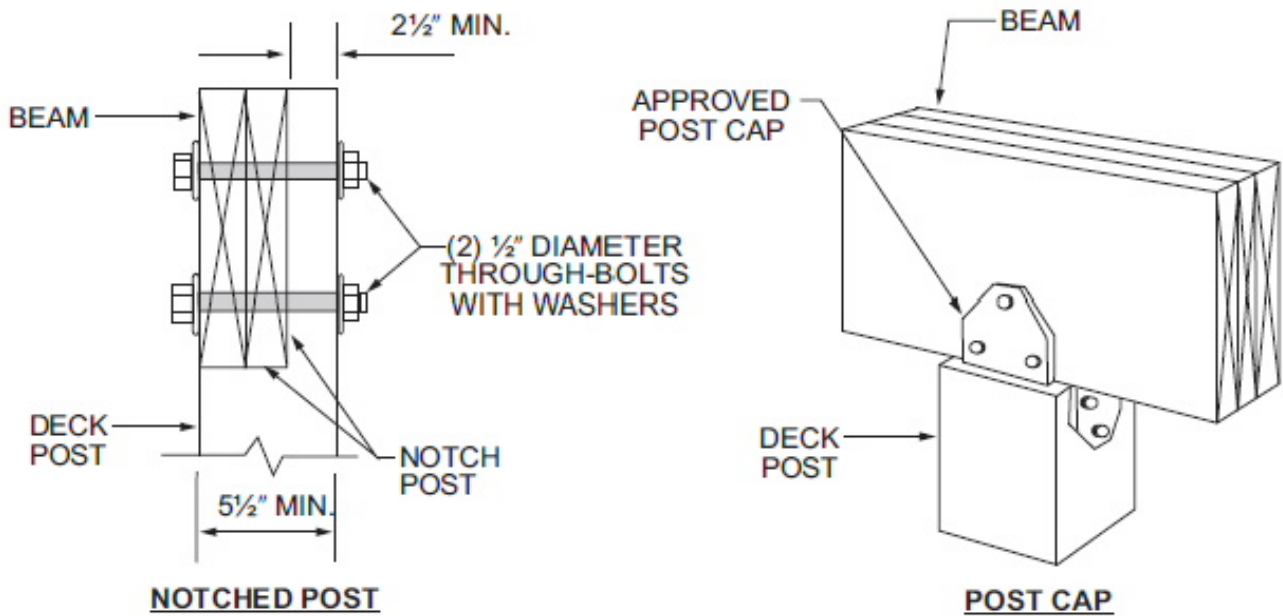
e. Includes incising factor.

f. Northern species. Incising factor not included.

**FIGURE 0
TYPICAL DECK BEAM SPANS**



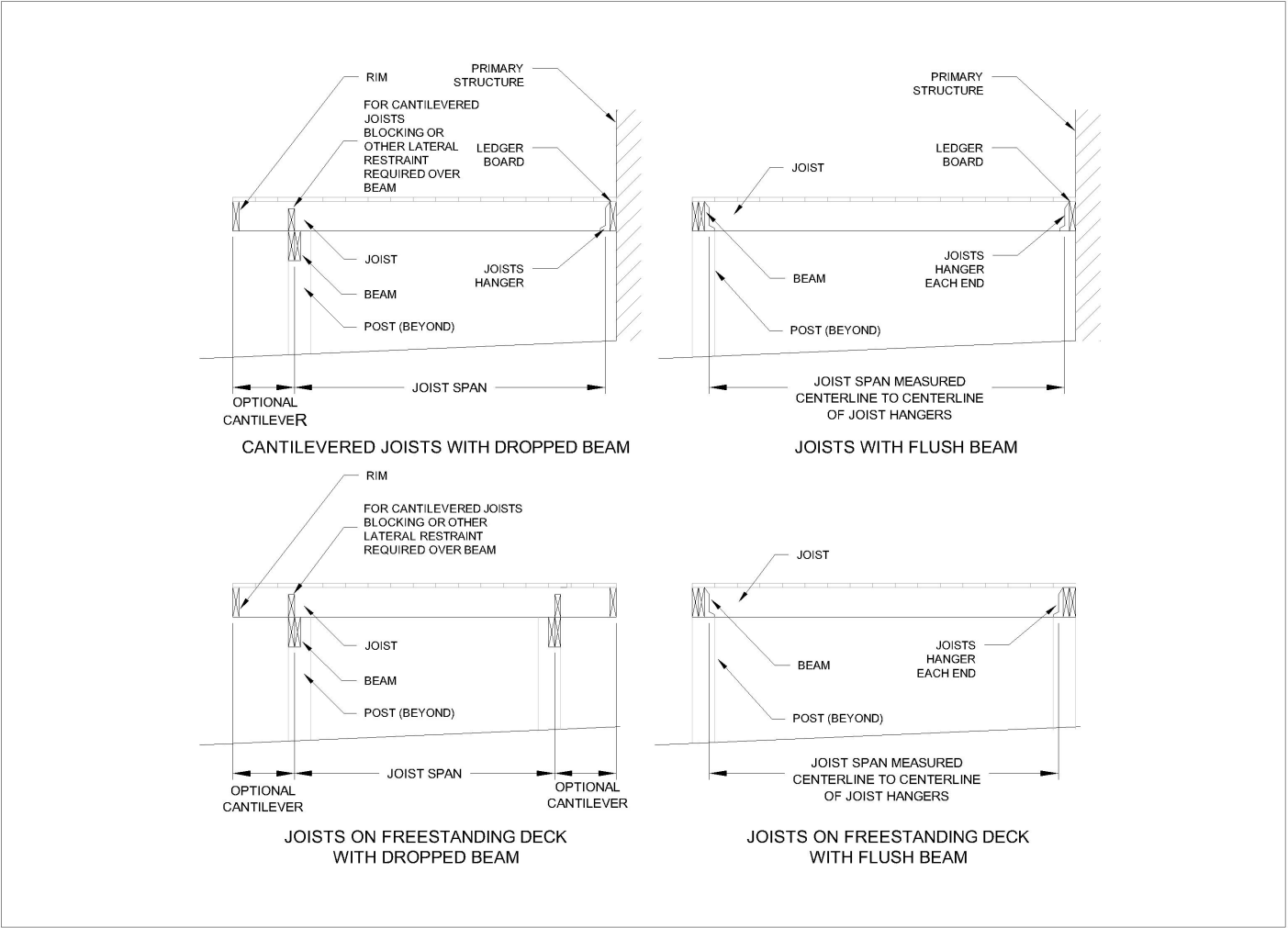
**FIGURE 0
DECK BEAM TO DECK POST**



For SI: 1 inch = 25.4 mm.

R508.6 Deck joists. Maximum allowable spans for wood deck joists, as shown in Figure R508.6, shall be in accordance with Table R508.6. The maximum joist spacing shall be limited by the decking material in accordance with Table R508.7. The maximum joist cantilever shall be limited to the actual joist span divided by 4 or the maximum cantilever length specified in Table R508.6, whichever is less.

FIGURE 0
TYPICAL DECK JOIST SPANS



R508.6.1 Deck joist bearing. The ends of joist shall have not less than 1½ inches (38mm) of bearing on wood or metal and not less than 3 inches (76 mm) on concrete or masonry over its entire bearing width. Joists bearing on top of a multi-ply beam or ledger shall be fastened in accordance with Table R602.3(1). Joists bearing on top of a single ply beam or ledger shall be attached by a mechanical connector. Joists framing into the side of a beam or ledger board shall be supported by approved joist hangers.

R508.6.2 Deck joist lateral restraint. Joist ends and bearing locations shall be provided with lateral restraint to prevent rotation. Where lateral restraint is provided by joist hangers or blocking between joists, their depth shall equal not less than 60 percent of the joist depth. Where lateral restraint is provided by rim joists, they shall be secured to the end of each joist with not less than (3) 10d (3-inch x 0.128-inch) nails or (3) No. 10 x 3-inch (76 mm) long wood screws.

TABLE R507.5R508.6
DECK JOIST SPANS FOR COMMON LUMBER SPECIES^f (ft. - in.)

		SPACING OF DECK JOISTS WITH NO CANTILEVER ^b	SPACING OF DECK JOISTS WITH CANTILEVERS ^c
--	--	---	---

SPECIES ^a	SIZE	(inches)			(inches)		
		12	16	24	12	16	24
Southern pine	2 × 6	9-11	9-0	7-7	6-8	6-8	6-8
	2 × 8	13-1	11-10	9-8	10-1	10-1	9-8
	2 × 10	16-2	14-0	11-5	14-6	14-0	11-5
	2 × 12	18-0	16-6	13-6	18-0	16-6	13-6
Douglas fir-larch ^d , hem-fir ^d spruce-pine-fir ^d	2 × 6	9-6	8-8	7-2	6-3	6-3	6-3
	2 × 8	12-6	11-1	9-1	9-5	9-5	9-1
	2 × 10	15-8	13-7	11-1	13-7	13-7	11-1
	2 × 12	18-0	15-9	12-10	18-0	15-9	12-10
Redwood, western cedars, ponderosa pine ^e , red pine ^e	2 × 6	8-10	8-0	7-0	5-7	5-7	5-7
	2 × 8	11-8	10-7	8-8	8-6	8-6	8-6
	2 × 10	14-11	13-0	10-7	12-3	12-3	10-7
	2 × 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, 1 pound per square foot = 0.0479 kPa, 1 pound = 0.454 kg.

a. No. 2 grade with wet service factor.

b. Ground snow load, live load = 40 psf, dead load = 10 psf, $L/\Delta = 360$.

c. Ground snow load, live load = 40 psf, dead load = 10 psf, $L/\Delta = 360$ at main span, $L/\Delta = 180$ at cantilever with a 220-pound point load applied to end.

d. Includes incising factor.

e. Northern species with no incising factor

f. Cantilevered spans not exceeding the nominal depth of the joist are permitted.

R508.7 DECKING Maximum allowable spacing for joists supporting decking shall be in accordance with Table R508.7. Wood decking shall be attached to each supporting member with not less than (2) 8d threaded nails or (2) No. 8 wood screws. Other types of decking or fastener systems shall be permitted in accordance with

manufacturer's installation requirements.

TABLE R507.4R508.7
MAXIMUM JOIST SPACING SPANS FOR DECKING

MATERIAL TYPE AND NOMINAL SIZE	MAXIMUM ON-CENTER JOIST SPACING	
	Perpendicular to joist	Diagonal to joists
1 ¹ / ₄ -inch-thick wood	16 inches	12 inches
2-inch-thick wood	24 inches	16 inches
Plastic composite	In accordance with Section R507.3	In accordance with Section R507.3

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 degree = 0.01745 rad.

a. Maximum angle of 45 degrees from perpendicular for wood deck boards

R07.8 Vertical and lateral supports at band joist. Vertical and lateral supports for decks shall comply with this section.

R508.8.1 Vertical supports.

R508.8.1.1 Ledger details. Deck ledgers shall be a minimum 2-inch by 8-inch nominal, pressure-preservative-treated southern pine, incised pressure-preservative-treated Hem-fir, or approved, naturally durable, No.2 grade or better lumber. Deck ledgers shall not support concentrated loads from beams or girders. Deck ledgers shall not be supported on stone or masonry veneer.

R508.8.1.2 Band joist details Band joists supporting a ledger shall be a minimum 2-inch-nominal (51 mm), solid-sawn, spruce-pine-fir or better lumber, or a minimum 1-inch by 9½ - inch (25 mm x 241 mm), dimensional Douglas fir or better, laminated veneer lumber. Band joists shall bear fully on the primary structure capable of supporting all required loads. .

R508.8.1.3 Ledger to band joist fastener details. Fasteners used in deck ledger connections in accordance with Table R508.8.1.3(1) shall be hot-dipped galvanized or stainless steel and shall be installed in accordance with Table R508.8.1.3(2) and Figures R508.8.1.3(1) and R508.8.1.3(2).

R508.8.1.4 Alternate ledger details. Alternate framing configurations supporting a ledger constructed to meet the load requirements of Section R301.5 shall be permitted.

R508.8.2 Lateral connections. Lateral loads shall be transferred to the ground or to a structure capable of transmitting them to the ground.

Where the lateral load connection is provided in accordance with Figure R508.8.2(1), hold-down tension devices shall be installed in not less than two locations per deck, within 24 inches of each end of the deck. Each device shall have an allowable stress design capacity of not less than 1,500 pounds (6672 N).

Where the lateral load connections are provided in accordance with Figure R508.8.2(2), the hold-down tension devices shall be installed in not less than four locations per deck, and each device shall have an allowable stress design capacity of not less than 750 pounds (3336 N)

TABLE R507-2R508.8.1

DECK LEDGER CONNECTION TO BAND JOIST^{a, b} (Deck live load = 40 psf, deck dead load = 10 psf, snow load ≤ 40 psf)

CONNECTION DETAILS	JOIST SPAN						
	6' and less	6'1" to 8'	8'1"2 to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
	On-center spacing of fasteners						
¹ / ₂ -inch diameter lag screw with ¹ / ₂ -inch maximum sheathing ^{c, d}	30	23	18	15	13	11	10
¹ / ₂ -inch diameter bolt with ¹ / ₂ -inch maximum sheathing ^d	36	36	34	29	24	21	19
¹ / ₂ -inch diameter bolt with 1-inch maximum sheathing ^e	36	36	29	24	21	18	16

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.

- a. Ledgers shall be flashed in accordance with Section R703.4 to prevent water from contacting the house band joist.
- b. Snow load shall not be assumed to act concurrently with live load.
- c. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- d. Sheathing shall be wood structural panel or solid sawn lumber.
- e. Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard, lumber or foam sheathing. Up to 1/2 -inch thickness of stacked washers shall be permitted to substitute for up to 1/2 inch of allowable sheathing thickness where combined with wood structural panel or lumber sheathing.

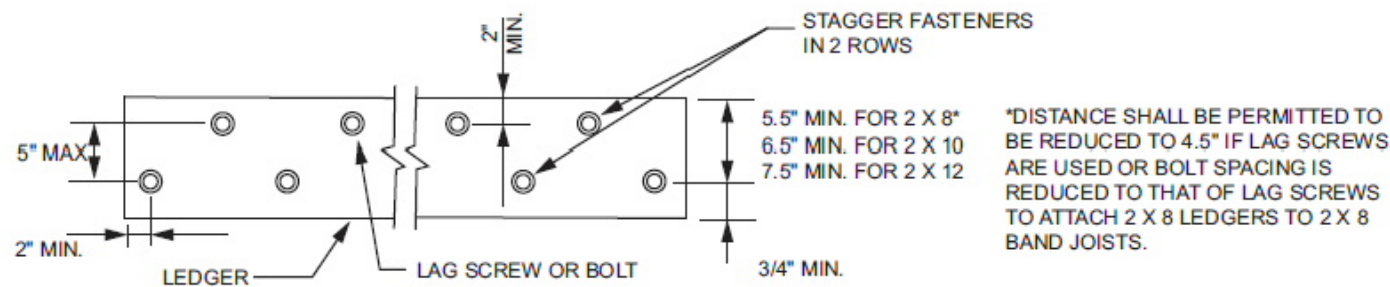
TABLE R507.2.1R508.8.1.3
PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS

MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS				
	TOP EDGE	BOTTOM EDGE	ENDS	ROW SPACING
Ledger ^a	2 inches ^d	3/4 inch	2 inches ^b	1 5/8 inches ^b
Band Joist ^c	3/4 inch	2 inches	2 inches ^b	1 5/8 inches ^b

For SI: 1 inch = 25.4 mm.

- a. Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger in accordance with Figure R507.2.1(1).
- b. Maximum 5 inches.
- c. For engineered rim joists, the manufacturer's recommendations shall govern.
- d. The minimum distance from bottom row of lag screws or bolts to the top edge of the ledger shall be in accordance with Figure R507.2.1(1).

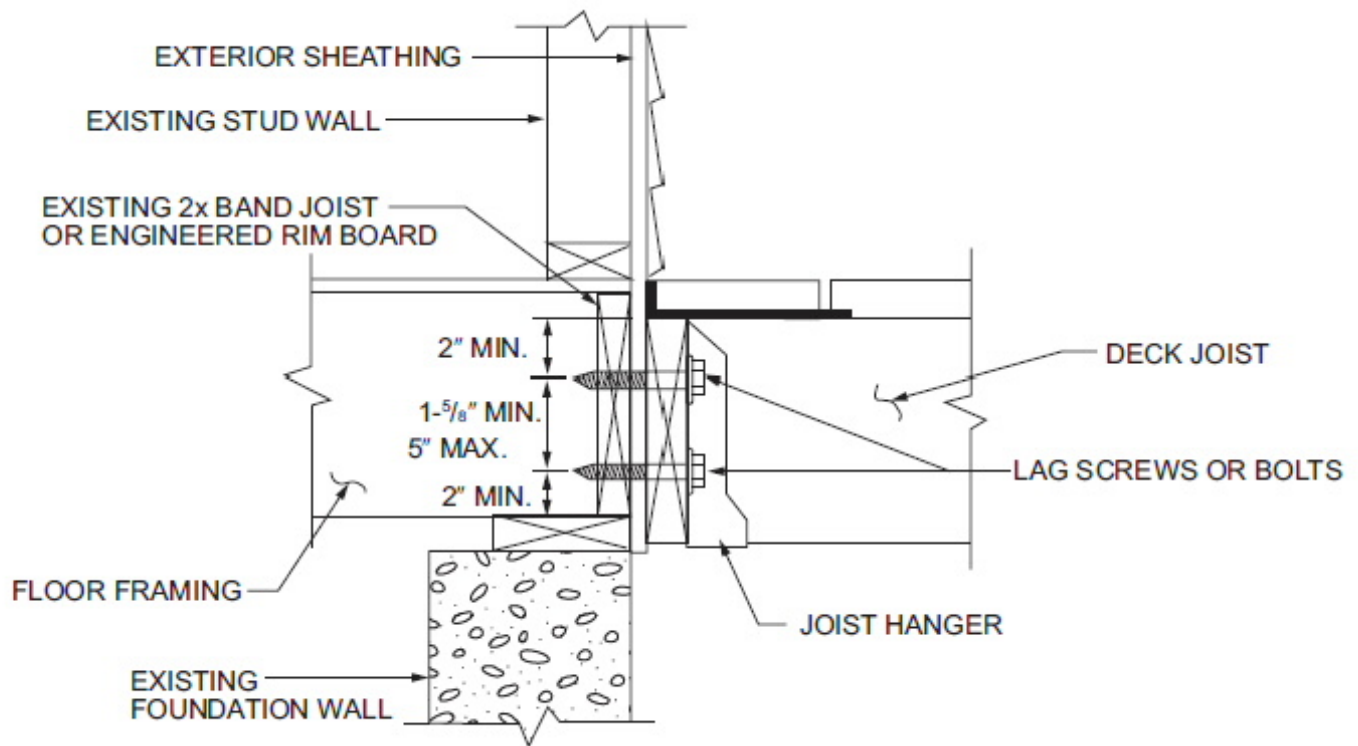
FIGURE 1
PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS



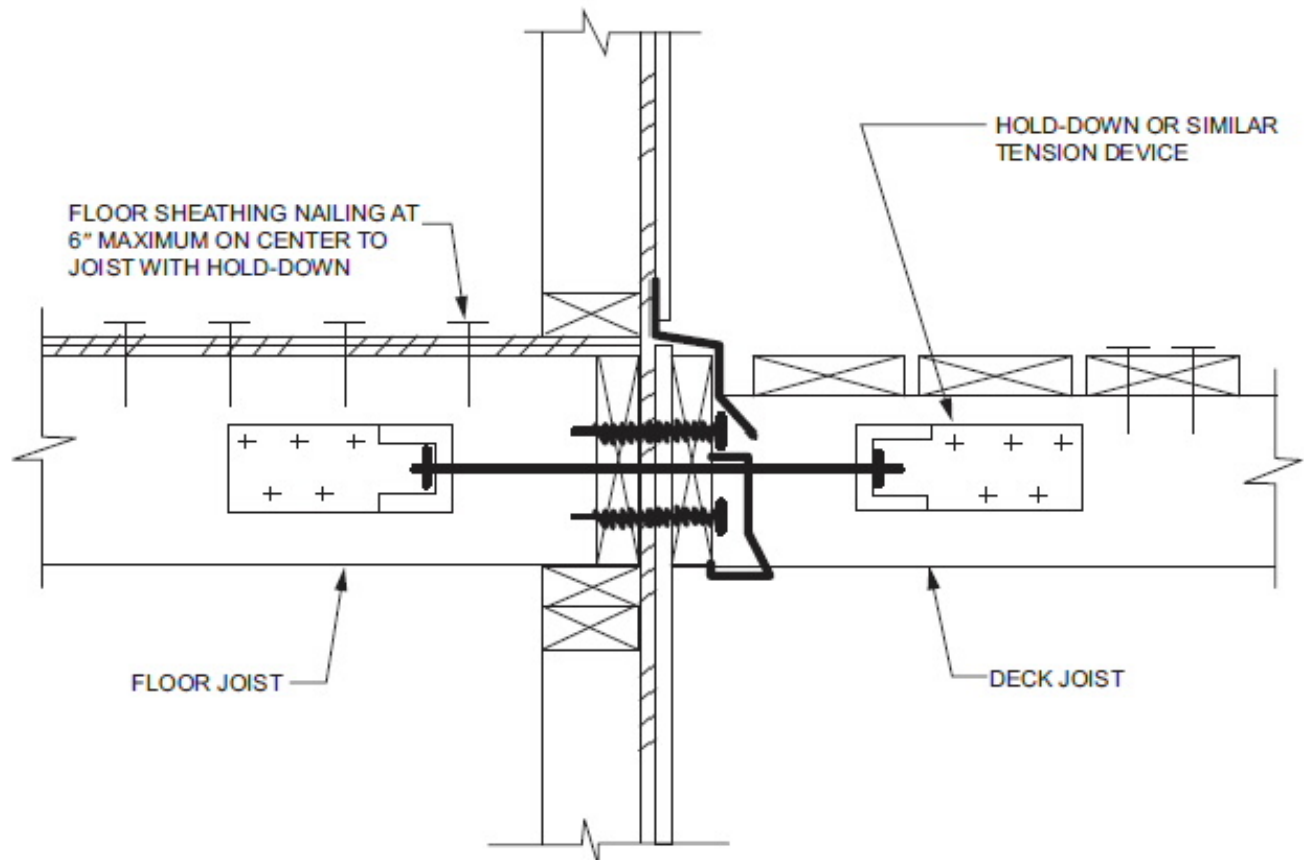
For SI: 1 inch = 25.4 mm.

For SI: 1 inch = 25.4 mm.

**FIGURE 2
PLACEMENT OF LAG SCREWS AND BOLTS IN BAND JOISTS**



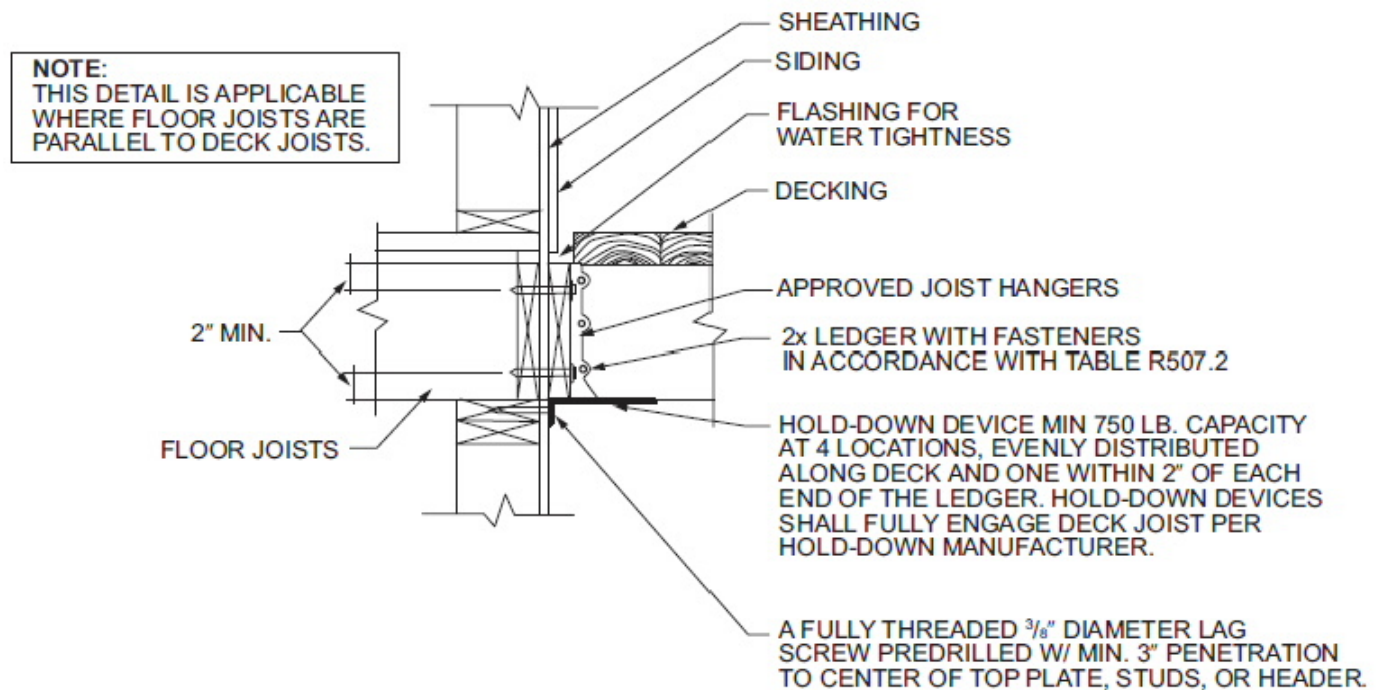
**FIGURE 1
DECK ATTACHMENT FOR LATERAL LOADS**



For SI: 1 inch = 25.4 mm.

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

**FIGURE 2
DECK ATTACHMENT FOR LATERAL LOADS**



Reason: This proposal was approved in Louisville last week. It is intended to provide prescriptive language and fill in the missing parts of R507 for the weekend warrior and yet not stifle the creativity of custom deck builders. The Deck Code Coalition will be submitting public comments in Kansas City for the remaining items that were not approved in Louisville, namely freestanding decks, deck beams and guards. If these public comments get passed, I will be submitting last minute changes for the Board to consider.

This proposal does several things:

1. It provides the missing pieces that were not included in the past version of R507.
2. It reorganizes the material in a "ground up" order similar to the other parts of the IRC, starting with footings, to posts, to beams, etc.
3. NOTE: for ease of submittal and your reading/comprehending, I deleted all of R507 and inserted all new text. Unfortunately cdpAccess does not play well with this vast deletion, so I was forced to create all new section which I called R508. In the end, R508 will be renumbered as R507.

Cost Impact: To this point there has been no real increase to the deck cost. We have provided more options which may in fact lower the cost. If and when "guards" is put into the code is when the cost will go up for additional hardware and labor.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Disapproval

Workgroup 3 Reason: Chuck explained-approved in Louisville-Emory opposes-Toalson stated we often try to bring national level proposals to our codes before that code (2018) is out. Catlett opposes-Bartell opposes.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R507.1 cdpVA-15

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CTS-305.2.10 cdpVA-15

Proponent : Michael Redifer (mredifer@nnva.gov)

2015 International Swimming Pool and Spa Code

305.2.10 Poolside Barrier setbacks. The pool or spa side of the required barrier shall be not less than 20 inches (508 mm) from the water's edge. The required barrier shall be not less than 36 inches (914 mm) from any lot line.

Reason: Establishing a setback from lot lines equal to the clear zone dimension of 36 inches (305.2.9) will ensure future activity by adjacent property owner will not require relocation of the barrier in order to maintain the established level of safety.

Cost Impact: This will increase the cost of construction in cases where using an existing fence on an adjacent property is preferable to installing a barrier located entirely on the property where the pool is located.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Consensus for Disapproval

Workgroup 3 Reason: Danville B/O-see's no issue with shared fences-Clements-if barrier removed cite thru property maint. code

Workgroup 4 Recommendation Recommendation: Consensus for Disapproval

Workgroup 4 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CTS-305.2.10 cdpVA-15

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F-1030.1 cdpVA-15

Proponent : Andrew Milliken, Representing Stafford County Fire Marshal's Office (amilliken@staffordcountyva.gov)

2015 International Building Code

1030.1 General. In addition to the *means of egress* required by this chapter, provisions shall be made for *emergency escape and rescue openings* in Group R-2 occupancies in accordance with Tables 1006.3.2(1) and 1006.3.2(2) ~~and~~, Group R-3 and R-4 occupancies. *Basements* and sleeping rooms below the fourth story above *grade plane* shall have at least one exterior *emergency escape and rescue opening* in accordance with this section. Where *basements* contain one or more sleeping rooms, *emergency escape and rescue openings* shall be required in each sleeping room, but shall not be required in adjoining areas of the *basement*. Such openings shall open directly into a *public way* or to a *yard* or *court* that opens to a *public way*.

- **Exceptions:**

1. *Basements* with a ceiling height of less than 80 inches (2032 mm) shall not be required to have *emergency escape and rescue openings*.
2. *Emergency escape and rescue openings* are not required from *basements* or sleeping rooms that have an *exit door* or *exit access door* that opens directly into a *public way* or to a *yard*, *court* or exterior exit balcony that opens to a *public way*.
3. *Basements* without *habitable spaces* and having not more than 200 square feet (18.6 m²) in floor area shall not be required to have *emergency escape and rescue openings*.

2015 International Fire Code

[BE] 1030.1 General. In addition to the *means of egress* required by this chapter, provisions shall be made for *emergency escape and rescue openings* in Group R-2 occupancies in accordance with Tables 1006.3.2(1) and 1006.3.2(2) ~~and~~, Group R-3 and R-4 occupancies. *Basements* and sleeping rooms below the fourth story above *grade plane* shall have at least one exterior *emergency escape and rescue opening* in accordance with this section. Where *basements* contain one or more sleeping rooms, *emergency escape and rescue openings* shall be required in each sleeping room, but shall not be required in adjoining areas of the *basement*. Such openings shall open directly into a *public way* or to a *yard* or *court* that opens to a *public way*.

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3. *Basements* without *habitable spaces* and having not more than 200

square feet (18.6 m²) in floor area shall not be required to have *emergency escape and rescue openings*.

Reason: The intent of this proposal is to clarify that the requirements of emergency escape and rescue openings apply to R-4 occupancies. Section 310.6 of the 2012 Virginia Construction Code and 2015 International Building Code indicate that, "group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code." Furthermore, section 403.9.3.6 of the 2012 Virginia Statewide Fire Prevention Code and 403.10.3.6 of the 2015 International Fire Code indicate that group R-4 occupancies shall include emergency escape and rescue windows as part of building evacuation procedures. This proposal does not add any new requirements but rather simply clarifies that emergency escape openings are essential for effective evacuation from and are required for R-4 occupancies. It also helps to provide continuity between Virginia Construction Code requirements for egress and Fire Prevention Code requirements for evacuation.

Cost Impact: This proposal does not impact cost as it is only editorial and does not add any new requirements.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Disapproval

Workgroup 2 Reason: 1st meeting: Andrew Milliken gave an overview of his proposal, Cindy Davis asked if everyone was in agreement with that intent to adding the R-4 language to this section?

Judy Hackler asked whether or not it would be a new classification or retrofit?

Cindy Davis – **Moving forward as pending.**

2nd meeting: consensus for disapproval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

F-1030.1 cdpVA-15

C-103.3(1) cdpVA-15

Proponent : William Andrews (william.andrews@richmondgov.com)

2012 Virginia Construction Code

103.3 Change of occupancy.

~~No change~~A change in the existing use or occupancy classification of a building or structure or portion thereof shall not be made, until the building official has issued a certificate of occupancy shall be made in any structure when the current USBC requires therefor as provided herein. When a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation or sanitation. When such a greater degree safety is required, the owner or the owner's agent shall comply with the following:

1. When involving Group I-2 or I-3, written application shall be made to the local building department for a new certificate of occupancy and the new certificate of occupancy shall be obtained prior to the new use of the structure. When impractical to achieve compliance with this code for the new occupancy classification, the building official shall consider modifications upon application and as provided for in Section [106.3](#). In addition, the applicable accessibility provisions of Section 1012.8 of Part II of the *Virginia Uniform Statewide Building Code*, also known as the "*Virginia Rehabilitation Code*," or the "VRC" shall be met.
 - **Exception:** This section shall not be construed to permit noncompliance with any applicable flood load or flood-resistant construction requirements of this code.
2. In other than Group I-2 or I-3, the provisions of the VRC for change of occupancy shall be met.

Reason: Seek change for 2015 USBC, to wording from IBC, to require new Certificate of Occupancy from building official when occupancy use changes, instead of only requiring permit or new Certificate of Occupancy when needs greater safety feature. Changing use should have record of building official approval.

Example: changing from restaurant (assembly use) to a duplex (residential) may seem new use needs lesser safety, yet without permit and inspection, no assurance smoke detectors properly provided. Decades after undocumented changes, would be "grandfathered" if revert to prior use, despite maybe having removed some safety features unrequired during lower level use.

Building maintenance and fire code official apply codes based on Certificate of Occupancy, so when use changes yet no new Certificate of Occupancy, challenges on applying their codes.

Suggest similar changes to Virginia Maintenance and Fire Prevention codes.

Cost Impact: No construction cost, merely cost of permit process to get new Certificate of Occupancy when use changes.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Non-Consensus Final

Workgroup 1 Reason: 1st meeting:VBCOA will have a code change for this, Mr. Andrews – Once something is submitted what is the process for adding collaborative language?
Vernon Hodge – If the proposal is going to be a joint proposal then even after it is submitted staff can add or just get an email saying I have been approved to be a co-proponent on this proposal so we can add that too. This way it shows that this has multiple proponents.

Henry Rosenbaum - We do run into this problem on the fire side

Cindy Davis – So it sounds like to me like you are all going to work together and we are not going to do anything with this now we will just carry this forward until the other one comes forward and see where it goes.

July 7th:

William Andrews stated he is working with VBCOA on this change of occupancy, Rick Wtt stated he had concerns about how it is written, Robert Adkins stated he didn't agree with this.

Richard Potts stated this proposal will Move forward as non-consensus.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-103.3(1) cdpVA-15

C-104.3 cdpVA-15

Proponent : William Andrews , Representing City of Richmond's Fire Marshal's office (william.andrews@richmondgov.com)

2012 Virginia Construction Code

104.3 Installation or modifications of fire protection systems. The building official shall notify the local fire official when the installation of a fire protection system in a new building is approved and when issuing an approval for altering, disabling or removing of a fire protection system in an existing building.

Reason: Fire officials are responsible for applying the fire code on maintenance and periodic testing of the fire protection systems, plus local fire officials coordinate emergency responses to sites (including state). Local fire officials need to learn when a building official approve installing, disabling or removing fire alarms, sprinkler system, and other fire protection systems (including for renovation or demolition). The building official is the best source for properly authorizing substantial changes to fire protection systems, thus to notify local fire official. If code leaves responsibility on contractor and property owners, often their getting permits from the building official consider comply with code, resulting in fire official not notified. State and local building officials need to keep local fire official updated when approving substantial changes of fire protection systems within that fire official's emergency response area.

DHCD Staff Note: The proponent modified the proposal after the second WG2 meeting (July 20, 2016) to add a new provision to Chapter 1 of the VCC. A link to the proposal reviewed by WGs 1 and 2 is below:

[Prior Proposal](#)

Cost Impact: No cost impact for construction. Minimal time and effort by building official's office to communicate information to the fire official.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: 1st WG 2 meeting: This will return with collaborative efforts, Johnna will work with Mr Andrews to tweak. Pending
2nd WG 2 meeting:

William Andrews gave an overview of his proposal. Same language as in previous workgroups. Johnna Grizzard stated she had sent some suggestions, however, she never received an answer. Kenney Payne suggested it needed rewording.

Rick Witt said we are not installing. He supports making this pending and doesn't think it is necessary. You can't change behavior.

Emory Rodgers said disabling or removing is approved under the USBC, then the fire code requires if you put it out of service to notify them. He suggested moving forward as non-consensus. This has been placed in 2 workgroups for comments.

Brian Gordon stated we are supporting this concept, without addressing some of the issues, we would not support as consensus.

Glenn Dean said he disagrees with Bill, the building official doesn't own the fire system.

William Lloyd said to move this forward, it is a reasonable requirement. It reminds the building official, if you are going to take out a fire protection system, you need to let the fire department know. It takes the burden off of the individual that owns the building.

Cindy Davis – **Move forward as consensus for disapproval.**

Robby Dawson asked if we change language, what would happen to it?

Cindy Davis stated it would be a change that we would consider again.

DHCD Staff Note: The proponent modified the proposal after the second WG2 meeting (July 20, 2016) to create a new provision in Chapter 1 of the VCC. The proposal reviewed by WGs 1 and 2 is in the "Attachments" section of this proposal and linked to the reason statement.

8/17/16 meeting: William spoke-non consensus

Workgroup 1 Recommendation Recommendation: Non-Consensus Final

Workgroup 1 Reason: Needs work. Proponent to come back with revised language based on workgroup feedback.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-104.3 cdpVA-15

C-108.2(2) cdpVA-15

Proponent : Walter Lucas, Representing City of Danville
(lucaswa@danvilleva.gov)

2012 Virginia Construction Code

108.2 Exemptions from application for permit.

Notwithstanding the requirements of Section [108.1](#), application for a permit and any related inspections shall not be required for the following; however, this section shall not be construed to exempt such activities from other applicable requirements of this code. In addition, when an owner or an owner's agent requests that a permit be issued for any of the following, then a permit shall be issued and any related inspections shall be required.

1. Installation of wiring and equipment that (i) operates at less than 50 volts, (ii) is for network powered broadband communications systems, or (iii) is exempt under Section 102.3(1), except when any such installations are located in a plenum, penetrate fire rated or smoke protected construction or are a component of any of the following:
 - 1.1. Fire alarm system.
 - 1.2. Fire detection system.
 - 1.3. Fire suppression system.
 - 1.4. Smoke control system.
 - 1.5. Fire protection supervisory system.
 - 1.6. Elevator fire safety control system.
 - 1.7. Access or egress control system or delayed egress locking or latching system.
 - 1.8. Fire damper.
 - 1.9. Door control system.
2. One story detached structures used as tool and storage sheds, playhouses or similar uses, provided the building area does not exceed 256 square feet (23.78 m²) and the structures are not classified as a Group F-1 or H occupancy.
3. Detached prefabricated buildings housing the equipment of a publicly regulated utility service, provided the floor area does not exceed 150 square feet (14 m²).
4. Tents or air-supported structures, or both, that cover an area of 900 square feet (84 m²) or less, including within that area all connecting areas or spaces with a common means of egress or entrance, provided such tents or structures have an occupant load of 50 or less persons.
5. Fences of any height unless required for pedestrian safety as provided for by Section [3306](#), or used for the barrier for a swimming pool.
6. Concrete or masonry walls, provided such walls do not exceed 6 feet (1829 mm) in height above the finished grade. Ornamental column caps shall not be considered to contribute to the height of the wall and shall be permitted to extend above the 6 feet (1829 mm) height measurement.
7. Retaining walls supporting less than 3 feet (914 mm) of unbalanced fill that are not constructed for the purpose of impounding Class I, II or III-A liquids or supporting a surcharge other than ordinary unbalanced fill.

8. Swimming pools that have a surface area not greater than 150 square feet (13.95 m^2), do not exceed 5,000 gallons (19 000 L) and are less than 24 inches (610 mm) deep.
9. Signs under the conditions in Section [H101.2](#) of Appendix H.
10. Replacement of above-ground existing LP-gas containers of the same capacity in the same location and associated regulators when installed by the serving gas supplier.
11. Flagpoles 30 feet (9144 mm) or less in height.
12. Temporary ramps serving dwelling units in Group R-3 and R-5 occupancies where the height of the entrance served by the ramp is no more than 30 inches (762 mm) above grade.
13. Construction work deemed by the building official to be minor and ordinary and which does not adversely affect public health or general safety.
14. Ordinary repairs that include the following:
 - 14.1. Replacement of windows and doors with windows and doors of similar operation and opening dimensions that do not require changes to the existing framed opening and that are not required to be fire rated in Group R-2 where serving a single dwelling unit and in Groups R-3, R-4 and R-5.
 - 14.2. Replacement of plumbing fixtures and well pumps in all groups without alteration of the water supply and distribution systems, sanitary drainage systems or vent systems.
 - 14.3. Replacement of general use snap switches, dimmer and control switches, 125 volt-15 or 20 ampere receptacles, luminaires (lighting fixtures) and ceiling (paddle) fans in Group R-2 where serving a single dwelling unit and in ~~Groups R-3, R-4 and R-5.~~ all use groups without replacement of wiring or adding new circuits.
 - 14.4. Replacement of mechanical appliances provided such equipment is not fueled by gas or oil in Group R-2 where serving a single-family dwelling and in Groups R-3, R-4 and R-5.
 - 14.5. Replacement of an unlimited amount of roof covering or siding in Groups R-3, R-4 or R-5 provided the building or structure is not in an area where the design (3 second gust) wind speed is greater than 100 miles per hour (160 km/hr) and replacement of 100 square feet (9.29 m^2) or less of roof covering in all groups and all wind zones.
 - 14.6. Replacement of 100 square feet (9.29 m^2) or less of roof decking in Groups R-3, R-4 or R-5 unless the decking to be replaced was required at the time of original construction to be fire-retardant-treated or protected in some other way to form a fire-rated wall termination.
 - 14.7. Installation or replacement of floor finishes in all occupancies.
 - 14.8. Replacement of Class C interior wall or ceiling finishes installed in Groups A, E and I and replacement of all classes of interior wall or ceiling finishes in other groups.
 - 14.9. Installation or replacement of cabinetry or trim.
 - 14.10. Application of paint or wallpaper.
 - 14.11. Other repair work deemed by the building official to be minor and ordinary which does not adversely affect public health or general safety.

15. Crypts, mausoleums and columbaria structures not exceeding 1,500 square feet (139.35 m²) in area if the building or structure is not for occupancy and used solely for the interment of human or animal remains and is not subject to special inspections.
- **Exception:** Application for a permit may be required by the building official for the installation of replacement siding, roofing and windows in buildings within a historic district designated by a locality pursuant to Section 15.2-2306 of the Code of Virginia.

Reason: It doesn't make sense to require a electrical permit to replace a switch or a fixture in other use groups When section 108.14.2 doesn't require a plumbing permit to replace fixtures of well pump in all use groups.

Cost Impact: This change would result in a cost savings.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Non-Consensus Final

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

C-108.2(2) cdpVA-15

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CB-304.1.1 cdpVA-15

Proponent : William King, Representing DBHDS Ad-Hoc Group
(william.king@alexandriava.gov)

2012 Virginia Construction Code

304.1.1 Day support and day treatment facilities. Day support and day treatment facilities licensed by the Virginia Department of Behavioral Health and Developmental Services shall be permitted to be classified as Group B occupancies when all of the following conditions are satisfied.

1. Participants who may require physical assistance from staff to respond to an emergency situation shall be located on the level of exit discharge.
2. Any change in elevation within the *exit access* on the *level of exit discharge* shall be made by means of a *ramp* or sloped walkway.
3. Where the facilities are located more than three stories above grade, an automatic sprinkler system shall be provided throughout the building in accordance with Section 903.3.1.1.

Reason: This proposal was created by a work-group including representatives from the Virginia Department of Behavioral Health & Development Services (DBHDS) to address concerns on classification that have arisen with the location of licensed Day Support and Day Treatment facilities. These facilities provide treatment for individuals within the community as opposed to larger centralized locations. This distributed network of facilities were established to make these resources more readily available to those that require them. The attached .pdfs contain information on the use of the Day Support and Day Treatment facilities per their licensing and the checklist used by DBHDS for site visits.

Attachments:

<https://va.cdpassess.com/proposal/fileupload/get/65>

<https://va.cdpassess.com/proposal/fileupload/get/66>

Cost Impact: This proposal will not increase the cost of construction.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: 1st WG 2 comments: Mr Dean concerned with technical requirements with in the use group but is not against the proposal. Modifications will be made to this proposal and will come back for next workgroup meeting. Pending

2nd WG 2 comments:

William King gave an overview of the proposal.

Glenn Dean believed this deals with technical and format issues, William Lloyd stated a need for a definition in chapter 2 that parallels that type of occupancy, George Hollingsworth believes the ramp slope needs clarification. Chris Snidow stated that if the walkway is less than 1-20 slope, it

becomes a ramp. Cindy Davis - Move forward as pending to answer questions raised today.

3rd meeting:

Questions about the new exception 3 which uses the word must as opposed to shall and reference 903.1.1 should be referenced fix language

non consensus

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-304.1.1 cdpVA-15

Public Comments for CB-304.1.1 cdpVA-15 : CB-304.1.1 (NEW)-KING294

William King

Public Comments for Proposal Id : 294

2 Comment(s)

By **William Andrews**

08-18-2016 09:14:39

Oppose without limit on number of occupants needing help to escape and escape distance. Comparing to I-1 and I-2, code should not allow over 16 occupants needing escape help as "B" use, or over 5 such occupants needing to travel over 200 feet to safety. Some increases may be allowed where sprinklered, yet since smoke major killer in fire, sprinklers should not allow "B" use or long escape distance with over 50 occupants needing help to escape.

By **William King**

08-05-2016 15:04:59

Modifiy this proposal to include a third condition.

3. To be located more than three stories above grade the building must be fully sprinklered.

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CB-1023.5 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2015 International Building Code

1023.5 Penetrations. Penetrations into or through *interior exit stairways* and *ramps* are prohibited except for equipment and ductwork necessary for independent ventilation or pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication systems and electrical raceway serving the *interior exit stairway* and *ramp* and terminating at a steel box not exceeding 16 square inches (0.010 m²). Such penetrations shall be protected in accordance with Section 714. There shall not be penetrations or communication openings, whether protected or not, between adjacent *interior exit stairways* and *ramps*.

Exceptions:

1. Membrane penetrations shall be permitted on the outside of the *interior exit stairway* and *ramp*. Such penetrations shall be protected in accordance with Section 714.3.2.

2. Structural members other than columns which are part of the *primary structural frame* and structural members which are *secondary members*, where such structural members are protected in accordance with Section 714, shall be permitted to penetrate into or through an *interior exit stairway* enclosure or a *ramp* enclosure.

Reason: Structural framing is allowed to penetrate through other rated assemblies, including rated corridor walls, shafts, and other fire barriers and rated construction (e.g., those elements governed by Chapter 6) or penetrate into, including fire walls. Otherwise, each stairway enclosure would be its own "mini-building" with independent structural framing which is not required by code. There is no code requirement for such enclosures to be constructed as independent - only that they be enclosed with fire barriers.

This proposal would be consistent with what is allowed under 2015 IBC 713.8 for shaft enclosures: "Structural elements, such as beams or joists, where protected in accordance with Section 714 shall be permitted to penetrate a shaft enclosure."

DHCD Staff Note: Proposal was modified after the July 20, 2016 workgroup meeting. The original proposal was withdrawn and replaced with this proposal. The original proposal with workgroup comments may be viewed here: [Original Proposal](#)

Cost Impact: Clarifying that primary and secondary structural framing can penetrate such enclosures will result in COST SAVINGS because otherwise, the structure within the stairway and its enclosure would need to be constructed almost like a fire wall.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: 1st meeting: Bob Adkins stated he loudly speaks against this code change, Andrew Milliken stated he agreed, Jeff Morrow said the thing that seems to be missing is the serving of the stairway. With the wording we have now, we can run sprinkler piping on through one wall in the stairway into another wall, so we are penetrating the stairway again. It should be limited to stairway.

Cindy Davis – Move forward as non-consensus with more work on it.

2nd meeting: non-consensus

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CB-1023.5 cdpVA-15

CE-1301.1.1.1 cdpVA-15

Proponent : Andrew Grigsby (andrew@leap-va.org)

2012 Virginia Construction Code

(DHCD Staff Note: Proponent confirmed corresponding changes to be made to IRC energy provisions)

~~1301.1.1.1 Changes to the IECC.~~

~~The following changes shall be made to the IECC:~~

- ~~1. Add Exception 3 to Section C402.4.5.2 to read:
 - ~~1.1. (3.)Any grease duct serving a Type I hood installed in accordance with IMC Section 506.3 shall not be required to have a motorized or gravity damper.~~~~
- ~~2. Change Section C402.4.8 to read:~~
- ~~3. Add Exception 4 to Section C403.2.4.4 to read:
 - ~~3.1. (4.)Any grease duct serving a Type I hood installed in accordance with IMC Section 506.3 shall not be required to have a motorized or gravity damper.~~~~
- ~~4. Change the exception to Section C405.1 to read:
 - ~~o **Exception:**Dwelling units within commercial buildings shall not be required to comply with Sections C405.2 through C405.5, provided that not less than 75 percent of the permanently installed luminaires, other than low-voltage lighting, shall be fitted for, and contain only, high-efficacy lamps.~~~~
- ~~5. Change Section [C405.6](#) to read:~~
- ~~6. Delete Section R401.3~~
- ~~7. Change the ceiling *R* value and wood frame wall *R* value categories for climate zone "4 except Marine" in Table R402.1.1 to read:~~
- ~~8. Change the ceiling *U* factor and frame wall *U* factor categories for climate zone "4 except Marine" in Table R402.1.3 to read:~~
- ~~9. Change Sections R402.2.1 and R402.2.4 to read:~~
- ~~10. Delete Section R402.3.6 and change Sections R402.4 and R402.4.1.1 to read:~~
- ~~11. Change the title of the "Criteria" category of Table R402.4.1.1; change the "Walls," "Shower/tub on exterior wall" and "Fireplace" categories of Table R402.4.1.1, and add footnotes "b" and "c" to Table R402.4.1.1 to read:~~
- ~~12. Change Section R402.4.1.2 and add Sections R402.4.1.2.1, R402.4.1.2.2 and R402.4.1.3 to read:~~
- ~~13. Change Section R403.1.1 to read:~~
- ~~14. Change Section R403.2.2 to read:~~
- ~~15. Change Section R403.2.2.1 to read:~~
- ~~16. Add Section R403.2.2.2 to read:~~
- ~~17. Add Section R403.2.2.3 to read:~~
- ~~18. Change Section R403.4.2 to read:~~
- ~~19. Delete Table R403.4.2~~
- ~~20. Change Section R403.6 to read:~~
- ~~21. Change Section R404.1 to read:~~
- ~~22. Change the "Glazing" and "Air exchange rate" categories of Table R405.5.2(1)~~

to read:

~~C402.4.8 Recessed lighting.~~ Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate or not more 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E 283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires installed in the thermal envelope shall be sealed with a gasket or caulk between the housing and interior wall or ceiling covering.

~~C405.6 Exterior lighting (Mandatory).~~ All exterior lighting, other than low-voltage landscape lighting, shall comply with Sections C405.6.1 and C405.6.2

- **~~Exception:~~** Where approved because of historical, safety, signage, or emergency considerations.

CEILING R-VALUE	WOOD FRAME WALL R-VALUE
38	15 or 13 + 1^h

CEILING U-FACTOR	FRAME WALL U-FACTOR
0.030	0.079

~~R402.2.1 Ceilings with attic spaces.~~ When Section R402.1.1 would require R-38 in the ceiling, installing R-30 over 100 percent of the ceiling area shall be deemed to satisfy the requirement for R-38 wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Similarly, when Section R402.1.1 would require R-49 in the ceiling, installing R-38 over 100 percent of the ceiling area shall be deemed to satisfy the requirement for R-49 wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the U-factor alternative approach in Section R402.1.3 and the total UA alternative in Section R402.1.4

~~R402.2.4 Access hatches and doors.~~ Access doors from conditioned spaces to unconditioned spaces (e.g., attics and crawl spaces) shall be weatherstripped and insulated in accordance with the following values:

1. ~~Hinged vertical doors shall have a minimum overall R-5 insulation value;~~
2. ~~Hatches and scuttle hole covers shall be insulated to a level equivalent to the insulation on the surrounding surfaces; and~~
3. ~~Pull down stairs shall have a minimum of 75 percent of the panel area having R-5 rigid insulation.~~

~~Access shall be provided to all equipment that prevents damaging or compressing the insulation. A wood framed or equivalent baffle or retainer is required to be provided when loose fill insulation is installed, the purpose of which is to prevent the loose fill insulation from spilling into the living space when the attic access is opened and to provide a permanent means of maintaining the installed R-value of the loose fill insulation.~~

~~R402.4 Air leakage.~~ The building thermal envelope shall be constructed to limit air

leakage in accordance with the requirements of Sections R402.4.1 through R402.4.4

~~R402.4.1.1 Installation (Mandatory).~~ The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table R402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.

COMPONENT	CRITERIA^{a,b}
Walls	<p>Cavities within corners and headers shall be insulated by completely filling the cavity with a material having a minimum thermal resistance of R-3 per inch.</p> <p>The junction of the foundation and sill plate shall be sealed.</p> <p>The junction of the top plate and top of exterior walls shall be sealed.</p> <p>Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.</p> <p>Knee walls shall be sealed.</p>
Shower/tub on exterior wall ^c	<p>Exterior walls adjacent to showers and tubs shall be insulated, and an air barrier shall be installed on the interior side of the exterior wall, adjacent to the shower or tub.</p>
Fireplace	<p>An air barrier shall be installed on fireplace walls. Fireplaces shall have gasketed doors or tight fitting flue dampers.</p>

~~b. Structural integrity of headers shall be in accordance with the applicable building code.~~

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

~~R402.4.1.2 Air sealing.~~ Building envelope air tightness shall be demonstrated to comply with either Section R402.4.1.2.1 or R402.4.1.2.2

~~R402.4.1.2.1 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 creation of all penetrations of the building thermal envelope.

During testing:

- ~~1. Exterior windows and doors and 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.~~

~~R402.4.1.2.2 Visual inspection option.~~ Building envelope tightness shall be considered acceptable when the items listed in Table R402.4.1.1, applicable to the method of construction, are field verified. Where required by the building official, an approved party, independent from the installer, shall inspect the air barrier. When this option is chosen, the dwelling unit shall be ventilated by mechanical means in accordance with Section [403](#) of the IMC.

~~R402.4.1.3 Leakage rate (Prescriptive).~~ The building or dwelling unit shall have an air leakage rate not exceeding 5 changes per hour as verified in accordance with Section R402.4.1.2

~~R403.1.1 Programmable thermostat.~~ The thermostat controlling the primary heating or cooling system of the dwelling unit shall be capable of controlling the heating and cooling system on a daily schedule to maintain different temperature set points at different times of the day. This thermostat shall include the capability to set back or temporarily operate the system to maintain zone temperatures down to 55°F (13°C) or up to 85°F (29°C). The thermostat shall initially be programmed with a heating temperature set point no higher than 70°F (21°C) and a cooling temperature set point no lower than 78°F (26°C).

~~R403.2.2 Sealing (Mandatory).~~ Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with either the IMC or the IRC, as applicable. Verification of compliance with this section shall be in accordance with either Section R403.2.2.1 or Section R403.2.2.2

• **~~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.~~

~~R403.2.2.1 Testing option.~~ Duct tightness shall be verified by either of the following:

- ~~1. Post construction test: Total leakage shall be less than or equal to 6 cfm (169.9 L/min) per 100 square feet (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inch 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 5 cfm (141.5 L/min) per 100 square feet (9.29 m²) of conditioned floor area when tested at a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All register boots 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 5 cfm (141.5 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.~~

~~When this option is chosen, testing shall be performed by approved qualified individuals, testing agencies or contractors. Testing and results shall be as prescribed in Section R403.2.2 and approved recognized industry standards.~~

~~**R403.2.2.2 Visual inspection option.**In addition to the inspection of ducts otherwise required by this code, when the air handler and all ducts are not within conditioned space and this option is chosen to verify duct tightness, duct tightness shall be considered acceptable when the requirements of Section R403.2.2 are field verified.~~

~~**R403.2.2.3 Sealed air handler.**Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design air flow rate when tested in accordance with ASHRAE 193.~~

~~**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 $\frac{3}{4}$ inch nominal diameter.~~
- ~~2. Piping serving more than one dwelling unit.~~
- ~~3. Piping located outside the conditioned space.~~
- ~~4. Piping from the water heater to a distribution manifold.~~
- ~~5. Piping located under a floor slab.~~
- ~~6. Buried piping.~~
- ~~7. Supply and return piping in recirculation systems other than demand recirculation systems.~~

~~**R403.6 Equipment and appliance sizing.**Heating and cooling equipment and appliances shall be sized in accordance with ACCA Manual S or other approved sizing methodologies 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 appliance sizing shall not be limited to the capacities determined in accordance with Manual S or other approved sizing methodologies 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 the approved heating and cooling methodology 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 the approved heating and cooling methodology and the next larger standard size unit is specified.~~
 - ~~3. The specified equipment or appliance is the lowest capacity unit available from the specified manufacturer.~~

~~**R404.1 Lighting equipment (Mandatory).**A minimum of 50 percent of the lamps in permanently installed luminaires shall be high efficacy lamps or a minimum of 50 percent of the permanently installed luminaires shall contain only high efficacy lamps.~~

- ~~• **Exception:**Low voltage lighting shall not be required to utilize high efficiency lamps.~~

BUILDING COMPONENT	STANDARD-REFERENCE DESIGN	PROPOSED-DESIGN
Glazing ^a	Total area ^b is 15% of the conditioned floor area.	As proposed
	Orientation: equally distributed to four cardinal compass orientations (N, E, S & W).	As proposed
	U factor: from Table N1102.1.3 (R402.1.3).	As proposed
	SHGC: From Table N1102.1.1 (R402.1.1) except that for climates with no requirement (NR) SHGC = 0.40 shall be used.	As proposed
	Interior shade fraction: 0.92 (0.21 x SHGC for the standard reference design)	0.92 (0.21 x SHGC as proposed)
	External shading: none.	As proposed
Air exchange rate	Air leakage rate of 5 air changes per hour 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 $0.01 \times CFA + 7.5 \times (N_{bf} + 1)$ where:	For residences that are not tested, the same air leakage rate as the standard reference design. For tested residences, the measured air exchange rate ^e .
	CFA = conditioned floor area N_{bf} = number of bedrooms Energy recovery shall not be assumed for mechanical ventilation.	The mechanical ventilation rate ^d shall be in addition to the air leakage rate and shall be as proposed.

Reason: During the last code update cycle, Virginia opted for a "go slow" approach and opted not to include the great majority of the efficiency gains obtained by the 2012 IECC. So our residential code is only very modestly more efficient than the 2009 IECC. It's time to get caught up. The 2015 IECC provides greater flexibility regarding methods of achieving compliance and actually is less stringent (moving from the 3ACH50 building air-tightness requirement to 5ACH50) - so meeting the 2015 code will be somewhat easier. These stricter energy codes are a good investment for homebuyers and renters of all income levels and promote quality and professionalism in the homebuilding industry.

DHCD Staff Note: There are five attachments in the proposal file. Links to them are below:

[Attachment 1](#)

[Attachment 2](#)

[Attachment 3](#)

[Attachment 4](#)

[Attachment 5](#)

Cost Impact: If we split the difference between the very low DOE estimate and the very high NAHB estimate, a smart homebuilder should be able to comply with this code for less than \$4K in the "average" home.

Workgroup Recommendation

Workgroup 2 Recommendation: None

Workgroup 2 Reason: None

Workgroup 3 Recommendation Recommendation: Non-Consensus Final

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CE-1301.1.1.1 cdpVA-15

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CE-R402.1.1(1) cdpVA-15

Proponent : Bruce Cornwall, Representing self (bcornwall@culpepercounty.gov)

2012 Virginia Energy Conservation Code

TABLE R402.1.1
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 & 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	38 49	15 or 13+1 ^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

For SI: 1 foot = 304.8 mm.

TABLE R402.1.3
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	0.030 0.026	0.079	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

a. Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

R402.4.1.2.2 Visual inspection option-

Building envelope tightness shall be considered acceptable when the items listed in Table [R402.4.1.1](#), applicable to the method of construction, are field verified. Where required by the building official, an approved party, independent from the installer, shall inspect the air barrier. When this option is chosen, the dwelling unit shall be ventilated by mechanical means in accordance with Section [403](#) of the *International Mechanical Code*.

Reason:
R-49 has been the standard for ceiling insulation in our area in the national code for 4 years. Studies show that the added insulation will more than pay for itself in the life of the home.

Cost Impact: The overall cost of this change would be approximately \$150.00 for an area of 1200 sq. ft.. This is .075 percent increase for a \$200,000 house.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: Reason: R-49 has been the standard for ceiling insulation in our area in the national code for 4 years. Studies show that the added insulation will more than pay for itself in the life of the home.
No one to speak on this proposal.

Mike Toalson commented he had been directed to speak in opposition to this proposal. We would ask that it be labeled non-consensus.

Andrew Grigsby stated his I support R49 for attics and that it was a smart investment.

Charles Cottrell spoke strong support for this issue.

Mike Toalson stated they did move forward with some changes in 2012. We always support giving the homebuyer the option to move forward with more insulation if they prefer, we don't believe it should be the minimum.

Cindy Davis stated it will **move forward as non-consensus**. We have a sub workgroup working on this and will continue to meet.

Workgroup 3 Recommendation Recommendation: Non-Consensus Final

Workgroup 3 Reason: Mike Toalson – we disapproved this before. Benefit vs cost is too much. We will continue to object to this-
Andrew Grigsby - I fully support this
Mike Toalson – I wasn't aware of this being on the agenda.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CE-R402.1.1(1) cdpVA-15

CE-R402.1.1(3) cdpVA-15

Proponent : Eric Lacey, Representing Responsible Energy Codes Alliance (eric@reca-codes.com)

2012 Virginia Energy Conservation Code

TABLE R402.1.1
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 & 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	15 or 13+1 ^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

For SI: 1 foot = 304.8 mm.

TABLE R402.1.3
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	0.0260-0.030	0.079	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

a. Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

2012 Virginia Residential Code

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 & 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	15 or 13 + 1 ^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

For SI: 1 foot = 304.8 mm.

**TABLE N1102.1.3
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	0.0260-0.030	0.079	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

a. Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.

Reason: The level of ceiling insulation required by the 2012 and 2015 IECC and IRC is most cost-effective when installed at initial construction, when equipment and laborers are already present. The only question is whether to install an additional amount of insulation in the attic (basically another 3.5 inches of blown-in insulation). The R-49 insulated attic will save approximately 1.6% more energy than the R-38 attic, every year over the 70-100 year expected lifetime of the home. The U.S. Department of Energy has found that ceiling insulation between R-38 and R-60 is cost-effective in Virginia's climate zone, and R-49 is well within that range. See <http://energy.gov/energysaver/articles/tips-insulation>. This proposal also updates the equivalent U-factors to be consistent with the 2015 IRC/IECC, which is important for builders and design professionals who intend to use DOE's free REScheck compliance software. Virginia's reduced insulation requirements, among other weakening amendments in the 2012 Uniform Code, have made compliance via REScheck problematic. We recommend that Virginia adopt Equivalent U-factor values that will be consistent with the latest version of the IECC, both to maximize cost-effective energy efficiency and to maintain consistency with leading software compliance programs.

Cost Impact: This proposal will increase the cost of construction. However, as noted above, this proposal is cost-effective to the consumer.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: None

Workgroup 3 Recommendation: None

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CE-R402.1.1(3) cdpVA-15

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CE-R402.3.6 cdpVA-15

Proponent : Eric Lacey, Representing Responsible Energy Codes Alliance
(eric@reca-codes.com)

2012 Virginia Energy Conservation Code

R402.3.6 Replacement fenestration

~~(Section deleted)~~

Where a permit is required, where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for U-factor and SHGC as provided in Table R402.1.4.

2012 Virginia Residential Code

N1102.3.6 Replacement Fenestration Where a permit is required, where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for U-factor and SHGC as provided in Table R402.1.4.

2015 International Energy Conservation Code

R503.1.1.1 Replacement fenestration. Where a permit is required, where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for U-factor and SHGC as provided in Table R402.1.2R402.1.4.

2015 International Residential Code

N1109.1.1.1 (R503.1.1.1) Replacement fenestration. Where a permit is required, where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for U-factor and SHGC as provided in Table R402.1.2R402.1.4.

Reason: This proposal improves efficiency by clarifying that replacement fenestration must meet the same level of efficiency as fenestration used in new construction. This code requirement has been in the IECC for over a decade, and for good reason – about 3/4 of all windows installed in buildings every year are replacement windows. This is a rare opportunity to impact the efficiency of existing buildings – which represent 98-99% of buildings in any given year – by a substantial

amount. Code-compliant fenestration is widely available and clearly cost-effective, and there is no reason why Virginia homeowners should not have all the benefits of efficient replacement windows and doors.

In the previous code update cycle, there was some concern expressed about how (and whether) to apply this requirement if a permit is not required for window replacement. This proposal adds the conditional language: "Where a permit is required ..." to clarify that replacement fenestration is only required to meet the code requirements when a permit is required in Virginia. The language is otherwise identical to the requirement that has been in the IECC for several editions.

Cost Impact: This proposal will not impact the cost of construction, because it applies to replacement products in an existing building. It does not require the replacement of fenestration (which may be replaced for a number of reasons, only one of which is energy conservation). In those cases where a homeowner is already replacing fenestration in an existing building, this provision would require those fenestration products to meet the requirements of this code for new construction.

Workgroup Recommendation

Workgroup 2 Recommendation: Non-Consensus Final

Workgroup 2 Reason: None

Workgroup 3 Recommendation: None

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CE-R402.3.6 cdpVA-15

CE-C402.4.3 cdpVA-15

Proponent : Eric Lacey, Representing Responsible Energy Codes Alliance (eric@reca-codes.com)

2015 International Energy Conservation Code

TABLE C402.4
BUILDING ENVELOPE FENESTRATION MAXIMUM *U*-FACTOR AND SHGC REQUIREMENTS

CLIMATE ZONE	1	2	3	4 EXCEPT MARINE	5 AND MARINE 4	6	7	8
Vertical fenestration								
<i>U</i>-factor								
Fixed fenestration	0.50	0.50	0.46	0.38	0.38	0.36	0.29	0.29
Operable fenestration	0.65	0.65	0.60	0.45	0.45	0.43	0.37	0.37
Entrance doors	1.10	0.83	0.77	0.77	0.77	0.77	0.77	0.77
SHGC								
SHGC	0.25	0.25	0.25	0.40	0.40	0.40	0.45	0.45
SHGC								
Orientation ^a	SEW	N	SEW	N	SEW	N	SEW	N
PF	0.25	0.33	0.25	0.33	0.25	0.33	0.40	0.53
0.2 ≤ PF	0.30	0.37	0.30	0.37	0.30	0.37	0.48	0.58
PF ≥ 0.5	0.40	0.40	0.40	0.40	0.40	0.40	0.64	0.64
Skylights								
<i>U</i> -factor	0.75	0.65	0.55	0.50	0.50	0.50	0.50	0.50
SHGC	0.35	0.35	0.35	0.40	0.40	0.40	NR	NR

NR = No requirement, PF = Projection factor.

a. "N" indicates vertical fenestration oriented within 45 degrees of true north. "SEW" indicates orientations other than "N." For buildings in the southern hemisphere, reverse south and north. Buildings located at less than 23.5 degrees latitude shall use SEW for all orientations.

C402.4.3 Maximum *U*-factor and SHGC. The maximum *U*-factor and solar heat gain coefficient (SHGC) for fenestration shall be as specified in Table C402.4.

The window projection factor shall be determined in accordance with Equation 4-5.

$$PF = A/B \quad \text{(Equation 4-5)}$$

where:

PF = Projection factor (decimal).

A = Distance measured horizontally from the furthest continuous extremity of any overhang, eave or permanently attached shading device to the vertical surface of the glazing.

B = Distance measured vertically from the bottom of the glazing to the underside of the overhang, eave or permanently attached shading device.

Where different windows or glass doors have different *PF* values, they shall each be evaluated separately.

Where the fenestration projection factor for a specific vertical fenestration product is greater than or equal to 0.2, the required maximum SHGC from Table C402.4 shall be adjusted by multiplying the required maximum SHGC by the multiplier specified in Table C402.4.3 corresponding with the orientation of the fenestration product and the projection factor.

TABLE C402.4.3

SHGC ADJUSTMENT MULTIPLIERS		
<u>PROJECTION FACTOR</u>	<u>ORIENTED WITHIN 45 DEGREES OF TRUE NORTH</u>	<u>ALL OTHER ORIENTATIONS</u>
<u>$0.2 \leq PF < 0.5$</u>	<u>1.1</u>	<u>1.2</u>
<u>$PF \leq 0.5$</u>	<u>1.2</u>	<u>1.6</u>

Reason: The purpose of this proposed code change is to maintain the calculation of projection factor and the simple SHGC requirement that is currently being enforced in Virginia. **The result of this proposal will be to maintain exactly the same fenestration SHGC and trade-off ability permitted in the current Virginia commercial energy code, or "business as usual" on commercial fenestration SHGC.** Without this proposal, the next edition of Virginia's energy code would be *less efficient* than the current edition, since it would allow higher SHGCs than what the current code allows, *even where there is no overhang at all*. There is no justifiable reason why fenestration SHGC should be less efficient going forward – in fact, SHGC has a substantial impact on overall energy efficiency in Virginia, particularly in commercial buildings.

This proposal will maintain the simplicity and efficiency of the current Virginia energy code carrying forward identical fenestration SHGC requirements into the next edition.

Cost Impact: This proposal will not increase the cost of construction.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CE-C402.4.3 cdpVA-15

CE-R405.5.2 cdpVA-15

Proponent : Eric Lacey, Representing Responsible Energy Codes Alliance
(eric@reca-codes.com)

2012 Virginia Energy Conservation Code

(DHCD Staff Note: Proponent confirmed corresponding changes to be made to IRC energy provisions)

**TABLE R405.5.2(1)
SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS**

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Above-grade walls	Type: mass wall if proposed wall is mass; otherwise wood frame. Gross area: same as proposed <i>U</i> -factor: from Table R402.1.3 Solar absorptance = 0.75 Emittance = 0.90	As proposed As proposed As proposed As proposed As proposed
Basement and crawl space walls	Type: same as proposed Gross area: same as proposed <i>U</i> -factor: from Table R402.1.3 , with insulation layer on interior side of walls.	As proposed As proposed As proposed
Above-grade floors	Type: wood frame Gross area: same as proposed <i>U</i> -factor: from Table R402.1.3	As proposed As proposed As proposed
Ceilings	Type: wood frame Gross area: same as proposed <i>U</i> -factor: from Table R402.1.3	As proposed As proposed As proposed
Roofs	Type: composition shingle on wood sheathing Gross area: same as proposed Solar absorptance = 0.75 Emittance = 0.90	As proposed As proposed As proposed As proposed
Attics	Type: vented with aperture = 1 ft ² per 300 ft ² ceiling area	As proposed
Foundations	Type: same as proposed foundation wall area above and below grade and soil characteristics: same as proposed.	As proposed As proposed
Doors	Area: 40 ft ² Orientation: North <i>U</i> -factor: same as fenestration from Table R402.1.3 .	As proposed As proposed As proposed

Glazing ^a	Total area ^b is 15% of the conditioned floor area. (a) <u>The proposed glazing area, where the proposed glazing area is less than 15 percent of conditioned floor area</u> (b) <u>15 percent of the conditioned floor area, where the proposed glazing area is 15 percent or more of the conditioned floor area</u>	As proposed
	Orientation: equally distributed to four cardinal compass orientations (N, E, S & W).	As proposed
	U-factor: from Table N1102.1.3 (R402.1.3).	As proposed
	SHGC: From Table N1102.1.1 (R402.1.1) except that for climates with no requirement (NR) SHGC = 0.40 shall be used.	As proposed
	Interior shade fraction: 0.92-(0.21 x SHGC for the standard reference design)	0.92-(0.21 x SHGC as proposed)
	External shading: none	As proposed
Skylights	None	As proposed
Thermally isolated sunrooms	None	As proposed

Reason: Virginia currently assumes a fixed 15% fenestration area in its performance path, in direct conflict with every edition of the IECC since 2006 (and Virginia's previous Uniform Code). This results in an approximately **1.6% to 3.2% reduction in energy efficiency** for below-average glazed homes, as compared to a scenario in which Virginia applied the glazing area assumption as published in the IECC.

By establishing a fixed 15% fenestration area in the standard reference design, homes with less than 15% glazing in the actual design would be able to reduce (trade off) the efficiency measures in the rest of the home with the automatic free credit created by the difference in efficiency between the less efficient fenestration and more efficient opaque wall requirements. Virginia's current 15% fixed glazing area assumption results in a net reduction in energy efficiency, as compared to the performance compliance path applied in the IECC and in nearly every other state in the country.

To be clear, the 15% fixed glazing area is not "energy neutral," but rather an "energy efficiency negative" loophole for homes built with less than 15% fenestration area.

Under the 2015 IECC performance path methodology, a proposed design with 12% fenestration would be compared to a standard reference design with 12% fenestration – in other words the method would compare designs with the same area. However, under Virginia's current performance path, the standard reference design would remain at 15%, even if the proposed design included only 12% window area, permitting code users to reduce the efficiency of the fenestration, opaque envelope, or other measures without undertaking any offsetting improvement in efficiency.

The amount of fenestration specified for most buildings is likely to be driven by a variety of factors unrelated to energy efficiency, including design or cost considerations. We have seen no evidence that fenestration area is driven, to any significant degree, by energy efficiency in general, much less in order to obtain trade-off credit under the code. For multifamily or attached housing in particular, fenestration area will likely be limited by the location of the unit in the building or row, the orientation, or other factors. To set the fenestration area assumption at a fixed 15% for these homes creates a significant free ridership "credit" for low glazing area, even where a low glazing area would have existed anyway and higher glazing area would have been impractical or impossible.

Maintaining a reasonable level of efficiency in buildings with lower fenestration area percentages is especially important. Examples of homes with lower fenestration area include townhouses, condos, multifamily buildings, or low-income housing. Weaker thermal envelopes in homes that may be targeted to low-income populations could have an even bigger negative impact on the ability of owners or renters to pay monthly energy bills.

The current dynamic approach to setting fenestration area in the performance path has been successfully applied since the 2006 edition of the IECC, and has been adopted by nearly every other state that has adopted the IECC. We recommend adopting the performance path fenestration area assumption as published in the 2015 IECC to help ensure reasonable energy performance in homes with below-average fenestration area.

Cost Impact: This proposal will only increase the cost of construction to the extent that a builder would have used the fenestration area trade-off in the 2012 Virginia Energy Conservation Code to reduce the efficiency of the envelope in homes with less than 15% fenestration area.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: None

Workgroup 3 Recommendation Recommendation: Non-Consensus Final

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CE-R405.5.2 cdpVA-15

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CE-R406.3 cdpVA-15

Proponent : Eric Lacey, Representing Responsible Energy Codes Alliance
(eric@reca-codes.com)

2015 International Energy Conservation Code

R406.3 Energy Rating Index. The Energy Rating Index (ERI) shall be a numerical integer value that is based on a linear scale constructed such that the *ERI reference design* has an Index value of 100 and a *residential building* that uses no net purchased energy has an Index value of 0. Each integer value on the scale shall represent a 1-percent change in the total energy use of the rated design relative to the total energy use of the *ERI reference design*. The ERI shall consider all energy used in the *residential building*, and shall not consider or include the effect of any on-site power production.

R406.4 ERI-based compliance. Compliance based on an ERI analysis requires that the *rated design* be shown to have an ERI less than or equal to the appropriate value listed in Table R406.4 when compared to the *ERI reference design* without any credit for on-site power production.

2015 International Residential Code

N1106.3 (R406.3) Energy rating index. The Energy Rating Index (ERI) shall be a numerical integer value that is based on a linear scale constructed such that the *ERI reference design* has an Index value of 100 and a *residential building* that uses no net purchased energy has an Index value of 0. Each integer value on the scale shall represent a one percent change in the total energy use of the rated design relative to the total energy use of the *ERI reference design*. The ERI shall consider all energy used in the *residential building*, and shall not consider or include the effect of any on-site power production.

N1106.4 (R406.4) ERI-based compliance. Compliance based on an ERI analysis requires that the *rated design* be shown to have an ERI less than or equal to the appropriate value listed in Table N1106.4 when compared to the *ERI reference design* without any credit for on-site power production.

Reason: The purpose of this proposal is to clarify that the Energy Rating Index calculation does not include the impact of on-site power production, whether renewable or not. It also provides more specific guidance to software providers in order to help maintain consistency between software and code compliance on this particular issue.

The current plain language of Section R406 of the 2015 IECC does not permit the inclusion of electricity/power production in ERI calculations. The language establishing the ERI in Section R406 properly focuses on energy use and loads, not the production of energy. The methodology prescribed by the ERI provisions does not mention the use of renewable energy or other on-site energy production, and these issues were not reasonably analyzed or addressed during the 2015 IECC code development process.

However, some have suggested that because popular home energy rating software gives users the ability to include the impact of on-site power production in the calculation of energy ratings,

that the ERI should also include on-site power production. However, *the IECC must set the scope for compliance software*; an additional software option or capability cannot overwrite the provisions of the IECC. While in our view, the current code is clear, this code change proposal will address this issue head on and clarify with unequivocal language that regardless of the energy rating software used, the ERI calculation shall not include renewable or other on-site energy production. It should be noted that current software can still be used to calculate the ERI under this proposal, so long as no on-site power production is input into the calculation.

To allow unrestricted trade-offs for on-site power production could bring about several negative unintended consequences. The most significant problem would be a huge reduction in the efficiency of the home in favor of on-site power production. As an example of the potential impact, a recent report analyzed the enormous potential impact of solar photovoltaics on the HERS Index. See Residential Energy Services Network, Inc., *The Impact of Photovoltaic Arrays on the HERS Index* (2015),

http://www.academia.edu/15036659/The_Impact_of_Photovoltaic_Arrays_on_the_HERS_Index. This report found that in most parts of the country, a 4 kW photovoltaic array could reduce a HERS Index Score by 20-40 points. Other analyses have found even larger potential reductions in the HERS Index Score. If the Uniform Code were amended to allow direct, unlimited trade-offs between a photovoltaic system and the efficiency of the thermal envelope, it would virtually eliminate the need to incorporate efficiency measures into the home to meet the code, wiping out many years of progress in improving the energy efficiency of homes in Virginia. This is fundamentally inconsistent with the scope and intent of the *IECC* and the Uniform Code, and it should not be permitted.

To begin allowing credit for electric generation to be considered for compliance calculations solely to replace critical energy efficiency measures will result in higher peak demands, less occupant comfort and substantial additional energy use given the much longer typical life of certain efficiency measures. Moreover, allowing credit for generation to be included in residential code compliance will substantially complicate the code and this compliance path. Some of the questions raised by such an approach include: (i) how to address energy sold back to the utility, (ii) treatment of the timing of the electricity production as compared to its use; (iii) whether there should be a minimum level of generation required; and (iv) how to ensure that the generation is permanent (including issues related to leasing, maintenance, equipment output over time, etc.). Finally, unlike conservation measures, generation is not integral to the building or its habitability and need not be in the purview of the building code – while generation can be attached to the building or located on the site, there is certainly no requirement that it be, unlike other building components or systems. If electric generation is to be included in the Uniform Code, it should be included explicitly and in a controlled manner, after a full discussion and debate -- residential energy code compliance should not be extended to cover electric generation through the backdoor of the ERI.

For all these reasons, we recommend that the Virginia Uniform Code be clarified to specifically exclude on-site power production from the ERI calculation.

Cost Impact: This proposal will not increase the cost of construction.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: None

Workgroup 3 Recommendation: None

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CE-R406.3 cdpVA-15

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CR-E3902.16(1) cdpVA-15

Proponent : Bryan Holland, Representing National Electrical Manufacturers Association (Bryan.Holland@NEMA.org)

2012 Virginia Residential Code

~~E3902.12 Arc-fault protection of bedroom outlets.~~

~~All branch circuits that supply 120-volt, single phase, 15-ampere and 20-ampere outlets installed in bedrooms shall be protected by a combination type arc-fault circuit interrupter installed to provide protection of the branch circuit.~~

- **Exceptions:**

- ~~1. Where an outlet branch circuit Type AFCI is installed at the first outlet to provide protection for the remaining portion of the branch circuit, the portion of the branch circuit between the branch circuit overcurrent device and the first outlet shall be installed with metal outlet and junction boxes and RMC, IMC, EMT, Type MC or steel armored Type AC cables meeting the requirements of Section [E3908.8](#).~~
- ~~2. Where an outlet branch circuit Type AFCI is installed at the first outlet to provide protection for the remaining portion of the branch circuit, the portion of the branch circuit between the branch circuit overcurrent device and the first outlet shall be installed with metal or nonmetallic conduit or tubing that is encased in not less than 2 inches (51 mm) of concrete.~~
- ~~3. AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel sheathed armored cable Type AC, or Type MC meeting the requirements of Section [E3908.8](#).~~

2015 International Residential Code

E3902.16 Arc-fault circuit-interrupter protection. Branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected by any of the following: [210.12(A)]

1. A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit. [210.12(A)(1)]
2. A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit. [210.12(A)(2)]
3. A listed supplemental arc protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:

- 3.1. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
 - 3.2. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 - 3.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit. [210.12(A)(3)]
4. A listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:
 - 4.1. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
 - 4.2. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 - 4.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.
 - 4.4. The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination-type AFCI and shall be listed as such. [210.12(A)(4)]
5. Where metal outlet boxes and junction boxes and RMC, IMC, EMT, Type MC or steel-armored Type AC cables meeting the requirements of Section E3908.8, metal wireways or metal auxiliary gutters are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(5)]
6. Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 2 inches (50.8 mm) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(6)]
 - **Exception:** AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel-sheathed armored cable Type AC or Type MC meeting the requirements of Section E3908.8.

Reason: According to the U.S. Fire Administration's National Fire Incident Reporting System, an estimated 372,900 residential building fires were reported to fire departments within the United States each year between 2011-2013 and caused an estimated 2,530 deaths, 13,125 injuries and \$7 billion in property loss. The report also indicated the second leading cause of residential fire death in 2013 was electrical malfunction. 84 percent of all electrical fires occurred in 1&2 family dwellings. The leading factors contributing to the ignition of residential building fires were due to electrical malfunction (41%), unspecified short-circuit arcing (25%), and short-circuit arcing from defective or worn insulation (12%). The statistics show that more than 8.4 percent of all electrical

fires occur in the kitchen and/or cooking area of a home, 4.5 percent in laundry areas, and another 7 percent involve appliances. [USFA Reports Attached]

These numbers hold true for the Commonwealth of Virginia. Between the years 2013-2015, an average of 230 residential fires each year were attributed to electrical distribution. This resulted in an average of 3 civilian deaths, 10 civilian injuries, and 9 fire service injuries. [VFIRS Annual Reports Attached]

Arc-Fault Circuit Interrupters (AFCI) were developed following an expressed need from the U.S. Consumer Products Safety Commission (CPSC) to prevent electrical fires. AFCI devices are certified to the UL 1699 product standard and are intended to mitigate the effects of arcing faults that may pose a risk of fire ignition under certain conditions if arcing persists. When unwanted arcing occurs, it generates high temperatures that can ignite nearby combustibles such as wood, paper, and carpets. Often this occurs in wiring behind walls or in places where the arcing cannot be easily detected. Typical household circuit breakers do not respond to early arcing and sparking conditions in home wiring. By the time a circuit breaker opens a circuit to defuse these conditions, a fire may already have begun. AFCI devices provide protection by detecting the presence of unwanted arcing in a wiring circuit and removing power from the circuit. The CPSC indicates AFCI protection could prevent more than 50 percent of electrical fires that occur each year.

Every AFCI device must meet the rigorous performance tests of the UL 1699 standard. This includes not less than (50) different tests to ensure safety from shock, electrocution, and fire. The standard also includes operational performance tests with not less than (4) different arc-fault simulations and not less than (8) unwanted tripping tests. The UL 1699 standard is fully harmonized with every lighting and appliance product standard. There is no operational conflict between AFCI devices and other electrical products. USFA statistics show overall trends for residential building electrical malfunction fires for the five-year period between 2007 and 2011 indicate a 14% decrease in fires, a 16% decrease in deaths, and a 13% decrease in dollar loss. This reduction in fire trends correlates with the requirement and expansion of AFCI protection in dwellings.

The homeowner's insurance industry supports and recommends the installation of AFCI protection at insured properties. The largest fire and casualty insurance carrier in the nation, State Farm Insurance, issued a letter in 2015 to the Governor of Michigan opposing proposed AFCI amendments to the state's electrical code. AFCI protection in accordance with the 2014 NEC / 2015 IRC is in effect in not less than (25) states across the nation. AFCI protection is supported and endorsed by the CPSC, USFA, IAEI, NFPA, NEMA, IBEW, IEC, NECA, IBHS, and FLASH.

Attachments:

<https://va.cdpaccess.com/proposal/fileupload/get/82>

<https://va.cdpaccess.com/proposal/fileupload/get/83>

<https://va.cdpaccess.com/proposal/fileupload/get/84>

<https://va.cdpaccess.com/proposal/fileupload/get/85>

<https://va.cdpaccess.com/proposal/fileupload/get/86>

Cost Impact: This proposal will increase the cost of construction. Under these provisions, a typical 2,500 sq.ft. dwelling would be required to have approximately 10-12 AFCI devices installed to protect the branch-circuits supplying the named rooms and spaces. This is an increase of 5-7 AFCI devices as compared to the current requirement for AFCI protection of bedroom circuits alone. The increased cost is the difference between a standard circuit breaker and an AFCI circuit breaker. The average cost of an AFCI circuit breaker in Virginia is approximately \$45.00 each. The average cost of a standard circuit breaker in Virginia is approximately \$15.00 each. This is a difference of \$30 per device. A increase of 5-7 AFCI devices would result in an increase of \$150.00 to \$210.00 per dwelling. There is no increased cost of time or labor to install AFCI devices. The increased cost is minimal as compared to the loss from fires that could be prevented by AFCI protection.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Non-Consensus Final

Workgroup 3 Reason: Bryan spoke-Toalson opposes-Bridges spoke about new appliances working OK but existing equipment can still create issues.□
non consensus

Workgroup 4 Recommendation Recommendation: Pending

Workgroup 4 Reason: Bryan Holland spoke in support of the arc fault breakers-2014 NEC extends arc fault to the kitchens-requesting the arc fault ammendment be removed and use the current NEC requirements. Proposal includes other industries comments

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-E3902.16(1) cdpVA-15

CR-E3902.16(2) cdpVA-15

Proponent : Haywood Kines (hkines@pwcgov.org)

2012 Virginia Residential Code

~~E3902.12 Arc-fault protection of bedroom outlets.~~

~~All branch circuits that supply 120-volt, single phase, 15-ampere and 20-ampere outlets installed in bedrooms shall be protected by a combination type arc-fault circuit interrupter installed to provide protection of the branch circuit.~~

Exceptions:

- ~~1. Where an outlet branch circuit Type AFCI is installed at the first outlet to provide protection for the remaining portion of the branch circuit, the portion of the branch circuit between the branch circuit overcurrent device and the first outlet shall be installed with metal outlet and junction boxes and RMC, IMC, EMT, Type MC or steel armored Type AC cables meeting the requirements of Section [E3908.8](#).~~
- ~~2. Where an outlet branch circuit Type AFCI is installed at the first outlet to provide protection for the remaining portion of the branch circuit, the portion of the branch circuit between the branch circuit overcurrent device and the first outlet shall be installed with metal or nonmetallic conduit or tubing that is encased in not less than 2 inches (51 mm) of concrete.~~
- ~~3. AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel sheathed armored cable Type AC, or Type MC meeting the requirements of Section [E3908.8](#).~~

2015 International Residential Code

E3902.16 Arc-fault circuit-interrupter protection. Branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas and similar rooms or areas all dwelling units shall be protected by any of the following:

1. A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit.
2. A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.
3. A listed supplemental arc protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit type arc-fault circuit

interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:

- 3.1 The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
- 3.2 The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
- 3.3 The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.
4. A listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:
 - 4.1 The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
 - 4.2 The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 - 4.3 The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.
5. Where metal outlet boxes and junction boxes and RMC, IMC, EMT, Type MC or steel-armored Type AC cables meeting the requirements of Section E3908.8, metal wireways or metal auxiliary gutters are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit.
6. Where a listed metal or nonmetallic conduit or tubing or Type MC cable is encased in not less than 2 inches (50.8 mm) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit.

Exceptions:

1. AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel-sheathed armored cable Type AC or Type MC meeting the requirements of Section E3908.8.
2. AFCI protection is not required for branch circuits feeding receptacles that are protected with ground-fault circuit interrupter protection as required by Sections 3902.1 through 3902.10.

Reason:

According to the U.S. Fire Administration's National Fire Incident Reporting System, an estimated 372,900 residential building fires were reported to fire departments within the United States each year between 2011-2013 and caused an estimated 2,530 deaths, 13,125 injuries and \$7 billion in property loss. The report also indicated the second leading cause of residential fire death in 2013 was electrical malfunction. 84 percent of all electrical fires occurred in 1&2 family dwellings. The leading factors contributing to the ignition of residential building fires were due to electrical malfunction (41%), unspecified short-circuit arcing (25%), and short-circuit arcing from defective or worn insulation (12%). The statistics show that more than 8.4 percent of all electrical fires occur in the kitchen and/or cooking area of a home, 4.5 percent in laundry areas, and another 7 percent involve appliances. [USFA Reports Attached]

These numbers hold true for the Commonwealth of Virginia. Between the years 2013-2015, an average of 230 residential fires each year were attributed to electrical distribution. This resulted in an average of 3 civilian deaths, 10 civilian injuries, and 9 fire service injuries. [VFIRS Annual Reports Attached]

Cost Impact: This proposal will increase the cost of construction. Under these provisions, a typical 2,500 sq.ft. dwelling would be required to have approximately 10-12 AFCI devices installed to protect the branch-circuits supplying the named rooms and spaces. This is an increase of 5-7 AFCI devices as compared to the current requirement for AFCI protection of bedroom circuits alone. The increased cost is the difference between a standard circuit breaker and an AFCI circuit breaker. The average cost of an AFCI circuit breaker in Virginia is approximately \$45.00 each. The average cost of a standard circuit breaker in Virginia is approximately \$15.00 each. This is a difference of \$30 per device. A increase of 5-7 AFCI devices would result in an increase of \$150.00 to \$210.00 per dwelling. There is no increased cost of time or labor to install AFCI devices. The increased cost is minimal as compared to the loss from fires that could be prevented by AFCI protection.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Non-Consensus Final

Workgroup 3 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-E3902.16(2) cdpVA-15

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CR-R408.2 cdpVA-15

Proponent : Ken Latham, Representing Self / Design Community
(ken@GoSdd.Com)

2012 Virginia Residential Code

R408.2 Openings for under-floor ventilation. The minimum net area of ventilation openings shall not be less than 1 square foot (0.0929 m²) for each 150 square feet (14 m²) of under-floor area. One ventilation opening shall be within 3 feet (915 mm) of each corner of the building. Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed ¼ inch (6.4 mm):

1. Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.
2. Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.
3. Cast-iron grill or grating.
4. Extruded load-bearing brick vents.
5. Hardware cloth of 0.035 inch (0.89 mm) wire or heavier.
6. Corrosion-resistant wire mesh, with the least dimension being ⅛ inch (3.2 mm) thick.

Exception: The total area of ventilation openings shall be permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is covered with an *approved* Class I vapor retarder material and the required openings are placed to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited, nor shall the required openings need to be within 3 feet (915 mm) of each corner provided there is cross ventilation of the space.

Reason: This intent of this change has been written to address the non-uniform code enforcement of the USBC 2012 / IRC 2012 Section R408.2 exception shown below. In the IRC 2003 the STATE BUILDING CODE TECHNICAL REVIEW BOARD concluded in Code Interpretation No. 1/2003 that foundation vents were **not required** to be placed within 3 feet of each corner(see below). Under IRC 2012 the wording for the exception is essentially the same as IRC 2003. The building inspection departments are still requiring a vent within 3 foot of every corner. Some localities have even made a stamp to place on the plans stating such. Even showing the calculations for the foundation vents required and the number shown on the plan as well as showing the "Code Interpretation No. 1/2003 ". Still the building inspection departments are writing or stamping "vent required within 3 foot of every corner" forcing the builders to install non-required vents and introducing extra moisture to the foundation space.

INTERPRETATIONS OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE
Section 310.3 (International Residential Code Section R408.2) Code Interpretation No. 1/2003 First Issued: 11/18/05, 2003 Edition **QUESTION: Does Exception No. 2 provide an exception to the general requirement that one ventilation opening shall be within three feet of each corner? ANSWER: Yes, provided the openings are placed so as to provide cross-ventilation.** on 9/9/2015 Vernon Hodges reconfirmed vents are not required to be 3 foot from the corners .

The need for this change is to help clarify the code for the building officials allowing all localities

to uniformly enforce the code provisions. This will remove the subjective interpretation of this section.

Cost Impact: The cost is very minimal savings.

Workgroup Recommendation

Workgroup 3 Recommendation Recommendation: Non-Consensus Final

Workgroup 3 Reason: Proponent not present-Vernon explained, shared TRB and stated that opinion was now off the table-Sean says language not required-Toalson say it helps to clarify-

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CR-R408.2 cdpVA-15

CTM-506.5.2 cdpVA-15

Proponent : Richard Grace (richard.grace@fairfaxcounty.gov) Representing the VPMIA and VBCOA PMG Committee

2012 Virginia Mechanical Code

SECTION 202 DEFINITIONS

Pollution Control Unit **POLLUTION CONTROL UNIT**

Manufactured equipment that is installed in a grease exhaust duct system for the purpose of extracting smoke, grease particles, and odors from the exhaust flow by means of a series of filters.

506.5.2 Pollution Control Unit **506.5.2 Pollution Control Units.**

The installation of pollution control units shall be in accordance with the manufacturer's installation instructions and all of the following:

1. Pollution control units shall be listed and labeled in accordance with UL 1978.
2. Fans serving pollution control units shall be listed and labeled in accordance with UL 762.
3. Pollution control units shall be mounted and secured in accordance with the manufacturer's installation instructions and the International Building Code.
4. Pollution control units located indoors shall be listed and labeled for such use. Where enclosed duct systems, as required by Section 506.3.11, are connected to a pollution control unit, such unit shall be located in a room or space having the same fire-resistance rating as the duct enclosure. Access shall be provided for servicing and cleaning of the unit. The space or enclosure shall be ventilated in accordance with the manufacturer's installation instructions.
5. A clearance of not less than 18 inches (457 mm) shall be maintained between the pollution control unit and combustible material.
6. Roof mounted pollution control units shall be listed for exterior installation and shall be mounted not less than 18 inches (457 mm) above the roof.
7. Exhaust outlets for pollution control units shall be in accordance with Section 506.3.13.
8. An airflow differential pressure control shall be provided to monitor the pressure drop across the filter sections of a pollution control unit. When the airflow is reduced below the design velocity, the airflow differential pressure control shall activate a

visual alarm located in the area where cooking operations occur.

9. Pollution control units shall be provided with a factory installed fire suppression system.

10. Service space shall be provided in accordance with the manufacturer's instructions for

the pollution control unit and the requirements of Section 306.

11. Wash down drains shall discharge through a grease interceptor and shall be sized for the flow. Drains, shall be sealed with a trap or other approved means to prevent air bypass. Where a trap is utilized it shall have a seal depth that accounts for the system pressurization and evaporation between cleanings.

12. Protection from freezing shall be provided for the water supply and fire suppression systems where such systems are subject to freezing.

13. Duct connections to pollution control units shall be in accordance with Section 506.3.2.3. Where water splash or carryover can occur in the transition duct as a result of a washing operation, the transition duct shall slope downward toward the cabinet drain pan for a length not less than 18 inches (457 mm). Ducts shall transition to the full size of the units inlet and outlet openings.

14. Extra heavy duty appliance exhaust systems shall not be connected to pollution control units except where such units are specifically designed and listed for use with solid fuels.

15. Pollution control units shall be maintained in accordance with the manufacturer's instructions.

Reason: Pollution Control Units have been manufactured by numerous companies for several years. The desire to limit the amount of smoke, grease, and other particulate at the exhaust outlets of commercial cooking appliances has driven the use of these units as numerous entities are requiring these types of units to be installed. These unit and there minimum construction and installation standards need to be addressed in the mechanical code.

DHCD Staff Note: Proposal changed ownership after first Workgroup Four meeting. Prior proposal with workgroup recommendation is available below:

[Prior Proposal](#)

Cost Impact: Will not increase cost of construction. This code change in itself does not require the installation of a PCU, therefore there is no cost impact associated with this language. This code change merely provides minimum requirements if one choses to install a PCU.

Workgroup Recommendation

Workgroup 4 Recommendation Recommendation: Non-Consensus Final

Workgroup 4 Reason: 1st meeting: Strausbaugh spoke on his proposal-was approved at the national level and will be in the 2018 IMC. Toalson speaks about cost impact? Strausbaugh stated this is not required to be installed-Toalson asked again for cost-Strausbaugh stated cost is no factor. Pending

2nd meeting: Maybe add: when provided, required, or installed-non consensus

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

CTM-506.5.2 cdpVA-15

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M-101.1 cdpVA-15

Proponent : VMC Rewrite Committee

DHCD Staff Contact: Vernon.Hodge@dhcd.virginia.gov

2012 Virginia Maintenance Code

101.1 VMC Rewrite [Text of proposal.](#)

Reason: As requested by the Board of Housing and Community Development, DHCD staff undertook a review of the Virginia Maintenance Code (VMC) to remove unenforceable construction provisions printed within the code. Current codes work from having to rely upon administrative provisions in Chapter 1 to supersede provisions in the International Codes, which are incorporated into the state regulations, but different than, or outside of the scope of, or in conflict with provisions of Chapter 1. DHCD established a committee of stakeholders involved in and affected by the VMC to collaborate on and review the draft rewrites. This VMC rewrite represents consensus among those involved. The changes are essentially editorial as they are just removing the unenforceable provisions from the International Property Maintenance Code (IPMC) and rewording administrative provisions in the IPMC to be consistent with the Chapter 1 language. It was noted that if client groups wanted to make substantive changes to the VMC, those would be submitted separately through Virginia's code change process.

Cost Impact: The proposal does not increase costs associated with the code as the changes are primarily editorial in nature.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: There was general agreement with the proposal.

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: 1st meeting: An overview was provided and attendees will provide feedback for the next workgroup.
2nd meeting: concensus for approval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
STATE BUILDING CODES OFFICE

2015 VIRGINIA MAINTENANCE CODE
DRAFT #4 – July 2015
(includes changes from all sub-workgroup meetings)

CHAPTER 1
ADMINISTRATION

SECTION 101
GENERAL

101.1 Short title. The Virginia Uniform Statewide Building Code, Part III, Maintenance, may be cited as the “Virginia Maintenance Code,” or as the “VMC.”

101.2 Incorporation by reference. Chapters 2 - 8 of the ~~2012~~ 2015 International Property Maintenance Code, published by the International Code Council, Inc., are adopted and incorporated by reference to be an enforceable part of the VMC. The term “IPMC” means the ~~2012~~ 2015 International Property Maintenance Code, published by the International Code Council, Inc. Any codes and standards referenced in the IPMC 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.

101.3 Numbering system. A dual numbering system is used in the VMC to correlate the numbering system of the Virginia Administrative Code with the numbering system of the IPMC. IPMC numbering system designations are provided in the catchlines of the Virginia Administrative Code sections and cross references between sections or chapters of the Virginia Maintenance Code use only the IPMC numbering system designations. The term “chapter” is used in the context of the numbering system of the IPMC and may mean a chapter in the VMC, a chapter in the IPMC or a chapter in a referenced code or standard, depending on the context of the use of the term. The term “chapter” is not used to designate a chapter of the Virginia Administrative Code, unless clearly indicated.

101.4 Arrangement of code provisions. The VMC is comprised of the combination of (i) the provisions of Chapter 1, Administration, which are established herein, (ii) Chapters 2 - 8 of the IPMC, which are incorporated by reference in Section 101.2, and (iii) the changes to the text of the incorporated chapters of the IPMC which are specifically identified. The terminology “changes to the text of the incorporated chapters of the IPMC which are specifically identified” shall also be referred to as the “state amendments to the IPMC.” Such state amendments to the IPMC are set out using corresponding chapter and section numbers of the IPMC numbering system. ~~In addition, since Chapter 1 of the IPMC is not incorporated as part of the VMC, any reference to a provision of Chapter 1 of the IPMC in the provisions of Chapters 2 – 8 of the IPMC is generally invalid. However, where the purpose of such a reference would clearly correspond to a provision of Chapter 1 established herein, then the~~

~~reference may be construed to be a valid reference to such corresponding Chapter 1 provision.~~

101.5 Use of terminology and notes. The term “this code,” or “the code,” where used in the provisions of Chapter 1, in Chapters 2 - 8 of the IPMC, or in the state amendments to the IPMC, means the VMC, unless the context clearly indicates otherwise. The term “this code,” or “the code,” where used in a code or standard referenced in the IPMC, means that code or standard, unless the context clearly indicates otherwise. The term “USBC” where used in this code means the VCC unless the context clearly indicates otherwise. In addition, the use of notes in Chapter 1 is to provide information only and shall not be construed as changing the meaning of any code provision. Notes in the IPMC, in the codes and standards referenced in the IPMC, and in the state amendments to the IPMC, may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise.

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 provisions of Chapters 2 – 8 of the IPMC that address the same subject matter and impose differing requirements.
2. The provisions of Chapter 1 of this code supersede any provisions of the codes and standards referenced in the IPMC that address the same subject matter and impose differing requirements.
3. The state amendments to the IPMC supersede any provisions of Chapters 2 – 8 of the IPMC that address the same subject matter and impose differing requirements.
4. The state amendments to the IPMC supersede any provisions of the codes and standards referenced in the IPMC that address the same subject matter and impose differing requirements.
5. The provisions of Chapters 2 - 8 of the IPMC supersede any provisions of the codes and standards referenced in the IPMC that address the same subject matter and impose differing requirements.

101.7 Administrative provisions. The provisions of Chapter 1 establish administrative requirements, which include but are not

Comment [x3]: All references to Chapter 1 in the IPMC are deleted or changed so that there are no correlation issues; therefore, this administrative provision is no longer needed.

Comment [x1]: Updating the edition number.

Comment [x2]: Updating the edition number.

limited to provisions relating to the scope of the code, enforcement, fees, permits, inspections and disputes. Any provisions of Chapters 2-8 of the IPMC or any provisions of the codes and standards referenced in the IPMC which address the same subject matter to a lesser or greater extent are deleted and replaced by the provisions of Chapter 1. Further, any administrative requirements contained in the state amendments to the IPMC shall be given the same precedence as the provisions of Chapter 1. Notwithstanding the above, where administrative requirements of Chapters 2-8 of the IPMC or of the codes and standards referenced in the IPMC are specifically identified as valid administrative requirements in Chapter 1 of this code or in the state amendments to the IPMC, then such requirements are not deleted and replaced.

Note: The purpose of this provision is to eliminate overlap, conflicts and duplication by providing a single standard for administrative, procedural and enforcement requirements of this code.

101.8 101.7 Definitions. The definitions of terms used in this code are contained in Chapter 2 along with specific provisions addressing the use of definitions. Terms may be defined in other chapters or provisions of the code and such definitions are also valid.

Note: The order of precedence outlined in Section 101.6 may be determinative in establishing how to apply the definitions in the IPMC and in the referenced codes and standards.

SECTION 102 PURPOSE AND SCOPE

102.1 Purpose. In accordance with Section 36-103 of the Code of Virginia, the Virginia Board of Housing and Community Development may adopt and promulgate as part of the Virginia Uniform Statewide Building Code, building regulations that facilitate the maintenance, rehabilitation, development and reuse of existing buildings at the least possible cost to ensure the protection of the public health, safety and welfare. Further, in accordance with Section 36-99 of the Code of Virginia, the purpose of this code is to protect the health, safety and welfare of the residents of the Commonwealth of Virginia, provided that buildings and structures should be permitted to be maintained at the least possible cost consistent with recognized standards of health, safety, energy conservation and water conservation, including provisions necessary to prevent overcrowding, rodent or insect infestation, and garbage accumulation; and barrier-free provisions for the physically handicapped and aged.

102.2 Scope. In accordance with Section 36-98 of the Code of Virginia, the VMC shall supersede the building codes and regulations of the counties, municipalities and other political subdivisions and state agencies.

102.3 Exemptions. This code shall not regulate those buildings and structures specifically exempt from the VCC, except that existing industrialized buildings and manufactured homes shall not be exempt from this code.

SECTION 103 APPLICATION OF CODE

103.1 General. This code prescribes regulations for the maintenance of all existing buildings and structures and associated equipment, including regulations for unsafe buildings and structures.

103.2 Maintenance requirements. Buildings and structures. Required or provided building, electrical, plumbing, mechanical, fire protection and other components and systems shall be maintained and kept in good repair in accordance with the requirements of this code and when applicable in accordance with the USBC under which such building or structure was constructed. No provision of this code shall require alterations to be made to an existing building or structure or to equipment unless conditions are present which meet the definition of an unsafe structure or a structure unfit for human occupancy.

103.2.1 Maintenance of nonrequired components and systems. Nonrequired components and systems may be discontinued in use provided that no hazard results from such discontinuance of use.

103.2.1 103.2.2 Maintenance of nonrequired fire protection systems. Nonrequired fire protection systems shall be maintained to function as originally installed. If any such systems are to be reduced in function or discontinued, approval shall be obtained from the building official in accordance with Section 103.8.1 of the VCC.

103.3 Continued approval. Notwithstanding any provision of this code to the contrary, alterations shall not be required to be made to existing buildings or structures which are occupied in accordance with a certificate of occupancy issued under any edition of the USBC.

103.4 Rental Inspections. In accordance with Section 36-105.1:1 of the Code of Virginia, these provisions are applicable to rental inspection programs. For purposes of this section:

"Dwelling unit" means a building or structure or part thereof that is used for a home or residence by one or more persons who maintain a household.

"Owner" means the person shown on the current real estate assessment books or current real estate assessment records.

"Residential rental dwelling unit" means a dwelling unit that is leased or rented to one or more tenants. However, a dwelling unit occupied in part by the owner thereof shall not be construed to be a residential rental dwelling unit unless a tenant occupies a part of the dwelling unit that has its own cooking and sleeping areas, and a bathroom, unless otherwise provided in the zoning ordinance by the local governing body.

The local governing body may adopt an ordinance to inspect residential rental dwelling units for compliance with this code and to promote safe, decent and sanitary housing for its citizens, in accordance with the following:

1. Except as provided for in subdivision 3 of this subsection, the dwelling units shall be located in a rental inspection district established by the local governing body in accordance with this section; and
2. The rental inspection district is based upon a finding by the local governing body that (i) there is a need to protect the public health, safety and welfare of the occupants of dwelling units inside the designated rental inspection district; (ii) the residential rental dwelling units within the designated rental inspection district are either (a) blighted or

Comment [x7]: Changes recommended by VBCOA to clarify the application of the code to required and nonrequired components.

Comment [x4]: There is no need to differentiate between administrative provisions and technical provisions or to resolve conflicts as the text of the IPMC has been review and modified to be within the scope of the VMC.

Comment [x5]: Renumbering.

Comment [x6]: This note is no longer necessary due to the correlation of the provisions of the IPMC and the administrative provisions of the VMC.

in the process of deteriorating or (b) the residential rental dwelling units are in the need of inspection by the building department to prevent deterioration, taking into account the number, age and condition of residential dwelling rental units inside the proposed rental inspection district; and (iii) the inspection of residential rental dwelling units inside the proposed rental inspection district is necessary to maintain safe, decent and sanitary living conditions for tenants and other residents living in the proposed rental inspection district. Nothing in this section shall be construed to authorize one or more locality-wide rental inspection districts and a local governing body shall limit the boundaries of the proposed rental inspection districts to such areas of the locality that meet the criteria set out in this subsection; or

3. An individual residential rental dwelling unit outside of a designated rental inspection district is made subject to the rental inspection ordinance based upon a separate finding for each individual dwelling unit by the local governing body that (i) there is a need to protect the public health, welfare and safety of the occupants of that individual dwelling unit; (ii) the individual dwelling unit is either (a) blighted or (b) in the process of deteriorating; or (iii) there is evidence of violations of this code that affect the safe, decent and sanitary living conditions for tenants living in such individual dwelling unit.

For purposes of this section, the local governing body may designate a local government agency other than the building department to perform all or part of the duties contained in the enforcement authority granted to the building department by this section.

Before adopting a rental inspection ordinance and establishing a rental inspection district or an amendment to either, the governing body of the locality shall hold a public hearing on the proposed ordinance. Notice of the hearing shall be published once a week for two successive weeks in a newspaper published or having general circulation in the locality.

Upon adoption by the local governing body of a rental inspection ordinance, the building department shall make reasonable efforts to notify owners of residential rental dwelling units in the designated rental inspection district, or their designated managing agents, and to any individual dwelling units subject to the rental inspection ordinance, not located in a rental inspection district, of the adoption of such ordinance, and provide information and an explanation of the rental inspection ordinance and the responsibilities of the owner thereunder.

The rental inspection ordinance may include a provision that requires the owners of dwelling units in a rental inspection district to notify the building department in writing if the dwelling unit of the owner is used for residential rental purposes. The building department may develop a form for such purposes. The rental inspection ordinance shall not include a registration requirement or a fee of any kind associated with the written notification pursuant to this subdivision. A rental inspection ordinance may not require that the written notification from the owner of a dwelling unit subject to a rental inspection ordinance be provided to the building department in less than 60 days after the adoption of a rental inspection ordinance. However, there shall be no penalty for the failure of an owner of a

residential rental dwelling unit to comply with the provisions of this subsection, unless and until the building department provides personal or written notice to the property owner, as provided in this section. In any event, the sole penalty for the willful failure of an owner of a dwelling unit who is using the dwelling unit for residential rental purposes to comply with the written notification requirement shall be a civil penalty of up to \$50. For purposes of this subsection, notice sent by regular first-class mail to the last known address of the owner as shown on the current real estate tax assessment books or current real estate tax assessment records shall be deemed compliance with this requirement.

Upon establishment of a rental inspection district in accordance with this section, the building department may, in conjunction with the written notifications as provided for above, proceed to inspect dwelling units in the designated rental inspection district to determine if the dwelling units are being used as a residential rental property and for compliance with the provisions of this code that affect the safe, decent and sanitary living conditions for the tenants of such property.

If a multifamily development has more than 10 dwelling units, in the initial and periodic inspections, the building department shall inspect only a sampling of dwelling units, of not less than two and not more than 10% of the dwelling units, of a multifamily development, that includes all of the multifamily buildings that are part of that multifamily development. In no event, however, shall the building department charge a fee authorized by this section for inspection of more than 10 dwelling units. If the building department determines upon inspection of the sampling of dwelling units that there are violations of this code that affect the safe, decent and sanitary living conditions for the tenants of such multifamily development, the building department may inspect as many dwelling units as necessary to enforce these provisions, in which case, the fee shall be based upon a charge per dwelling unit inspected, as otherwise provided in the fee schedule established pursuant to this section.

Upon the initial or periodic inspection of a residential rental dwelling unit subject to a rental inspection ordinance, the building department has the authority under these provisions to require the owner of the dwelling unit to submit to such follow-up inspections of the dwelling unit as the building department deems necessary, until such time as the dwelling unit is brought into compliance with the provisions of this code that affect the safe, decent and sanitary living conditions for the tenants.

Except as provided for above, following the initial inspection of a residential rental dwelling unit subject to a rental inspection ordinance, the building department may inspect any residential rental dwelling unit in a rental inspection district, that is not otherwise exempted in accordance with this section, no more than once each calendar year.

Upon the initial or periodic inspection of a residential rental dwelling unit subject to a rental inspection ordinance for compliance with these provisions, provided that there are no violations of this code that affect the safe, decent and sanitary living conditions for the tenants of such residential rental dwelling unit, the building department shall provide, to the owner of such residential rental dwelling unit, an exemption from the rental inspection ordinance for a minimum of four years. Upon the sale of a residential rental dwelling unit, the building department may perform a periodic inspection as provided above, subsequent to such sale. If a residential rental dwelling unit has been issued a certificate of occupancy within the

last four years, an exemption shall be granted for a minimum period of four years from the date of the issuance of the certificate of occupancy by the building department. If the residential rental dwelling unit becomes in violation of this code during the exemption period, the building department may revoke the exemption previously granted under this section.

A local governing body may establish a fee schedule for enforcement of these provisions, which includes a per dwelling unit fee for the initial inspections, follow-up inspections and periodic inspections under this section.

The provisions of this section shall not in any way alter the rights and obligations of landlords and tenants pursuant to the applicable provisions of Chapter 13 (Section 55-217 et seq.) or Chapter 13.2 (Section 55-248.2 et seq.) of Title 55 of the Code of Virginia.

The provisions of this section shall not alter the duties or responsibilities of the local building department under Section 36-105 of the Code of Virginia to enforce the USBC.

Unless otherwise provided for in Section 36-105.1:1 of the Code of Virginia, penalties for violation of this section shall be the same as the penalties provided for violations of other sections of the USBC.

SECTION 104 ENFORCEMENT, GENERALLY

104.1 Scope of enforcement. This section establishes the requirements for enforcement of this code in accordance with Section 36-105 of the Code of Virginia. The local governing body may also inspect and enforce the provisions of the USBC for existing buildings and structures, whether occupied or not. Such inspection and enforcement shall be carried out by an agency or department designated by the local governing body.

If the local building department receives a complaint that a violation of this code exists that is an immediate and imminent threat to the health or safety of the owner, tenant, or occupants of any building or structure, or the owner, occupant, or tenant of any nearby building or structure, and the owner, occupant, or tenant of the building or structure that is the subject of the complaint has refused to allow the code official or his agent to have access to the subject building or structure, the code official or his agent may present sworn testimony to make an affidavit under oath before a magistrate or court of competent jurisdiction and request that the magistrate or court grant the code official or his agent an inspection warrant to enable the code official or his agent to enter the subject building or structure for the purpose of determining whether violations of this code exist. After issuing a warrant under this section, the magistrate or judge shall file the affidavit in the manner prescribed by Section 19.2-54 of the Code of Virginia. After executing the warrant, the code official or his agents shall return the warrant to the clerk of the circuit court of the city or county wherein the inspection was made. The code official or his agent shall make a reasonable effort to obtain consent from the owner, occupant, or tenant of the subject building or structure prior to seeking the issuance of an inspection warrant under this section.

Note: Generally, official action must be taken by the local government to enforce the VMC. Consultation with the legal counsel of the jurisdiction when initiating or changing such action is advised.

104.1.1 Transfer of ownership. In accordance with Section 36-105 of the Code of Virginia, if the local building department has initiated an enforcement action against the owner of a building or structure and such owner subsequently transfers the ownership of the building or structure to an entity in which the owner holds an ownership interest greater than 50%, the pending enforcement action shall continue to be enforced against the owner.

104.2 Fees. In accordance with Section 36-105 of the Code of Virginia, fees may be levied by the local governing body in order to defray the cost of enforcement and appeals.

104.3 State buildings. In accordance with Section 36-98.1 of the Code of Virginia, this code shall be applicable to state-owned buildings and structures. Acting through the Division of Engineering and Buildings, the Department of General Services shall function as the building official for state-owned buildings.

104.3.1 Certification of state enforcement personnel. State enforcement personnel shall comply with the applicable certification requirements of Sections 104.4.2 through 104.4.4 and 104.4.3 for certification, periodic maintenance training, and continuing education.

104.4 Local enforcing agency. In jurisdictions enforcing this code, the local governing body shall designate the agency within the local government responsible for such enforcement and appoint a code official. The local governing body may also utilize technical assistants to assist the code official in the enforcement of this code. A permanently appointed code official shall not be removed from office except for cause after having been afforded a full opportunity to be heard on specific and relevant charges by and before the appointing authority. DHCD shall be notified by the appointing authority within 30 days of the appointment or release of a permanent or acting code official and within 60 days after retaining or terminating a technical assistant.

Note: Code officials and technical assistants are subject to sanctions in accordance with the VCS.

104.4.1 Qualifications of code official and technical assistants. The code official shall have at least five years of building experience as a licensed professional engineer or architect, building, fire or trade inspector, contractor, housing inspector or superintendent of building, fire or trade construction or at least five years of building experience after obtaining a degree in architecture or engineering, with at least three years in responsible charge of work. Any combination of education and experience that would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. The code official shall have general knowledge of sound engineering practice in respect to the design and construction of structures, the basic principles of fire prevention, the accepted requirements for means of egress and the installation of elevators and other service equipment necessary for the health, safety and general welfare of the occupants and the public. The local governing body may establish additional qualification requirements.

A technical assistant shall have at least three years of experience and general knowledge in at least one of the following areas: building construction, building, fire or housing inspections, plumbing, electrical or mechanical trades, fire protection, elevators or property maintenance work. Any

Comment [x9]: Changes to correlate with the moving of the code change training and continuing education requirements to the Virginia Certification Standards.

Comment [x8]: These changes reflect changes in the law that is the basis for this section.

combination of education and experience which would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. The locality may establish additional certification requirements.

104.4.2 Certification of code official and technical assistants. An acting or permanent code official shall be certified obtain an active certification as a code official in accordance with the VCS within one year after being appointed as acting or permanent code official. A technical assistant shall be certified obtain an active certification in accordance with the VCS in the appropriate subject area within 18 months after becoming a technical assistant. When required by a locality to have two or more active certifications under the VCS, a technical assistant shall obtain the additional certifications within three years from the date of such requirement.

Exception: A code official or technical assistant in place prior to April 1, 1995, shall not be required to meet the certification requirements in this section while continuing to serve in the same capacity in the same locality.

104.4.3 Noncertified code official. Except for a code official exempt from certification under the exception to Section 104.4.2, any acting or permanent code official who is does not certified posses an active certification as a code official in accordance with the VCS shall attend the core module of the Virginia Building Code Academy or an equivalent course in an individual or regional code academy accredited by DHCD within 180 days of appointment. This requirement is in addition to meeting the certification requirement in Section 104.4.2.

104.4.4 Requirements for periodic maintenance training and education. Code officials and technical assistants shall attend periodic maintenance training as designated by DHCD. In addition to the periodic maintenance training required above, code officials and technical assistants shall attend 16 hours of continuing education every two years as approved by DHCD. If a code official or technical assistant possesses more than one BHCD certificate, the 16 hours shall satisfy the continuing education requirement for all BHCD certificates.

104.4.5 104.4.4 Conflict of interest. The standards of conduct for code officials and technical assistants shall be in accordance with the provisions of the State and Local Government Conflict of Interests Act, Chapter 31 (Section 2.2-3100 et seq.) of Title 2.2 of the Code of Virginia.

104.4.6 104.4.5 Records. The local enforcing agency shall retain a record of applications received, permits, certificates, notices and orders issued, fees collected and reports of inspections in accordance with The Library of Virginia's General Schedule Number Six.

104.5 Powers and duties, generally. The code official shall enforce this code as set out herein and as interpreted by the State Review Board and shall issue all necessary notices or orders to ensure compliance with the code.

104.5.1 Delegation of authority. The code official may delegate powers and duties except where such authority is limited by the local government. When such delegations are made, the code

official shall be responsible for assuring that they are carried out in accordance with the provisions of this code.

104.5.2 Issuance of modifications. Upon written application by an owner or an owner's agent, the code official may approve a modification of any provision of this code provided the spirit and intent of the code are observed and public health, welfare and safety are assured. The decision of the code official concerning a modification shall be made in writing and the application for a modification and the decision of the code official concerning such modification shall be retained in the permanent records of the local enforcing agency.

104.5.2.1 Substantiation of modification. The code official may require or may consider a statement from a professional engineer, architect or other person competent in the subject area of the application as to the equivalency of the proposed modification.

104.5.3 Inspections. The code official may inspect buildings or structures to determine compliance with this code and shall carry proper credentials when performing such inspections. The code 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.

104.5.3.1 Observations. When, during an inspection, the code 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.

104.5.3.2 Approved inspection agencies and individuals. The code official may accept reports of inspections or tests from individuals or inspection agencies approved in accordance with the code official's written policy required by Section 104.5.3.3. 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 this code have been met, and shall be certified by the individual inspector or by the responsible officer when the report is from an agency. The code official shall review and approve the report unless there is cause to reject it. Failure to approve a report shall be in writing within five working days of receiving it, stating the reasons for rejection.

104.5.3.3 Third-party inspectors. Each code official charged with the enforcement of this code and who accepts third-party reports 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 code official.

104.5.3.4 Qualifications. In determining third-party qualifications, the code official may consider such items as

Comment [x10]: Changes necessary to correlate with the Virginia Certification Standards.

Comment [x11]: Renumbering.

Comment [x12]: Renumbering.

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.

104.5.4 Notices, reports and orders. Upon findings by the code official that violations of this code exist, the code official shall issue a correction notice or notice of violation to the owner or the person responsible for the maintenance of the structure. Work done to correct violations of this code subject to the permit, inspection and approval provisions of the VCC shall not be construed as authorization to extend the time limits established for compliance with this code.

104.5.4.1 Correction notice. The correction notice shall be a written notice of the defective conditions. The correction notice shall require correction of the violation or violations within a reasonable time unless an emergency condition exists as provided under the unsafe building provisions of Section 105. Upon request, the correction notice shall reference the code section that serves as the basis for the defects and shall state that such defects shall be corrected and reinspected in a reasonable time designated by the code official.

104.5.4.2 Notice of violation. If the code official determines there are violations of this code other than those for unsafe structures, unsafe equipment or structures unfit for human occupancy under Section 105, the code official may issue a notice of violation to be communicated promptly in writing to the owner or the person responsible for the maintenance or use of the building or structure in lieu of a correction notice as provided for in Section 104.5.4.1. In addition, the code official shall issue a notice of violation for any uncorrected violation remaining from a correction notice established in Section 104.5.4.1. A notice of violation shall be issued by the code official before initiating legal proceedings unless the conditions violate the unsafe building conditions of Section 105 and the provisions established therein are followed. The code official shall provide the section numbers to the owner for any code provision cited in the notice of violation. The notice shall require correction of the violation or violations within a reasonable time unless an emergency condition exists as provided under the building provisions of Section 105. The owner or person to whom the notice of violation has been issued shall be responsible for contacting the code official within the time frame established for any reinspections to assure the violations have been corrected. The code official will be responsible for making such inspection and verifying the violations have been corrected. In addition, the notice of violation shall indicate the right of appeal by referencing the appeals section of this code.

104.5.5 Coordination of inspections. The code official shall coordinate inspections and administrative orders with any other state or local agencies having related inspection authority and shall coordinate those inspections required by the Virginia Statewide Fire Prevention Code (13VAC5-51) for maintenance of fire protection devices, equipment and assemblies so that the owners and occupants will not be subjected to numerous inspections or conflicting orders.

Note: The Fire Prevention Code requires the fire official to coordinate such inspections with the code official.

104.5.6 Further action when violation not corrected. If the responsible party has not complied with the notice of violation, the code official shall submit a written request to the legal counsel of the locality to institute the appropriate legal proceedings to restrain, correct or abate the violation or to require the removal or termination of the use of the building or structure involved. In cases where the locality so authorizes, the code official may issue or obtain a summons or warrant.

104.5.7 Penalties and abatement. Penalties for violations of this code shall be as set out in Section 36-106 of the Code of Virginia. The successful prosecution of a violation of the code shall not preclude the institution of appropriate legal action to require correction or abatement of a violation.

SECTION 105 UNSAFE STRUCTURES OR STRUCTURES UNFIT FOR HUMAN OCCUPANCY

105.1 General. This section shall apply to existing structures which are classified as unsafe or unfit for human occupancy. All conditions causing such structures to be classified as unsafe or unfit for human occupancy shall be remedied or as an alternative to correcting such conditions, the structure may be vacated and secured against public entry or razed and removed. Vacant and secured structures shall still be subject to other applicable requirements of this code. Notwithstanding the above, when the code official determines that an unsafe structure or a structure unfit for human occupancy constitutes such a hazard that it should be razed or removed, then the code official shall be permitted to order the demolition of such structures in accordance with applicable requirements of this code.

Note: Structures which become unsafe during construction are regulated under the VCC.

105.2 Inspection of unsafe or unfit structures. The code official shall inspect any structure reported or discovered as unsafe or unfit for human habitation and shall prepare a report to be filed in the records of the local enforcing agency and a copy issued to the owner. The report shall include the use of the structure and a description of the nature and extent of any conditions found.

105.3 Unsafe conditions not related to maintenance. When the code official finds a condition that constitutes a serious and dangerous hazard to life or health in a structure constructed prior to the initial edition of the USBC and when that condition is of a cause other than improper maintenance or failure to comply with state or local building codes that were in effect when the structure was constructed, then the code official shall be permitted to order those minimum changes to the design or construction of the structure to remedy the condition.

105.3.1 Limitation to requirements for retrofitting. In accordance with Section 103.2, this code does not generally provide for requiring the retrofitting of any structure. However, conditions may exist in structures constructed prior to the initial edition of the USBC because of faulty design or equipment that constitute a danger to life or health or a serious hazard. Any changes to the design or construction required by the code official under this section shall be only to remedy the serious

hazard or danger to life or health and such changes shall not be required to fully comply with the requirements of the VCC applicable to newly constructed buildings or structures.

105.4 Notice of unsafe structure or structure unfit for human occupancy. When a structure is determined to be unsafe or unfit for human occupancy by the code official, a written notice of unsafe structure or structure unfit for human occupancy shall be issued by personal service to the owner, the owner's agent or the person in control of such structure. The notice shall specify the corrections necessary to comply with this code, or if the structure is required to be demolished, the notice shall specify the time period within which the demolition must occur. Requirements in Section 104.5.4 for notices of violation are also applicable to notices issued under this section to the extent that any such requirements are not in conflict with the requirements of this section.

Note: Whenever possible, the notice should also be given to any tenants of the affected structure.

105.4.1 Vacating unsafe structure. If the code official determines there is actual and immediate danger to the occupants or public, or when life is endangered by the occupancy of an unsafe structure, the code official shall be authorized to order the occupants to immediately vacate the unsafe structure. When an unsafe structure is ordered to be vacated, the code official shall post a notice with the following wording at each entrance: "THIS STRUCTURE IS UNSAFE AND ITS OCCUPANCY (OR USE) IS PROHIBITED BY THE CODE OFFICIAL." After posting, occupancy or use of the unsafe structure shall be prohibited except when authorized to enter to conduct inspections, make required repairs or as necessary to demolish the structure.

105.5 Posting of notice. If the notice is unable to be issued by personal service as required by Section 105.4, then the notice shall be sent by registered or certified mail to the last known address of the responsible party and a copy of the notice shall be posted in a conspicuous place on the premises.

105.6 Posting of placard. In the case of a structure unfit for human habitation, at the time the notice is issued, a placard with the following wording shall be posted at the entrance to the structure: "THIS STRUCTURE IS UNFIT FOR HABITATION AND ITS USE OR OCCUPANCY HAS BEEN PROHIBITED BY THE CODE OFFICIAL." In the case of an unsafe structure, if the notice is not complied with, a placard with the above wording shall be posted at the entrance to the structure. After a structure is placarded, entering the structure shall be prohibited except as authorized by the code official to make inspections, to perform required repairs or to demolish the structure. In addition, the placard shall not be removed until the structure is determined by the code official to be safe to occupy, nor shall the placard be defaced.

105.7 Revocation of certificate of occupancy. If a notice of unsafe structure or structure unfit for human habitation is not complied with within the time period stipulated on the notice, the code official shall be permitted to request the local building department to revoke the certificate of occupancy issued under the VCC.

105.8 Vacant and open structures. When an unsafe structure or a structure unfit for human habitation is open for public entry at the time a placard is issued under Section 105.6, the code official shall be permitted to authorize the necessary work to make such structure

secure against public entry whether or not legal action to compel compliance has been instituted.

105.9 Emergency repairs and demolition. To the extent permitted by the locality, the code official may authorize emergency repairs to unsafe structures or structures unfit for human habitation when it is determined that there is an immediate danger of any portion of the unsafe structure or structure unfit for human habitation collapsing or falling and when life is endangered. Emergency repairs may also be authorized where there is a code violation resulting in the immediate serious and imminent threat to the life and safety of the occupants. The code official shall be permitted to authorize the necessary work to make the structure temporarily safe whether or not legal action to compel compliance has been instituted. In addition, whenever an owner of an unsafe structure or structure unfit for human habitation fails to comply with a notice to demolish issued under Section 105.4 in the time period stipulated, the code official shall be permitted to cause the structure to be demolished. In accordance with Sections 15.2-906 and 15.2-1115 of the Code of Virginia, the legal counsel of the locality may be requested to institute appropriate action against the property owner to recover the costs associated with any such emergency repairs or demolition and every such charge that remains unpaid shall constitute a lien against the property on which the emergency repairs or demolition were made and shall be enforceable in the same manner as provided in Articles 3 (Section [58.1-3490](#) [58.1-3940](#) et seq.) and 4 (Section 58.1-3965 et seq.) of Chapter 39 of Title 58.1 of the Code of Virginia.

Note: Code officials and local governing bodies should be aware that other statutes and court decisions may impact on matters relating to demolition, in particular whether newspaper publication is required if the owner cannot be located and whether the demolition order must be delayed until the owner has been given the opportunity for a hearing. In addition, historic building demolition may be prevented by authority granted to local historic review boards in accordance with Section 15.2-2306 of the Code of Virginia unless determined necessary by the code official.

105.10 Closing of streets. When necessary for public safety, the code official shall be permitted to order the temporary closing of sidewalks, streets, public ways or premises adjacent to unsafe or unfit structures and prohibit the use of such spaces.

SECTION 106 APPEALS

106.1 Establishment of appeals board. In accordance with Section 36-105 of the Code of Virginia, there shall be established within each local enforcing agency a LBBCA. Whenever a county or a municipality does not have such a LBBCA, the local governing body shall enter into an agreement with the local governing body of another county or municipality or with some other agency, or a state agency approved by DHCD for such appeals resulting therefrom. Fees may be levied by the local governing body in order to defray the cost of such appeals. The LBBCA for hearing appeals under the VCC shall be permitted to serve as the appeals board required by this section. The locality is responsible for maintaining a duly constituted LBBCA prepared to hear appeals within the time limits established in this section. The LBBCA shall meet as necessary to assure a duly constituted board, appoint officers as necessary, and receive such training on the code as may be appropriate or necessary from staff of the locality.

Comment [x13]: Correction of an error in the 2012 edition.

106.2 Membership of board. The LBBCA shall consist of at least five members appointed by the locality for a specific term of office established by written policy. Alternate members may be appointed to serve in the absence of any regular members and as such, shall have the full power and authority of the regular members. Regular and alternate members may be reappointed. Written records of current membership, including a record of the current chairman and secretary shall be maintained in the office of the locality. In order to provide continuity, the terms of the members may be of different length so that less than half will expire in any one-year period.

106.3 Officers and qualifications of members. The LBBCA shall annually select one of its regular members to serve as chairman. When the chairman is not present at an appeal hearing, the members present shall select an acting chairman. The locality or the chief executive officer of the locality shall appoint a secretary to the LBBCA to maintain a detailed record of all proceedings. Members of the LBBCA shall be selected by the locality on the basis of their ability to render fair and competent decisions regarding application of the USBC and shall to the extent possible, represent different occupational or professional fields relating to the construction industry. At least one member should be an experienced builder; at least one member should be an RDP, and at least one member should be an experienced property manager. Employees or officials of the locality shall not serve as members of the LBBCA.

106.4 Conduct of members. No member shall hear an appeal in which that member has a conflict of interest in accordance with the State and Local Government Conflict of Interests Act (Section 2.2-3100 et seq. of the Code of Virginia). Members shall not discuss the substance of an appeal with any other party or their representatives prior to any hearings.

106.5 Right of appeal; filing of appeal application. Any person aggrieved by the local enforcing agency's application of this code or the refusal to grant a modification to the provisions of this code may appeal to the LBBCA. The applicant shall submit a written request for appeal to the LBBCA within 14 calendar days of the receipt of the decision being appealed. The application shall contain the name and address of the owner of the building or structure and, in addition, the name and address of the person appealing, when the applicant is not the owner. A copy of the code official's decision shall be submitted along with the application for appeal and maintained as part of the record. The application shall be marked by the LBBCA to indicate the date received. Failure to submit an application for appeal within the time limit established by this section shall constitute acceptance of a code official's decision.

106.6 Meetings and postponements. The LBBCA shall meet within 30 calendar days after the date of receipt of the application for appeal, except that a period of up to 45 calendar days shall be permitted where the LBBCA has regularly scheduled monthly meetings. A longer time period shall be permitted if agreed to by all the parties involved in the appeal. A notice indicating the time and place of the hearing shall be sent to the parties in writing to the addresses listed on

the application at least 14 calendar days prior to the date of the hearing, except that a lesser time period shall be permitted if agreed to by all the parties involved in the appeal. When a quorum of the LBBCA is not present at a hearing to hear an appeal, any party involved in the appeal shall have the right to request a postponement of the hearing. The LBBCA shall reschedule the appeal within 30 calendar days of the postponement, except that a longer time period shall be permitted if agreed to by all the parties involved in the appeal.

106.7 Hearings and decision. All hearings before the LBBCA shall be open meetings and the appellant, the appellant's representative, the locality's representative and any person whose interests are affected by the code official's decision in question shall be given an opportunity to be heard. The chairman shall have the power and duty to direct the hearing, rule upon the acceptance of evidence and oversee the record of all proceedings. The LBBCA shall have the power to uphold, reverse or modify the decision of the official by a concurring vote of a majority of those present. Decisions of the LBBCA shall be final if no further appeal is made. The decision of the LBBCA shall be by resolution signed by the chairman and retained as part of the record of the appeal. Copies of the resolution shall be sent to all parties by certified mail. In addition, the resolution shall contain the following wording:

"Any person who was a party to the appeal may appeal to the State Review Board by submitting an application to such Board within 21 calendar days upon receipt by certified mail of this resolution. Application forms are available from the Office of the State Review Board, 600 East Main Street, Richmond, Virginia 23219, (804) 371-7150."

106.8 Appeals to the State Review Board. After final determination by the LBBCA in an appeal, any person who was a party to the appeal may further appeal to the State Review Board. In accordance with Section 36-98.2 of the Code of Virginia for state-owned buildings and structures, appeals by an involved state agency from the decision of the code official for state-owned buildings or structures shall be made directly to the State Review Board. The application for appeal shall be made to the State Review Board within 21 calendar days of the receipt of the decision to be appealed. Failure to submit an application within that time limit shall constitute an acceptance of the code official's decision. For appeals from a LBBCA, a copy of the code official's decision and the resolution of the LBBCA shall be submitted with the application for appeal to the State Review Board. Upon request by the Office of the State Review Board, the LBBCA shall submit a copy of all pertinent information from the record of the appeal. In the case of appeals involving state-owned buildings or structures, the involved state agency shall submit a copy of the code official's decision and other relevant information with the application for appeal to the State Review Board. Procedures of the State Review Board are in accordance with Article 2 (Section 36-108 et seq.) of Chapter 6 of Title 36 of the Code of Virginia. Decisions of the State Review Board shall be final if no further appeal is made.

CHAPTER 2 DEFINITIONS

SECTION 201 GENERAL

201.1 Scope. Unless otherwise expressly stated, the following terms shall, for the purposes of this code, have the meanings shown in this chapter.

201.2 Interchangeability. Words stated in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Building Code, International Existing Building Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Residential Code, International Zoning Code or NFPA 70* other International Codes, such terms shall have the meanings ascribed to them as stated in those codes, except that terms that are not defined in this code and that are defined in the VCC shall take precedence over other definitions.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

201.5 Parts. Whenever the words “dwelling unit,” “dwelling,” “premises,” “building,” ~~“rooming house,”~~ “rooming unit,” “housekeeping unit” or “story” are stated in this code, they shall be construed as though they were followed by the words “or any part thereof.”

SECTION 202 GENERAL DEFINITIONS

ANCHORED. Secured in a manner that provides positive connection.

[A] APPROVED. Acceptable to the *code official*.

BASEMENT. That portion of a building which is partly or completely below grade.

BATHROOM. A room containing plumbing fixtures including a bathtub or shower.

BEDROOM. Any room or space used or intended to be used for sleeping purposes in either a dwelling or *sleeping unit*.

[A] CODE OFFICIAL. The official who is charged with the administration and enforcement of this code, or any duly authorized representative.

~~**CONDEMN.** To adjudge unfit for occupancy.~~

~~**COST OF SUCH DEMOLITION OR EMERGENCY**~~

~~**REPAIRS.** The costs shall include the actual costs of the demolition or repair of the structure less revenues obtained if salvage was conducted prior to demolition or repair. Costs shall include, but not be limited to, expenses incurred or necessitated related to demolition or emergency repairs, such as asbestos survey and abatement if necessary; costs of inspectors, testing agencies or experts retained relative to the demolition or emergency repairs; costs of testing; surveys for other materials that are controlled or regulated from being dumped in a landfill; title searches; mailing(s); postings; recording; and attorney fees expended for recovering of the cost of emergency repairs or to obtain or enforce an order of demolition made by a *code official*, the governing body or board of appeals.~~

DETACHED. When a structural element is physically disconnected from another and that connection is necessary to provide a positive connection.

DETERIORATION. To weaken, disintegrate, corrode, rust or decay and lose effectiveness.

[BG] DWELLING UNIT. A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

[Z] EASEMENT. That portion of land or property reserved for present or future use by a person or agency other than the legal fee *owner(s)* of the property. The *easement* shall be permitted to be for use under, on or above a said lot or lots.

~~**EQUIPMENT SUPPORT.** Those structural members or assemblies of members or manufactured elements, including braces, frames, lugs, snuggers, hangers or saddles, that transmit gravity load, lateral load and operating load between the equipment and the structure.~~

EXTERIOR PROPERTY. The open space on the *premises* and on adjoining property under the control of *owners* or *operators* of such *premises*.

GARBAGE. The animal or vegetable waste resulting from the handling, preparation, cooking and consumption of food.

[BE] GUARD. A building component or a system of building components located at or near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to a lower level.

[BG] HABITABLE SPACE. Space in a structure for living, sleeping, eating or cooking. *Bathrooms, toilet rooms, closets, halls, storage or utility spaces, and similar areas* are not considered *habitable spaces*.

HISTORIC BUILDING. Any building or structure that is one or more of the following:

1. Listed or certified as eligible for listing, by the State

Comment [x16]: These terms are not used in the Virginia Maintenance Code and are therefore deleted.

Comment [x14]: Existing state amendment.

Comment [x15]: This term is not used in the Virginia Maintenance Code, therefore it is deleted.

Comment [x17]: This term is not used in the Virginia Maintenance Code and is therefore deleted.

Historic Preservation Officer or the Keeper of the National Register of Historic Places, in the National Register of Historic Places.

2. Designated as historic under an applicable state or local law.

3. Certified as a contributing resource within a National Register or state or locally designated historic district.

HOUSEKEEPING UNIT. A room or group of rooms forming a single *habitable space* equipped and intended to be used for living, sleeping, cooking and eating which does not contain, within such a unit, a toilet, lavatory and bathtub or shower.

IMMINENT DANGER. A condition which could cause serious or life threatening injury or death at any time.

INFESTATION. The presence, within or contiguous to, a structure or *premises* of insects, rats, vermin or other pests.

INOPERABLE MOTOR VEHICLE. A vehicle which cannot be driven upon the public streets for reason including but not limited to being unlicensed, wrecked, abandoned, in a state of disrepair, or incapable of being moved under its own power.

[A] LABELED. Equipment, materials or products to which have been affixed a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory, inspection agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the above labeled items and whose labeling indicates either that the equipment, material or product meets identified standards or has been tested and found suitable for a specified purpose.

LET FOR OCCUPANCY or LET. To permit, provide or offer possession or *occupancy* of a dwelling, *dwelling unit*, *rooming unit*, building, premise or structure by a person who is or is not the legal *owner* of record thereof, pursuant to a written or unwritten lease, agreement or license, or pursuant to a recorded or unrecorded agreement of contract for the sale of land.

NEGLECT. The lack of proper maintenance for a building or structure.

[A] OCCUPANCY. The purpose for which a building or portion thereof is utilized or occupied.

OCCUPANT. Any individual living or sleeping in a building, or having possession of a space within a building.

OPENABLE AREA. That part of a window, skylight or door which is available for unobstructed ventilation and which opens directly to the outdoors.

OPERATOR. Any person who has charge, care or control of a structure or *premises* which is let or offered for *occupancy*.

[A] OWNER. Any person, agent, *operator*, firm or corporation

having legal or equitable interest in the property; or recorded in the official records of the state, county or municipality as holding title to the property; or otherwise having control of the property, including the guardian of the estate of any such person, and the executor or administrator of the estate of such person if ordered to take possession of real property by a court.

PERSON. An individual, corporation, partnership or any other group acting as a unit.

PEST ELIMINATION. The control and elimination of insects, rodents or other pests by eliminating their harborage places; by removing or making inaccessible materials that serve as their food or water; by other approved pest elimination methods.

[A] PREMISES. A lot, plot or parcel of land, *easement* or *public way*, including any structures thereon.

[A] PUBLIC WAY. Any street, alley or similar parcel of land essentially unobstructed from the ground to the sky, which is deeded, dedicated or otherwise permanently appropriated to the public for public use.

ROOMING HOUSE. A building arranged or occupied for lodging, with or without meals, for compensation and not occupied as a one- or two-family dwelling.

ROOMING UNIT. Any room or group of rooms forming a single habitable unit occupied or intended to be occupied for sleeping or living, but not for cooking purposes.

RUBBISH. Combustible and noncombustible waste materials, except garbage; the term shall include the residue from the burning of wood, coal, coke and other combustible materials, paper, rags, cartons, boxes, wood, excelsior, rubber, leather, tree branches, *yard* trimmings, tin cans, metals, mineral matter, glass, crockery and dust and other similar materials.

[BG] SLEEPING UNIT. A room or space in which people sleep, which can also include permanent provisions for living, eating and either sanitation or kitchen facilities, but not both. Such rooms and spaces that are also part of a *dwelling unit* are not *sleeping units*.

STRICT LIABILITY OFFENSE. An offense in which the prosecution in a legal proceeding is not required to prove criminal intent as a part of its case. It is enough to prove that the defendant either did an act which was prohibited, or failed to do an act which the defendant was legally required to do.

[A] STRUCTURE. That which is built or constructed or a portion thereof.

STRUCTURE UNFIT FOR HUMAN OCCUPANCY. An existing structure determined by the code official to be dangerous to the health, safety and welfare of the occupants of the structure or the public because (i) of the degree to which the structure is in disrepair or lacks maintenance, ventilation, illumination, sanitary or heating facilities or other essential equipment, or (ii) the required plumbing and sanitary facilities are inoperable.

Comment [x22]: This term is not used in the Virginia Maintenance Code, therefore it is deleted.

Comment [x18]: This term is not used in the Virginia Maintenance Code, therefore it is deleted.

Comment [x19]: These terms are not used in the Virginia Maintenance Code, therefore they are deleted.

Comment [x20]: This term is not used in the Virginia Maintenance Code, therefore it is deleted.

Comment [x23]: This term is not used in the Virginia Maintenance Code, therefore it is deleted.

Comment [x21]: This term is not used in the Virginia Maintenance Code, therefore it is deleted.

Comment [x24]: Existing state amendment.

TENANT. A person, corporation, partnership or group, whether or not the legal *owner* of record, occupying a building or portion thereof as a unit.

TOILET ROOM. A room containing a water closet or urinal but not a bathtub or shower.

ULTIMATE DEFORMATION. The deformation at which failure occurs and which shall be deemed to occur if the sustainable load reduces to 80 percent or less of the maximum strength.

Comment [x25]: This term is not used in the Virginia Maintenance Code, therefore it is deleted.

UNSAFE EQUIPMENT. Unsafe equipment includes any boiler, heating equipment, elevator, moving stairway, electrical wiring or device, flammable liquid containers or other equipment that is in such disrepair or condition that such equipment is determined by the code official to be dangerous to the health, safety and welfare of the occupants of a structure or the public.

Comment [x26]: Existing state amendment.

UNSAFE STRUCTURE. An existing structure (i) determined by the code official to be dangerous to the health, safety and welfare of the occupants of the structure or the public, (ii) that contains unsafe equipment, or (iii) that is so damaged, decayed, dilapidated, structurally unsafe or of such faulty construction or unstable foundation that partial or complete collapse is likely. A vacant existing structure unsecured or open shall be deemed to be an unsafe structure.

Comment [x27]: Existing state amendment.

[M] VENTILATION. The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, any space.

WORKMANLIKE. Executed in a skilled manner; e.g., generally plumb, level, square, in line, undamaged and without marring adjacent work.

Comment [x28]: This term is not used in the Virginia Maintenance Code, therefore it is deleted.

[Z] YARD. An open space on the same lot with a structure.

CHAPTER 3 GENERAL REQUIREMENTS

SECTION 301 GENERAL

301.1 Scope. The provisions of this chapter shall govern the minimum conditions and the responsibilities of persons for the maintenance of structures, and equipment and for the maintenance of exterior property to the extent that this code is applicable.

301.2 Responsibility. The owner of the premises shall maintain the structures and exterior property in compliance with these requirements, except as otherwise provided for in this code. A person shall not occupy as owner-occupant or permit another person to occupy premises that are not in a sanitary and safe condition and that do not comply with the requirements of this chapter. Occupants of a dwelling unit, rooming unit or housekeeping unit are responsible for keeping in a clean, sanitary and safe condition that part of the dwelling unit, rooming unit, housekeeping unit or premises which they occupy and control.

301.3 Vacant structures and land. Vacant structures and premises thereof or vacant land shall be maintained in a clean, safe, secure and sanitary condition as provided herein so as not to cause a blighting problem or adversely affect the public health or safety.

SECTION 302 EXTERIOR PROPERTY AREAS

302.1 Sanitation. Exterior property and premises shall be maintained in a clean, safe and sanitary condition. The occupant shall keep that part of the exterior property that such occupant occupies or controls in a clean and sanitary condition.

302.2 Grading and drainage. All premises shall be graded and maintained to prevent the erosion of soil and to prevent the accumulation of stagnant water thereon, or within any structure located thereon protect the foundation walls or slab of the structure from the accumulation and drainage of surface or stagnant water in accordance with the VCC.

Exception: Approved retention areas and reservoirs.

302.3 Sidewalks and driveways. All sidewalks, walkways, stairs, driveways, parking spaces and similar areas spaces regulated under the VCC shall be kept in a proper state of repair, and maintained free from hazardous conditions.

302.4 Weeds. Premises and exterior property shall be maintained free from weeds or plant growth in excess of [JURISDICTION TO INSERT HEIGHT IN INCHES]. Noxious weeds shall be prohibited. Weeds shall be defined as all grasses, annual plants and vegetation, other than trees or shrubs provided; however, this term shall not include cultivated flowers and gardens.

Upon failure of the owner or agent having charge of a property to cut and destroy weeds after service of a notice of

violation, they shall be subject to prosecution in accordance with Section 106.3 and as prescribed by the authority having jurisdiction. Upon failure to comply with the notice of violation, any duly authorized employee of the jurisdiction or contractor hired by the jurisdiction shall be authorized to enter upon the property in violation and cut and destroy the weeds growing thereon, and the costs of such removal shall be paid by the owner or agent responsible for the property.

302.5 Rodent harborage. All structures and exterior property adjacent premises shall be kept free from rodent harborage and infestation where such harborage or infestation adversely affects the structures. Where rodents are found, they shall be promptly exterminated by approved processes that will not be injurious to human health. After pest elimination, proper precautions shall be taken to eliminate rodent harborage and prevent reinfestation.

302.6 Exhaust vents. Pipes, ducts, conductors, fans or blowers shall not discharge gases, steam, vapor, hot air, grease, smoke, odors or other gaseous or particulate wastes directly upon abutting or adjacent public or private property or that of another tenant.

302.7 Accessory structures. Accessory structures, including detached garages, fences and walls, shall be maintained structurally sound and in good repair.

302.8 Motor vehicles. Except as provided for in other regulations, no inoperative or unlicensed motor vehicle shall be parked, kept or stored on any premises, and no vehicle shall at any time be in a state of major disassembly, disrepair, or in the process of being stripped or dismantled. Painting of vehicles is prohibited unless conducted inside an approved spray booth.

Exception: A vehicle of any type is permitted to undergo major overhaul, including body work, provided that such work is performed inside a structure or similarly enclosed area designed and approved for such purposes.

302.9 Defacement of property. No person shall willfully or wantonly damage, mutilate or deface any exterior surface of any structure or building on any private or public property by placing thereon any marking, carving or graffiti. It shall be the responsibility of the owner to restore said surface to an approved state of maintenance and repair.

SECTION 303 SWIMMING POOLS, SPAS AND HOT TUBS

303.1 Swimming pools. Swimming pools shall be maintained in a clean and sanitary condition, and in good repair.

303.2 Enclosures. Private swimming pools, hot tubs and spas, containing water more than 24 inches (610 mm) in depth shall be completely surrounded by a fence or barrier not less than 48 inches (1219 mm) in height above the finished ground level measured on the side of the barrier away from the pool. Gates and doors in such barriers shall be self-closing

Comment [x34]: Existing state amendments.

Comment [x29]: The scope section is modified to delete the reference to the responsibility of persons as that is addressed in Chapter 1 and in state law. A statement is added to limit the application of "exterior property" provisions to only those applicable as "premises" in general are not regulated unless affecting a building or structure. The "responsibility" section is deleted for the same reason.

Comment [x35]: This is not a maintenance requirement, so it is deleted.

Comment [x30]: This section is modified to delete the references to vacant land and to delete the language concerning blight as that is not within the scope of the VMC.

Comment [x31]: Existing state amendments.

Comment [x36]: Existing state amendments.

Comment [x32]: These changes are necessary to reflect the scoping of the VMC to apply only to those aspects of exterior property regulated by the VCC.

Comment [x33]: Existing state amendment.

and self latching. Where the self latching device is not less than 54 inches (1372 mm) above the bottom of the gate, the release mechanism shall be located on the pool side of the gate. Self closing and self latching gates shall be maintained such that the gate will positively close and latch when released from an open position of 6 inches (152 mm) from the gatepost. No existing pool enclosure shall be removed, replaced or changed in a manner that reduces its effectiveness as a safety barrier. Swimming pool, hot tub and spa barriers shall be maintained as required by the code or ordinance under which such barriers were constructed.

Exception: Spas or hot tubs with a safety cover that complies with ASTM F 1346 shall be exempt from the provisions of this section.

SECTION 304 EXTERIOR STRUCTURE

304.1 General. The exterior of a structure shall be maintained in good repair, structurally sound and sanitary so as not to pose a threat to the public health, safety or welfare.

304.1.1 Unsafe conditions. The following conditions shall be determined as unsafe and shall be repaired or replaced to comply with the *International Building Code* or the *International Existing Building Code* as required for existing buildings:

1. The nominal strength of any structural member is exceeded by nominal loads, the load effects or the required strength;
2. The anchorage of the floor or roof to walls or columns, and of walls and columns to foundations is not capable of resisting all nominal loads or load effects;
3. Structures or components thereof that have reached their limit state;
4. Siding and masonry joints including joints between the building envelope and the perimeter of windows, doors and skylights are not maintained, weather resistant or water tight;
5. Structural members that have evidence of deterioration or that are not capable of safely supporting all nominal loads and load effects;
6. Foundation systems that are not firmly supported by footings, are not plumb and free from open cracks and breaks, are not properly anchored or are not capable of supporting all nominal loads and resisting all load effects;
7. Exterior walls that are not anchored to supporting and supported elements or are not plumb and free of holes, cracks or breaks and loose or rotting materials, are not properly anchored or are not capable of supporting all nominal loads and resisting all load effects;

8. Roofing or roofing components that have defects that admit rain, roof surfaces with inadequate drainage, or any portion of the roof framing that is not in good repair with signs of deterioration, fatigue or without proper anchorage and incapable of supporting all nominal loads and resisting all load effects;

9. Flooring and flooring components with defects that affect serviceability or flooring components that show signs of deterioration or fatigue, are not properly anchored or are incapable of supporting all nominal loads and resisting all load effects;

10. Veneer, cornices, belt courses, corbels, trim, wall facings and similar decorative features not properly anchored or that are anchored with connections not capable of supporting all nominal loads and resisting all load effects;

11. Overhang extensions or projections including, but not limited to, trash chutes, canopies, marquees, signs, awnings, fire escapes, standpipes and exhaust ducts not properly anchored or that are anchored with connections not capable of supporting all nominal loads and resisting all load effects;

12. Exterior stairs, decks, porches, balconies and all similar appurtenances attached thereto, including guards and handrails, are not structurally sound, not properly anchored or that are anchored with connections not capable of supporting all nominal loads and resisting all load effects; or

13. Chimneys, cooling towers, smokestacks and similar appurtenances not structurally sound or not properly anchored, or that are anchored with connections not capable of supporting all nominal loads and resisting all load effects.

Exceptions:

1. Where substantiated otherwise by an approved method;
2. Demolition of unsafe conditions shall be permitted where approved by the code official;

304.2 Protective treatment. Exterior surfaces, including but not limited to, doors, door and window frames, cornices, porches, trim, balconies, decks and fences, shall be maintained in good condition. Exterior wood surfaces, other than decay-resistant woods, shall be protected from the elements and decay by painting or other protective covering or treatment. Peeling, flaking and chipped paint shall be eliminated and surfaces repainted. Siding and masonry joints, as well as those between the building envelope and the perimeter of windows, doors and skylights, shall be maintained weather resistant and water tight. Metal surfaces subject to rust or corrosion shall be coated to inhibit such rust and corrosion, and surfaces with rust or corrosion shall be stabilized and coated to inhibit future rust and corrosion. Oxidation stains shall be removed from exterior surfaces. Surfaces designed for stabilization

Comment [x37]: Minimum standards are replaced with general language requiring maintenance of barriers in accordance with the code in effect at the time of construction. Since there is authorization in state law for a locality to have an ordinance requiring barriers for pools, a reference to local ordinances is added.

Comment [x38]: The term "public" is deleted since the statutory scope of the code is to protect the citizens of the Commonwealth, in addition to the public.

Comment [x39]: Existing state amendment.

by oxidation are exempt from this requirement.

[F] 304.3 Premises identification. Buildings shall have approved address numbers placed in a position to be plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Numbers shall be not less than 4 inches (102 mm) in height with a minimum stroke width of 0.5 inch (12.7 mm). Address numbers of buildings shall be maintained when required by the code under which such buildings were constructed or when required by ordinance.

304.4 Structural members. Structural members shall be maintained free from deterioration, and shall be capable of safely supporting the imposed dead and live loads.

304.5 Foundation walls. Foundation walls shall be maintained plumb and free from open cracks and breaks and shall be kept in such condition so as to prevent the entry of rodents and other pests.

304.6 Exterior walls. Exterior walls shall be free from holes, breaks, and loose or rotting materials; and maintained weatherproof and properly surface coated where required to prevent deterioration.

304.7 Roofs and drainage. The roof and flashing shall be sound, tight and not have defects that admit rain. Roof drainage shall be adequate to prevent dampness or deterioration in the walls or interior portion of the structure. Roof drains, gutters and downspouts shall be maintained in good repair and free from obstructions. Roof water shall not be discharged in a manner that creates a public nuisance to protect the foundation or slab of buildings and structures from the accumulation of roof drainage.

304.8 Decorative features. Cornices, belt courses, corbels, terra cotta trim, wall facings and similar decorative features shall be maintained in good repair with proper anchorage and in a safe condition.

304.9 Overhang extensions. Overhang extensions including, but not limited to, canopies, marquees, signs, metal awnings, fire escapes, standpipes and exhaust ducts shall be maintained in good repair and be properly anchored so as to be kept in a sound condition. Where required, all exposed surfaces of metal or wood shall be protected from the elements and against decay or rust by periodic application of weather-coating materials, such as paint or similar surface treatment.

304.10 Stairways, decks, porches and balconies. Every exterior stairway, deck, porch and balcony, and all appurtenances attached thereto, shall be maintained structurally sound, in good repair, with proper anchorage and capable of supporting the imposed loads.

304.11 Chimneys and towers. Chimneys, cooling towers, smoke stacks, and similar appurtenances shall be maintained structurally safe and sound, and in good repair. Exposed surfaces of metal or wood shall be protected from the elements and against decay or rust by periodic application of weather-coating materials, such as paint or similar surface treatment.

304.12 Handrails and guards. Every handrail and guard shall be firmly fastened and capable of supporting normally imposed loads and shall be maintained in good condition.

304.13 Window, skylight and door frames. Every window, skylight, door and frame shall be kept in sound condition, good repair and weather tight.

304.13.1 Glazing. Glazing materials shall be maintained free from cracks and holes.

304.13.2 Openable windows. Every window, other than a fixed window, shall be easily openable and capable of being held in position by window hardware.

304.14 Insect screens. During the period from [DATE] April 1 to [DATE] December 1, every door, window and other outside opening required for ventilation of habitable rooms, food preparation areas, food service areas or any areas where products to be included or utilized in food for human consumption are processed, manufactured, packaged or stored shall be supplied with approved tightly fitting screens of minimum not less than 16 mesh per inch (16 mesh per 25 mm); and every screen door used for insect control shall have a self-closing device in good working condition.

Exception: Screens shall not be required where other approved means, such as mechanical ventilation, air curtains or insect repellent fans, are employed used.

304.15 Doors. Exterior doors, door assemblies, operator systems if provided, and hardware shall be maintained in good condition. Locks at all entrances to dwelling units and sleeping units shall tightly secure the door. Locks on means of egress doors shall be in accordance with Section 702.3.

304.16 Basement hatchways. Every basement hatchway shall be maintained to prevent the entrance of rodents, rain and surface drainage water.

304.17 Guards for basement windows. Every basement window that is openable shall be supplied with rodent shields, storm windows or other approved protection against the entry of rodents.

304.18 Building security. Doors, windows or hatchways for dwelling units, room units or housekeeping units shall be provided with devices designed to provide security for the occupants and property within. Devices designed to provide security for the occupants and property within, when required by the code under which a building was constructed, or when provided, shall be maintained unless their removal is approved by the building official under the VCC.

304.18.1 Doors. Doors providing access to a dwelling unit, rooming unit or housekeeping unit that is rented, leased or let shall be equipped with a deadbolt lock designed to be readily openable from the side from which egress is to be made without the need for keys, special knowledge or effort and shall have a minimum lock throw of 1 inch (25 mm). Such deadbolt locks shall be installed according to the manufacturer's specifications and maintained

Comment [x40]: Premises marking is required by the VCC, so the section is modified to only require maintenance of the identification method, or in accordance with local ordinance.

Comment [x42]: Existing state amendment.

Comment [x41]: Existing state amendment.

Comment [x43]: While this section was deleted in the 2012 and previous editions of the VMC, there is a need for requiring the maintenance of security devices that were required by the code under which a building was constructed, or which have been provided, so general maintenance language has been added.

in good working order. For the purpose of this section, a sliding bolt shall not be considered an acceptable deadbolt lock.

304.18.2 Windows. Operable windows located in whole or in part within 6 feet (1828 mm) above ground level or a walking surface below that provide access to a *dwelling unit, rooming unit or housekeeping unit* that is rented, leased or let shall be equipped with a window sash locking device.

304.18.3 Basement hatchways. Basement hatchways that provide access to a *dwelling unit, rooming unit or housekeeping unit* that is rented, leased or let shall be equipped with devices that secure the units from unauthorized entry.

304.19 Gates. To the extent required by the code under which constructed or to the extent provided when constructed, exterior gates, gate assemblies, operator systems if provided, and hardware shall be maintained in good condition. Latches at all entrances shall tightly secure the gates.

**SECTION 305
INTERIOR STRUCTURE**

305.1 General. The interior of a structure and equipment therein shall be maintained in good repair, structurally sound and in a sanitary condition. *Occupants shall keep that part of the structure that they occupy or control in a clean and sanitary condition. Every owner of a structure containing a rooming house, housekeeping units, a hotel, a dormitory, two or more dwelling units or two or more nonresidential occupancies, shall maintain, in a clean and sanitary condition, the shared or public areas of the structure and exterior property.*

305.1.1 Unsafe conditions. The following conditions shall be determined as unsafe and shall be repaired or replaced to comply with the *International Building Code* or the *International Existing Building Code* as required for existing buildings:

1. The nominal strength of any structural member is exceeded by nominal loads, the load effects or the required strength;
2. The anchorage of the floor or roof to walls or columns, and of walls and columns to foundations is not capable of resisting all nominal loads or load effects;
3. Structures or components thereof that have reached their limit state;
4. Structural members are incapable of supporting nominal loads and load effects;
5. Stairs, landings, balconies and all similar walking surfaces, including *guards* and handrails, are not structurally sound, not properly anchored or are anchored with connections not capable of supporting all nominal loads and resisting all load effects;
6. Foundation systems that are not firmly supported by

footings are not plumb and free from open cracks and breaks, are not properly anchored or are not capable of supporting all nominal loads and resisting all load effects.

Exceptions:

1. Where substantiated otherwise by an approved method;
2. Demolition of unsafe conditions shall be permitted when approved by the code official.

305.2 Structural members. Structural members shall be maintained structurally sound, and be capable of supporting the imposed loads.

305.3 Interior surfaces. Interior surfaces, including windows and doors, shall be maintained in good, clean and sanitary condition. Peeling, chipping, flaking or abraded paint shall be repaired, removed or covered. Cracked or loose plaster, decayed wood and other defective surface conditions shall be corrected.

305.4 Stairs and walking surfaces. Every stair, ramp, landing, balcony, porch, deck or other walking surface shall be maintained in sound condition and good repair.

305.5 Handrails and guards. Every handrail and guard shall be firmly fastened and capable of supporting normally imposed loads and shall be maintained in good condition.

305.6 Interior doors. Every interior door shall fit reasonably well within its frame and shall be capable of being opened and closed by being properly and securely attached to jambs, headers or tracks as intended by the manufacturer of the attachment hardware.

305.7 Carbon monoxide alarms. Carbon monoxide alarms shall be maintained as approved.

**SECTION 306
COMPONENT SERVICEABILITY**

306.1 General. The components of a structure and equipment therein shall be maintained in good repair, structurally sound and in a sanitary condition.

306.1.1 Unsafe conditions. Where any of the following conditions cause the component or system to be beyond its limit state, the component or system shall be determined as unsafe and shall be repaired or replaced to comply with the *International Building Code* or the *International Existing Building Code* as required for existing buildings:

1. Soils that have been subjected to any of the following conditions:
 - 1.1. Collapse of footing or foundation system;
 - 1.2. Damage to footing, foundation, concrete or other structural element due to soil expansion;

Comment [x47]: Existing state amendment.

Comment [x44]: Existing state amendments.

Comment [x45]: Language recommended by VBCOA to be able to use the IPMC text for gates.

Comment [x46]: Occupant responsibility for violations is determined by Chapter 1 so this language is deleted.

1.3. Adverse effects to the design strength of footing, foundation, concrete or other structural element due to a chemical reaction from the soil;

1.4. Inadequate soil as determined by a geotechnical investigation;

1.5. Where the allowable bearing capacity of the soil is in doubt; or

1.6. Adverse effects to the footing, foundation, concrete or other structural element due to the ground-water table.

2. Concrete that has been subjected to any of the following conditions:

2.1. Deterioration;

2.2. Ultimate deformation;

2.3. Fractures;

2.4. Fissures;

2.5. Spalling;

2.6. Exposed reinforcement; or

2.7. Detached, dislodged or failing connections.

3. Aluminum that has been subjected to any of the following conditions:

3.1. Deterioration;

3.2. Corrosion;

3.3. Elastic deformation;

3.4. Ultimate deformation;

3.5. Stress or strain cracks;

3.6. Joint fatigue; or

3.7. Detached, dislodged or failing connections.

4. Masonry that has been subjected to any of the following conditions:

4.1. Deterioration;

4.2. Ultimate deformation;

4.3. Fractures in masonry or mortar joints;

4.4. Fissures in masonry or mortar joints;

4.5. Spalling;

4.6. Exposed reinforcement; or

4.7. Detached, dislodged or failing connections.

5. Steel that has been subjected to any of the following conditions:

5.1. Deterioration;

5.2. Elastic deformation;

5.3. Ultimate deformation;

5.4. Metal fatigue; or

5.5. Detached, dislodged or failing connections.

6. Wood that has been subjected to any of the following conditions:

6.1. Ultimate deformation;

6.2. Deterioration;

6.3. Damage from insects, rodents and other vermin;

6.4. Fire damage beyond charring;

6.5. Significant splits and checks;

6.6. Horizontal shear cracks;

6.7. Vertical shear cracks;

6.8. Inadequate support;

6.9. Detached, dislodged or failing connections;
or

6.10. Excessive cutting and notching.

Exceptions:

1. Where substantiated otherwise by an approved method;

2. Demolition of unsafe conditions shall be permitted where approved by the code official.

Comment [x48]: Existing state amendments.

SECTION 307
HANDRAILS AND GUARDRAILS

307.1 General. Every exterior and interior flight of stairs having more than four risers shall have a handrail on one side of the stair and every open portion of a stair, landing, balcony, porch, deck, ramp or other walking surface that is more than 30 inches (762 mm) above the floor or grade below shall have guards. Handrails shall be not less than 30 inches (762 mm) in height or more than 42 inches (1067 mm) in height measured vertically above the nosing of the tread or above the finished floor of the landing or walking surfaces. Guards shall be not less than 30 inches (762 mm) in height above the floor of the landing, balcony, porch, deck, or ramp or other walking surface. Handrails and guards required by the code under

which a building was constructed or which were provided when a building was constructed shall be maintained.

Exception: *Guards* shall not be required where exempted by the adopted building code.

**SECTION 308
RUBBISH AND GARBAGE**

308.1 Accumulation of rubbish or garbage. *Exterior property and premises, and* The interior of every structure; shall be free from any excessive accumulation of rubbish or garbage.

308.2 Disposal of rubbish. Every occupant of a structure shall dispose of all rubbish in a clean and sanitary manner by placing such rubbish in approved containers.

308.2.1 Rubbish storage facilities. The owner of every occupied premises shall supply approved covered containers for rubbish, and the owner of the premises shall be responsible for the removal of rubbish.

308.2.2 Refrigerators. Refrigerators and similar equipment not in operation shall not be discarded, abandoned or stored on premises without first removing the doors.

308.3 Disposal of garbage. Every occupant of a structure shall dispose of garbage in a clean and sanitary manner by placing such garbage in an approved garbage disposal facility or approved garbage containers.

308.3.1 Garbage facilities. The owner of every dwelling shall supply one of the following: an approved mechanical food waste grinder in each dwelling unit; an approved incinerator unit in the structure available to the occupants in each dwelling unit; or an approved leakproof, covered, outside garbage container.

308.3.2 Containers. The operator of every establishment producing garbage shall provide, and at all times cause to be utilized, approved leakproof containers provided with close fitting covers for the storage of such materials until removed from the premises for disposal.

**SECTION 309
PEST ELIMINATION INFESTATION AND EXTERMINATION**

309.1 Infestation. This section shall apply to the extent that insect and rodent infestation adversely affects a structure. All structures shall be kept free from insect and rodent infestation. Structures in which insects or rodents are found shall be promptly exterminated by approved processes that will not be injurious to human health. After pest elimination extermination, proper precautions shall be taken to prevent reinfestation.

309.2 Owner. The owner of any structure shall be responsible

for pest elimination within the structure prior to renting or leasing the structure.

309.3 Single occupant. The occupant of a one family dwelling or of a single tenant nonresidential structure shall be responsible for pest elimination on the premises.

309.4 Multiple occupancy. The owner of a structure containing two or more dwelling units, a multiple occupancy, a rooming house or a nonresidential structure shall be responsible for pest elimination in the public or shared areas of the structure and exterior property. If infestation is caused by failure of an occupant to prevent such infestation in the area occupied, the occupant and owner shall be responsible for pest elimination.

309.5 Occupant. The occupant of any structure shall be responsible for the continued rodent and pest free condition of the structure.

Exception: Where the infestations are caused by defects in the structure, the owner shall be responsible for pest elimination

**SECTION 310
LEAD-BASED PAINT**

310.1 General. Interior and exterior painted surfaces of dwellings and child care facilities, including fences and outbuildings, that contain lead levels equal to or greater than 1.0 milligram per square centimeter or in excess of 0.50% lead by weight shall be maintained in a condition free from peeling, chipping and flaking paint or removed or covered in an approved manner. Any surface to be covered shall first be identified by an approved warning as to the lead content of such surface.

**SECTION 311
ABOVEGROUND LIQUID FERTILIZER STORAGE TANKS**

311.1 General. ALFSTs shall be maintained in accordance with the requirements of Section 1701.16 of the VRC and the requirements of the VCC applicable to such ALFSTs when newly constructed and the requirements of the VRC when undergoing a change of occupancy to an ALFST and when repaired, altered or reconstructed, including the requirements for inspections and for a secondary containment system.

Comment [x49]: Removing construction requirements and adding a general statement requiring maintenance.

Comment [x52]: These sections in the IPMC address who is responsible for code violations. Since that subject matter is covered in Chapter 1 and in state law, the sections are deleted.

Comment [x50]: Existing state amendments.

Comment [x53]: Existing state amendments.

Comment [x51]: Existing state amendment.

CHAPTER 4

LIGHT, VENTILATION AND OCCUPANCY LIMITATIONS

SECTION 401 GENERAL

401.1 Scope. The provisions of this chapter shall govern the minimum conditions and standards maintenance of structures for light, ventilation and space for occupying a structure occupancy.

401.2 Responsibility. The owner of the structure shall provide and maintain light, ventilation and space conditions in compliance with these requirements. A person shall not occupy as owner occupant, or permit another person to occupy, any premises that do not comply with the requirements of this chapter.

401.3 Alternative devices. In lieu of the means for natural light and ventilation herein prescribed, artificial light or mechanical ventilation complying with the International Building Code shall be permitted.

SECTION 402 LIGHT

402.1 Habitable spaces Natural or artificial light. Every habitable space, hallway, stairway, bathroom and other spaces shall have not less than one window of approved size facing directly to the outdoors or to a court. The minimum total glazed area for every habitable space shall be 8 percent of the floor area of such room. Wherever walls or other portions of a structure face a window of any room and such obstructions are located less than 3 feet (914 mm) from the window and extend to a level above that of the ceiling of the room, such window shall not be deemed to face directly to the outdoors nor to a court and shall not be included as contributing to the required minimum total window area for the room shall be maintained to provide natural or artificial light to the extent required by the code under which a building was constructed or to the extent provided when such building was constructed.

Exception: Where natural light for rooms or spaces without exterior glazing areas is provided through an adjoining room, the unobstructed opening to the adjoining room shall be not less than 8 percent of the floor area of the interior room or space, but a minimum of 25 square feet (2.33 m²). The exterior glazing area shall be based on the total floor area being served.

402.2 Common halls and stairways. Every common hall and stairway in residential occupancies, other than in one and two family dwellings, shall be lighted at all times with not less than a 60 watt standard incandescent light bulb for each 200 square feet (19 m²) of floor area or equivalent illumination, provided that the spacing between lights shall not be greater than 30 feet (9144 mm). In other than residential occupancies, means of egress, including exterior means of egress, stairways shall be illuminated at all times the building space served by the means of egress is occupied with not less than 1 footcandle (11 lux) at floors, landings and treads.

402.3 Other spaces. All other spaces shall be provided with natural or artificial light sufficient to permit the maintenance of sanitary conditions, and the safe occupancy of the space and utilization of the appliances, equipment and fixtures.

SECTION 403 VENTILATION

403.1 Habitable spaces Natural or mechanical ventilation. Every habitable space, hallway, stairway, bathroom and other spaces shall have not less than one openable window. The total openable area of the window in every room shall be equal to not less than 45 percent of the minimum glazed area required in Section 402.1 be maintained to provided natural or mechanical ventilation to the extent required by the code under which a building was constructed or to the extent provided when such building was constructed.

Exception: Where rooms and spaces without openings to the outdoors are ventilated through an adjoining room, the unobstructed opening to the adjoining room shall be not less than 8 percent of the floor area of the interior room or space, but not less than 25 square feet (2.33 m²). The ventilation openings to the outdoors shall be based on a total floor area being ventilated.

403.2 Bathrooms and toilet rooms. Every bathroom and toilet room shall comply with the ventilation requirements for habitable spaces as required by Section 403.1, except that a window shall not be required in such spaces equipped with a mechanical ventilation system. Air exhausted by a mechanical ventilation system from a bathroom or toilet room shall discharge to the outdoors and shall not be recirculated.

403.3 Cooking facilities. Unless approved through the certificate of occupancy, cooking shall not be permitted in any rooming unit or dormitory unit, and a cooking facility or appliance shall not be permitted to be present in the rooming unit or dormitory unit.

Exceptions:

1. Where specifically approved in writing by the code official.
2. Devices such as coffee pots and microwave ovens shall not be considered cooking appliances.

403.4 Process ventilation. Where injurious, toxic, irritating or noxious fumes, gases, dusts or mists are generated, a local exhaust ventilation system shall be provided to remove the contaminating agent at the source. Air shall be exhausted to the exterior and not be recirculated to any space. Local exhaust systems required by the code under which a building was constructed, or which are provided, that exhaust injurious, toxic, irritating or noxious fumes, gases, dusts or mists to the exterior of a building shall be maintained to prevent compromising the required ventilation system.

403.5 Clothes dryer exhaust. Clothes dryer exhaust systems

Comment [x54]: The scope statement is changed to bring it in line with Chapter 1 and the statutory authority for the VMC.

Comment [x57]: Construction requirements in the IPMC are deleted and maintenance and operational requirements left intact.

Comment [x55]: Who is responsible for code violations is addressed in Chapter 1 and in state law, so Section 401.2 is deleted. Section 401.3 is deleted as it assumes that the IPMC construction requirements are enforceable.

Comment [x56]: All construction requirements in this section are deleted and replaced by a general statement requiring the maintenance of existing facilities.

shall be independent of all other systems and shall be exhausted outside the structure in accordance with the manufacturer's instructions.

Exception: Listed and labeled condensing (ductless) clothes dryers.

**SECTION 404
OCCUPANCY LIMITATIONS**

404.05 Limitation of application of section. The provisions of Section 404 which address construction aspects of occupancy limitations shall apply on the extent that such requirements were part of the code under which a building was constructed. Operational requirements such as the use of rooms or minimum areas per occupant are part of this code to the extent that they do not require alterations to be made to a building.

404.1 Privacy. Dwelling units, hotel units, housekeeping units, rooming units and dormitory units shall be arranged to provide privacy and be separate from other adjoining spaces.

404.2 Minimum room widths. A habitable room, other than a kitchen, shall be not less than 7 feet (2134 mm) in any plan dimension. Kitchens shall have a minimum clear passageway of 3 feet (914 mm) between counterfronts and appliances or counterfronts and walls.

404.3 Minimum ceiling heights. Habitable spaces, hallways, corridors, laundry areas, bathrooms, toilet rooms and habitable basement areas shall have a minimum clear ceiling height of 7 feet (2134 mm).

Exceptions:

1. In one- and two-family dwellings, beams or girders spaced not less than 4 feet (1219 mm) on center and projecting a maximum of 6 inches (152 mm) below the required ceiling height.

2. Basement rooms in one- and two-family dwellings occupied exclusively for laundry, study or recreation purposes, having a minimum ceiling height of 6 feet 8 inches (2033 mm) with a minimum clear height of 6 feet 4 inches (1932 mm) under beams, girders, ducts and similar obstructions.

3. Rooms occupied exclusively for sleeping, study or similar purposes and having a sloped ceiling over all or part of the room, with a minimum clear ceiling height of 7 feet (2134 mm) over not less than onethird of the required minimum floor area. In calculating the floor area of such rooms, only those portions of the floor area with a minimum clear ceiling height of 5 feet (1524 mm) shall be included.

404.4 Bedroom and living room requirements. Every bedroom and living room shall comply with the requirements of Sections 404.4.1 through 404.4.5.

404.4.1 Room area. Every living room shall contain not less than 120 square feet (11.2 m²) and every bedroom shall contain not less than 70 square feet (6.5 m²) and

every bedroom occupied by more than one person shall contain not less than 50 square feet (4.6 m²) of floor area for each occupant thereof.

404.4.2 Access from bedrooms. Bedrooms shall not constitute the only means of access to other bedrooms or habitable spaces and shall not serve as the only means of egress from other habitable spaces.

Exception: Units that contain fewer than two bedrooms.

404.4.3 Water closet accessibility. Every bedroom shall have access to not less than one water closet and one lavatory without passing through another bedroom. Every bedroom in a dwelling unit shall have access to not less than one water closet and lavatory located in the same story as the bedroom or an adjacent story.

404.4.4 Prohibited occupancy. Kitchens and nonhabitable spaces shall not be used for sleeping purposes.

404.4.5 Other requirements. Bedrooms shall comply with the applicable provisions of this code including, but not limited to, the light, ventilation, room area, ceiling height and room width requirements of this chapter; the plumbing facilities and water-heating facilities requirements of Chapter 5; the heating facilities and electrical receptacle requirements of Chapter 6; and the smoke detector and emergency escape requirements of Chapter 7.

404.5 Overcrowding. Dwelling units shall not be occupied by more occupants than permitted by the minimum area requirements of Table 404.5.

**TABLE 404.5
MINIMUM AREA REQUIREMENTS**

SPACE	MINIMUM AREA IN SQUARE FEET		
	1-2 occupants	3-5 occupants	6 or more occupants
Living room ^{a, b}	120	120	150
Dining room ^{a, b}	No requirement	80	100
Bedrooms	Shall comply with Section 404.4.1		

For SI: 1 square foot = 0.0929 m².

a. See Section 404.5.2 for combined living room/dining room spaces.

b. See Section 404.5.1 for limitations on determining the minimum occupancy area for sleeping purposes.

404.5.1 Sleeping area. The minimum occupancy area required by Table 404.5 shall not be included as a sleeping area in determining the minimum occupancy area for sleeping purposes. Sleeping areas shall comply with Section 404.4.

404.5.2 Combined spaces. Combined living room and dining room spaces shall comply with the requirements of Table 404.5 if the total area is equal to that required for separate rooms and if the space is located so as to function as a combination living room/dining room.

404.6 Efficiency unit. Nothing in this section shall prohibit an efficiency living unit from meeting the following requirements:

Comment [x58]: Since there have been prior state amendments to this section addressing criteria for occupancy, a general statement is added to the beginning of the section authorizing the use of the section to the extent that is does not require alterations to be made, since that would be a construction requirement and not within the scope of the VMC.

1. A unit occupied by not more than one occupant shall have a minimum clear floor area of 120 square feet (11.2 m²). A unit occupied by not more than two *occupants* shall have a minimum clear floor area of 220 square feet (20.4 m²). A unit occupied by three *occupants* shall have a minimum clear floor area of 320 square feet (29.7 m²). These required areas shall be exclusive of the areas required by Items 2 and 3.

2. The unit shall be provided with a kitchen sink, cooking appliance and refrigeration facilities, each having a minimum clear working space of 30 inches (762 mm) in front. Light and *ventilation* conforming to this code shall be provided.

3. The unit shall be provided with a separate *bathroom* containing a water closet, lavatory and bathtub or shower.

4. The maximum number of *occupants* shall be three.

404.7 Food preparation. All spaces to be occupied for food preparation purposes shall contain suitable space and equipment to store, prepare and serve foods in a sanitary manner. There shall be adequate facilities and services for the sanitary disposal of food wastes and refuse, including facilities for temporary storage.

CHAPTER 5

PLUMBING FACILITIES AND FIXTURE REQUIREMENTS

SECTION 501 GENERAL

501.1 Scope General. The provisions of this chapter shall govern the minimum maintenance of structures for plumbing systems, facilities and plumbing fixtures to be provided.

501.2 Responsibility. The owner of the structure shall provide and maintain such plumbing facilities and plumbing fixtures in compliance with these requirements. A person shall not occupy as owner occupant or permit another person to occupy any structure or premises that does not comply with the requirements of this chapter.

SECTION 502 REQUIRED FACILITIES

[P] 502.1 Dwelling units. Every dwelling unit shall contain its own bathtub or shower, lavatory, water closet and kitchen sink that shall be maintained in a sanitary, safe working condition. The lavatory shall be placed in the same room as the water closet or located in close proximity to the door leading directly into the room in which such water closet is located. A kitchen sink shall not be used as a substitute for the required lavatory.

[P] 502.2 Rooming houses. Not less than one water closet, lavatory and bathtub or shower shall be supplied for each four rooming units.

[P] 502.3 Hotels. Where private water closets, lavatories and baths are not provided, one water closet, one lavatory and one bathtub or shower having access from a public hallway shall be provided for each 10 occupants.

[P] 502.4 Employees' facilities. Not less than one water closet, one lavatory and one drinking facility shall be available to employees.

[P] 502.4.1 Drinking facilities. Drinking facilities shall be a drinking fountain, water cooler, bottled water cooler or disposable cups next to a sink or water dispenser. Drinking facilities shall not be located in toilet rooms or bathrooms.

[P] 502.5 Public toilet facilities. Public toilet facilities shall be maintained in a safe, sanitary and working condition in accordance with the International Plumbing Code. Except for periodic maintenance or cleaning, public access and use shall be provided to the toilet facilities at all times during occupancy of the premises.

SECTION 503 TOILET ROOMS

[P] 503.1 Privacy. Toilet rooms and bathrooms shall provide privacy and shall not constitute the only passageway to a hall or other space, or to the exterior. A door and interior locking device shall be provided for all common or shared bathrooms

and toilet rooms in a multiple dwelling.

[P] 503.2 Location. Toilet rooms and bathrooms serving hotel units, rooming units or dormitory units or housekeeping units, shall have access by traversing not more than one flight of stairs and shall have access from a common hall or passageway.

[P] 503.3 Location of employee toilet facilities. Toilet facilities shall have access from within the employees' working area. The required toilet facilities shall be located not more than one story above or below the employees' working area and the path of travel to such facilities shall not exceed a distance of 500 feet (152 m). Employee facilities shall either be separate facilities or combined employee and public facilities.

Exception: Facilities that are required for employees in storage structures or kiosks, which are located in adjacent structures under the same ownership, lease or control, shall not exceed a travel distance of 500 feet (152 m) from the employees' regular working area to the facilities.

[P] 503.4 Floor surface. In other than dwelling units, every toilet room floor shall be maintained to be a smooth, hard, nonabsorbent surface to permit such floor to be easily kept in a clean and sanitary condition.

SECTION 504 PLUMBING SYSTEMS AND FIXTURES

[P] 504.1 General. Plumbing fixtures shall be properly installed and maintained in working order, and shall be kept free from obstructions, leaks and defects and be capable of performing the function for which such plumbing fixtures are designed. Plumbing fixtures shall be maintained in a safe, sanitary and functional condition. Required or provided plumbing systems and facilities shall be maintained in compliance with the code under which constructed.

504.1.1 Public and employee facilities. Except for periodic maintenance or cleaning, access and use shall be provided to facilities at all times during occupancy of the premises in accordance with the code under which constructed.

504.2 Plumbing fixtures. All plumbing fixtures shall be maintained in a safe, sanitary and working condition. A kitchen sink shall not be used as a substitute for a required lavatory.

[P] 504.2.1 Fixture clearances. Plumbing fixtures shall have adequate clearances for usage and cleaning of plumbing fixtures shall be maintained as approved when installed.

[P] 504.3 Plumbing system hazards. Where it is found that a plumbing system in a structure constitutes a hazard to the public, the occupants or the structure by reason of inadequate service, inadequate venting, cross connection, backsiphonage, improper installation, deterioration or damage or for similar reasons, the code official shall require the defects to be corrected to eliminate the hazard.

Comment [x59]: The scope statement is changed to bring it in line with Chapter 1 and the statutory authority for the VMC.

Comment [x60]: Who is responsible for code violations is addressed in Chapter 1 and in state law, so this section is deleted.

Comment [x61]: This section is construction-related and therefore deleted.

Comment [x63]: Maintenance requirements deleted in other sections are provided in this general section.

Comment [x64]: These sections were moved from Section 502 since the remainder of Section 502 was deleted.

Comment [x65]: The language is changed to only require maintenance of clearances provided.

Comment [x62]: This section contains all construction-related requirements, so it is deleted.

Comment [x66]: Language addressing minimum criteria is deleted since it could require a building to be upgraded and language addressing lack of maintenance is left in.

SECTION 505 WATER SYSTEM

505.1 General Supply. Every sink, lavatory, bathtub or shower, drinking fountain, water closet or other plumbing fixture shall be properly connected to either a public water system or to an approved private water system. Kitchen sinks, lavatories, laundry facilities, bathtubs and showers shall be supplied with hot or tempered and cold running water in accordance with the *International Plumbing Code*. Required or provided water supply systems shall be maintained in compliance with the code under which the systems were constructed. All water supply systems shall be free from obstructions, defects and leaks.

505.1.1 Tempered water. Tempered water shall be supplied to fixtures and facilities when required by the code under which constructed.

505.2 Protection of water supply systems. Protection of water supply systems shall be provided to the extent required by the code under which a building was constructed and shall be maintained.

505.2.1 Attached hoses. Shampoo basin faucets, janitor sink faucets and other hose bibs or faucets to which hoses are attached and left in place shall be protected by an approved atmospheric-type vacuum breaker or an approved permanently attached hose connection vacuum breaker.

[P] 505.2 505.3 Contamination Inspection and testing of backflow prevention assemblies. The water supply shall be maintained free from contamination, and all water inlets for plumbing fixtures shall be located above the flood level rim of the fixture. Shampoo basin faucets, janitor sink faucets and other hose bibs or faucets to which hoses are attached and left in place, shall be protected by an approved atmospheric type vacuum breaker or an approved permanently attached hose connection vacuum breaker. Inspection and testing shall comply with Sections 505.3.1 and 505.3.2.

505.3.1 Inspections. Inspections shall be made of all backflow assemblies and air gaps to determine whether they are operable.

505.3.2 Testing. Reduced pressure principle backflow preventer assemblies, double check-valve assemblies, double-detector check valve assemblies and pressure vacuum breaker assemblies shall be tested at the time of installation, immediately after repairs or relocation and at least annually. The testing procedure shall be performed in accordance with one of the following standards: ASSE 5013; ASSE 5015; ASSE 5020; ASSE 5047; ASSE 5048; or CSA B64.10.1.

505.3 Supply. The water supply system shall be installed and maintained to provide a supply of water to plumbing fixtures, devices and appurtenances in sufficient volume and at pressures

adequate to enable the fixtures to function properly, safely, and free from defects and leaks.

505.4 Water heating facilities. Water heating facilities shall be properly installed, maintained and capable of providing an adequate amount of water to be drawn at every required sink, lavatory, bathtub, shower and laundry facility at a minimum temperature of 110°F (43°C). A gas burning water heater shall not be located in any bathroom, toilet room, bedroom or other occupied room normally kept closed, unless adequate combustion air is provided. An approved combination temperature and pressure-relief valves and relief valve discharge pipes shall be properly installed and maintained on water heaters.

SECTION 506 SANITARY DRAINAGE SYSTEM

[P] 506.1 General Draining and venting. Plumbing fixtures shall be properly connected to either a public sewer system or to an approved private sewage disposal system. Required or provided sanitary drainage and venting systems shall be maintained in compliance with the code under which the system was constructed.

[P] 506.2 Maintenance. Every plumbing stack, vent, waste and sewer line building drainage and sewer system shall function properly and be kept free from obstructions, leaks and defects.

[P] 506.3 Grease interceptors. Grease interceptors and automatic grease removal devices shall be maintained in accordance with this code and the manufacturer's installation instructions. Grease interceptors and automatic grease removal devices shall be regularly serviced and cleaned to prevent the discharge of oil, grease, and other substances harmful or hazardous to the building drainage system, the public sewer, the private sewage disposal system or the sewage treatment plant or processes. Records of maintenance, cleaning and repairs shall be available for inspection by the code official.

SECTION 507 STORM DRAINAGE

[P] 507.1 General. Drainage of roofs and paved areas, yards and courts, and other open areas on the premises shall not be discharged in a manner that creates a public nuisance to protect the buildings and structures from the accumulation of overland water runoff.

Comment [x67]: Section 505.1 is reworded to delete construction-related requirements and add all maintenance requirements from the remainder of Section 505. Sections 505.3 and 505.4 are existing state amendments.

Comment [x68]: Construction-related provisions deleted and maintenance provisions kept.

Comment [x69]: Removed the reference to connections as that is controlled by the Virginia Dept. of Health.

Comment [x70]: The language in the IPCM is clarified to include all building drainage and sewer systems.

Comment [x71]: Existing state amendment.

CHAPTER 6 MECHANICAL AND ELECTRICAL REQUIREMENTS

SECTION 601 GENERAL

601.1 Scope General. The provisions of this chapter shall govern the ~~minimum~~ maintenance of mechanical and electrical facilities and equipment to be provided.

601.2 Responsibility. The ~~owner~~ of the structure shall provide and maintain mechanical and electrical facilities and equipment in compliance with these requirements. A person shall not occupy as owner occupant or permit another person to occupy any premises that does not comply with the requirements of this chapter.

SECTION 602 HEATING AND COOLING FACILITIES

602.1 Facilities required. Heating and cooling facilities shall be ~~provided~~ maintained and operated in structures as required by this section.

602.2 Residential occupancies. Dwellings shall be provided with heating facilities capable of maintaining a room temperature of 68°F (20°C) in all habitable rooms, ~~bathrooms and toilet rooms~~ based on the winter outdoor design temperature for the locality indicated in Appendix D of the *International Plumbing Code*. Cooking appliances shall not be used, nor shall portable unvented fuel burning space heaters be used, as a means to provide required heating.

Exception: In areas where the average monthly temperature is above 30°F (-1°C), a minimum temperature of 65°F (18°C) shall be maintained.

602.3 602.2 Heat supply. Every owner and operator of any a Group R-2 apartment building or other residential building who rents, leases or lets one or more dwelling units or sleeping units, rooming unit, dormitory or guestroom on terms, either expressed or implied, to furnish heat to the occupants thereof shall supply heat during the period from ~~{DATE} October 15~~ to ~~{DATE} May 1~~ to maintain a minimum temperature of not less than 68°F (20°C) in all habitable rooms, bathrooms, and toilet rooms. The code official may also consider modifications as provided in Section 104.5.2 when requested for unusual circumstances or may issue notice approving building owners to convert shared heating and cooling piping HVAC systems 14 calendar days before or after the established dates when extended periods of unusual temperatures merit modifying these dates.

Exceptions: 1. When the outdoor temperature is below the winter outdoor design temperature for the locality, maintenance of the minimum room temperature shall not be required provided that the heating system is operating at its full design capacity. The winter outdoor design temperature for the locality shall be as indicated in Appendix D of the *International Plumbing Code*.

2. In areas where the average monthly temperature is above 30°F (-1°C), a minimum temperature of 65°F

(18°C) shall be maintained.

602.2.1 Prohibited use. In dwelling units subject to Section 602.2, one or more unvented room heaters shall not be used as the sole source of comfort heat in a dwelling unit.

602.4 602.3 Occupiable work spaces. Indoor occupiable work spaces shall be supplied with heat during the period from ~~{DATE} October 1~~ to ~~{DATE} May 15~~ to maintain a minimum temperature of 65°F (18°C) during the period the spaces are occupied.

Exceptions:

1. Processing, storage and operation areas that require cooling or special temperature conditions.

2. Areas in which persons are primarily engaged in vigorous physical activities.

602.4 Cooling supply. Every owner and operator of a Group R-2 apartment building who rents, leases or lets one or more dwelling units, rooming units or guestrooms on terms, either expressed or implied, to furnish cooling to the occupants thereof shall supply cooling during the period from May 15 to October 1 to maintain a temperature of not more than 80°F (27°C) in all habitable rooms. The code official may also consider modifications as provided in Section 104.5.2 when requested for unusual circumstances or may issue notice approving building owners to convert shared heating and cooling piping HVAC systems 14 calendar days before or after the established dates when extended periods of unusual temperatures merit modifying these dates.

Exception: When the outdoor temperature is higher than the summer design temperature for the locality, maintenance of the room temperature shall not be required provided that the cooling system is operating at its full design capacity. The summer outdoor design temperature for the locality shall be as indicated in the IECC.

602.5 Room temperature measurement. The required room temperatures shall be measured 3 feet (914 mm) above the floor near the center of the room and 2 feet (610 mm) inward from the center of each exterior wall.

SECTION 603 MECHANICAL EQUIPMENT

603.1 Mechanical appliances. Required or provided ~~M~~mechanical appliances, fireplaces, solid fuel-burning appliances, cooking appliances, chimneys, vents and water heating appliances shall be properly installed and maintained in compliance with the code under which the appliance, system or equipment was installed, kept in a safe working condition, and shall be capable of performing the intended function.

603.2 Removal of combustion products. Where required by the code under which installed, ~~F~~fuel-burning equipment and appliances shall be connected to an approved chimney or vent.

Exception: Fuel-burning equipment and appliances that

Comment [x72]: The scope section is changed to bring it in line with Chapter 1 and the statutory authority for the VMC and the responsibility section is deleted as in prior chapters.

Comment [x73]: All changes to this section are existing state amendments.

Comment [x74]: Construction-related requirements are deleted and maintenance-related requirements left in.

~~are labeled for unvented operation.~~

603.3 Clearances. Required clearances to combustible materials shall be maintained.

603.4 Safety controls. Safety controls for fuel-burning equipment shall be maintained in effective operation.

603.5 Combustion air. Where required by the code under which installed, A supply of air for complete combustion of the fuel ~~and for ventilation of the space containing the~~ fuel-burning equipment shall be provided for the fuel-burning equipment.

603.6 Energy conservation devices. ~~Devices intended to reduce fuel consumption by attachment to a fuel burning appliance, to the fuel supply line thereto, or to the vent outlet or vent piping therefrom, shall not be installed unless labeled for such purpose and the installation is specifically approved.~~

SECTION 604 ELECTRICAL FACILITIES

604.1 Facilities required Electrical system. ~~Every occupied building shall be Required or provided with an electrical systems in compliance with the requirements of this section and Section 605 and facilities shall be maintained in compliance with the code under which the system or facility was constructed.~~

604.2 Service. ~~The size and usage of appliances and equipment shall serve as a basis for determining the need for additional facilities in accordance with NFPA 70. Dwelling units shall be served by a three-wire, 120/240-volt, single-phase electrical service having a minimum rating of 60 amperes.~~

604.3 Electrical system hazards. ~~Where it is found that the electrical system in a structure constitutes a hazard to the occupants or the structure by reason of inadequate service, improper fusing, insufficient receptacle and lighting outlets, improper wiring or installation, deterioration or damage, or for similar reasons, the code official shall require the defects to be corrected to eliminate the hazard.~~

604.3.1 Abatement of electrical hazards associated with water exposure. The provisions of this section shall govern the repair and replacement of electrical systems and equipment that have been exposed to water.

604.3.1.1 Electrical equipment. Electrical distribution equipment, motor circuits, power equipment, transformers, wire, cable, flexible cords, wiring devices, ground fault circuit interrupters, surge protectors, molded case circuit breakers, low-voltage fuses, luminaires, ballasts, motors and electronic control, signaling and communication equipment that have been exposed to water shall be replaced in accordance with the provisions of the *International Building Code VCC*.

Exception: The following equipment shall be allowed to be repaired or reused where an inspection report from the equipment manufacturer ~~or, an approved representative of the equipment manufacturer's representative,~~ a third party licensed or certified electrician, or an electrical engineer indicates

that the equipment has not sustained damage that requires replacement:

1. Enclosed switches, rated ~~a maximum of~~ 600 volts or less;
2. Busway, rated ~~a maximum of~~ 600 volts or less;
3. Panelboards, rated ~~a maximum of~~ 600 volts or less;
4. Switchboards, rated ~~a maximum of~~ 600 volts or less;
5. Fire pump controllers, rated ~~a maximum of~~ 600 volts or less;
6. Manual and magnetic motor controllers;
7. Motor control centers;
8. Alternating current high-voltage circuit breakers;
9. Low-voltage power circuit breakers;
10. Protective relays, meters and current transformers;
11. Low- and medium-voltage switchgear;
12. Liquid-filled transformers;
13. Cast-resin transformers;
14. Wire or cable that is suitable for wet locations and whose ends have not been exposed to water;
15. Wire or cable, not containing fillers, that is suitable for wet locations and whose ends have not been exposed to water;
16. Luminaires that are listed as submersible;
17. Motors;
18. Electronic control, signaling and communication equipment.

604.3.2 Abatement of electrical hazards associated with fire exposure. ~~The provisions of this section shall govern the repair and replacement of electrical systems and equipment that have been exposed to fire.~~

604.3.2.1 Electrical equipment. ~~Electrical switches, receptacles and fixtures, including furnace, water heating, security system and power distribution circuits, that have been exposed to fire, shall be replaced in accordance with the provisions of the *International Building Code*.~~

Exception: ~~Electrical switches, receptacles and fixtures that shall be allowed to be repaired where an inspection report from the equipment manufacturer or approved manufacturer's representative indicates that the equipment has not sustained damage that requires replacement.~~

Comment [x75]: Construction-related requirements are deleted and maintenance-related requirements left in. Section 604.3.1.1 contains existing state amendments.

SECTION 605 ELECTRICAL EQUIPMENT

605.1 Installation ~~Electrical components.~~ Electrical equipment, wiring and appliances shall be ~~properly installed and maintained in compliance with the code under which constructed and~~ in a safe and ~~approved~~ manner.

605.2 Power distribution and R~~eceptacles.~~ ~~Every habitable space in a dwelling shall contain not less than two separate and remote receptacle outlets. Every laundry area shall contain not less than one grounding-type receptacle or a receptacle with a ground fault circuit interrupter. Every bathroom shall contain not less than one receptacle. Any new bathroom receptacle outlet shall~~ have Required or provided power circuits and receptacles shall be maintained in accordance with the code under which constructed and ground fault and arc-fault circuit interrupter protection shall be provided where required by the code in effect at the time of construction. All receptacle outlets shall have the appropriate faceplate cover for the location when required by the code under which constructed.

605.3 Lighting distribution and L~~uminaires.~~ Every public hall, interior stairway, ~~toilet room, kitchen, bathroom, laundry room, boiler room and furnace room shall contain not less than one electric luminaire. Pool and spa luminaires over 15 V shall have ground fault circuit interrupter protection.~~ Required or provided lighting circuits and luminaires shall be maintained in compliance with the code under which constructed.

605.4 Wiring ~~Flexible cords.~~ Flexible cords shall not be ~~used for permanent wiring, or for running run~~ through doors, windows, or cabinets, or concealed within walls, floors, or ceilings.

SECTION 606 ELEVATORS, ESCALATORS AND DUMBWAITERS

606.1 General. Elevators, dumbwaiters and escalators shall be maintained in compliance with ASME A17.1. The most current certificate of inspection shall be on display at all times within the elevator or attached to the escalator or dumbwaiter, be available for public inspection in the office of the building *operator* or be posted in a publicly conspicuous location *approved by the code official.* ~~The inspection and tests shall be performed at not less than the periodic intervals listed in ASME A17.1, Appendix N, except where otherwise specified by the authority having jurisdiction. An annual periodic inspection and test is required of elevators and escalators. A locality shall be permitted to require a six-month periodic inspection and test. All periodic inspections shall be performed in accordance with Section 8.11 of ASME A17.1. The code official may also provide for such inspection by an approved agency or through agreement with other local certified elevator inspectors. An approved agency includes any individual, partnership or corporation who has met the certification requirements established by the VCS.~~

606.2 Elevators. In buildings equipped with passenger elevators, not less than one elevator shall be maintained in operation at all times when the building is occupied.

Exception: Buildings equipped with only one elevator shall be permitted to have the elevator temporarily out of service for testing or servicing.

SECTION 607 DUCT SYSTEMS

607.1 General. Duct systems shall be maintained free of obstructions and shall be capable of performing the required function.

607.2 Clothes dryer exhaust duct. Required or provided clothes dryer exhaust systems shall be maintained in compliance with the code under which constructed.

Comment [x76]: Construction-related requirements are deleted and maintenance-related requirements left in.

Comment [x77]: Existing state amendments.

CHAPTER 7

FIRE SAFETY REQUIREMENTS

SECTION 701 GENERAL

701.1 Scope General. The provisions of this chapter shall govern the ~~minimum conditions and standards for fire safety relating to structures and exterior premises, including maintenance of fire safety facilities and equipment to be provided.~~

701.2 Responsibility. The owner of the premises shall provide and maintain such fire safety facilities and equipment in compliance with these requirements. A person shall not occupy as owner-occupant or permit another person to occupy any premises that do not comply with the requirements of this chapter.

SECTION 702 MEANS OF EGRESS

[F] 702.1 General. A safe, continuous and unobstructed path of travel shall be provided from any point in a building or structure to the public way. ~~All required or provided means of egress components shall comply with the International Fire Code be maintained in accordance with the code under which constructed.~~

[F] 702.2 Aisles. The required width of aisles ~~in accordance with the International Fire Code shall be unobstructed, shall be maintained in accordance with the code under which constructed.~~

[F] 702.3 Locked doors. Means of egress doors shall be maintained and, to the extent required by the code in effect at the time of construction, shall be readily openable from the side from which egress is to be made without the need for keys, special knowledge or effort, ~~except where the door hardware conforms to that permitted by the International Building Code.~~

[F] 702.4 Emergency escape openings. Required emergency escape openings shall be maintained in accordance with the code in effect at the time of construction, and the following: Required emergency escape and rescue openings ~~to the extent required by the code in effect at the time of construction, shall be operational from the inside of the room without the use of keys or tools. Bars, grilles, grates or similar devices are permitted to be placed over emergency escape and rescue openings provided the minimum net clear opening size complies with the code that was in effect at the time of construction and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening.~~

SECTION 703 FIRE-RESISTANCE RATINGS

[F] 703.1 Fire-resistance-rated assemblies. The required fire-resistance rating of fire-resistance-rated walls, fire stops, shaft enclosures, partitions and floors shall be maintained.

[F] 703.2 Opening protectives. Required opening protectives shall be maintained in an operative condition. Fire and

smokestop doors shall be maintained in operable condition. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable.

SECTION 704 FIRE PROTECTION SYSTEMS

[F] 704.1 General. Systems, devices and equipment to detect a fire, actuate an alarm, or suppress or control a fire or any combination thereof shall be maintained in an operable condition at all times ~~in accordance with the International Fire Code.~~

[F] 704.1.1 Automatic sprinkler systems. Inspection, testing and maintenance of automatic sprinkler systems shall be in accordance with NFPA 25 ~~for the purpose of operation and maintenance.~~

[F] 704.1.2 Fire department connection. Where the fire department connection is not visible to approaching fire apparatus, the fire department connection shall be indicated by an approved sign mounted on the street front or on the side of the building. Such sign shall have the letters "FDC" not less than 6 inches (152 mm) high and words in letters not less than 2 inches (51 mm) high or an arrow to indicate the location. Such signs shall be subject to the approval of the fire-code official.

[F] 704.2 Single- and multiple-station smoke alarms. Required or provided single- and multiple-station smoke alarms shall be installed in existing Group I-1 and R occupancies in accordance with Sections 704.2.1 through 704.2.3 maintained in compliance with the code under which they were constructed.

[F] 704.2.1 Where required. Existing Group I-1 and R occupancies shall be provided with single-station smoke alarms in accordance with Sections 704.2.1.1 through 704.2.1.4. Interconnection and power sources shall be in accordance with Sections 704.2.2 and 704.2.3.

Exceptions:

1. Where the code that was in effect at the time of construction required smoke alarms and smoke alarms complying with those requirements are already provided.
2. Where smoke alarms have been installed in occupancies and dwellings that were not required to have them at the time of construction, additional smoke alarms shall not be required provided that the existing smoke alarms comply with requirements that were in effect at the time of installation.
3. Where smoke detectors connected to a fire alarm system have been installed as a substitute for smoke alarms.

[F] 704.2.1.1 Group R-1. Single- or multiple-station

Comment [x78]: The text in this chapter is revised to keep maintenance-related requirements and to delete construction-related or administrative requirements.

Comment [x79]: The International Fire Code may have requirements for upgrading fire safety systems, which would be in conflict with Chapter 1, so the reference is deleted.

Comment [x80]: Language is added to clarify the use of the referenced standard.

smoke alarms shall be installed in all of the following locations in Group R-1:

1. In sleeping areas.
2. In every room in the path of the *means of egress* from the sleeping area to the door leading from the *sleeping unit*.
3. In each story within the *sleeping unit*, including basements. For *sleeping units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

[F] 704.2.1.2 Groups R-2, R-3, R-4 and I-1. Single or multiple station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4 and I-1 regardless of *occupant load* at all of the following locations:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
2. In each room used for sleeping purposes.
3. In each story within a *dwelling unit*, including basements but not including crawl spaces and uninhabitable attics. In *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

[F] 704.2.1.3 Installation near cooking appliances. Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section 704.2.1.1 or 704.2.1.2.

1. Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking appliance.
2. Ionization smoke alarms with an alarm silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking appliance.
3. Photoelectric smoke alarms shall not be installed less than 6 feet (1829 mm) horizontally from a permanently installed cooking appliance.

[F] 704.2.1.4 Installation near bathrooms. Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section 704.2.1.1 or 704.2.1.2.

[F] 704.2.2 Interconnection. Where more than one smoke

alarm is required to be installed within an individual *dwelling or sleeping unit*, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing *alterations*, repairs or construction of any kind.
2. Smoke alarms in existing areas are not required to be interconnected where *alterations* or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes.

[F] 704.2.3 Power source. Single station smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. Smoke alarms are permitted to be solely battery operated in existing buildings where no construction is taking place.
2. Smoke alarms are permitted to be solely battery operated in buildings that are not served from a commercial power source.
3. Smoke alarms are permitted to be solely battery operated in existing areas of buildings undergoing *alterations* or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for building wiring without the removal of interior finishes.

[F] 704.2.4 Smoke detection system. Smoke detectors listed in accordance with UL-268 and provided as part of the building's fire alarm system shall be an acceptable alternative to single- and multiple-station smoke alarms and shall comply with the following:

1. The fire alarm system shall comply with all applicable requirements in Section 907 of the *International Fire Code*.

~~2. Activation of a smoke detector in a dwelling or sleeping unit shall initiate alarm notification in the dwelling or sleeping unit in accordance with Section 907.5.2 of the International Fire Code.~~

~~3. Activation of a smoke detector in a dwelling or sleeping unit shall not activate alarm notification appliances outside of the dwelling or sleeping unit, provided that a supervisory signal is generated and monitored in accordance with Section 907.6.5 of the International Fire Code.~~

CHAPTER 8 REFERENCED STANDARDS

Comment [x81]: Existing state amendments.

Add the following referenced standards to Chapter 8 of the IPMC:

<u>ASSE</u>		American Society of Sanitary Engineers 901 Canterbury Road, Suite A Westlake, OH 44145
<u>Standard reference number</u>	<u>Title</u>	<u>Referenced in code section number</u>
5013—2009	Performance Requirements for Testing Reduced Pressure Principle Backflow Prevention Assembly (RPA) and Reduced Pressure Fire Protection Backflow Preventers (RFP)	505.2.2
5015—2009	Performance Requirements for Testing Double Check Valve Backflow Prevention Assemblies (DC) and Double Check Fire Protection Backflow Prevention Assemblies (DCF)	505.2.2
5020—2009	Performance Requirements for Testing Pressure Vacuum Breaker Assemblies (PVBA)	505.2.2
5047—98	Performance Requirements for Testing Reduced Pressure Detector Fire Protection Backflow Prevention Assemblies (RPDA)	505.2.2
5048—2009	Performance Requirements for Testing Double Check Valve Detector Assembly (DCDA)	505.2.2
<u>CSA</u>		CSA Group 8501 East Pleasant Valley Cleveland, OH 44131-5516
<u>Standard reference number</u>	<u>Title</u>	<u>Referenced in code section number</u>
B64.10.1—11	Maintenance and Field Testing of Backflow Preventers	505.2.2

Public Comments for M-101.1 cdpVA-15 : VMC Rewrite (NEW)-VMC Rewrite Committee

Phillip Storey

Public Comments for Proposal Id : 238

1 Comment(s)

By **Phillip Storey**
07-18-2016 10:55:20

VMC § 103.2

To avoid confusion and potential conflict with amended § 103.2.1, we propose removing the first three words of this amended language (“Required or provided”), so that it begins with “Building, electrical, plumbing...” We do not believe that the first three words add any substantive value to the section, and the inclusion of “provided” creates confusion when combined with § 103.2.1.

VMC § 103.2.1

We support the amended §103.2.1, making clear that the VMC requires components and systems to be maintained for safety but not necessarily for functioning unless otherwise required. This brings the maintenance requirements in line with the purpose of the code as a whole, as stated explicitly in Va. Code § 36-99 and VMC § 102.1, of protecting safety while allowing maintenance at the least possible cost consistent with recognized standards.

VMC § 603.1

We believe this section should be amended to match the proposed amended § 103.2.1, allowing components or systems that are not otherwise required under the code to be maintained for safety but not necessarily for functioning. Both the current and the proposed versions of § 603.1 are inconsistent with the explicit purpose of the code as a whole, as stated in Va. Code § 36-99 and VMC § 102.1, of protecting safety while allowing maintenance at the least possible cost consistent with recognized standards. Requiring that optional components or systems (not otherwise required by the code) to be maintained in fully functioning condition, when less expensive maintenance could render them safe, adds unnecessary costs.

We also believe that, consistent with our comments on amended § 103.2, the first three words (“Required or provided”) should be removed from § 603.1 to avoid confusion and potential conflict with amended § 103.2.1.

R-101.1 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2012 Virginia Construction Code

103.3 Change of occupancy.

No change of occupancy shall be made in any structure when the current USBC requires a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation or sanitation. When such a greater degree is required, the owner or the owner's agent shall comply with the following:

1. When involving Group I-2 or I-3, written application shall be made to the local building department for a new certificate of occupancy and the new certificate of occupancy shall be obtained prior to the new use of the structure. When impractical to achieve compliance with this code for the new occupancy classification, the building official shall consider modifications upon application and as provided for in Section [106.3](#). In addition, the applicable accessibility provisions of Section 1012.8 of Part II of the *Virginia Uniform Statewide Building Code*, also known as the "*Virginia Rehabilitation Existing Building Code*," or the "~~VRC~~VEBC" shall be met.
 - **Exception:** This section shall not be construed to permit noncompliance with any applicable flood load or flood-resistant construction requirements of this code.
2. In other than Group I-2 or I-3, the provisions of the ~~VRC~~VEBC for change of occupancy shall be met.

103.4 Additions.

Additions to buildings and structures shall comply with the requirements of this code for new construction or shall comply with the ~~VRC~~VEBC. An existing building or structure plus additions shall comply with the height and area provisions of Chapter [5](#) and the applicable provisions of Chapter [9](#). 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 flood-resistant construction requirements of this code.
2. When this code is used for compliance, existing structural elements carrying gravity loads shall be permitted to comply with Section [1103](#) of the ~~International Existing Building Code~~VEBC.

103.5 Reconstruction, alteration or repair in Group R-5 occupancies.

The following criteria is applicable to reconstruction, alteration or repair of Group R-5 buildings or structures:

1. Any reconstruction, alteration or repair shall not adversely affect the performance of the building or structure, or cause the building or structure to become unsafe or lower existing levels of health and safety.
2. Parts of the building or structure not being reconstructed, altered or repaired shall not be required to comply with the requirements of this code applicable to newly constructed buildings or structures.
3. The installation of material or equipment, or both, that is neither required nor prohibited shall only be required to comply with the provisions of this code relating to the safe installation of such material or equipment.
4. Material or equipment, or both, may be replaced in the same location with material or equipment of a similar kind or capacity.
 - **Exceptions:**
 - 4.1. This section shall not be construed to permit noncompliance with any applicable flood load or flood-resistant construction requirements of this code.
 - 4.2. Reconstructed decks, balconies, porches and similar structures located 30 inches (762 mm) or more above grade shall meet the current code provisions for structural loading capacity, connections and structural attachment. This requirement excludes the configuration and height of handrails and guardrails.
 - 4.3. Compliance with the ~~VRC~~VEBC shall be an acceptable alternative to compliance with this section at the discretion of the owner or owner's agent.

103.6 Reconstruction, alteration, and repair in other occupancies.

Reconstruction, alteration, and repair in occupancies other than Group R-5 shall comply with the ~~VRC~~VEBC.

103.7 Retrofit requirements.

The local building department shall enforce the provisions of Section [1701](#) of the ~~VRC~~VEBC, which require certain existing buildings to be retrofitted with fire protection systems and other safety equipment. Retroactive fire protection system requirements contained in the *International Fire Code* (IFC) shall not be applicable unless required for compliance with the provisions of Section [1701](#) of the ~~VRC~~VEBC.

117.2 Moved buildings and structures.

Any building or structure moved into a locality or moved to a new location within a locality shall not be occupied or used until a certification of occupancy is issued for the new location. Such moved buildings or structures shall be required to comply with the requirements of this code for a newly constructed building or structure unless meeting all of the following requirements relative to the new location:

1. There is no change in the occupancy classification from its previous location.
2. The building or structure was in compliance with all state and local requirements applicable to it in its previous location and is in compliance with all state and local requirements applicable if originally constructed in the new location.

3. The building or structure did not become unsafe during the moving process due to structural damage or for other reasons.
4. Any alterations, reconstruction, renovations or repairs made pursuant to the move are in compliance with applicable requirements of the ~~VRC~~VEBC.

2012 Virginia Rehabilitation Code

101.1 Short title.

The *Virginia Uniform Statewide Building Code*, Part II, Rehabilitation, may be cited as the "*Virginia Rehabilitation*~~Existing Building Code~~," or as the "~~VRC~~VEBC."

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 ~~VRC~~VEBC. 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.

101.3 Numbering system.

A dual numbering system is used in the ~~VRC~~VEBC to correlate the numbering system of the *Virginia Administrative Code* with the numbering system of the IEBC. IEBC numbering system designations are provided in the catch-lines of the *Virginia Administrative Code* sections and cross references between sections or chapters of the ~~VRC~~VEBC use only the IEBC numbering system designations. The term "chapter" is used in the context of the numbering system of the IEBC and may mean a chapter in the ~~VRC~~VEBC, a chapter in the IEBC or a chapter in a referenced code or standard, depending on the context of the use of the term. The term "chapter" is not used to designate a chapter of the *Virginia Administrative Code*, unless clearly indicated.

101.4 Arrangement of code provisions.

The ~~VRC~~VEBC is comprised of the combination of (i) the provisions of Chapter [1](#), Administration, which are established herein, (ii) Chapters [2](#) - [16](#) of the IEBC, which are incorporated by reference in Section [101.2](#), and (iii) the changes to the text of the incorporated chapters of the IEBC that are specifically identified, including any new chapters added. The terminology "changes to the text of the incorporated chapters of the IEBC that are specifically identified, including any new chapters added" shall also be referred to as the "state amendments to the IEBC." Such state amendments to the IEBC are set out using corresponding chapter and section numbers of the IEBC numbering system. In addition, since Chapter [1](#) of the IEBC is not incorporated as part of the ~~VRC~~VEBC, any reference to a provision of Chapter [1](#) of the IEBC in the provisions of Chapters [2](#) - [16](#) of the IEBC is generally invalid. However, where the purpose of such a reference would clearly correspond to a provision of Chapter [1](#) established herein, then the reference may be construed to be a valid reference to such corresponding Chapter [1](#) provision.

101.5 Use of terminology and notes.

The term "this code," or "the code," where used in the provisions of Chapter [1](#), in Chapters [2](#) - [16](#) of the IEBC, or in the state amendments to the IEBC, means the ~~VRC~~VEBC, unless the context clearly indicates otherwise. The term "this code," or "the code," where used in a code or standard referenced in the ~~IEBC~~VEBC, means that code or standard, unless the context clearly indicates otherwise. The term "USBC" where used in this code, means the *Virginia Construction Code*, or VCC, unless the context clearly indicates otherwise. In addition, where the phrase "of the *International Building Code* under which the building was constructed" is used in the ~~IEBC~~VEBC, it shall be construed to mean the USBC or other code that was in effect when the building was built. Further, the use of notes in Chapter [1](#) is to provide information only and shall not be construed as changing the meaning of any code provision. Notes in the ~~IEBC~~VEBC, in the codes and standards referenced in the ~~IEBC~~ and in the state amendments to the ~~IEBC~~VEBC, may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise.

Reason: The proposed new title "*Virginia Existing Building Code*" (VEBC) follows the model code "*International Existing Building Code*" (IEBC) for which it is named. Although not "officially" recognized as such, the "*International Residential Code*" (with state amendments) is most often referred to and known as the "*Virginia Residential Code*" or VRC. The proposed code change would eliminate the possible confusion.

Cost Impact: None.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-101.1 cdpVA-15

R-101.5 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2012 Virginia Rehabilitation Code

101.5 Use of terminology and notes. ~~The term "this code," or "the code," where used in the provisions of Chapter 1, in Chapters 2 – 16 of the IEBC, or in the state amendments to the IEBC, means the VRC, unless the context clearly indicates otherwise. The term "this code," or "the code," where used in a code or standard referenced in the IEBC, means that code or standard, unless the context clearly indicates otherwise. The term "USBC" where used in this code, means the VCC, unless the context clearly indicates otherwise. In addition, where the phrase "of the International Building Code under which the building was constructed" is used in the IEBC, it shall be construed to mean the USBC or other code that was in effect when the building was built. Further, the use of notes in Chapter 1 is to provide information only and shall not be construed as changing the meaning of any code provision. Notes in the IEBC, in the codes and standards referenced in the IEBC and in the state amendments to the IEBC, may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise. The provisions of this code shall be used as follows:~~

1. The term "this code," or "the code," where used in the provisions of Chapter 1, in Chapters 2 – 16 of the IEBC, or in the state amendments to the IEBC, means the VEBC, unless the context clearly indicates otherwise.
2. The term "this code," or "the code," where used in a code or standard referenced in the VEBC, means that code or standard, unless the context clearly indicates otherwise.
3. The term "USBC" where used in this code, means the *Virginia Construction Code*, or VCC, unless the context clearly indicates otherwise.
4. Where the phrase "of the *International Building Code* under which the building was constructed" is used in the VEBC, it shall be construed to mean the USBC or other code that was in effect when the building was built.
5. The use of notes in Chapter 1 is to provide information only and shall not be construed as changing the meaning of any code provision.
6. Notes in the VEBC, in the codes and standards referenced in the VEBC, may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise.
7. References to *International Codes* and standards, where used in this code, include state amendments made to those *International Codes* and standards in the VCC.

Note: The VCC references other code that was in effect when the building was

~~built. Further, the use of notes in Chapter 1 is to provide information only and shall not be construed as changing the meaning of any code provision. Notes in the IEBC, in the codes International Codes and standards referenced including the IEBC and in the state amendments to the IEBC, may modify the content of a related provision and shall be considered to be a valid part of the provision, unless the context clearly indicates otherwise. following major codes:~~

2015 International Plumbing Code (IPC)

2015 International Mechanical Code (IMC)

2014 NFPA 70

2015 International Fuel Gas Code (IFGC)

2015 International Energy Conservation Code (IECC)

2015 International Residential Code (IRC)

Reason: The entire paragraph has been converted to a list format, which is much easier to read and understand. Other than the new #7 and "Note" the text remains unchanged (except for "VEBC" in lieu of "VRC").

The added language under #7 clarifies that any VRC reference to the IBC means the VCC, which includes the Virginia amendments to the model IBC, as well as, any VRC references to of the other iCodes or standards means those including Virginia amendments. Otherwise, such references would be to the IBC (or other iCodes or standards) without the Virginia amendments.

The "Note" follows the same concept as that found in VCC 101.2, Note 1 to remind everyone of the "International Codes" referenced in the VEBC that might otherwise be amended in the USBC.

Cost Impact: None.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: 1st meeting: Consensus for approval pending Kennys changes when referencing the International Building Code and IBC/IEBC reference.

2nd meeting: consensus for approval

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Kenney Payne gave an overview of the proposal. He is presenting under adhoc group and as a speaker for VRC.

Sean Farrell stated he wanted to clarify, we are just proposing to change the VA Rehabilitation Code to the Virginia Existing Building Code.

Cindy Davis stated we will Move forward as consensus.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-101.5 cdpVA-15

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R-102.2(1) cdpVA-15

Proponent : Ronald Clements, Jr (clementsro@chesterfield.gov)

2012 Virginia Rehabilitation Code

102.2 Scope.

The provisions of this code shall control the rehabilitation, reconstruction, alteration, repair, ~~and change of occupancy~~ of existing buildings and structures in occupancies other than Group R-5 and shall be permitted to be used as an alternative to compliance with the VCC for additions to buildings in any occupancy classification and for reconstruction, alteration or repair in Group R-5 occupancies. In other than group I-2 or I-3 the provisions of the VRC for change of occupancy shall be met.

Exception: ~~The use of this code shall not be permitted for change of occupancy involving Group I-2 or I-3.~~

**TABLE 1012.4
MEANS OF EGRESS HAZARD CATEGORIES**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATIONS
1 (Highest Hazard)	H
2	I-2, I-3, I-4
3	A, E, I-1, M, R-1, R-2, R-4
4	B, F-1, R-3, S-1, <u>R-5</u>
5 (Lowest Hazard)	F-2, S-2, U

**TABLE 1012.5
HEIGHTS AND AREAS HAZARD CATEGORIES**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATIONS
1 (Highest Hazard)	H
2	A-1, A-2, A-3, A-4, I, R-1, R-2, R-4
3	E, F-1, S-1, M

4 (Lowest Hazard)	B, F-2, S-2, A-5, R-3, U, <u>R-5</u>
-------------------	--------------------------------------

Reason: Change of occupancy from R-5 to a commercial use is not specifically addressed in the VRC. Conversion of group R-5 single family dwellings to various commercial uses is a common change of occupancy.

VRC section 102.2 prohibits the use of the VRC for change of use from R-5 to another use. The VRC can only be used for R-5 addition, alteration, reconstruction or repair of R-5 buildings. The proposed change to section 102.2 extends the scope of the VRC to include change of use from R-5 to another use.

Under the "work area" method of compliance in the Virginia Rehabilitation code change of occupancy is addressed by VRC chapter 10. When using chapter 10 requirements for means of egress are established based on hazard classes assigned in table 1012.4 and allowable height and area requirements are established based on hazard classes assigned in table 1012.5. Group R-5 is not addressed by either table. This is due to the fact that group R-5 is a Virginia group classification that does not exist in the ICC family of codes; therefore, group R-5 was not included in the IEBC as adopted by Virginia. I chose to classify R-5 as hazard class #4 in both tables because group R-5 is closest in hazard level to group R-3.

Cost Impact: This code change does not alter the cost of construction.

Workgroup Recommendation

Workgroup 1 Recommendation: Consensus for Approval

Workgroup 1 Reason: Move forward, will be changed based on VBCOA VRC committee change that will be similar.

Workgroup 2 Recommendation: Consensus for Approval

Workgroup 2 Reason: No opposition. Consensus for approval.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-102.2(1) cdpVA-15

R-102.2(2) cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2012 Virginia Rehabilitation Code

102.2 Scope.

The provisions of this code shall control ~~the rehabilitation:~~

1. The *rehabilitation*, reconstruction, *alteration*, ~~repair~~, and ~~change~~ *repair* of occupancy of existing buildings and structures in occupancies other than Group R-5 and shall be permitted to be used as an alternative to compliance with, or portions thereof.

Exception: The use of the VCC for additions to buildings in any occupancy classification and for reconstruction, alteration or repair in occupancies classified as Group R-5 shall be permitted.

2. Additions to existing buildings and structures, or portions thereof.

Exception: The use of the VCC shall be permitted.

3. The *change of occupancy* to other than occupancies classified as Group I-2 or I-3.

~~**Exception:** The use of this code shall not be permitted for change of occupancy involving Group I-2 or I-3.~~

Exception: The use of the VCC for *change of occupancy* to occupancies classified as Group R-5 shall be permitted.

4. Retrofit provisions provided in Chapter 17.

Reason: The reformatting of VRC 102.2 should make it easier to understand which code (VEBC or VCC) applies to which occupancies.

Also, the original exception is misleading, since you can have a change of occupancy *involving* a Group I-2 and/or I-3. For example, one can go from a Group I-2 to a Group B, or go from a Group I-3 to a Group R; however, one cannot go from a particular Group to a Group I-2 or I-3.

If Group I-2 and/or Group I-3 are allowed to use the VRC/VEBC, even if changing to such Groups, then this code change would need to be revised accordingly.

Cost Impact: None.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: Pending all submittals being sent in. Pending-CONSENSUS FOR APPROVAL
PENDING WG 2

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: The reformatting of VRC 102.2 should make it easier to understand which code (VEBC or VCC) applies to which occupancies.
Kenney Payne gave an overview of the proposal.

Comments:

Bob Adkins said it looks like this is eliminating the option of using the VCC. Is this requiring VRC to be the dominant? He believes there should be a marker and thinks it is confusing.

Sean Farrell stated that if you design to the VCC and build to the VCC you are meeting the VRC requirements. You have complied with the VRC.

Vernon Hodge said you would have to put in another proposal to put the option back in.

Ron Clements stated you start at VCC Section 103.3 and it sends you to the VRC.

Chris Snidow asked if the VCC equals or exceeds the VRC, if he uses the VCC, is he complying with the VRC?

Cindy Davis – Yes, **we will Move forward as consensus**

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-102.2(2) cdpVA-15

R-202(1) cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2015 International Existing Building Code

SECTION 202 DEFINITIONS

ALTERATION.

Any construction or renovation to an existing structure other than a *repair* or *addition*.
~~Alterations are classified as Level 1, Level 2 and Level 3.~~

Reason: Since the term "alteration" is used in the other compliance methods (Prescriptive, Performance, and Previous (proposed title under separate code change), and classifying alterations as Level 1, 2, and/or 3 is only required under the Work Area Compliance method, it could cause and has caused confusion since one generally cannot switch between compliance methods under a single permit unless otherwise approved by the building official.

In other words, I could not use the Prescriptive Compliance Method and then classify my *alterations* as Level 1, 2, and/or 3, because those classifications are only recognized under the Work Area Compliance Method.

Cost Impact: None.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: Since the term "alteration" is used in the other compliance methods (Prescriptive, Performance, and Previous (proposed title under separate code change), and classifying alterations as Level 1, 2, and/or 3 is only required under the Work Area Compliance method, it could cause and has caused confusion since one generally cannot switch between compliance methods under a single permit unless otherwise approved by the building official.

Kenney Payne gave an overview of his proposal.

Comments: None

Cindy Davis said we will **Move forward as consensus**

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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R-202(2) cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2012 Virginia Rehabilitation Code

SECTION 202 DEFINITIONS

EXISTING BUILDING.

A building for which a legal certificate of occupancy has been issued under any edition of the USBC or approved by the building official when no legal certificate of occupancy exists, and that has been occupied for its intended use; or, a building built prior to the initial edition of the USBC.

2015 International Existing Building Code

SECTION 202 DEFINITIONS

~~EXISTING BUILDING.~~

~~A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.~~

Reason: There should be a way to address buildings that have been occupied, but have never been issued an "actual" certificate of occupancy. In some instances, there may not be any documentation, and in others, there may be a "document" but it is not an "official" certificate of occupancy. Per a strict reading of the current definition would such buildings be considered "existing buildings?" We all know the buildings are there, and they have been or are occupied.

This code change attempts to address that question by saying at some point, a building official "approved" such occupancy (which is a defined term), and therefore such buildings would be considered an existing building.

Cost Impact: None.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: 1st meeting: Kenney Payne gave an overview of his proposal. Bob Adkins said his building official is opposed to this proposal, Johnna stated that the current definition is more lenient than the proposed definition. Cindy Davis said we will Move forward as consensus adding "as approved by the building official".

2nd meeting: consensus as amended-with-or approved by the building official when no c/o exists.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-202(2) cdpVA-15

R-202(3) cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2012 Virginia Construction Code

SECTION 202 DEFINITIONS

CHANGE OF OCCUPANCY.

~~A change in the use or occupancy of any building or structure that would place the building or structure in a different division of the same group of occupancies or in a different group of occupancies; or a change in the purpose or level of activity within a building or structure that involves a change in application of the requirements of this code~~[REFER TO SEPARATE CODE CHANGE PROPOSAL].

2015 International Building Code

SECTION 202 DEFINITIONS

[A] ADDITION.

~~An extension or increase in floor area or height~~
See Section 202 of a building or structure the IEBC.

[A] ALTERATION.

~~Any construction or renovation to an existing structure other than repair or addition.~~
See Section 202 of the VEBC.

[A] CHANGE OF OCCUPANCY.

~~A change in the purpose or level of activity within a building that involves a change in application~~
See Section 202 of the requirements of this codeVEBC.

[BS] EXISTING STRUCTURE.

~~A structure erected prior to the date of adoption~~
See Section 202 of the appropriate code, or one for which a legal building permit has been issuedVEBC. ~~For application of provisions in flood hazard areas, an existing structure is any building or structure for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard.—~~

[A] HISTORIC BUILDINGS.

~~Buildings that are listed in or eligible for listing in~~
See Section 202 of the National Register of Historic Places, or designated as historic under an appropriate state or local lawVEBC.

[A] REPAIR.

~~The reconstruction or renewal~~

~~See Section 202 of any part of an existing building for the purpose of its maintenance or to correct damage~~IEBC.

[EB] REROOFING.

~~The process~~

~~See Section 202 of recovering or replacing an existing *roof covering*. See "Roof recover" and "Roof replacement."~~the IEBC.

[BS] ROOF RECOVER.

~~The process~~

~~See Section 202 of installing an additional *roof covering* over a prepared existing *roof covering* without removing the existing *roof covering*~~IEBC.

[BS] ROOF REPAIR.

~~Reconstruction or renewal~~

~~See Section 202 of any part of an existing roof for the purposes of its maintenance~~IEBC.

[BS] ROOF REPLACEMENT.

~~The process~~

~~See Section 202 of removing the existing *roof covering*, repairing any damaged substrate and installing a new *roof covering*~~IEBC.

[BS] SUBSTANTIAL DAMAGE.

~~Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent~~

~~See Section 202 of the market value of the structure before the damage occurred~~VEBC.

[BS] SUBSTANTIAL IMPROVEMENT.

~~Any *repair*, reconstruction, rehabilitation, *alteration*, *addition* or other improvement of a building or structure, the cost of which equals or exceeds 50 percent~~

~~See Section 202 of the market value of the structure before the improvement or repair is started~~VEBC. ~~If the structure has sustained *substantial damage*, any *repairs* are considered substantial improvement regardless of the actual *repair* work performed. The term does not, however, include either:~~

- ~~1. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the *building official* and that are the minimum necessary to assure safe living conditions.~~
- ~~2. Any *alteration* of a historic structure provided that the *alteration* will not preclude the structure's continued designation as a historic structure.~~

[BS] SUBSTANTIAL STRUCTURAL DAMAGE.

~~A condition where one or both~~

See Section 202 of the following apply:

- ~~1. The vertical elements of the lateral force-resisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 33 percent from its predamage condition.~~
- ~~2. The capacity of any vertical component carrying gravity load, or any group of such components, that supports more than 30 percent of the total area of the structure's floors and roofs has been reduced more than 20 percent from its predamage condition and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75 percent of that required by this code for new buildings of similar structure, purpose and location.~~

VEBC.

2015 International Existing Building Code

SECTION 202 DEFINITIONS

ALTERATION.

Any construction or renovation to an existing structure other than a *repair* or *addition*.

~~Alterations are classified as Level 1, Level 2 and Level 3.~~

[A] APPROVED.

~~Acceptable to the code official or authority having jurisdiction.~~

CHANGE OF OCCUPANCY.

~~A change in the use of the building or a portion of a building. A change of occupancy shall include any change of occupancy classification, any change from one group to another group within an occupancy classification or any change in use within a group for a specific occupancy classification.~~

[REFER TO SEPARATE CODE CHANGE PROPOSAL].

DEFERRED SUBMITTAL.

~~Those portions of the design that are not submitted at the time of the application and that are to be submitted to the code official within a specified period.~~

EXISTING BUILDING.

~~A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.~~

[REFER TO SEPARATE CODE CHANGE PROPOSAL].

EXISTING STRUCTURE.

A structure for which a legal building permit has been issued under any edition of the USBC or previously approved; or, a structure built prior to the initial edition of the USBC. For application of provisions in flood hazard areas, an existing structure is any building or structure for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard.

[A] FACILITY.

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

[BS] FLOOD HAZARD AREA.

~~The greater of the following two areas:~~

- ~~1. The area within a flood plain subject to a 1 percent or greater chance of flooding in any year.~~
- ~~2. The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.~~

[A] REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.

~~A registered design professional engaged by the owner to review and coordinate certain aspects of the project, as determined by the code official, for compatibility with the design of the building or structure, including submittal documents prepared by others, deferred submittal documents and phased submittal documents.~~

[BS] SUBSTANTIAL IMPROVEMENT.

For the purpose of determining compliance with the flood provisions of this code, any improvement, including repair, reconstruction, rehabilitation, alteration, or addition, or other improvement, of a building or structure or a portion thereof, the cost of which equals or exceeds 50 percent of the market value of the building or structure, before the improvement ~~or repair~~ is started. If the building or structure or portion thereof has sustained *substantial damage*, any ~~repairs~~ improvements are considered *substantial improvement* regardless of the actual ~~repair work~~ improvement performed. The term does not, however, include either:

1. Any project for improvement of a building or structure or portion thereof required to correct existing health, sanitary, or safety code violations identified by the ~~code~~ building official and that is the minimum necessary to ~~ensure~~ assure safe living conditions; or
2. Any *alteration* of a historic structure, provided that the *alteration* will not preclude the building's or structure's continued designation as a historic building or structure.

UNSAFE.

~~Buildings, structures or equipment that are unsanitary, or that are deficient due to inadequate means of egress facilities, inadequate light and ventilation, or that~~

~~constitute a fire hazard, or in which the structure or individual structural members meet the definition of "Dangerous," or that are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance shall be deemed unsafe. A vacant structure that is not secured against entry shall be deemed unsafe.~~

Reason: 2012 VRC: A placeholder has been inserted to alert that a separate code change proposal is being submitted for consideration. If that code change is denied, then the existing VRC "change of occupancy" definition will remain.

2015 IBC / IEBC: Attempt to remove all rehab-centric definitions from the VCC/IBC so such definitions occur in only one place – the VRC. Oftentimes, the definitions in the VCC/IBC conflicted with the same word's definition in the VRC. When it says to "See IEBC," it is because the IEBC definition is okay and is not being proposed to be changed by this proposal. When it says, "See VEBC," it is because this proposal is submitting a change. If proposed changed definitions are denied, they should revert back to the "See IEBC" provision so such definitions would still be located in only one place/code book. If the proposal to switch VRC to VEBC is denied, then "VEBC" should be switched back to "VRC" in this proposal.

When words are deleted in their entirety, it is because they should use the definition already found in the IBC (e.g., "Approved," "Deferred Submittal," and "Flood Hazard Area" to name a few) or VMC (e.g., "Unsafe").

There should be a definition for an existing "structure" since a "building" is defined as having a roof and is intended to be occupied.

Cost Impact: None.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: 2012 VRC: A placeholder has been inserted to alert that a separate code change proposal is being submitted for consideration. If that code change is denied, then the existing VRC "change of occupancy" definition will remain. Kenney Payne gave an overview of his proposal.

Comments:

Cindy Davis stated we will **Move forward as consensus**

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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R-202(4) cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2015 International Existing Building Code

SECTION 202 DEFINITIONS

WORK AREA.

That ~~portion~~intended room, space, or portion~~portion~~ of a building ~~consisting of all reconfigured spaces as indicated on the construction documents or structure where a wall or walls are added, relocated, or removed.~~ Work area excludes ~~other:~~ the addition or elimination of any door or window; the reconfiguration or extension of any system; the installation of any additional equipment; the removal of finish flooring or ceiling materials; adjacent or other rooms, spaces, or portions of the building or structure where incidental work entailed by the intended work must be performed; and portions of the building or structure where work not initially intended by the owner is specifically required by this code.

504.1 Scope. Level 2 *alterations* ~~include the reconfiguration of space,~~ the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment; and shall apply where the work area is less than 50 percent of the building area.

801.1 Scope. Level 2 *alterations* as described in Section 504 shall comply with the requirements of this chapter.

- **Exception:** Buildings in which the ~~reconfiguration~~alteration is exclusively the result of compliance with the accessibility requirements of Section 705.2 shall be permitted to comply with Chapter 7.

809.1 Reconfigured Work areas or converted spaces. All ~~reconfigured spaces~~work areas intended for occupancy and all spaces converted to habitable or occupiable space in any *work area* shall be provided with natural or mechanical ventilation in accordance with the *International Mechanical Code*.

- **Exception:** Existing mechanical ventilation systems shall comply with the requirements of Section 809.2.

901.2 Compliance. In addition to the provisions of this chapter, work shall comply with all of the requirements of Chapters 7 and 8. The requirements of Sections 803, 804 and 805 shall apply within all *work areas* whether or not they include exits and corridors shared by more than one tenant and regardless of the occupant load.

- **Exception:** Buildings in which the ~~reconfiguration of space~~alteration affecting exits or shared egress access is exclusively the result of compliance with the

accessibility requirements of Section 705.2 shall not be required to comply with this chapter.

Reason: As you consider this proposed code change, **keep in mind these salient points:**

1. Per 2012 VRC 102.1, the Code of Virginia and General Assembly of Virginia declared.

The **application of those building code requirements** currently in force to . . . rehabilitation has **sometimes led to the imposition of costly and time-consuming requirements** that **result in a significant reduction in the amount of rehabilitation activity** taking place.

2. Per the 2015 IEBC under "Effective Use of the IEBC":

Although many of these buildings are potentially salvageable, **rehabilitation is often cost-prohibitive because compliance with all of the requirements for new construction could require extensive changes that go well beyond the value of the building or the original scope of the rehabilitation.**

To **make the rehabilitation process easier**, this code allows for options for **controlled departure from full compliance with the International Codes** dealing with new construction, while maintaining basic levels for fire prevention, structural and life safety features of the rehabilitated building.

The ISSUE:

The current definition or "work area" is creating inconsistent interpretations – mostly over what is considered a "reconfigured space" and to some degree, what is a "work area." The fact that "work area" *appears* to be composed of Chapters 5-13 due to the "Work Area Compliance Method" has also led to this confusion (a separate code change proposal is dealing with this issue). This code change clarifies what a *work area* includes and what it does not include.

1. What is a work area? Work area is currently defined in 2015 IEBC (and 2012 VRC) Chapter 2 as:

WORK AREA. That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code.

- If one interprets almost every alteration, intended or not, including areas outside the "intended" alteration as a *work area*, more often than not the result would be a Level 3 alteration and/or supplemental requirements would be required. Is that the intent of the General Assembly, the Code of Virginia, and this code?
- If one interprets all "work" per Chapter 5 as a *work area*, the result would most likely be a Level 3 alteration and/or supplemental requirements would be required. Is that the intent of the General Assembly, the Code of Virginia, and this code?
- There are inconsistent interpretations of what is a *work area* even though it is a defined term, and/or what is a reconfigured space (which is not a defined term) – thus oftentimes leading to interpretations that encompass more portions of the building than may be actually required. Is that the intent of the General Assembly, the Code of Virginia, and this code?
- If required to comply with a Level 3 alteration and/or supplemental requirements in almost all cases, the owner may choose to abandon the rehabilitation of the project completely (or with reduced scope) – **a result contrary to the purpose** intended by the VRC, the General Assembly, and the Code of Virginia.

2. What is a reconfigured space? This is not a defined term in the code, but currently, has

EVERYTHING to do with what ends up being considered a *work area*. Why should so much be left to an undefined term? Should the "intended" *work area* be expanded to include adjacent, unintended, and/or other portions of the building that are clearly excluded from the *work area* per the definition?

3. Since the term "reconfigured space" is not defined, this is usually the basis upon which inconsistent interpretations are made. Under the scenarios above, some code officials have interpreted adjacent spaces were incidental and not part of the *intended* work, but those spaces were nonetheless reconfigured, so they required them to be included in the *work area*.

The REMEDY:

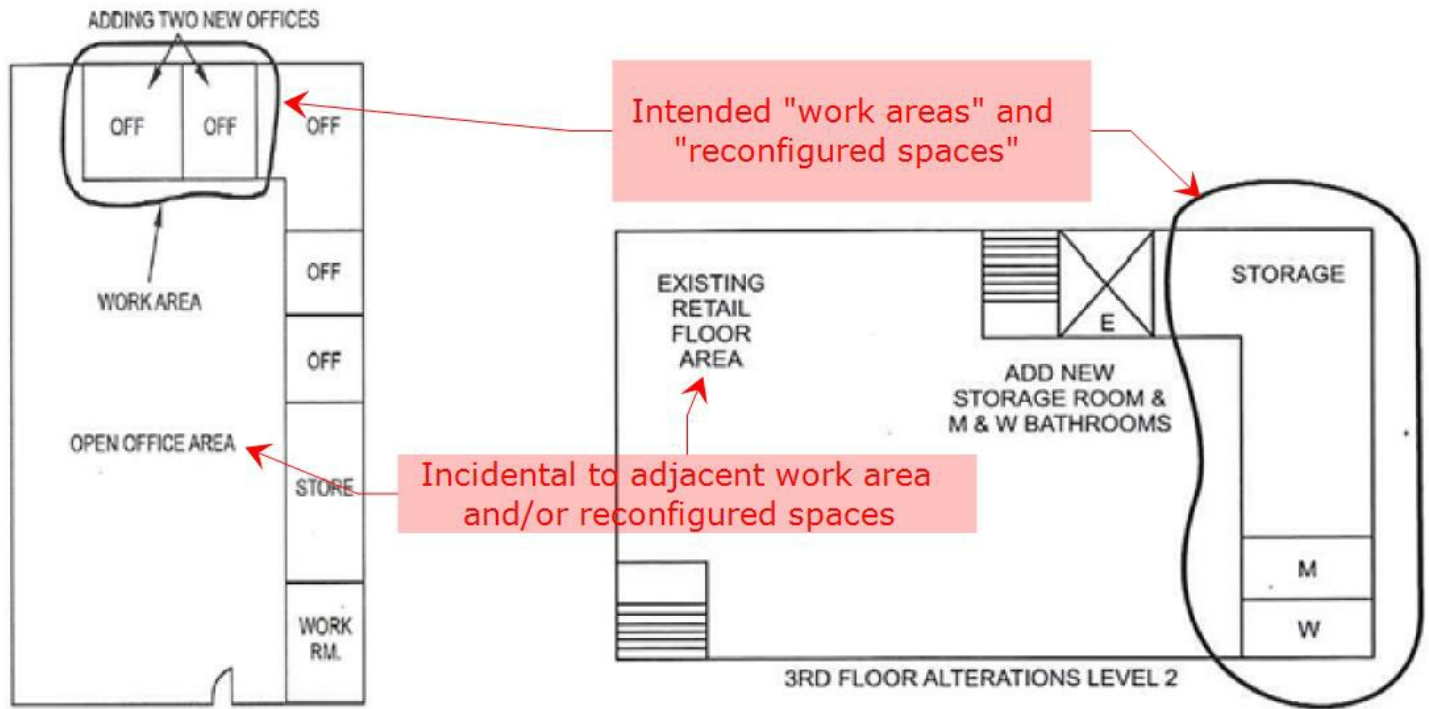
We either need a definition of "reconfigured space" as difficult as that may be, or delete the term entirely and incorporate that "concept" into the *work area* definition. The new "work area" definition in this code change proposal opted for the latter approach and breaks down as follows:

"That intended room, space, or portion of a building or structure"

- Starts off with "intended" so as to make clear that the proposed work must be intended (refer to the diagram below).
- Deleted "or portions" because it was not needed, especially when adding in "rooms and spaces."
- Added "or structure" because a *work area* could involve more than just a building.

To demonstrate the concept of "intended" and "incidental," refer to the diagram below (which was reproduced from a book published by the ICC):

- - You have an existing large open area with rooms down one side.
 - Your "intended" work is to add two (2) new offices.
 - When the new offices are added, you have reduced the SF of the large open area, thus technically the large open office area is also a reconfigured space, but since the open area is "incidental" to the "intended" new offices, the large open area is not considered part of your *work area* – only the "intended" new offices would be part of your *work area*.



(The above diagrams came from the "2009 IEBC Q&A" book published by the ICC)

"where a wall or walls are added, relocated, or removed."

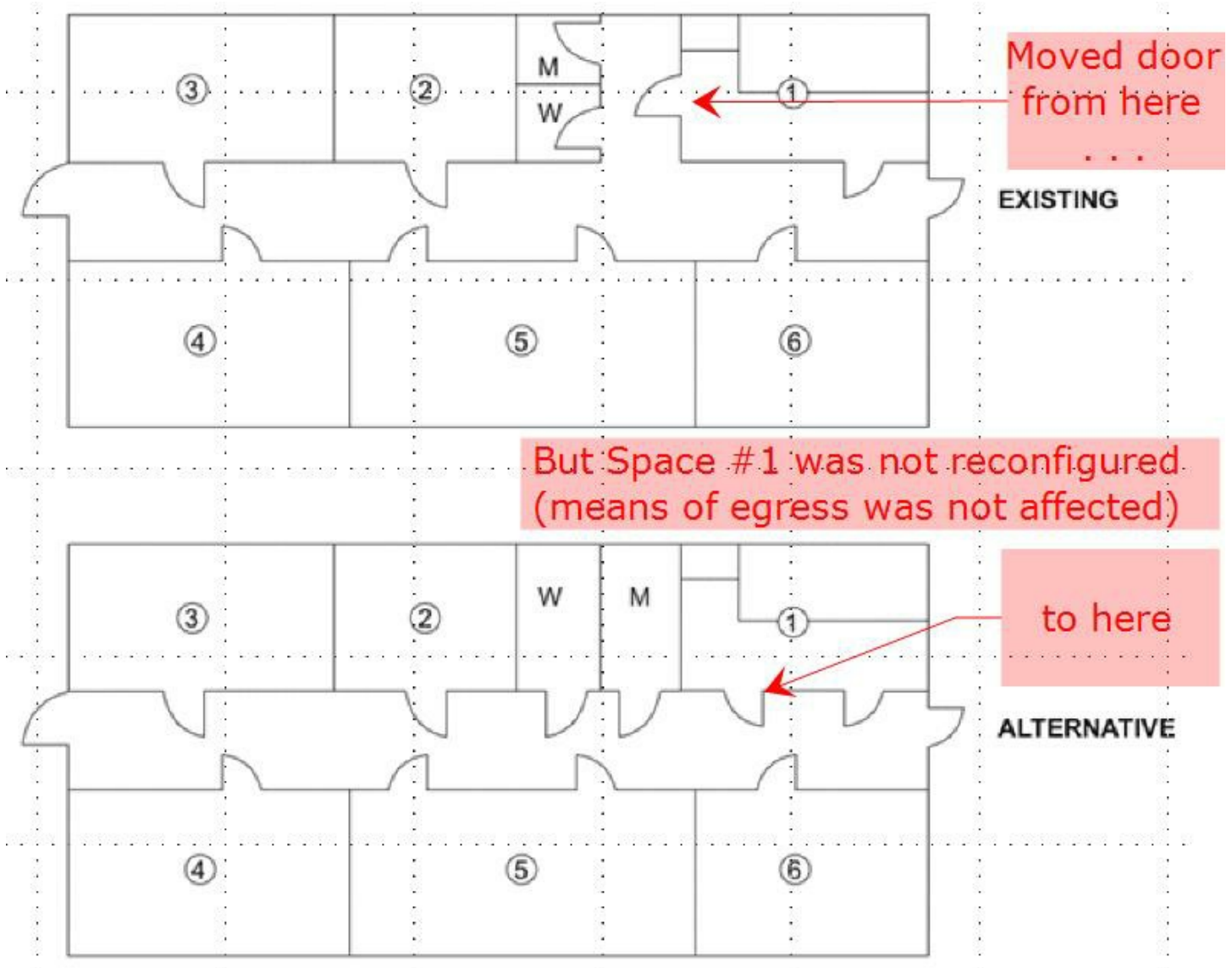
- Simply put, if the work involves the adding, relocating, or removing walls – it is a work area.
- Work not involving walls would be covered by other aspects of the VRC.
 - For example if the work did not involve walls, but would affect the means of egress, either Sections 905 or 805 would apply – if they would not apply, then you must still comply with Section 704. If the work does not maintain the level of protection, then it must be addressed.

"Work area excludes:"

- As important as it is to include what *does* make a *work area*, it is just as important to indicate what *does not* make a *work area*.
- The current/existing definition already includes a list of components that are not included - this code change expands on that list; however, the components included in that expansion are directly from VRC Section 504.1.

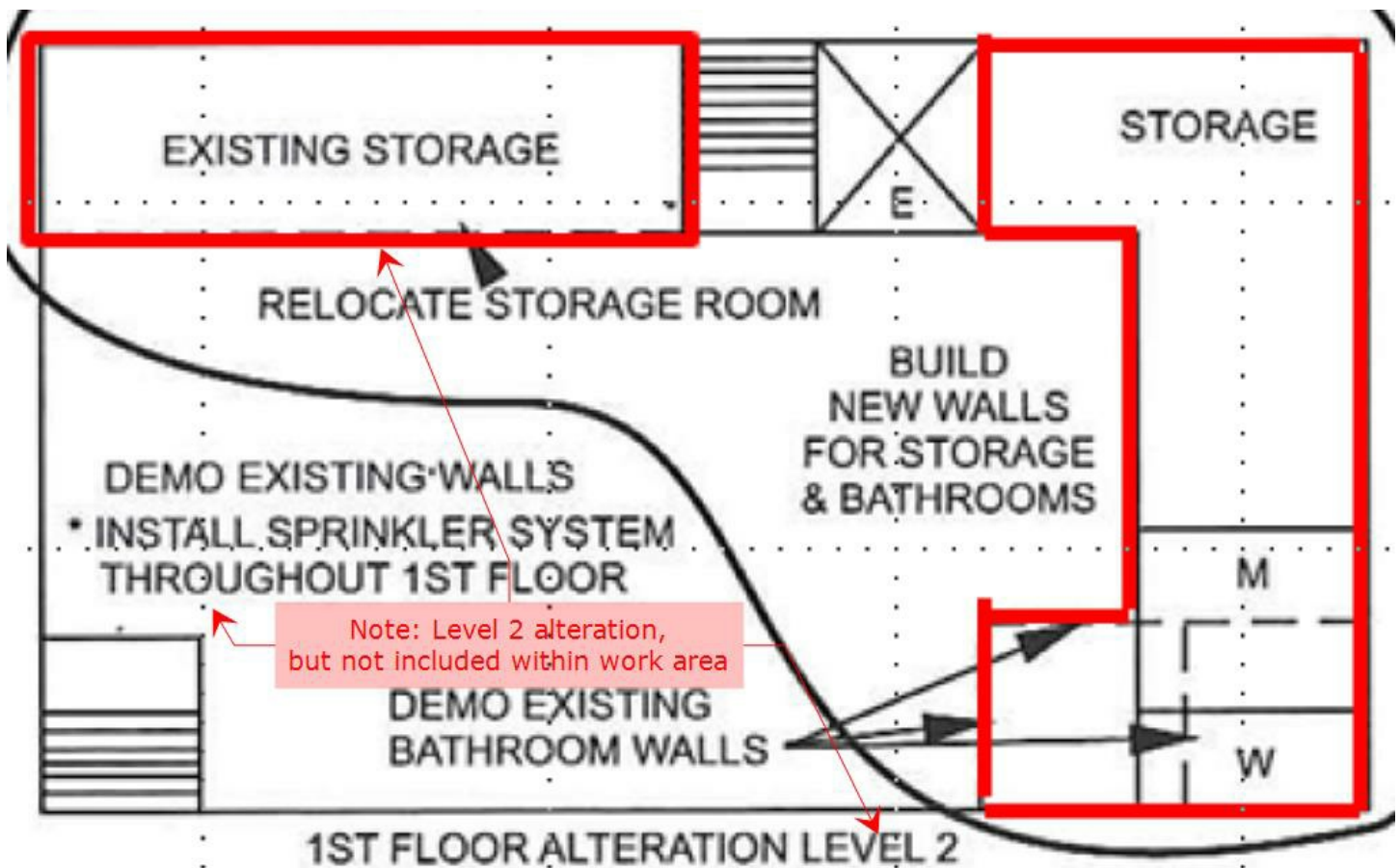
"the addition or elimination of any door or window;"

- This language comes from VRC 504.1 and clarifies adding or removing a door(s) or window(s) does not constitute a reconfigured space, and therefore, would not - by itself - be a considered a *work area*.
- Each of those components would still be considered a Level 2 alteration (per VRC 504.1), but they would not constitute a reconfigured space or *work area*.
- This should prevent an interpretation - that the relocation or adding of a door not only reconfigured the space to which the door was relocated/added, but also reconfigured the adjacent space/room (e.g., a corridor) on which the door opened onto. Refer to the diagram below:



"the reconfiguration or extension of any system; the installation of any additional equipment;

- This language comes from VRC 504.1 and clarifies that reconfiguring a "system" or just adding equipment does not constitute a reconfigured space, and therefore, would not be considered a *work area*.
- Each of those would still be considered a Level 2 alteration (per VRC 504.1), but they would not constitute a reconfigured space or *work area*.
 - For example, a new sprinkler system added would be considered a Level 2 alteration, but not a work area (refer to the diagram below).
- This should prevent an interpretation - that adding a sprinkler "system" would be interpreted as a *work area*.
 - A "real world" interpretation: The owner wanted to replace all of the existing HVAC equipment (above the ceiling) throughout the entire building. The AHJ said this work constituted a work area and since the work area exceeded 50% of the building area, they had to comply with Chapter 9 (Level 3) - which, in turn, would have required a new sprinkler system be added to the entire building. Under this proposed code change, the above should not happen!



"the removal of finish flooring or ceiling materials;"

- Clarifies that the work is to the floor area – and not the "volumetric area" (e.g., when an existing floor or ceiling finish is removed but not replaced) by deleting the term "reconfigured space."
- Some AHJ have said that the term "space" means 3-dimensions, so if the ceiling were lowered, raised, or removed – you have reconfigured the "space" (e.g., may require more CFM or sprinkler coverage). The same was said regarding the floor (the height of the space just grew by 1/2"). However, there are other portions of the VRC that address situations like these, the least of which is that you cannot make things worse than when you started (e.g., Section 701.2 which applies to ALL levels of alterations).

"adjacent or other rooms, spaces, or portions of the building or structure where incidental work entailed by the intended work must be performed;"

- Essentially uses the existing language of the current definition, with some technical changes.
 - Added the terms "adjacent," "rooms," "spaces," and "structure" to comport with the same language added to the first sentence.

"and portions of the building or structure where work not initially intended by the owner is specifically required by this code."

- Deleted "by the owner" as it is unnecessary and was not used consistently within the definition.
- Isn't all "work" instituted "by an owner"? (work is not initiated by the AHJ, the RDP, or the contractor, and if it is, they do so in the role of "the owner").
 - For example, in the current definition, why use the term "by the owner" in the last

part of the last sentence, but not the first part of the last sentence?

The purpose of the VRC is to **encourage rehabilitation**, not interpret the code which would place barriers for doing so – which takes us back to the **salient points** at the beginning of this supporting statement. So, this code change proposal is in keeping with the "purpose" of the VRC. In other words, **"Incentivize, don't penalize."**

Regarding proposed code changes to Sections 504.1 and 901.2:

The term "reconfiguration of space" is not a defined term, yet it drives the defined term of "work area." So, this code change proposes to address a definition of "reconfigured space" within the current definition of "work area" and then we would no longer need to use the term "reconfigured space" throughout the rest of the VRC.

The other issue is that we know when the "work area" exceeds 50%, it is considered a Level 3 alteration; however, although it may be implied, it is not absolutely clear what happens when the "work area" is less than 50% of the building area. This code change clarifies the issue.

The same reasoning can be used for the proposed changes to Section 901.2 – we should use *defined* terms, not terms that are ambiguous and can only lead to and has already caused confusion and can be interpreted numerous ways - leading to inconsistent interpretations.

Regarding proposed code changes to the Exceptions to Sections 801.1 and 901.2:

For the previously stated reasons for deleting the term "reconfiguration," such attempts at improving accessibility could include work that has nothing to do with "reconfiguration" or "reconfiguring" spaces. A simple widening of a single door (a Level 2 alteration but not a reconfiguration of the space) or lowering mirrors and adding accessories and signage (other examples of *alterations*) have nothing to do with reconfiguring spaces. However, if it did involve reconfiguring the space, it would still be captured by either the term "*alteration*" because as a defined term, means anything other than a *repair* or *addition* – or by the term "work area" per its new proposed definition.

Cost Impact: Construction costs would be REDUCED if a Level 3 and/or supplemental requirements could be avoided simply over whether the interpretation of a "work area" includes adjacent spaces or not or what constitutes a "reconfigured space;" thus, complying with what the General Assembly and Code of Virginia intended.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: Reason: Per 2012 VRC 102.1 the Code of Virginia and General Assembly of Virginia declared. The application of those building code requirements currently in force to...rehabilitation has sometimes led to the imposition of costly and time-consuming requirements that result in a significant reduction in the amount of rehabilitation activity taking place. Per the 2015 IEBC under "Effective Use of the IEBC": Although many of these buildings are potentially salvageable, rehabilitation is often cost-prohibitive because compliance with all of the requirements for new construction could require extensive changes that go well beyond the value of the building or the original scope of the rehabilitation. To make the rehabilitation process easier, this code allows for options for controlled departure from full compliance with the International Codes dealing with new construction, while maintaining basic levels for fire prevention, structural and life safety features of the rehabilitated building.

Kenney Payne gave an overview of his proposal. This is a level 2 alteration. What is a reconfigured space? This is not a defined term in the code, but currently, has everything to do with what ends up being considered a work area.

Comments:

Chris Snidow asked if anyone had considered furniture and aisles in this definition?

Kenney Payne stated that this part of the code doesn't address this.

Bill King asked why is a 6' partition not a wall? In the federal government, everything is movable.

Chris Snidow stated he thinks what you are talking about is not a wall, but a partition. The way we look at it, if it's not tall enough to block the exit lights then they are partitions. You need to look at the individual situation.

Ron Clements stated if you think that where a wall is added, relocated or removed is better than re-configured and if you think this text is clearer than re-configured then I would move it forward. This language is clearer than re-configured.

Rick Wtt stated if you pass this forward, you have the opportunity to come back after it is published and address some of the questions that you are speaking about such as partitions.

Cindy Davis said we will **Move forward as consensus**

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-202(4) cdpVA-15

R-202(5) cdpVA-15

Proponent : Bob Orr, Representing VBCOA VRC Committee
(borr@culpepercounty.gov)

2015 International Existing Building Code

SECTION 202 DEFINITIONS

~~UNSAFE.~~

~~Buildings, structures or equipment that are unsanitary, or that are deficient due to inadequate means of egress facilities, inadequate light and ventilation, or that constitute a fire hazard, or in which the structure or individual structural members meet the definition of "Dangerous," or that are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance shall be deemed unsafe. A vacant structure that is not secured against entry shall be deemed unsafe.~~

~~[BS] DANGEROUS.~~

~~Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:~~

- ~~1. The building or structure has collapsed, has partially collapsed, has moved off its foundation, or lacks the necessary support of the ground.~~
- ~~2. There exists a significant risk of collapse, detachment or dislodgement of any portion, member, appurtenance or ornamentation of the building or structure under service loads.~~

Reason: These definitions are not inline with those in the Virginia Construction Code addressing buildings or structures under active permit.

2012 Virginia Rehabilitation Code section 201.3 directs you to the Virginia construction Code:

201.3 Terms defined in other codes. "Where terms are not defined in this code and are defined in other International Codes, such terms shall have the meanings ascribed to them in those codes, except for terms that are not defined in this code and that are defined in the VCC shall take precedence over other definitions".

Cost Impact: No cost impact as this is a function of interpretation clarity.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-202(5) cdpVA-15

R-301.1 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
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2015 International Existing Building Code

OPTION A

301.1 General. The *repair, alteration, change of occupancy, addition or relocation* of all *existing buildings* shall comply with one of the methods listed in Sections 301.1.1 through ~~301.1.3~~ 301.1.4 as selected by the applicant. Sections 301.1.1 through ~~301.1.3~~ 301.1.4 shall not be applied in combination with each other. ~~Where this code requires consideration of the seismic force-resisting system of an existing building subject to repair, alteration, change of occupancy, addition or relocation of existing buildings, the seismic evaluation and design shall be based on Section 301.1.4 regardless of which compliance method is used.~~

Exception: ~~Subject to the approval of the code official, alterations complying with the laws in existence at the time the building or the affected portion of the building was built shall be considered in compliance with the provisions of this code unless the building is undergoing more than a limited structural alteration as defined in Section 907.4.4. New structural members added as part of the alteration shall comply with the International Building Code. Alterations of existing buildings in flood hazard areas shall comply with Section 701.3.~~

301.1.1 Prescriptive compliance method. *Repairs, alterations, additions, and changes of occupancy, and moved buildings* complying with Chapter 4 of this code ~~in buildings complying with the International Fire Code~~ shall be considered in compliance with the provisions of this code.

301.1.2 Work area compliance method. *Repairs, alterations, additions, changes ~~in~~ of occupancy and relocated/moved buildings* complying with the applicable requirements of Chapters 5 through 13 of this code shall be considered in compliance with the provisions of this code.

301.1.3 Performance compliance method. *Repairs, alterations, additions, changes ~~in~~ of occupancy and relocated/moved buildings* complying with Chapter 14 of this code shall be considered in compliance with the provisions of this code.

301.1.4 Previous code compliance method. *Alterations and repairs complying with the requirements of the building code under which the building or structure or the affected portions thereof was built, or as previously approved by the building official, shall be considered in compliance with the provisions of this code, unless the building or structure or the affected portions thereof is undergoing a substantial structural alteration as described in Section 907.4.2. New structural members added as part of the alteration or repairs shall comply with the IBC. Alterations and repairs of existing buildings in flood hazard areas shall comply with Section 601.3, for repairs, or Section*

701.3 for alterations.

[BS] ~~301.1.4~~301.2 Seismic evaluation and design procedures. Where this code requires consideration of the seismic force-resisting system of an existing building subject to repair, alteration, change of occupancy, addition or relocation of existing buildings, the seismic evaluation and design shall be based on this section regardless of which compliance method is used. The seismic evaluation and design shall be based on the procedures specified in the *International Building Code* or ASCE 41. The procedures contained in Appendix A of this code shall be permitted to be used as specified in Section ~~301.1.4.2~~301.2.2.

[renumber remaining sections and tables and correlate cross references from other sections of the code]

OPTION B

301.1 General. The *repair, alteration, change of occupancy, addition or relocation* moving of all *existing buildings* shall comply with one of the methods listed in Sections 301.1.1 through 301.1.3 as selected by the applicant. Sections 301.1.1 through 301.1.3 shall not be applied in combination with each other. ~~Where this code requires consideration of the seismic force-resisting system of an existing building subject to repair, alteration, change of occupancy, addition or relocation of existing buildings, the seismic evaluation and design shall be based on Section 301.1.4 regardless of which compliance method is used.~~

Exception: ~~Subject to the approval of the code official, a~~Alterations and repairs complying with the ~~laws in existence at the time~~requirements of the building code under which the building or structure or the affected portion of the building or structure was built, or complying with requirements as previously approved by the building official, shall be considered in compliance with the provisions of this code unless the building or structure or portions thereof is undergoing ~~more than a limited~~substantial structural alteration as ~~defined~~described in Section 907.4.42. New structural members added as part of the alteration or repair shall comply with the *International Building Code*. Alterations and repairs of existing buildings in flood hazard areas shall comply with Section 701.3 for alterations and Section 601.3 for repairs.

301.1.1 Prescriptive compliance method. *Repairs, alterations, additions, and changes of occupancy and moved buildings* complying with Chapter 4 of this code ~~in buildings complying with the International Fire Code~~ shall be considered in compliance with the provisions of this code.

301.1.2 Work area compliance method. *Repairs, alterations, additions, changes in of occupancy and relocated moved buildings* complying with the applicable requirements of Chapters 5 through 13 of this code shall be considered in compliance with the provisions of this code.

301.1.3 Performance compliance method. *Repairs, alterations, additions, changes in occupancy and relocated moved* buildings complying with Chapter 14 of this code shall be considered in compliance with the provisions of this code.

Reason:

OPTION A:

Regarding 301.1, the proposal takes an "exception" (which is essentially a 4th compliance method) and giving it its own "section" like the other compliance methods and adds "repairs" to the scope (what is good enough for alterations should be good enough for repairs). It also moves structural-related provisions from 301.1 to the structural part of the Section - which would now become 301.2. That way, all structural-related provisions are kept together and not spread around. Deleted "relocation" and substituted "moved" since "relocated" buildings are covered under the Industrial Buildings Code and are therefore not under the purview of the VRC.

Regarding the other sections: The changes made regarding "change in occupancy" to "change of occupancy" is so we use a defined term (which is change of occupancy), to achieve consistency, and because change of occupancy is the term used in the technical provisions (Section 407, Chapter 10, and 1401.2). Deleted "relocated" and substituted "moved" since "relocated" buildings are covered under the Industrial Buildings Code and are therefore not under the purview of the VRC.

The rest of the changes are related to renumbering only.

OPTION B:

Regarding 301.1, the proposal leaves the "exception" (which is essentially a 4th compliance method) and adds "repairs" to the scope (what is good enough for alterations should be good enough for repairs). It also moves structural-related provisions from 301.1 to the structural part of the Section 301.1.4. That way, all structural-related provisions are kept together and not spread around.

Regarding the other sections: The changes made regarding "change in occupancy" to "change of occupancy" is so we use a defined term (which is change of occupancy), to achieve consistency, and because change of occupancy is the term used in the technical provisions (Section 407, Chapter 10, and 1401.2).

No renumbering is necessary with this Option.

Cost Impact: None.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: 1st meeting: Kenney Payne gave an overview of his proposal.

William King stated whatever the old provisions of the code, such as if it was built in 1975, forget all the provisions that have come passed this date. Prior to USBC you do whatever you feel like.

Kenney Payne asked if we left this as an exception with different language would this be acceptable?

Vernon Hodge stated this was not enforceable language now because it is in the model code and

it is administrative language.

Cindy Davis stated we would Move forward as non-consensus with tweaking.

DHCD Staff Note: Proposal has been modified since July 20, 2016 Workgroup Two meeting.

2nd meeting: General support option A moves forward as consensus

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-301.1 cdpVA-15

R-301.1.2 cdpVA-15

Proponent : Kenney Payne, Representing AIA-Virginia
(kpayne@moseleyarchitects.com)

2015 International Existing Building Code

301.1.2 ~~Work area~~Proportional compliance method. *No change to text.*

Reason: The term "Work area" when used to describe an entire "compliance method" leads to confusion among owners, designers, reviewers, code and fire officials. "Work area" is a defined term and involves reconfigured spaces. However, not all "work" covered under the "work area" compliance method is actually "work areas!" A "work area" is but a small part of this entire compliance method, yet the entire method is named after this one concept. This is like calling the original 13 colonies the "Virginia Colonies." Virginia was but just one of the original colonies. Chapters 5 through 13 technically fall under the "Work area" compliance method; however, "work areas" only apply in Chapters 8 and 9 (in other words, 2 out of 9 chapters).

Repair: Has nothing to do with a "work area," yet it falls under the "Work area" compliance method. So, would a code/fire official be correct in interpreting a repair is a work area?

Level 1 alteration: Has nothing to do with a "work area," yet it falls under the "Work area" compliance method. So, would a code/fire official be correct in interpreting a repair is a work area?.

Addition, moved/relocated building, or a historic building: They all must be "work areas," because they fall under the "work area" compliance method.

Since it is apparent NONE of the above examples are actual "work areas" (per the definition in Chapter 2), then why confuse things by assigning them to the "Work area" compliance method? If we revise the name/title of this particular compliance method, then at least trying to connect all "work" performed under Chapters 5-13 to a "work area" should no longer be an interpretation issue.

Other than the Index (where I cannot make a code change under this cdpVA system), this is the only place the term "Work area" compliance method is used.

Cost Impact: Could potentially reduce costs if we can avoid interpretations that require repairs, Level 1 alterations, some Level 2 alterations, additions, etc. to be classified as "work areas."

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: 1st meeting: Editorial changes-Beahm asked why cost reduction if only editorial, Witt suggests hold till July.-Robbie suggested TRB decide
2nd meeting: consensus for approval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-301.1.2 cdpVA-15

R-303.1 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
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2015 International Building Code

SECTION 1511 REROOFING AND ROOF REPAIR

1511.1 General. Materials and methods of application used for ~~recovering or replacing an existing reroofing and roof covering repair~~, as defined by Section 202 of the IEBC, shall comply with the applicable requirements of Chapter 15 and the requirements of Section 303 of the VEBC.

Exceptions:

1. ~~Roof replacement or roof recover~~ of existing low slope roof coverings shall not be required to meet the minimum design slope requirement of one quarter unit vertical in 12 units horizontal (2 percent slope) in Section 1507 for roofs that provide positive roof drainage.
2. ~~Recovering or replacing an existing roof covering~~ shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section 1503.4 for roofs that provide for positive roof drainage. For the purposes of this exception, existing secondary drainage or scupper systems required in accordance with this code shall not be removed unless they are replaced by secondary drains or scuppers designed and installed in accordance with Section 1503.4.

~~1511.2 Structural and construction loads.~~ Structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the system.

~~1511.3 Roof replacement.~~ ~~Roof replacement~~ shall include the removal of all existing layers of roof coverings down to the roof deck.

~~Exception:~~ ~~Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section 1507.~~

~~1511.3.1 Roof recover.~~ The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:

1. ~~Where the new roof covering is installed in accordance with the roof covering manufacturer's approved instructions.~~
2. ~~Complete and separate roofing systems, such as standing seam metal roof panel systems, that are designed to transmit the roof loads directly to the~~

- ~~building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.~~
- ~~3. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs when applied in accordance with Section 1511.4.~~
 - ~~4. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear off of existing roof coverings.~~

~~1511.3.1.1 Exceptions.~~ ~~A roof recover shall not be permitted where any of the following conditions occur:~~

- ~~1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.~~
- ~~2. Where the existing roof covering is slate, clay, cement or asbestos cement tile.~~
- ~~3. Where the existing roof has two or more applications of any type of roof covering.~~

~~1511.4 Roof recovering.~~ ~~Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.~~

~~1511.5 Reinstallation of materials.~~ ~~Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counterflashings shall not be reinstalled where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.~~

~~1511.6 Flashings.~~ ~~Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.~~

2015 International Existing Building Code

SECTION 303 REROOFING AND ROOF REPAIR

303.1 Reroofing. Materials and methods of application used for recovering or replacing an existing roof covering shall comply with this section and the applicable requirements of Chapter 15 of the *International Building Code*.

Exceptions:

1. *Roof replacement or roof recover* of existing low-slope roof coverings shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section 1507 of the *International Building Code* for roofs that provide positive roof drainage.

2. Recovering or replacing an existing roof covering shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section 1503.4 of the *International Building Code* for roofs that provide for positive roof drainage. For the purposes of this exception, existing secondary drainage or scupper systems required in accordance with the *International Building Code* shall not be removed unless they are replaced by secondary drains or scuppers designed and installed in accordance with Section 1503.4 of the *International Building Code*.

303.2 Structural and construction loads. Structural roof components shall be capable of supporting the roof-covering system and the material and equipment loads that will be encountered during installation of the system.

303.3 Roof replacement. *Roof replacement* shall include the removal of all existing layers of roof coverings down to the roof deck.

Exception: Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section 1507 of the *International Building Code*.

303.3.1 Roof recover. The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:

1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.

2. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs when applied in accordance with Section 706.4.

3. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

4. Where the new roof covering is installed in accordance with the roof covering manufacturer's approved instructions.

Exceptions. A *roof recover* shall not be permitted where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional

roofing.

2. Where the existing roof covering is slate, clay, cement or asbestos-cement tile.

3. Where the existing roof has two or more applications of any type of roof covering.

303.4 Roof recovering. Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.

303.5 Reinstallation of materials. Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counterflashings shall not be reinstalled where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.

303.6 Flashings. Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

303.7 Roof repair. Roof repairs shall comply with this section. Work on nondamaged components that is necessary for the required *repair* of damaged components shall be considered part of the *roof repair* and shall not be subject to the requirements of other parts of this code.

Exception: Routine maintenance required by this section, ordinary *repairs* exempt from permit in accordance with Section 108.2 of the VCC, and abatement of wear due to normal service conditions shall not be subject to the requirements for *roof repairs* in this section.

303.7.1 Building materials and systems. Building materials and systems shall comply with the requirements of Sections 303.7.1.1 and 303.7.1.2.

303.7.1.1 Existing materials. Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the building official to be unsafe.

303.7.1.2 New and replacement materials. Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for *repairs*, provided no hazard to life, health or property is created. Hazardous materials shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.

SECTION 706 REROOFING

707706707706 STRUCTURAL

[BS] 707.1706.1 General. *No change to text.*

[BS] 706.1 General. ~~Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15 of the *International Building Code*.~~

Exception: ~~Reroofing shall not be required to meet the minimum design slope requirement of one quarter unit vertical in 12 units horizontal (2 percent slope) in Section 1507 of the *International Building Code* for roofs that provide positive roof drainage.~~

[BS] 707.2706.2 Addition or replacement of roofing or replacement of equipment. *No change to text.*

[BS] 706.2 Structural and construction loads. ~~Structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the system.~~

[BS] 706.3 Recovering versus replacement. ~~New roof coverings shall not be installed without first removing all existing layers of roof coverings down to the roof deck where any of the following conditions occur:~~

- ~~1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.~~
- ~~2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.~~
- ~~3. Where the existing roof has two or more applications of any type of roof covering.~~

Exceptions:

- ~~1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.~~
- ~~2. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs when applied in accordance with Section 706.4.~~
- ~~3. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted~~

- without tear-off of existing roof coverings.
4. ~~Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section 1507 of the *International Building Code*.~~

[BS] 706.4 Roof recovering. ~~Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.~~

[BS] 706.5 Reinstallation of materials. ~~Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counterflashings shall not be reinstalled where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.~~

[BS] 706.6 Flashings. ~~Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.~~

[BS] 707.3 Additional requirements for reroof permits. ~~The requirements of this section shall apply to alteration work requiring reroof permits.~~

[BS] 707.3.1 Bracing for unreinforced masonry bearing wall parapets. ~~Where a permit is issued for reroofing for more than 25 percent of the roof area of a building assigned to Seismic Design Category D, E or F that has parapets constructed of unreinforced masonry, the work shall include installation of parapet bracing to resist the reduced *International Building Code* level seismic forces as specified in Section 301.1.4.2 of this code, unless an evaluation demonstrates compliance of such items.~~

[BS] 707.3.2 Roof diaphragms resisting wind loads in high-wind regions. ~~Where roofing materials are removed from more than 50 percent of the roof diaphragm or section of a building located where the ultimate design wind speed, V_{ult} , determined in accordance with Figure 1609.3(1) of the *International Building Code*, is greater than 115 mph (51 m/s) or in a special wind region, as defined in Section 1609 of the *International Building Code*, roof diaphragms, connections of the roof diaphragm to roof framing members, and roof to wall connections shall be evaluated for the wind loads specified in the *International Building Code*, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting at least 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in the *International Building Code*.~~

Reason: Reroofing and roof repair are clearly an "existing building" scope of work and should be in the VEBC. Therefore, reroofing and roof repair requirements (IBC Section 1511) have been relocated from the IBC to the new VEBC Section 303 and a "pointer" has been left in IBC 1511. Since "reroofing" is a defined term meaning, "the process of recovering and replacing an existing roof covering" it is redundant to repeat that same language again in the IBC 1511.1 charging paragraph and only the defined term is necessary.

Is reroofing a repair or an alteration? If an alteration, would it equate to a Level 1 or Level 2? When does a roof "repair" become an alteration? Rather than deal with such ambiguity and potential inconsistent interpretations, why not just call it – *reroofing* (as defined) and *roof repair* (as defined) and not get into how it fits within the classification of work under the VEBC. Simply put these provisions into VEBC Chapter 3, which applies to all compliance methods, and you would not need to "classify" the work as anything – repair or alteration. It is simply a reroofing or a roof repair project.

Upon a word search of the term "roof repair" (which is a defined term in the 2015 IEBC), it appears that term does not exist in the IEBC. Therefore, this code change has added requirements for a "roof repair" which essentially duplicates language already found in other IEBC sections (e.g., 401.2, 404.1, 602.1, and 602.2). Section 303 of the VEBC essentially is the same text as the 2015 IBC Section 1511 and 2015 IEBC Section 706. So, even though it is being proposed to be deleted in the IBC and Section 706 of the IEBC, it is being reinserted in the new 2015 VEBC Section 303.

2015 IEBC Section 706 was deleted and incorporated into the new VEBC Section 303.

2015 IEBC Section 707.3 was deleted in its entirety because it is completely contrary to the purpose of the VEBC as described in VRC Section 102.1. The VEBC should "incentivize, not penalize." Numerous owners want – or need – to repair a large portion or replace a large portion or all of their existing roofs, yet in doing so, they may be required to brace existing parapets and/or evaluate and provide for additional connections regarding the roof diaphragm. These requirements seem onerous and could be enough to prevent owners from repairing or replacing their roofs (I have heard of one owner already say so) – or – to have to do such repairs as "mini" projects (under the percentage limits) to avoid triggering the need to comply with these provisions. To do as "mini" projects would be extremely costly and inefficient (due to restaging, time lost, and possibly relocating occupants numerous times). Also, the VEBC should not require more than or be more stringent than the IBC; however, in the case of IEBC Section 707.3, if one were to follow the reroofing requirements found in the IBC, they would be less stringent and more flexible than those found in the VEBC. Although one could choose the Prescriptive Compliance Method (Section 403) which sends you to the IBC, the Work Area Compliance Method should not be that much more onerous when it comes to reroofing.

Cost Impact: By deleting the requirement for bracing of wall parapets and evaluating and providing for roof diaphragms when reroofing, or if such provisions remained, an owner might decide to create numerous "mini" projects (in lieu of just one project) to get the work done - there should be the potential for tremendous COST SAVINGS.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-303.1 cdpVA-15

R-505.1.1 cdpVA-15

Proponent : Ronald Clements, Jr, Representing VBCOA VRC Committee
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2015 International Existing Building Code

505.1.1 Special Provisions A building separated horizontally in compliance with VCC section 510.2 shall be considered as separate and distinct buildings for the purpose of determining *building area* used for application of this section.

Reason: The current VRC is silent on how to calculate work areas in pedestal buildings designed per IBC 510. This change clarifies that the areas on either side of the horizontal assemblies should be used as the "building area" for application of the 50% calculation in 505.1.

Cost Impact: This will increase the cost of construction if the interpretation is that the "buildings" above and below the horizontal assemblies should not be reviewed as separate buildings when applying the 50% calculation. This will not increase the cost of construction if the interpretation is that the "buildings" above and below the horizontal assemblies should be reviewed as separate buildings when applying the 50% calculation.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-505.1.1 cdpVA-15

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R-805.3.1.1 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
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2015 International Existing Building Code

805.3.2 Mezzanines. Mezzanines in the *work area* and with an occupant load of more than 50 or in which the common path of egress travel distance to an exit or exit access doorway exceeds 75 feet (22 860 mm) shall have access to at least two independent means of egress.

- **Exception:** Two independent means of egress are not required where the travel distance to an exit does not exceed 100 feet (30 480 mm) and the building is protected throughout with an automatic sprinkler system.

~~**805.3.3 Main entrance—Group A.** All buildings of Group A with an occupant load of 300 or more shall be provided with a main entrance capable of serving as the main exit with an egress capacity of at least one half of the total occupant load. The remaining exits shall be capable of providing one half of the total required exit capacity.~~

~~**Exception:** Where there is no well defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the building provided that the total width of egress is not less than 100 percent of the required width.~~

805.4.1.1 Occupant load and travel distance. In any *work area*, all rooms and spaces having an occupant load greater than 50 or in which the common path of egress travel distance to an exit or exit access doorway exceeds 75 feet (22 860 mm) shall have a minimum of two egress doorways.

- **Exceptions:**
 1. Storage rooms having a maximum occupant load of 10.
 2. Where the *work area* is served by a single exit in accordance with Section 805.3.1.1.

Reason:

In the case of 805.3.2 and 805.4.1.1, the more appropriate term should be *common path of egress travel* distance not just travel distance. If you look at 2015 IBC Table 1006.2.1 the term used is *common path of egress travel* distance not travel distance. Also, the common path of travel distances (75 or 100 feet) in Table 1006.2.1 are more consistent with the limits found in 805.3.2 and its exception (also mostly 75 or 100 feet). The term travel distance is more often associated with 2015 Table 1017.2 where the travel distances are typically 200-400 feet. Table 1006.2.1 also allows the travel distance to be to an *exit access doorway* - not just an *exit*.

805.3.3 is being deleted because it is a retrofit requirement. Note it is not limited to just work areas (like all of the other subsections are), but applies to all buildings of Group A. It is also

more stringent than 2015 IBC 1029.2, where a main exit is only addressed when one is provided. If not, then 1029.2 would not apply. If left in the VRC, this provision would require you to widen "main" entrance doors or add additional entrance doors and/or add additional doors around the perimeter of the building simply because you may have a work area within a Group A building. It also appears it may conflict with 2012 VRC 805.2, Exception 2 - which states that "means egress conforming to the requirements of the building code under which the building was constructed shall be considered compliant means of egress."

Cost Impact: This should / could result in COST SAVINGS. if the exit access travel distances were limited to 75 feet (not the more appropriate 200-400 feet), then you would be required to have more exits and/or exit access doorways. Also, if you were required to provide additional or wider doors around the perimeter of your Group A building, simply because you were doing alterations *within* a Group A building, that could be challenging and would be an additional cost that does not appear to be necessary and may conflict with state law regarding retrofit requirements.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: withdrawn first part 805.3.1.1
consensus

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-805.3.1.1 cdpVA-15

R-808.3 cdpVA-15

Proponent : Johnna Grizzard (grizzardj@chesterfield.gov)

2015 International Existing Building Code

808.3 Residential occupancies. In Group R-2, R-3, R-4 and ~~R-4~~R-5 occupancies and buildings regulated by the *International Residential Code*, the requirements of Sections 808.3.1 through 808.3.7 shall be applicable only to work areas located within a dwelling unit.

Reason: The 2012 VCC currently permits application of the VRC for reconstruction, alteration or repair in group R-5 occupancies as an exception to VCC 103.5. There is also a forthcoming proposal for the 2015 Virginia code change cycle to more clearly specify the VRC is applicable to R-5 occupancies. The 2015 IEBC specifies that Section 808.3 is applicable to residential occupancies, and lists the occupancies: R-1, R-2, R-3, and R-4 and buildings regulated by the *International Residential Code*." Because R-5 is not a Use Group designation in the I-codes, but buildings regulated by the IRC is specified for this section, it appears the intent is for this section to apply to all residential occupancies.

Cost Impact: None

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-808.3 cdpVA-15

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R-903.1 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2015 International Existing Building Code

903.1 Existing ~~shafts and vertical openings~~stairways. Existing stairways that are part of the means of egress shall be enclosed in accordance with Section 803.2.1 and its Exceptions if applicable, from the highest *work area* floor to, and including, the level of exit discharge and all floors below.

Reason: The revision to the header is to avoid potential confusion as the charging paragraph is only about stairways, and not shafts and vertical openings.

The purpose of adding "and Exceptions if applicable" is to again avoid potential confusion where it may be interpreted that all such stairways must be enclosed, regardless of whether the exceptions would otherwise apply. In other words, could a code official interpret that the stairway must be enclosed - period - per 803.2.1, which only addresses the hourly rating - without allowing the application of the exceptions? If yes, then this code change is needed and should avoid such confusion or potentially incorrect interpretations.

Cost Impact: If it could be interpreted that the stairway(s) must be enclosed with rated construction without allowing the use of the exceptions, then this code change could result in COST SAVINGS.

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-903.1 cdpVA-15

R-904.2 cdpVA-15

Proponent : Kenney Payne, Representing AIA-VA
(kpayne@moseleyarchitects.com)

2015 International Existing Building Code

904.2 Fire alarm and detection systems. Fire alarm and detection shall be provided throughout the work area in accordance with Section 907 of the *International Building Code* as required for new construction.

904.2.1 Manual fire alarm systems. Where required by the *International Building Code*, a manual fire alarm system shall be provided throughout the *work area*. Alarm notification appliances shall be provided on such floors and shall be automatically activated as required by the *International Building Code*.

- **Exceptions:**

1. Alarm-initiating and notification appliances shall not be required to be installed in tenant spaces outside of the *work area*.
2. Visual alarm notification appliances are not required, except where an existing alarm system is upgraded or replaced or where a new fire alarm system is installed.

904.2.2 Automatic fire detection. Where required by the *International Building Code* for new buildings, automatic fire detection systems shall be provided throughout the *work area*.

Reason: It could be interpreted that VRC Section 904.2 (the "charging" paragraph) requires installation throughout the building, as it would be required "for new construction." However, VRC Sections 904.2.1 and 904.2.2 clearly only require such installation in work areas only.

There appears to be a lack of clarity and/or the potential for a conflict that could lead to confusion, misinterpretations, and/or inconsistent interpretations. By adding "throughout the *work area*" in the charging paragraph, it clarifies the extent (work area (as defined) only) and uses the exact same terminology as the subsections.

Cost Impact: Potential **COST SAVINGS** if such systems are only required in work areas (which it clearly says in Sections 904.2.1 and 904.2.2), and not throughout the building (which might be interpreted under Section 904.2 because of the term "new construction").

Workgroup Recommendation

Workgroup 2 Recommendation Recommendation: Consensus for Approval

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

R-904.2 cdpVA-15

M-103.3 cdpVA-15

Proponent : William Andrews (william.andrews@richmondgov.com)

2012 Virginia Maintenance Code

103.3 Continued approval.

Notwithstanding any provision of this code to the contrary, alterations shall not be required to be made to existing buildings or structures which are occupied in accordance with a certificate of occupancy issued under any edition of the USBC. A change in the existing use or occupancy classification of a building or structure or portion thereof shall not be made, until the building official has issued an appropriate certificate of occupancy for such use.

Reason: Change for 2015 Code. Short of declaring building or part unsafe due to changed use, maintenance code official needs ability to cite change use to require customer to get Certificate of Occupancy for change of use. Maintenance code intended to see structure maintained as was approved by building official, thus change in use needs record of building official's approval (Certificate of Occupancy). Beyond limiting maintenance code official from requiring alterations to existing building, code should enable official to cite change of use needs approval from building code official (document via Certificate of Occupancy); and alterations may be arranged through building permit process.

Cost Impact: No construction cost, merely cost of permit process for new certificate of occupancy when use changes.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Disapproval

Workgroup 1 Reason:

March 27th-In coordination with other changes that are pending.-status pending

July 7th-Vernon-you do not direct the building official to do something out of another code book-status consensus for disapproval

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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M-104.5.3 cdpVA-15

Proponent : Sean Farrell (sfarrell@pwcgov.org)

2012 Virginia Maintenance Code

104.5.3 Inspections.

The code official may inspect buildings or structures to determine compliance with this code and shall carry proper credentials when performing such inspections. Where no permission has been granted to inspect a building or structure, or to access the premises, the inspection may only involve what is in plain view. The code 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.

Reason: STRB has taken this up with two appeals in 2015. Both appeals upheld the code officials in this case the VMC. The training and education for all code officials is of critical importance for the proper entry into a property/building by enforcers and what are the rights of the tenants/owners to say no. New language is proposed that is intended to highlight permission must be obtained to enter the building or property; that without permission the enforcer can only document what is from "plain view"; and, if there is imminent threat. Legal counsel should be consulted when permission is not obtained to determine if a search warrant can be obtained.

Cost Impact: None

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Disapproval

Workgroup 1 Reason: No support. Mainly commentary.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

M-104.5.3 cdpVA-15

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M-507.1 cdpVA-15

Proponent : Charles Wilson (cwilson2@arlingtonva.us)

2012 Virginia Maintenance Code

Drainage of roofs, paved areas, yards and courts and other areas on the property shall be discharged in a manner to protect buildings, structures, and surrounding pervious surfaces from erosion and the accumulation of stormwater runoff.

The intent of the modification; is to include erosion prevention and insert the consistent use of the phrase stormwater runoff as widely used in the environmental area.

The need; is to address the threshold limit that is not address by Department of Environmental Quality (DEQ).

The impact on cost of construction; a simple application of level spreader or channel discharge will have no unreasonable construction cost.

507.1 General.

Drainage of roofs and paved areas, yards and courts, and other open areas on the premises shall be discharged in a manner to protect the buildings and structures from the accumulation of overland water runoff.

Reason: To include erosion prevention and insert the consistent use of the phrase stormwater runoff as widely used in the environmental area.
And to address the threshold limit that is not address by the Department of Environmental Quality (DEQ).

Cost Impact: A simple application of level spreader or channel discharge will have no unreasonable construction cost.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Disapproval

Workgroup 1 Reason: Mr Farr disagrees, Emory stated VBCOA opposes unanimously consensus for disapproval

Workgroup 2 Recommendation Recommendation: Consensus for Disapproval

Workgroup 2 Reason: Reason: To include erosion prevention and insert the consistent use of the phrase stormwater runoff as widely used in the environmental area. And to address the threshold limit that is not addressed by the Department of Environmental Quality (DEQ).

Comments:

Brian Gordon opposes this code change.

Cindy Davis - **Move forward for consensus of disapproval**

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

M-507.1 cdpVA-15

M-202 cdpVA-15

Proponent : John Walsh , Representing VBCOA VMC Committee
(john.walsh@richmondgov.com)

2012 Virginia Maintenance Code

STRUCTURE UNFIT FOR HUMAN OCCUPANCY.

An existing structure determined by the code official to be dangerous to the health, safety and welfare of the occupants of the structure or the public because (i) of the degree to which the structure is in disrepair or lacks required maintenance, ventilation, illumination, sanitary or heating facilities or other essential equipment, or (ii) the required plumbing and sanitary facilities are inoperable.

602.2 Heat supply. All dwellings shall have an approved primary heat source, as required under the code under which it was built, capable of maintaining a level of comfort heat sufficient to maintain the plumbing and sanitation systems free from damage or freezing. Additionally, ~~E~~every owner and operator of a Group R-2 apartment building or other residential dwelling who rents, leases or lets one or more dwelling unit, rooming unit, dormitory or guestroom on terms, either expressed or implied, to furnish heat to the occupants thereof shall supply heat during the period from October 15 to May 1 to maintain a temperature of not less than 65°F (18°C) in all habitable rooms, bathrooms, and toilet rooms. The code official may also consider modifications as provided in Section 104.5.2 when requested for unusual circumstances or may issue notice approving building owners to convert shared heating and cooling piping HVAC systems 14 calendar days before or after the established dates when extended periods of unusual temperatures merit modifying these dates.

Exception: When the outdoor temperature is below the winter outdoor design temperature for the locality, maintenance of the minimum room temperature shall not be required provided that the heating system is operating at its full design capacity. The winter outdoor design temperature for the locality shall be as indicated in Appendix D of the *International Plumbing Code*.

Reason:

202 Definitions-Due to a recent ruling by the TRB that exempted owner occupied structures from the provisions of the Unfit definition related to a heating source it is necessary to clarify the language and also to clarify the intent of the Board of Housing. It was argued that the Board in their 1990 original revision to the definition and to the section of code found in 602.2 purposefully excluded owner occupied structures from the requirement for any heat source. Even in light of the fact that the definition of a "nuisance" structure (precursor to the current Unsafe/Unfit definitions) in 1990 stated "Any" structure that lacked heat was a nuisance structure. It was argued that because in that same cycle the performance measurement was limited to rental units in Section 602.2 the owner occupied structures were excluded from the requirement for any type of minimum heat source. The locality argued that all structures were required to have some form of heat source and that when the Board limited the performance measurement that they did not exclude any property or structure from the requirement for minimum heating standards, that in fact they kept the requirement for rental units and allowed owner occupied to operate without a set standard to allow for alternative heat sources. This argument was bolstered by the testimony of a TRB member who is also a former Board member. He argued that he served 8 years on the

Board and was involved with the approval of the model codes for two code cycles and did not believe it was ever the intent of the board to exclude owner occupied structures, but to limit the performance standard to rental units. It is my opinion that some form of minimum heat source is required otherwise how would an owner keep his plumbing and sanitation system operational in the winter? For these reasons I ask that the Board change the "An" at the beginning of the definition to "Any" in order to provide greater clarity.

602.2 Heat Supply-Based on a recent decision by the TRB that the revision to 602.2 of the VMC exempted owner occupied properties from the requirement for any heating facilities it is necessary to clarify the language and also to clarify the intent of the Board of Housing. It was argued that the Board in their 1990 original revision to the definition and to the section of code found in 602.2 purposefully excluded owner occupied structures from the requirement for any heat source. Even in light of the fact that the definition of a "nuisance" structure (precursor to the current Unsafe/Unfit definitions) in 1990 stated "Any" structure that lacked heat was a nuisance structure. It was argued that because in that same cycle the performance measurement was limited to rental units only that the owner occupied structures were excluded from the requirement for any type of minimum heat source. The locality argued that all structures were required to have some form of heat source and that when the Board limited the performance measurement that they did not exclude any property or structure from the requirement for minimum heating standards, that in fact they kept the performance standard for rental units and allowed owner occupied structures to operate without a set standard to allow for alternative heat sources. This argument was bolstered by the testimony of a TRB member who is also a former Board member. He argued that he served 8 years on the Board and was involved with the approval of standards for two code cycles and did not believe it was ever the intent of the board to exclude owner occupied structures, but to limit the performance standard to rental units. It is my opinion that some form of minimum heat source is required otherwise how would an owner keep his plumbing and sanitation system operational in the winter? For these reasons I ask that the Board to consider this code change in order to provide greater clarity as to the requirements for providing heat to an owner occupied structure.

Cost Impact:

202 Definitions-The cost to make the change would be negligible. 99% of the residential units in Virginia are furnished with or have had installed in them some form of minimum primary heat source that will maintain the plumbing and sanitary systems free from freezing and/or damage.

602.2 Heat Supply-The cost to make the change would be negligible. 99% of the residential units in Virginia are furnished with or have had installed in them some form of minimum primary heat source that will maintain the plumbing and sanitary systems free from freezing and/or damage.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Non-Consensus Final

Workgroup 1 Reason:

March 27th-Will collaborate based on comments at workgroup-status pending

July 7th-Phillip Storey spoke in opposition and has submitted his own proposal-Walsh somewhat agreed and wants the TRB to revisit--move forward

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: John Walsh gave an overview of his proposal, Peter Askin with Phil Storey group gave an overview of his reason for non-consensus John Walsh stated Mr. Storey is interpreting the maintenance code as a restrictive code such as what a building is required to have. All it requires is to maintain under the code in which it was built. This is a performance standard for rental dwellings. Cindy Davis stated we will Move forward with non-consensus.

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

M-202 cdpVA-15

Public Comments for M-202 cdpVA-15 : M-202-WALSH248

Vernon Hodge

Public Comments for Proposal Id : 248

3 Comment(s)

In addition to the comments we submitted by attachment on 7/5/16, we remain concerned that the language of the proposed amendment to VMC § 602.2 would impose a potentially costly retrofitting requirement on homeowners who have complied with the USBC requirements over the years as they maintained their home. The scenarios below illustrate this concern.

SCENARIO 1: Someone buys a new manufactured home in 1990, built to HUD Manufactured Home Construction and Safety Standards (HUD MH Standards), and installs it in Virginia Beach as her primary residence. When the HVAC heating and cooling systems break in 2000, instead of spending \$500 or \$1,000 to repair them or much more to replace them with comparable systems, she replaces them with portable AC units and portable space heaters. This does not violate HUD MH Standards, because they only cover manufacture and pre-sale alterations – they don't impose any maintenance requirements on purchasers or homeowners. As an owner-occupied structure, this does not violate VMC § 602. As such, it does not meet the VMC's definition for Structure Unfit for Human Occupancy (Unfit), because VMC § 602's specific requirements control over the general mention of "heating" in the Unfit definition. (Additionally, both when the home was first built and when its HVAC systems were replaced, the Virginia Construction Code did not require even new, site-built dwellings built for owner occupancy to have heating systems installed.)

SCENARIO 2: Someone builds a single-family home in 2000 as a rental property, to be leased on terms that include the provision of heat, with a home-wide HVAC system installed. In 2010 someone purchases the home to occupy it as their primary residence, and when the HVAC system breaks in 2015 they decide to rely on a wood-burning stove and a couple of portable space heaters (for rooms that the stove heat doesn't really reach) to heat the home rather than replacing the home-wide HVAC system. When it was built as a rental property, VCC § R303.9 required the provision of heat to the occupants without relying on portable space heaters, though at that time VCC did not include heating requirements for owner-occupied homes. While it remained a rental property, VMC § 602 required the same (heat provided, not using portable space heaters), and lack of this (required) heat would have been grounds for declaring the home Unfit for Human Occupancy. However, after the home's sale and conversion to owner occupancy, even with the new heating arrangement using portable space heaters, it does not violate current VMC § 602 requirements or meet the definition of a Structure Unfit for Human Occupancy. The proposed amendment to § 602.2 could potentially expose the homeowner to liability based on the rental purpose for which the home was initially built, even though its current purpose (owner occupancy) did not require heating facilities under the VCC at the time the home was built.

While we oppose this amendment in its entirety, at a bare minimum we believe the language "as required under the code under which it was built" should be changed to "as required by the USBC in effect when it was built."

By **Phillip Storey**
07-18-2016 11:19:29

VMC § 602..2

We renew our objection to this proposed amendment to 602.2, as previously argued in our first comments on 7/5/16 (attached memorandum). We support the decision of the Board in 1990, renewed in every subsequent cycle, to exclude owner-occupied dwellings from the heating requirement. As explained in our comments from 7/5/16, the proposed amendment could impose major costs on tens of thousands of low-income households or put their homes at risk of condemnation.

The reference to maintaining plumbing and sanitation systems free from damage or freezing — when there are already VMC provisions requiring the maintenance of these systems, and there are likely much less expensive ways to comply rather than through an "approved primary heat source" for maintaining "comfort heat" — suggests this requirement is essentially "a solution in search of a problem," rather than a proposal carefully targeting an important, well-founded problem.

By **Vernon Hodge**
07-05-2016 12:00:22

See attached file.

Attachment: M-202(1).pdf

COMMENTS IN OPPOSITION TO 2015 USBC PROPOSED AMENDMENT M-202

SUBMITTED TO WORKGROUP 1

7/5/2016

Phillip T. Storey
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I. SUMMARY

We urge the Board of Housing and Community Development (“Board”) to reject M-202’s proposed amendments to the Virginia Maintenance Code (“VMC”) § 602.2 because it represents a substantial, unprecedented, and unwarranted change to the heating requirements adopted by the Board since 1984.

The changes proposed by M-202 represent unwarranted overregulation. Supposedly designed to ensure working plumbing and sanitation, there are already requirements in other sections of the VMC to achieve that purpose. Proposal M-202’s “approved primary heat source” language is also vague, and would give enforcement officials excessive discretion to condemn homes under VMC § 105.1.

Additionally, M-202’s changes would overturn the Board’s intent to exclude owner-occupied dwellings from the VMC’s heating requirements, which the code has reflected for more than 25 years. While current and past editions of the international model maintenance codes require owner-occupied dwellings to have heating facilities, the Board has repeatedly rejected that requirement and imposed heating obligations only on rented or leased dwellings. The Board

made that clear in 1990 when it first rejected the owner-occupied heating requirement, and M-202's alternative reading also conflicts with well-established principles of statutory and regulatory interpretation.

Although proposal M-202 purports to have a negligible cost impact, data from the U.S. Energy Information Administration and the U.S. Census Bureau indicate that its adoption would affect tens of thousands of mostly low-income families in Virginia, imposing thousands of dollars in compliance costs on each.

II. CONTEXT

Proposal M-202 responds to recent administrative appeals of the City of Richmond's application of VMC §105.1, threatening to condemn owner-occupied dwellings for lacking central heating systems. Although M-202's suggested amendment to VMC § 602.2 would set the heating performance measurement for owner-occupied structures only at "a level...sufficient to maintain the plumbing and sanitation systems free from damage or freezing," we do not believe the requirement is truly focused on plumbing system performance. VMC § 504.1 already requires that "[a]ll plumbing fixtures shall be maintained in a safe, sanitary and functional condition." M-202's proposed heating standard would be an unnecessary overregulation for that purpose.

We believe M-202 is really about requiring "comfort heat" throughout all structures (or at least all dwellings), by maintaining an undefined "approved primary heat source." That requirement was the basis for the administrative appeals mentioned in the Reason explanation for M-202, which motivated the proposal. The suggested amendment to § 602.2, even with the modest-sounding "damage or freezing" performance measurement, lends itself to broad interpretation by local officials. This is clear from the testimony Mr. Walsh, M-202's sponsor,

provided in the appeal hearing before the State Building Code Technical Review Board (“TRB”), where he explained “approved primary heat source” (undefined in the USBC) as: (1) a heat source “labeled and used for whole-home heating and not for space heating;”¹ (2) heating “acceptable under the building code as a sole-source heater;”² and (3) a heat source with “documentation that supports that it is an acceptable heating system for a house.”³

In addition to our concerns about the necessity and scope of M-202, we believe the proposed amendments are based on a misreading of the Board’s intent in adopting the VMC’s heating requirements and a misunderstanding of the amendments’ cost impact. These are addressed fully below.

III. PROPOSAL M-202 DOES NOT CLARIFY THE BOARD’S INTENT

A. Section 202 Definition: Structure Unfit for Human Occupancy

Proposal M-202 seeks to amend the definition of Structure Unfit for Human Occupancy in VMC § 202 by replacing the word “An” with “Any.” We do not believe this change would affect the meaning of the definition in any real way, and therefore we take no position on the amendment.

In order to clarify the intent of the Board, however, we will propose the following amendment to the definition, adding the word “required.”

An existing structure determined by the code official to be dangerous to the health, safety and welfare of the occupants of the structure or the public because (i) of the degree to which the structure is in disrepair or lacks required maintenance,

¹ State Building Code Technical Review Board, Audio Recording of Hearing for Appeal Nos. 15-12 and 15-13 (2/19/2016) (hereafter “TRB Hearing Audio”) at 1:25:42.

² *Id.* at 1:26:46.

³ *Id.* at 1:33:49. The potential for the vague standard’s absurd application is suggested by Mr. Walsh’s testimony that a home could be issued an NOV threatening condemnation for lack of an installed heating system even “in July, when it is 102 [degrees] outside.” *Id.* at 1:32:49.

ventilation, illumination, sanitary or heating facilities or other essential equipment, or (ii) the required plumbing and sanitary facilities are inoperable.

Our proposed amendment would clarify that a structure could be determined unfit due to “the degree to which it lacks” maintenance, facilities, equipment, or other elements *that are among the VMC’s substantive requirements found in chapters 3 through 8*. As explained in our proposal submitted through the Online Code Development Process, such a clarification would ensure interpretation of the Unfit definition that is in harmony with TRB Interpretation Number 6/90 and with the Board’s amendments to the model code’s heating requirements in VMC § 602, as explained below.

B. Section 602: Heating Requirements

M-202’s proposed amendment to § 602.2 would overturn, not clarify, the intent of the Board in consistently amending that section when adopting the model code since 1990. As explained below, there are clear indications that the Board fully intended to eliminate any heating requirement for owner-occupied dwellings.

1. The Board’s Amendments to VMC § 602 Represent a Policy Choice to Eliminate Heating Requirements—Not Just a Specific Heating Performance Measurement—for Owner-Occupied Dwellings

In explaining the reason for proposal M-202, Mr. Walsh argues that the Board’s amendments to § 602 were not intended to eliminate the requirement for owner-occupied dwellings, just like rented and leased dwellings, to have heating facilities. Instead, he argues the Board’s amendments were intended to eliminate only the specific performance measurement for the heating facilities that were still required in owner-occupied dwellings. As explained below, that interpretation contradicts both the history of the VMC and the standard rules for interpreting potentially ambiguous statutes and regulations.

The clearest, most direct indication that the Board intended to entirely eliminate the heating requirement for owner-occupied dwellings is found in the Virginia Register of Regulations (“Register”), where the final amendments to the 1990 edition of the VMC were published.⁴ Previous editions of the model maintenance code (1984 and 1987), which the Board adopted without amendment,⁵ required heat only in dwellings whose owner “rents, leases, or lets” them on terms that include the provision of heat.⁶ The 1990 model maintenance code added a separate provision requiring heating facilities in “every dwelling,”⁷ which the Board eliminated when adopting the 1990 VMC and each subsequent edition.⁸

The summary the Board published in the Register along with the 1990 VMC amendments includes a clear explanation of the Board’s intent in the amended heating requirement.

[T]ext was deleted from the BOCA Property Maintenance Code, §§ PM-601.1 and PM-601.2, which required heat to be supplied in all buildings, rather than just those being rented or leased. This change was necessary to be consistent with Volume I of the Uniform Statewide Building Code.⁹

The Board’s summary clearly indicates its policy decision was not simply to excuse owner-occupied structures from specific heating performance measurements, but to reject

⁴ 7 Va. Reg. Regs. 1084 *et seq.* (December 31, 1990).
(<http://register.dls.virginia.gov/vol07/iss07/v07i07.pdf>)

⁵ The inclusion of *any* heating requirement in the VMC, when it was first adopted as part of the USBC in 1984, was a contentious issue on which urban and rural areas disagreed. In particular, “[r]ural areas...objected to many of the requirements desired by urban communities. They noted the financial burden such requirements might place on building owners and indicated that in many areas central heating...[was] not the normative housing standard[].” Department of Housing and Community Development, *Review of Department of Housing and Community Development Regulations: Evaluation Report on Virginia Uniform Statewide Building Code*, 22 (Sep. 1984), p. 28 (available at the Office of the Registrar of Regulations, Virginia Register of Regulations). *See also* pp. 23, 28-29.

⁶ BOCA National Existing Structures Code, § 601.1 (1984, 1987).

⁷ BOCA National Property Maintenance Code, § 601.1 (1990).

⁸ 7 Va. Reg. Regs. 1092.

⁹ *Id.* 1085.

entirely the requirement that heating facilities be installed in buildings that are not being rented or leased.¹⁰ Furthermore, the interpretation argued for in proposal M-202 remained inconsistent with USBC Volume I through several more code cycles, until the 2003 edition first required heating facilities in all new dwellings covered by the Residential Code.¹¹ Even with that change in 2003 to USBC Volume I, the Board made the same amendment to VMC § 602 in each new edition of the code. M-202 would retroactively enforce heating requirements that were not part of the USBC when many of the affected owner-occupied dwellings were built.¹²

C. Proposal M-202's Interpretation of the Board's Intent is Contrary to the Rules of Statutory Construction

M-202's interpretation of the Board's intent in both VMC § 202's definition of a Structure Unfit for Human Occupancy and § 602's heating requirements is contrary to well-established rules for interpreting potentially ambiguous statutes and regulations, which are known as principles or rules of (statutory) construction. Courts in Virginia have repeatedly stated that the interpretations administrative agencies give to regulations must be judged "in light of the principles of construction courts normally employ."¹³ Under these principles, including those

¹⁰ The Reason statement for proposal M-202 notes that during the appeal hearing before the TRB on 2/19/2016, one TRB member who formerly served with the Board of Housing and Community Development stated his opinion (no TRB members "testified" at the hearing) that the Board never intended to entirely eliminate the heating requirement for owner-occupied structures. However, the TRB Chairman, who had also worked with the Board in the early 1990s, stated the opposite opinion during the same hearing. TRB Hearing Audio at 1:16:45. Despite these conflicting opinions, the Board's own statement in its summary published in the Register in 1990 offers the clearest and most timely indication of its intent. 7 Va. Reg. Regs. 1085.

¹¹ Section R303.8.

¹² This result would certainly be in tension with VMC § 103.2 and its interpretation in TRB Appeal 08-12.

¹³ *Bd. of Supervisors of Culpeper Cnty. v. State Bldg. Code Technical Review Bd.*, 52 Va. App. 460, 466, 663 S.E.2d 571, 574 (2008).

explained below, the VMC, as repeatedly adopted by the Board, cannot be construed to contain heating requirements for owner-occupied dwellings.

1. Substantive Changes Made to Statutes and Regulations Are Presumed to Be Purposeful

Proposal M-202's Reason statement asserts that the Board intended the VMC's definitions of Public Nuisance (in editions before 2000) and Structure Unfit for Human Occupancy (in editions since 2000) to impose substantive heating requirements not found in § 602, which contains the code's specific provisions governing heating.¹⁴ This interpretation is in direct conflict with the Board's decision to eliminate heating requirements for owner-occupied dwellings from the VMC in 1990, and thus violates one of the rules of statutory construction: "As a general rule, a presumption exists that a substantive change in law was intended by an amendment to an existing statute."¹⁵

The Board easily could have adopted the model maintenance code language that "[e]very dwelling shall be provided with heating facilities," and deleted only the subsequent language specifying a performance measurement. It did not, and in its summary published with the 1990 VMC amendments, the Board explained that it deleted text from the model code "which required heat to be supplied in all buildings, rather than just those being rented or leased."¹⁶ That

¹⁴ Proposal M-202's Reason explanation overstates the breadth of the Public Nuisance definition. It did not state that "[a]ny structure that lacked heat was a nuisance structure," only "[a]ny premises from which the plumbing, heating, and/or facilities required by this code *have been removed*..." (Emphasis added.) Arguably, the phrase "required by this code" should be read to apply to plumbing and heating, not only to other "facilities."

¹⁵ *Virginia–American Water Co. v. Prince William County Service Authority*, 246 Va. 509, 517, 436 S.E.2d 618, 622-23 (1993).

¹⁶ 7 Va. Reg. Regs. 1085.

substantive change is only meaningful if it did, in fact, remove from the VMC the heating requirement for owner-occupied structures.

2. When in Conflict, Specific Provisions Control Over General Provisions

As Mr. Walsh points out, the mention of “heating” in the definition of a Structure Unfit for Human Occupancy could potentially be read to conflict with the Board’s elimination of the model maintenance code’s § 602 heating requirement for dwellings that are not rented or leased. One of the principles of construction governs such situations. “When one statute [or regulation] speaks to a subject in a general way and another deals with a part of the same subject in a more specific manner, the two should be harmonized, if possible, and where they conflict, the latter [i.e. the more specific section] prevails.”¹⁷

The definition of a Structure Unfit for Human Occupancy is found in VMC Chapter 2 (“Definitions”), § 202 (“General Definitions”). Section 201.1 defines the scope of Chapter 2: “Unless otherwise expressly stated, the following terms shall, for the purposes of this code, have the meanings shown in this chapter.” The scope of Chapter 6 (“Mechanical and Electrical Requirements”), which contains the heating requirements of § 602, is defined in § 601.1: “The provisions of this chapter shall govern the minimum mechanical and electrical facilities and equipment to be provided.” Thus, the definitions in Chapter 2, including the Unfit definition, are general provisions. By contrast, all of Chapter 6 and § 602 in particular (“Heating and Cooling Facilities”) are specific provisions that “shall govern” the mechanical and electrical requirements of the VMC, including the provision of heat.

¹⁷ *Virginia Nat'l Bank v. Harris*, 220 Va. 336, 340, 257 S.E.2d 867, 870 (1979).

As explained above, the attempt to harmonize M-202's interpretation of the Unfit definition with the intent of the Board in amending VMC § 602 conflicts with the history of the code, the stated intent of the Board in 1990, and other rules of statutory construction. As such, the principles of construction require that the specific provisions of § 602's amendments prevail when interpreting the code since 1990. Thus, M-202's proposed change to § 602.2 represents a stark policy change and not a mere clarification of the intent of the Board.

IV. THE COST IMPACT OF M-202 IS FAR GREATER THAN CLAIMED

Proposal M-202 claims its cost impact would be negligible because "99% of residential units in Virginia are furnished with...some form of minimum primary heat," but cites no source for the assertion. Data from the U.S. Energy Information Administration ("EIA") and the Census Bureau suggest that the proposal would impact tens of thousands of low-income homeowners. Furthermore, M-202 fails to consider the cost of the proposal on affected homeowners, especially relative to their incomes.

A. M-202 Would Affect Many Households

According to 2014 Census Bureau data, more than 68,000 owner-occupied dwellings in Virginia use wood as their primary heating fuel and nearly 5,000 others use no fuel at all for heating, together accounting for 3.6% of the total owner-occupied homes in the state.¹⁸ It is unclear how many of those homes would be in violation of the amendments proposed in M-202, or how many of the homes heated primarily with electricity, coal, fuel oil, or "other fuel" also

¹⁸ U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, Table B25117. (http://factfinder.census.gov/bkmk/table/1.0/en/ACS/14_5YR/B25117/04000000US51).

lack an “approved primary heat source” under M-202. But it is safe to assume that M-202 would affect many tens of thousands of households in Virginia.

B. Compliance Cost Per Household Is Substantial

The compliance cost for a homeowner affected by M-202 would be considerable. A moderately efficient “whole-home” heating system, as Mr. Walsh has described the requirement,¹⁹ would likely cost a few thousand dollars for even a small home.²⁰

C. M-202 Has a Disparate Impact on Low-Income Virginians

For most homeowners, a few thousand dollars is a significant expense. For families barely hanging onto the bottom rung of the economic ladder, this cost represents a crippling blow. For example, a compliance cost of \$3,000 represents roughly 20 percent of the average annual social security income for a widow.²¹ Proposal M-202, as applied through VMC § 105.1, would lead to the condemnation of many homes whose owners are too poor to comply with its requirements—displacing them and forcing some into homelessness.

For example, one low-income family in the City of Richmond recently endured this very scenario. Juan, Antonia, and their children were living in an older-model mobile home they had spent several thousand dollars to purchase and repair. Code enforcement officials inspected the home in early 2014 and issued a Notice of Violation requiring structural and electrical repairs, as well as the installation of a primary heating system comparable to the home’s original HVAC

¹⁹ TRB Hearing Audio, at 1:25:42.

²⁰ A ductless mini-split system for a dual-zone, 900 square foot home costs roughly \$1,500 and up for the unit alone, exclusive of the labor to install it. (Per www.homedepot.com and www.minisplitwarehouse.com, last checked 7/4/16.)

²¹ Social Security Administration, Monthly Statistical Snapshot, May 2016, Table 2. (https://www.ssa.gov/policy/docs/quickfacts/stat_snapshot/2016-05.pdf)

system. While the family could afford, with some help from the community, to make the other repairs, they could not scrape together thousands of dollars to install the heating system. Facing imminent condemnation, they abandoned their home and lost the investments they had made in purchasing and repairing it.²²

If the Board adopts M-202, it will force tens of thousands of other low-income families across Virginia into similar situations. Not surprisingly, national studies show that low-income households are especially likely to utilize alternative heating sources such as portable electric heaters or wood-burning stoves. According to EIA data, the primary heating sources for households living under the poverty line are nearly three times as likely to be portable electric heaters and nearly twice as likely to be wood stoves as they are for households over the poverty line.²³ We have no reason to believe Virginia is an exception to these national figures. The abundance of ministries and volunteer projects throughout Virginia to distribute free winter firewood to their low-income neighbors who rely on it suggests how widespread M-202's impact would be.²⁴

V. CONCLUSION

For the reasons explained above, we urge the Board to reject proposal M-202. Adopting the proposal would: (1) overturn the longstanding and consistent policy decision of the Board to adopt heating requirements *only* for dwellings that are rented or leased; (2) create unnecessary and burdensome new regulations for homeowners; and (3) impose a heavy cost impact on tens of thousands of low-income Virginians, including homes condemned and families displaced.

²² Private interview by Phil Storey, Legal Aid Justice Center, June 2016.

²³ U.S. Energy Information Administration, 2009 Residential Energy Consumption Survey, Table HC6.5.

²⁴ A recent Google search revealed many such programs operating throughout Virginia.

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M-604.3.1.1 cdpVA-15

Proponent : Haywood Kines (hkines@pwcgov.org)

2012 Virginia Maintenance Code

604.3.1.1 Electrical equipment.

Electrical distribution equipment, motor circuits, power equipment, transformers, wire, cable, flexible cords, wiring devices, ground fault circuit interrupters, surge protectors, molded case circuit breakers, low-voltage fuses, luminaires, ballasts, motors and electronic control, signaling and communication equipment that have been exposed to water shall be replaced in accordance with the provisions of the *International Building Code*.

- **Exception:** The following equipment shall be allowed to be repaired or reused where an inspection report from the equipment manufacturer, an approved representative of the equipment manufacturer, a Certified third party ~~licensed or certified electrician~~ Testing Agency, or an electrical engineer indicates that the exposed equipment has not sustained damage that requires replacement:
 1. Enclosed switches, rated 600 volts or less;
 2. Busway, rated 600 volts or less;
 3. Panelboards, rated 600 volts or less;
 4. Switchboards, rated 600 volts or less;
 5. Fire pump controllers, rated 600 volts or less;
 6. Manual and magnetic motor controllers;
 7. Motor control centers;
 8. Alternating current high-voltage circuit breakers;
 9. Low-voltage power circuit breakers;
 10. Protective relays, meters and current transformers;
 11. Low- and medium-voltage switchgear;
 12. Liquid-filled transformers;
 13. Cast-resin transformers;
 14. Wire or cable that is suitable for wet locations and whose ends have not been exposed to water;
 15. Wire or cable, not containing fillers, that is suitable for wet locations and whose ends have not been exposed to water;
 16. Luminaires that are listed as submersible;
 17. Motors;
 18. Electronic control, signaling and communication equipment.

Reason: The proposal adds a Certified Third Party Testing Agency to the list that may provide a report to the AHJ documenting the equipment exposed to water damage from flooding or Fire Fighting has not sustained any damage. A Certified Third Party Testing Agency's are Nationally Recognized Testing Laboratories such as U.L. and Approved to evaluate unlisted equipment and provide testing reports with a Label for the AHJ to except for approval. The reason for the "third party licensed or certified electrician" to be removed is based Va. DPOR Title 54.1 Chapter 11 Individual License and Certification Regulations; none of the definitions in the regulations for Electrician Work, Electrician, or Master has requirements for abilities to test damaged equipment or qualifications to certify equipment. Also there is no definition for "Certified Electrician" for the AHJ to determine qualifications to provide testing reports or documents per

the definitions in the regulations. These regulations for Licensed Electrical tradesman and contractors are intended for new construction, Alterations to existing systems and general maintenance of electrical equipment and systems to comply with the Va. Uniform Statewide Building Codes.

Cost Impact: The cost difference would be based on the hourly rate of each Company or Individual performing the evaluation and amount of equipment the needed to be evaluated for damaged.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Non-Consensus Final

Workgroup 1 Reason: None

Workgroup 2 Recommendation Recommendation: Non-Consensus Final

Workgroup 2 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

M-604.3.1.1 cdpVA-15

A-40 cdpVA-15

Proponent : Amusement Device Technical Advisory Committee

DHCD Staff Contact: Vernon.Hodge@dhcd.virginia.gov

2012 Virginia Building and Fire Code Related Regulations

2012 Virginia Amusement Device Regulations

13VAC5-31-40. Incorporated standards.

A. The following standards are hereby incorporated by reference for use as part of this chapter:

1. American National Standards Institute (ANSI) Standard No. B77.1-2011 for the regulation of passenger tramways; and
2. American Society for Testing and Materials (ASTM) Standard Nos. ~~F698-94, F747-06F747-15, F770-11F770-15, F846-92 (2009), F853-05, F893-10, F1159-11F1159-15b, F1193-06F1193-16, F1957-99 (2011), F2007-12, F2137-11F2137-15a, F2291-11F2291-15, F2374-10, F2375-09, F2376-08F2376-13, F2460-11, and F2959-12 F2959-16 and F2974-15~~ for the regulation of amusement devices.

The standards referenced above may be procured from:

ANSI

25 W 43rd Street

New York, NY 10036 West Conshohocken, PA 19428-2959

ASTM

100 Barr Harbor Dr.

(remainder of section unchanged)

Reason: The Amusement Device Technical Advisory Committee is a Board of Housing and Community Development-appointed committee to advise the Board on the standards for amusement devices. The ASTM F-24 standards for amusement devices were reviewed and this proposal is to update the regulations to the latest available ASTM standards. A number of standards have been discontinued and their provisions incorporated into the updated standards, so the proposal is necessary to prevent the reference to outdated standards.

Cost Impact: As the standards are just being updated to the latest available standards, the proposal does not create any significant cost impact.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

A-40 cdpVA-15

I-160 cdpVA-15

Proponent : DHCD State Building Codes Office staff

DHCD Staff Contact: Eric.Leatherby@dhcd.virginia.gov

2012 Virginia Building and Fire Code Related Regulations

2012 Virginia Industrialized Building Safety Regulations

13VAC5-91-160. Use of model codes and standards

A. Industrialized buildings ~~produced~~ entering the production assembly line after the effective date of the 2012 edition of this chapter shall comply with all applicable requirements of the codes and standards listed in subsection B of this section except that the following codes and standards may be used for industrialized buildings entering the production assembly line during a one year period after the effective date of the 2012 edition of this chapter:

1. ICC *International Building Code* – 2009 Edition
2. ICC *International Plumbing Code* – 2009 Edition
3. ICC *International Mechanical Code* – 2009 Edition
4. National Fire Protection Association Standard Number 70 (*National Electrical Code*) – 2008 Edition
5. ICC *International Fuel Gas Code* – 2009 Edition
6. ICC *International Energy Conservation Code* – 2009 Edition
7. ICC *International Residential Code* – 2009 Edition

B. The following documents are adopted and incorporated by reference to be an enforceable part of this chapter:

1. ICC *International Building Code* – 2012 Edition
2. ICC *International Plumbing Code* – 2012 Edition
3. ICC *International Mechanical Code* – 2012 Edition
4. *National Electrical Code* – 2011 Edition
5. ICC *International Fuel Gas Code* – 2012 Edition
6. ICC *International Energy Conservation Code* – 2012 Edition
7. ICC *International Residential Code* – 2012 Edition

Note: As the 2012 editions of the *International Codes* are incorporated by reference as the construction standards for use with these regulations, this chapter is also referred to as the 2012 edition of the *Virginia Industrialized Building Safety Regulations* or the 2012 edition of this chapter.

The codes and standards referenced above may be procured from:

International Code Council, Inc. 500 New Jersey Avenue, NW, 6th Floor Washington, DC 20001-2070

13VAC5-91-180. Compliance assurance agencies

A. Application shall be made to the SBCO for acceptance as a compliance assurance

agency. Application shall be made under oath and shall be accompanied by information and evidence that is adequate for the SBCO to determine whether the applicant is specially qualified by reason of facilities, personnel, experience and demonstrated reliability to investigate, test and evaluate industrialized buildings for compliance with this chapter, and to provide adequate follow-up and compliance assurance services at the point of manufacture.

B. Following a determination by the SBCO that an application is complete, the information contained in the application and any other information deemed necessary by the SBCO will be reviewed for approval or disapproval. If the application is approved, the applicant will be notified with an approval letter ~~for a two-year period from the date of the approval letter~~. If the application is disapproved, the applicant will be notified in writing of the reasons for the disapproval. The applicant may then resubmit the application within 30 days of the receipt of the notification of disapproval for reconsideration of approval.

~~**C.** Compliance assurance agencies that are already approved by the SBCO at the time of the effective date of this provision shall have 90 days from the effective date of this provision to apply for reapproval in accordance with subsections A and B of this section. Such agencies shall continue to be approved while the SBCO evaluates the reapplication. Compliance assurance agencies receiving an approval letter from the SBCO after the effective date of this provision shall apply for reapproval within 90 days prior to the expiration of the two-year approval period if continued approval as a compliance assurance agency is desired.~~

~~**D.**~~ The SBCO may suspend or revoke the approval of a compliance assurance agency upon a determination that (i) approval or reapproval was based upon fraudulent or inaccurate information, (ii) a change in facts or circumstances renders the agency incapable of meeting its duties and responsibilities as a compliance assurance agency in a satisfactory manner, or (iii) the agency failed to discharge its duties and responsibilities as a compliance assurance agency in a satisfactory manner. In such cases, the SBCO will issue a suspension or revocation notice to the agency outlining the reasons for the actions and the terms, if any, for reinstatement.

13VAC5-91-200. Information required by the administrator

All of the following information and criteria will be considered by the administrator in designating initial approval and reapproval of compliance assurance agencies:

1. Names of officers and location of offices.
2. Specification and description of services proposed to be furnished under this chapter.
3. Description of qualifications of personnel and their responsibilities, including an assurance that personnel involved in system analysis, design and plans review, compliance assurance inspections, and their supervisors comply with the requirements of the American Society for Testing and Material (ASTM) Standard Number E541-08 - Standard Specification for Agencies Engaged in System Analysis and Compliance Assurance for Manufactured Building or shall obtain ICC or DHCD certifications in the appropriate subject area within 18 months of employment and maintain such certifications in an active status.
4. Summary of experience within the organization.
5. General description of procedures and facilities to be used in proposed services, including evaluation of the model, factory follow-up, quality

assurance, labeling of production buildings, and specific information to be furnished on or with labels.

6. Procedures to deal with any defective buildings resulting from oversight.
7. Acceptance of these services by independent accrediting organizations ~~and by other jurisdictions.~~
8. Proof of independence and absence of conflict of interest.

The ASTM Standard Number E541-08 may be procured from:

American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, PA 19428-2959

13VAC5-91-240. Control of compliance assurance agency certification label

The labels shall be under direct control of the compliance assurance agency ~~until and shall be applied by the manufacturer~~ to buildings that comply fully with this chapter. The labels shall be applied by the compliance assurance agency or by the manufacturer when authorized to do so by the compliance assurance agency. The manufacturer shall place its order for labels with the compliance assurance agency. The manufacturer is not permitted to acquire labels from any other source. Each compliance assurance agency shall keep a list of the serial numbers of labels issued to each manufacturer's plant in such manner that a copy of the record can be submitted to the administrator upon request.

13VAC5-91-260. Registration seal for industrialized buildings

A. Registered industrialized buildings shall be marked with approved registration seals issued by the SBCO. The seals shall be applied to a registered industrialized building intended for sale or use in Virginia prior to the shipment of the building from the place of manufacture. The seals shall be applied by the compliance assurance agency or by the manufacturer when authorized to do so by the compliance assurance agency.

B. Registered industrialized buildings shall bear one registration seal on each manufactured section or module, or, as an alternative, the registration seal for each manufactured section or module may be placed in one location in the completed building.

C. Approved registration seals shall be purchased by the compliance assurance agency from the SBCO in advance of use. The fee for each registration seal shall be \$75, except that the fee for each registration seal for buildings constructed as Group R-5 under Part I of the USBC shall be \$50. Fees shall be submitted by checks made payable to "Treasurer of Virginia" or shall be submitted by electronic means. Payment for the seals must be received by the SBCO before the seals can be sent to the user. The compliance assurance agency shall maintain permanent records of seals purchased, including a record of any manufacturers receiving such seals.

D. To the extent practicable, the registration seal shall be installed so that it cannot be removed without destroying it. The seal shall be applied in the vicinity of the electrical distribution panel or in another location that is readily accessible for inspection and shall be installed near the certification label.

E. ~~Refunds of seals shall be in~~ In accordance with [§ 36-85.1](#) of the Code of Virginia, any person or corporation having paid the fee for an approved registration seal which it will not use may, unless and except as otherwise specifically provided, within one year from the date of the payment of any such fee, apply to the administrator for a refund, in whole or in part, of the fee paid; provided that no payment shall be recovered unless

the approved registration seal is returned, unused, and in good condition, to the administrator. Such application shall be by notarized letter. An Additionally, as a requirement of this chapter, an administrative and processing fee of 25% of the amount of the refund due shall be deducted from the refund; however, such deduction shall not exceed \$250.

13VAC5-91-270. Manufacturer's installation instructions and responsibilities of installers

A. The manufacturer of each industrialized building shall provide specifications or instructions, or both, with each building for handling, installing or erecting the building. Such instructions may be included as part of the label from the compliance assurance agency or may be furnished separately by the manufacturer of the building. The manufacturer shall not be required to provide the foundation and anchoring equipment for the industrialized building.

B. Persons or firms installing or erecting registered industrialized buildings shall install or erect the building in accordance with the manufacturer's instructions.

C. Where the installation or erection of an industrialized building utilizes components that are to be concealed, the installer shall notify and obtain approval from the building official prior to concealment of such components unless the building official has agreed to an alternative method of verification.

Note: The Virginia Department of Professional and Occupational Regulation's Board for Contractors requires licenses for certain activities related to the industrialized building industry. For more information, contact the Board for Contractors at 9960 Mayland Drive, Suite 400, Richmond, VA 23233 (804) 367-8511.

Reason:

DHCD staff reviewed the Virginia Industrialized Building Safety Regulations and proposes the following clarifications to the regulations:

The change to § 160(A) is to clarify that the one year grace period for the use of the earlier codes only applies to industrialized buildings which are being constructed in the plant during the one year period, and not to buildings just being designed which have not begun being constructed.

The change to § 180(B and C) deletes criteria for reapproval of compliance assurance agencies implemented in the last code change cycle. The requirements have been determined to be unnecessary and an undue burden on compliance assurance agencies and DHCD staff. The change to § 200 makes it clear that the criteria for approval of compliance assurance agencies applies to both initial approval and to reapproval. An additional change to § 200 deletes a requirement that compliance assurance agencies must be accepted by other jurisdictions in addition to be accepted by an independent accrediting organization as that requirement is not necessary.

The change to § 240 permits the compliance assurance agency to authorize the manufacturer to apply the compliance assurance agency's certification label. This is already permitted for registration seals.

The change to § 260(E) provides the statutory language for refunds of seals rather than just a reference to the provision in state law.

The change to the note in § 270 is to provide the contact information for the Board for Contractors.

Cost Impact: The changes are just to clarify the regulation, so the changes will not increase the cost of construction.

Workgroup Recommendation

Workgroup 1 Recommendation Recommendation: Consensus for Approval

Workgroup 1 Reason: None

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

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**CODES AND STANDARDS COMMITTEE
2015 CODE CHANGE CYCLE – BOOK 2
September 19, 2016**

**TAB 10 – Review of Statewide Fire Prevention Code Development Committee Decisions
(See 2015 Code Change Cycle – Book 1)**

Board Decision

None

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

Notes (to identify any changes to action by the FPCDC):

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