Virginia Board of Housing and Community Development

CODES AND STANDARDS COMMITTEE

2024 CODE CHANGE CYCLE – BOOK 4

December 7, 2026

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Opening Statement

Consideration of Recommendation of Statewide Fire Prevention Code Development Committee for SFPC Proposed Regulation (See Book 3)

TAB 1 – Consideration of Proposed Regulation for USBC

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Virginia Existing Building Code (Tab 1 Page 186)

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TAB 2 – Consideration of Proposed Regulation for IBSR

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TAB 5 – Informational Document Showing Editorial Corrections and Correlations to the Virginia Uniform Statewide Building Code

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Department of Housing And Community Development

Review and Update of the Uniform Statewide Building Code (USBC)

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 ~~2021~~ 2024 edition of the USBC due to the use of the ~~2021~~ 2024 editions of the model codes.

B. Section 101.2 Incorporation by reference.

Chapters 2 - 35 of the ~~2021~~ 2024 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 ~~2021~~ 2024 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:

~~2021~~ 2024 International Plumbing Code (IPC)

~~2021~~ 2024 International Mechanical Code (IMC)

~~2020~~ 2023 National Fire Protection Association (NFPA) 70

~~2021~~ 2024 International Fuel Gas Code (IFGC)

~~2021~~ 2024 International Energy Conservation Code (IECC)

~~2021~~ 2024 International Residential Code (IRC)

Note 2: The IRC is applicable to the construction of detached one-family 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 in this section; (ii) Chapters 2 through 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 through 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 in this section, 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 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 through 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.
5. References to International Codes and standards, where used in this code, include state amendments made to those International Codes and standards in the VCC.

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 through 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 through 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 through 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.
6. The provisions of the National Electrical Code (NEC), Virginia Property Maintenance Code ~~(VMC)~~ (VPMC), Virginia Plumbing Code (VPC), and Virginia Fuel Gas Code (VFGC)

supersede any provisions of the Virginia Energy Conservation Code (VECC) that address the same subject matter and impose differing requirements.

7. The provisions of Chapters 2 through 10 and 12 through 44 of the VRC supersede any provisions of Chapter 11 of the VRC 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 provisions relating to the scope of the code, enforcement, fees, permits, inspections and disputes. Any provisions of Chapters 2 through 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 provisions of this subsection, where administrative requirements of Chapters 2 through 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.

13VAC5-63-30. 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 103.1.1 Virginia Existing Building Code.

Part II of the Virginia Uniform Statewide Building Code, also known as the "Virginia Existing Building Code," or the "VEBC" is applicable to construction and rehabilitation activities in existing buildings and structures, as those terms are defined in the VEBC, except where specifically addressed in the VCC.

C. Section 103.2 When applicable to construction.

Construction for which a permit application is submitted to the local building department on or after the effective date of the ~~2021~~ 2024 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 ~~2021~~ 2024 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 ~~2021~~ 2024 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.

D. Section 103.3 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.

E. Section 103.3.1 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.

F. Section 103.4 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 through 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 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 a registered design professional (RDP).
5. ~~Section N1102.1 of the IRC and Sections C402.1.1, C402.1.1.1, and R402.1 of the IECC.~~

G. Section 103.5 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 (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. 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.

H. Section 103.6 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~~ Virginia Amusement Device Regulations (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~~ Virginia Certification Standards (VCS).

I. Section 103.7 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, and to all buildings and structures built on state-owned property, 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 or structure 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 or structures and for all buildings and structures built on state-owned property. 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~~ may provide for the inspection of state-owned buildings and enforcement of the USBC and standards for access by ~~the physically handicapped~~ individuals with physical disabilities 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~~ Department of General Services. The ~~department~~ Department of General Services 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~~ Department of

General Services shall provide the local building department with a written summary of its reasons for doing so.

Exception: (Expires July 1, 2027) In accordance with §36-98.1 of the Code of Virginia, enforcement of the USBC for bus shelters to be constructed for transit agencies receiving state funds from the Commonwealth Mass Transit Fund, pursuant to § 33.2-1526.1 of the Code of Virginia, and that do not exceed 256 square feet, shall be delegated to the local building official in lieu of the Department of General Services.

Notwithstanding any provision of this code to the contrary, roadway and railway tunnels and bridges owned by either the Virginia Department of Transportation or the Virginia Passenger Rail Authority shall be exempt from this code. The Virginia Department of General Services shall not have jurisdiction over such roadway and railway 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 or the Virginia Passenger Rail Authority rights-of-way that are subject to this code.

Except as provided in subsection E of § 23.1-1016 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~~ Department of General Services 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 A of § 23.1-1002 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 the case of roadway tunnels and bridges, and by the Virginia Passenger Rail Authority, in the case of railway tunnels and bridges, in each case in consultation with the State Fire Marshal. Emergency response planning and activities related to the standards shall be developed by the Department of Transportation or the Virginia Passenger Rail Authority, respectively, 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 and the Virginia Passenger Rail Authority shall provide a report on the maintenance and operability of installed fire protection and detection systems in its railway tunnels and bridges to the State Fire Marshal.

J. Section 103.7.1 Certification of state enforcement personnel.

State enforcement personnel shall comply with the applicable requirements of Section 105 for certification.

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 Property Maintenance Code," or the ~~"VMC,"~~ "VPMC," the local building department shall enforce such provisions.

If the local building department receives a complaint that a violation of the ~~VMC~~ VPMC 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 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~~ VPMC 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~~ VPMC 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. The local governing body shall also enforce the provisions of the VPMC regarding heat supply and cooling supply if the local governing body has elected not to enforce the VPMC, pursuant to subdivision C of § 36-105 of the Code of Virginia.

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~~ the 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.

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

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 or their designee within 60 days of the ~~employment of, contracting with or termination~~ separation of ~~all~~ a technical ~~assistants~~ assistant.

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

~~F. 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 construction conceptual and administrative processes; 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, including high school technical training programs or college engineering, architecture, or construction degree programs, shall be deemed to satisfy this requirement. The locality may establish additional qualification requirements.~~

~~G.~~ F. 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.

Exceptions:

1. 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.

2. A permit technician in place prior to the effective date of the 2015 edition of the code shall not be required to meet the certification requirements in this section while continuing to serve in the same capacity in the same locality.

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

~~H.~~ G. 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.

~~I.~~ H. 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.

13VAC5-63-80. 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, including the

addition or removal of emergency supplemental hardware; (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 by the VEBC.

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 broadband communications systems, (iii) is exempt under Section 102.3(1) or 102.3(4), or (iv) is for monitoring or automation systems in dwelling units, 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 m^2) 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 m^2).

4. Tents, air-supported structures, or both that cover an area of 900 square feet (84 m^2) 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 (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 six feet height measurement.

7. Retaining walls supporting less than three 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) and are less than 24 inches (610 mm) deep.

9. Signs under the conditions in Section H101.2 of Appendix H.

10. Replacement of aboveground 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 Groups 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 that 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 there is no refrigerant classification change and 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 Group R-3, R-4, or R-5 provided the building or structure is not in an area where the nominal design wind speed is greater than 100 miles per hour (44.7 meters per second) 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 256 square feet (23.78 m^2) or less of roof decking in Group 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 m^2) 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.

16. Billboard safety upgrades to add or replace steel catwalks, steel ladders, or steel safety cable.

Exceptions:

1. 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.

2. Application for a permit may be required by the building official for any items exempted in this section that are located in a special flood hazard area.

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 jurisdiction offers an online permit option for permit application and processing or 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 the person is duly licensed or certified under the terms ~~or~~ of Chapter 11 (§ 54.1-1100 et seq.) of Title 54.1 of the Code of Virginia to carry out or superintend the same or (ii) file a written statement that the person 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 § 43-4.01 A 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 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. When dry floodproofing is provided, the engineering details shall include detail of the walls, floors, and flood shields designed to resist flood-related loads, including the sealing of floor and wall penetrations. 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-family or two-family dwellings.

B. Section 110.1.1 Consultation and notification.

Prior to approval or removal of emergency supplemental hardware, the building code official shall consult with the local fire code official, or state fire code official if no local fire code official exists, and head of the local law-enforcement agency. The local fire code official; the state fire code official; and the local fire, EMS, and law-enforcement first responders shall be notified by the building code official of such approval or removal after approval or removal of such emergency supplemental hardware.

C. 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.

D. 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 the owner's 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~~ Pollutants (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 in this section, 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 (79,248 mm) on pipes or less than 160 square feet (14.86 m^2) on other facility components or less than 35 cubic feet (1 m^3) 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).

E. 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.

F. Section 110.5 Posting of permits; limitation of approval.

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.

G. 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.

H. 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.

I. 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, noncompliance with provisions of this code and pertinent laws and ordinances, or incorrect information supplied by the applicant in the application or construction documents on which the permit or approval was based.

J. Section 110.9 Cancellation of permit.

The building official shall cancel a permit at the request of the permit holder or the owner. An incomplete building or structure shall not be left as an unsafe building or structure.

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. The building official may consider nationally recognized guidelines in making a determination.

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~~ Virginia Board of Housing and Community Development (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 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 U.S. 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 ensure 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. 113.3.1 Equipment changes.

Upon the replacement or new installation of any fuel-burning appliances or equipment in existing Group R-5 occupancies, an inspection 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.

H. 113.3.2 Lowest floor elevation.

In flood hazard areas, upon placement of the lowest floor, including the basement, and prior to further vertical construction, the elevation certification required in Section 1612.4 shall be submitted to the building official.

I. 113.3.3 Flood hazard documentation.

If located in a flood hazard area, documentation of the elevation of the lowest floor or the elevation of dry floodproofing, if applicable, as required in Section 1612.4 shall be submitted to the building official prior to the final inspection.

J. 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.

K. 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.

L. 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~~ The written 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.

M. 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. Reports of inspections conducted for the purpose of verifying compliance with the requirements of the USBC for elevators, escalators, and related conveyances shall include the name and certification number of the elevator mechanic performing the tests witnessed by the third-party inspector or agency.

Exception: The licensed mechanical contractor installing the mechanical system shall be permitted to perform duct tests required by Section R403.3.5 of the IECC or Section N1103.3.5 of the IRC. The contractor shall have been trained on the equipment used to perform the test.

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

N. 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 timeframe 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.

O. 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.

P. Section 113.8 Final inspection.

Upon completion of construction for which a permit was issued, 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. Approval of the final inspection indicates that all work associated with the permit complies with this code, and the permit is complete. Prior to occupancy or change of occupancy of a building or structure, a certificate of occupancy shall be issued in accordance with Section 116.

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~~ is authorized to issue a written notice of violation to the responsible party or permit holder , or both, if any violations of this code or any directives or orders of the building official have not been corrected or complied with within a reasonable time. ~~The building official may also issue a notice of violation to other persons found to be responsible in addition to the permit holder. If the violations, directives, or orders involve work without a permit, the notice of violation shall be issued to the responsible party.~~ The notice shall reference the code section upon which the notice is based and direct the correction of the violation or the compliance with such directive or order and specify a reasonable time period within which the corrections or compliance must occur. The notice shall be issued by either delivering a copy by mail to the last known address of the permit holder or responsible party, by delivering the notice in person, by leaving it in the possession of any person in charge of the premises, by electronic service, 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 tenants of such building or structure are not the party to whom the notice of violation is issued, then a copy of the notice shall also be delivered to the owner or tenants.

~~Note: A notice of unsafe building or structure for structures that become unsafe during the construction process are issued in accordance with Section 118.~~

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.

Upon failure to comply with the notice of violation, the building official may initiate legal proceedings by requesting 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.

Prior to occupancy or change of occupancy of a building or structure, a certificate of occupancy shall be obtained in accordance with this section. The building official shall issue the certificate of occupancy within five working days after approval of the final inspection and when the building or structure or portion thereof is determined to be in compliance with this code and any pertinent laws or ordinances, or when otherwise entitled.

Exceptions:

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

2. A new certificate of occupancy is not required for an addition to an existing Group R-5 building that already has a certificate of occupancy.

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 of a building ~~of~~ 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 R320.3 of the VRC 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 106.6 of the ~~VMC~~ VPMC. 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 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 When no certificate exists.

When the local building department does not have a certificate of occupancy for a 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~~ VPMC or the Virginia Statewide Fire Prevention Code (13VAC5-52) and the occupancy classification of the building or structure has not changed. Such buildings and structures shall not be prevented from continued use.

When the local building department has records indicating that a certificate did exist but does not have a copy of the certificate itself, then the building official may either verify in writing that a certificate did exist or issue a certificate based upon the records.

13VAC5-63-180. Section 118 Buildings or structures that become a threat to public safety during construction.

A. Section 118.1 General.

Any building or structure that is under construction and has not received a permanent certificate of occupancy (CO), or final inspection if a CO will not be issued, that has been determined by the building official to be an immediate threat to public safety due to faulty construction, deterioration, damage, or structural instability shall be made safe through compliance with this code or shall be demolished and removed if determined necessary by the building official.

B. Section 118.2 Correction notice.

The building official shall issue a correction notice that describes the condition of the structure that is the basis for the determination that a violation of Section 118 exists. The correction notice

shall state what is required to correct the violation and provide a reasonable time to make the corrections, or if the structure is required to be demolished, the notice shall specify the time period within which the demolition must occur.

C. Section 118.3 Notice of violation.

When the violation has not been corrected in accordance with the correction notice issued per Section 118.2, the building official is authorized to issue a notice of violation in accordance with Section 115 of this code.

D. Section ~~118.3.1~~ 118.4 Vacating ~~unsafe~~ the 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~~ and the building or structure under construction is occupied, the building official shall be authorized to order the occupants to immediately vacate the ~~unsafe~~ building or structure. When ~~an unsafe~~ the building or structure is ordered to be vacated, the building official shall ~~post a notice at each entrance that reads as follows:~~ include the order in the correction notice, notice of violation, or issue a separate order.

> ~~"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.~~

~~E. Section 118.4 Posting of notice.~~

~~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.~~

~~F. Section 118.5 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.~~

E. Section 118.4.1 Posting of placard. If the building or structure has been issued an order to vacate a placard shall be posted with the following wording at each entrance to the structure: "THIS STRUCTURE IS AN IMMEDIATE THREAT TO PUBLIC SAFETY AND ITS USE OR OCCUPANCY HAS BEEN PROHIBITED BY THE BUILDING OFFICIAL." After a structure is placarded, entering the structure shall be prohibited except as authorized by the building official to make inspections, to perform required repairs or to demolish the structure. The placard shall not be tampered with, nor shall it be removed until the structure is determined by the building official to no longer be a threat to public safety.

~~G.~~ F. Section ~~118.6~~ 118.5 Emergency repairs and demolition. To the extent permitted by the locality, the building official may authorize emergency repairs or securing of the site when it is determined that there is an imminent threat to the life and safety of the public. The building 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, if the notice of violation included an order to demolish the structure and the demolition has not occurred in the time period stipulated, the building official shall be permitted to cause the ~~unsafe~~ 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.

~~H.~~ G. Section ~~118.7~~ 118.6 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 a structure that has become a threat to public safety during construction.

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. When the local governing body has established a fee for the filing of an appeal, the building department shall establish a written policy for the process and methods of payment. The written request for appeal is not considered to be complete and filed until the fee is paid. 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. Reaffirmation of a prior code decision does not constitute a new application of code subject to appeal.

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. Notice indicating the time and place of the hearing shall be sent to the parties in writing to the addresses listed on the application if requested or by

electronic means at least 14 calendar days prior to the date of the hearing unless a lesser time period is 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 explained in writing, signed by the chairman and retained as part of the record of the appeal. Copies of the written decision shall be sent to all parties by certified mail. In addition, the written decision 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 decision. 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 Section 36-114 of the Code of Virginia, the State Review Board shall have the power and duty to hear all appeals from decisions arising under the application of the USBC and to render its decision on any such appeal, which decision shall be final if no appeal is made therefrom. 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 written decision 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.

I. Section 119.9 Hearings and decision.

All hearings before the State Review Board shall be open meetings and the chair shall have the power and duty to direct the hearing, rule upon the acceptance of evidence and oversee the record of all proceedings. The State Review Board shall have the power to uphold, reverse, or modify the decision of the LBBCA by a concurring vote of a majority of those present.

Proceedings of the Review Board shall be governed by the provisions of the Administrative Process Act (§ 2.2-4000 et seq. of the Code of Virginia), except that an informal conference pursuant to § 2.2-4019 of the Code of Virginia shall not be required. Decisions of the State Review Board shall be final if no further appeal is made. The decision of the State Review Board shall be explained in writing, signed by the chair and retained as part of the record of the appeal. Copies of the written decision shall be sent to all parties by certified mail. In addition, the written decision shall contain the following wording: "As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty (30) days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a Notice of Appeal with the Secretary of the Review Board. In the event that this decision is served on you by mail, three (3) days are added to that period."

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 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.

Chemical fume hood. A ventilated enclosure designed to contain and exhaust fumes, gases, vapors, mists, and particulate matter generated within the hood.

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.

Dead end corridor. A portion of a corridor in which the travel to an exit is in one direction only.

DHCD. The Virginia Department of Housing and Community Development.

Emergency communication equipment. Emergency communication equipment, includes two-way radio communications, signal booster, bi-directional amplifiers, radiating cable systems, internal multiple antenna, or a combination of these.

Emergency public safety personnel. Emergency public safety personnel and 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 fires, medical emergencies, violent crimes, and terrorist attacks.

Emergency supplemental hardware. Any approved hardware used only for emergency events or drills to keep intruders from entering the room during an active shooter or hostile threat event or drill.

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 closed panels, 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 defined in § 36-85.3 of the Code of Virginia and certified under the provisions of the National Manufactured Home Construction and Safety Standards Act (42 USC § 5401 et seq.) 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. Any agency 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 that~~ 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.

Permit holder. The person to whom the permit is issued.

Public building. A structure or building that is owned, leased, or otherwise occupied by a municipality or the state and used for any municipal or public purposes by the municipality or the state.

Short-term holding area. An area containing a holding cell, or a holding room, 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~~ E90, "Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions."

State regulated care facility (SRCF). A building 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, the Virginia Department of Health, 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.

~~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.~~

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 inspectors, plans reviewers, and permit technicians. For the purpose of this definition, an extended contract shall be a contract with an aggregate term of 18 months or longer.

Tenable environment. 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.

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:

Ambulatory 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.

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.

Base flood elevation. The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the Flood Insurance Rate Map (FIRM), and as shown in the Flood Insurance Study.

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.

Change of occupancy. See Section 202 of the VEBC.

Clinic, outpatient. Buildings or portions thereof used to provide medical care on less than a 24-hour basis that are not licensed by the Virginia Department of Health as outpatient surgical hospitals.

~~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 care for occupants who have the ability to respond to emergency situations and evacuate at a slower rate, who have mental and psychiatric complications, or both.~~

Coastal high-hazard area. Area within the special flood hazard area extending from offshore to the inland limit of a coastal primary sand dune, as defined in § 28.2-1400 of the Code of Virginia, along an open coast and any other area that is subject to high-velocity wave action from storms or seismic sources and shown either in the Flood Insurance Study or on the Flood Insurance Rate Map (FIRM) or other flood hazard map as velocity Zone V, VO, VE, or V1-30 (areas subject to wave heights of three feet (914.4 mm) or more).

<u>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 care for occupants who have the ability to respond to emergency situations and evacuate at a slower rate, who have mental and psychiatric complications, or both.</u>

~~Essential facilities. Buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind, tornadoes, snow, or earthquakes.~~

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.

Existing structure. A structure (i) for which a legal building permit has been issued under any edition of the USBC, (ii) that has been previously approved, or (iii) that was 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.

Flood or flooding.

1. A general and temporary condition of partial or complete inundation of normally dry land from either of the following:

1.1 The overflow of inland or tidal waters.

1.2 The unusual and rapid accumulation or runoff of surface waters from any source.

2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event that results in flooding as defined in subdivision 1.1 of this definition.

3. Mudflows that are proximately caused by flooding as defined in subdivision 1.2 of this definition and are akin to a river of liquid and flowing mud on the surface of normally dry land areas, as when earth is carried by a current of water and disposed along the path of the current.

Flood hazard area. The greater of the following two areas:

1. The area within a flood plain subject to a 1.0% or greater chance of flooding in any year (also known as the 100-year floodplain).

2. The area designated as a flood hazard area on a community's flood hazard map or otherwise legally designated, including areas in either the Flood Insurance Study or on the Flood Insurance Rate Map (FIRM) and including areas added to account for future flooding conditions based on the locally adopted sea level rise projected to occur by 2070.

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 428.3.

Merchandise pad. A merchandise pad is an area for display of merchandise surrounded by aisles, permanent fixtures or walls. Merchandise pads contain elements such as nonfixed and movable fixtures, cases, racks, counters and partitions from which customers browse or shop.

~~Nominal loads. The magnitudes of the loads specified in Chapter 16 (dead, live, soil, wind, tornado, snow, rain, flood, and earthquake).~~

Owner. The owner 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.

~~Risk category. A categorization of buildings and other structures for determination of flood, wind, tornado, snow, ice, and earthquake loads based on the risk associated with unacceptable performance.~~

Special flood hazard area. The land area subject to flood hazards and shown on a Flood Insurance Rate Map or the Flood Insurance Study as Zone A, AE, A1-30, A99, AR, AO, AH, V, VO, VE, or V1-30.

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.

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

Wall. A vertical element with a horizontal length-to-thickness ratio greater than three used to enclose space.

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

Agricultural building

Historic buildings

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

A. Change Items 2, 6 and 8 of Section 302.1 of the IBC to read:

2. Business (see Section 304 and 313 for State Regulated Care Facilities (SRCFs)): Group B.

~~1.~~ 6. Institutional (see Section 308 and Section 313 for SRCFs).

~~2.~~ 8. Residential (see Section 310 and Section 313 for SRCFs): Groups R-1, R-2, R-3, R-4, and R-5.

B. Change Sections 303.1.1 and 303.1.2 of the IBC to read:

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 be permitted to be classified as Group B occupancies or as part of the assembly occupancy:

1. A room or space used for assembly purposes with an occupant load of less than 50 persons and ancillary to another occupancy.

2. A room or space used for assembly purposes that is less than 750 square feet (70 m^2) in area and ancillary to another occupancy.

C. 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:

Amusement park structures

Bleachers

Grandstands

Stadiums

Swimming pools

~~D. Add Section 304.1.1 to the IBC to read:~~

~~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 provided all of the following conditions are met:~~

~~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 two stories above grade, an automatic sprinkler system shall be provided throughout the building in accordance with Section 903.3.1.1.~~

~~E. Delete Exception 19 of Section 307.1.1 of the IBC and change Exceptions 14 and 18 to Section 307.1.1 of the IBC to read:~~

~~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.~~

~~18. 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.~~

D. Combine the two explosives rows in Table 307.1.1 of the IBC and revise to read:

Explosives	Groups M, R-3, R-5, B, F, M and S	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 International Fire Code, as amended in Section 307.9 of this code.

~~F.~~ E. Change the "Flammable liquid, combination (IA, IB, IC)" row in Table 307.1(1), add a new "Permissible fireworks" row to Table 307.1(1) of the IBC, and add footnote "r" to Table 307.1(1) of the IBC to read:

Flammable liquid, combination (IA, IB, IC)	NA	H-2 or H-3	NA	120[d,e,h]	NA	NA	120[d,h]	NA	NA	30[d,h,r]
Permissible fireworks	1.4G	H-3	125[d,e,l]	NA	NA	NA	NA	NA	NA	NA
r. The tabular value for distilled spirit distillation and blending rooms is 120 gallons.										

~~G.~~ F. 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 14 in Section 307.1.1:

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 Groups 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 warehouse or storage room is not open 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 three 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), two-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 one 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 shall be stored in a Type 2 or 4 magazine in accordance with Section 5604 and NFPA 495.

~~H.~~ G. Change Section 308.2 of the IBC to read:

308.2 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, shall be classified as the occupancy condition indicated in Section 308.2.1 or 308.2.2. Assisted living facilities licensed by the Virginia Department of Social Services shall be classified as one of the occupancy conditions indicated in Section 308.2.1 or 308.2.2.

~~I.~~ H. Change Sections 308.2.1 and 308.2.2 of the IBC to read:

308.2.1 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 level of exit discharge and the path of egress to the exit does not include steps.

308.2.2 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.

~~J.~~ I. Change Section 308.3 of the IBC to read:

308.3 Institutional 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.

~~K.~~ J. Add an exception to Section 308.5 of the IBC to read:

Exception: ~~Family day homes~~ Home-based child care facilities under Section 313.3.

~~L.~~ K. Change Sections 310.1 and 310.2 of the IBC to read:

310.1 Residential Group R. Residential Group R includes, among others, the use of a building or structure, or portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the IRC. Group R occupancies not constructed in accordance with the IRC as permitted by Section 310.4.2 shall comply with Section 420.

310.2 Residential Group R-1. Residential occupancies containing sleeping units or more than two dwelling units, and:

1. The occupants are primarily transient, and
2. There are more than 10 occupants.

~~M.~~ L. Change Section 310.3 of the IBC to read:

Residential Group R-2. Residential occupancies containing sleeping units or more than two dwelling units where the occupants are not primarily transient.

~~N.~~ M. Change Sections 310.4, 310.4.1, 310.4.2, 310.5, and 310.5.1 and add Section 310.5.3 of the IBC to read:

310.4 Residential Group R-3. Residential occupancies containing no more than two dwelling units and where the occupancy is not classified as Group R-1, R-2, R-4, R-5, or I, and:

1. The occupants are not primarily transient, or
2. There are no more than 10 transient occupants per dwelling unit.

310.4.1 Radon-resistant construction. Group R-3 buildings and structures shall be subject to the radon-resistant construction requirements in Appendix ~~F~~ BE of the IRC in localities enforcing such requirements pursuant to Section ~~R331~~ R333 of the ~~IRC~~ VRC.

310.4.2 Lodging houses. Owner-occupied or proprietor-occupied lodging houses and other transient boarding facilities not more than three stories above grade plane in height, with five or fewer guest rooms and 10 or fewer total occupants shall be 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~~ R310 of the IRC for Group R-5.

310.5 Residential Group R-4. Residential occupancies with 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 310.5. Assisted living facilities licensed by the Virginia Department of Social Services shall be classified as one of the occupancy conditions indicated in Section 310.5.1 or 310.5.2.

310.5.1 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 or, in which 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 level of exit discharge and the path of egress to the exit does not include steps.

310.5.3 Radon-resistant construction. Group R-4 buildings and structures shall be subject to the radon-resistant construction requirements in Appendix ~~F~~ BE of the VRC in localities enforcing such requirements pursuant to Section ~~R331~~ R333 of the VRC.

~~O.~~ N. Add Section 310.6 to the IBC to read:

310.6 Residential Group R-5. Residential Group R-5 occupancies shall include residential occupancies within the scope of Section 310.6.1 and manufactured homes in accordance with the Virginia Manufactured Home Safety Regulations (13VAC5-91).

310.6.1 Virginia Residential Code. The provisions of the IRC for detached one-family and two-family dwellings and townhouses as amended by VCC Section 310.8, also referred to as the Virginia Residential Code (VRC) printed by the ICC, shall apply to construction, rehabilitation, and demolition of the types of buildings and structures listed in this subsection, and the equipment therein, provided the building or structure is not more than three stories above grade plane in height with a separate means of egress:

1. Detached single-family and two-family dwellings.
2. Townhouses.
3. Care facilities for five or fewer people.
4. Owner-occupied or proprietor-occupied lodging houses with no more than five guest rooms and 10 or fewer total occupants.
5. Accessory structures of Group R-5 occupancies.
6. Other occupancies specifically permitted in this code to be classified as Group R-5.

All references to the IRC in the IBC shall be considered to be references to this section.

~~P.~~ O. Add Section 310.6.1.1 to the IBC to read:

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

~~Q.~~ P. Add Section 310.7 to the IBC to read:

310.7 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~~ BE of the IRC in localities enforcing such requirements pursuant to Section ~~R331~~ R333 of the IRC.

~~R.~~ Q. Add Section 310.8 to the IBC to read:

310.8 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:

Accessory dwelling unit. A dwelling unit in a two-family dwelling that is accessory to the primary dwelling unit. An accessory dwelling unit provides for separate living, sleeping, eating, cooking, and sanitation facilities for one or more occupants but may share living space, means of egress, utilities, or other components. An accessory dwelling unit fully complies with the requirements of this code for a dwelling unit except where specified otherwise.

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.

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 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.

~~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% of the market value of the structure before the damage occurred.~~

~~Substantial Improvement. Any repair, reconstruction, rehabilitation, alteration, addition, or other improvement of a building or structure, the cost of which equals or exceeds 50% of the market value of the structure before the improvement or repair is started. 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 building or structure's continued designation as a historic structure.~~

Two-family dwelling. A dwelling that includes two dwelling units or one dwelling unit and one accessory dwelling unit.

2. Change the following definitions to read:

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.

Dwelling. Any building that contains one or two dwelling units or one dwelling unit and one accessory dwelling unit used, intended, or designed to be built, used, rented, leased, let, or hired out to be occupied or that are occupied for living purposes.

Flood hazard area. The greater of the following two areas:

1. The area within a floodplain subject to a 1.0% or greater chance of flooding in any given year (also known as the 100-year floodplain).

2. The area designated as a flood hazard area on a community's flood hazard map or otherwise legally designated, including areas shown in either the Flood Insurance Study or on the Flood Insurance Rate Map (FIRM) and including areas added to account for future flooding conditions based on the locally adopted sea level rise projected to occur by 2070.

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

Manufactured home. A structure subject to federal regulation ~~that~~ , 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.

Substantial Improvement. Any repair, reconstruction, rehabilitation, alteration, addition, or other improvement of a building or structure, the cost of which equals or exceeds 50% of the market value of the structure before the improvement or repair is started. 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 of the following:

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 building or structure's continued designation as a historic structure.

3. Add the following paragraph to the end of Section R301.2.1 to read:

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 ultimate design wind speed of 140 mph (62.6 m/s) and areas lower than 4,000 feet in elevation shall use the ultimate design wind speed of 110 mph (49.2 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 26.5.2 of ASCE 7.

4. Change Section R301.2.2 by replacing references to "Section R101.2" with “Section 310.6 of the Virginia Construction Code”.

~~4.~~ 5. Add Exceptions 6 and 7 to Section R302.1 to read:

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 (3048 mm) to each other at any point along the exterior walls.

~~5.~~ 6. Change the Projections row of table R302.1(1) to remove the top row and change the Minimum Fire Separation Distance for Fire-resistance rated Exterior Wall Elements to less than five feet.

~~6.~~ 7. Change Exception 6 to Section R302.2.6 to read:

6. Townhouse units protected by a fire sprinkler system complying with Section P2904, NFPA 13, NFPA 13R, or NFPA 13D.

~~7. Change~~ 8. Delete Sections R302.3.1 through R302.3.3.2 and change Section ~~R302.3, including Exception 1, and add Exception 3~~ R302.3 to read ~~(Exception 2 remains)~~:

Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a one-hour fire-resistance rating where tested in accordance with ASTM E119, UL 263, or Section 703.2.2 of the International Building Code. Fire-resistance-rated floor or ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing. Dwelling unit separation wall assemblies that are constructed on a lot line shall be constructed as required in Section R302.2 for townhouses.

1. A fire-resistance rating of 1/2 hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13, NFPA 13R, or Section P2904.

2. Wall assemblies need not extend through attic spaces where the ceiling is protected by not less than 5/8-inch (15.9 mm) Type X gypsum board, an attic draft stop constructed as specified in Section R302.12.1 is provided above and along the wall assembly separating the dwellings and the structural framing supporting the ceiling is protected by not less than 1/2-inch (12.7 mm) gypsum board or equivalent.

3. Fire resistant rated assemblies are not required to separate a dwelling unit and accessory dwelling unit where both units are located on the same lot and comply with Sections R314.7 and R315.5.

~~8.~~ 9. 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) thick, solid or honeycomb-core steel doors not less than 1-3/8 inches (35 mm) thick, or 20-minute fire-rated doors.

~~9.~~ 10. Delete Section R302.13 in its entirety.

~~10. Add an exception to Section R303.10 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.~~

~~11. Add Section R303.10.1 to read:~~

~~R303.10.1 Nonowner occupied required heating. Every dwelling unit or portion thereof that 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 R303.10 during the period from October 15 to May 1.

12. Add Section R303.11 to read:

R303.11 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.

13. 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 103.5 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.

14. Change Section R308.4.5 to read:

R308.4.5 Glazing and wet surfaces. Glazing in walls, enclosures, or fences containing or facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers, and indoor or outdoor swimming pools shall be considered a hazardous location if located less than 60 inches (1524 mm) measured horizontally, in a straight line, from the water's edge and the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface. This shall apply to single glazing and each pane in multiple glazing.

15. Change Section R310.1, including Exception 2 to read (Exceptions 1 and 3 remain):

R310.1 Emergency escape and rescue opening required. Basements, habitable attics, and every sleeping room designated on the construction documents shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency egress and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court having a minimum width of 36 inches (914 mm) that opens to a public way.

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

16. Delete Section R310.2.2 and change Section R310.2.1 to read:

R310.2.1 Minimum opening area. Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m^2). 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. 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 net clear opening of not less than five square feet (0.465 m^2).

17. Change Section R311.1 to read:

~~R311.1 Means of egress. Dwellings and each dwelling unit in a two-family dwelling shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the required egress door without requiring travel through a garage. The required egress door shall open directly into a public way or to a yard or court that opens to a public way.~~

~~18. Change the exception to Section R311.3.1 to read:~~

~~Exception: The landing or floor on the exterior side shall be not 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.~~

~~19. Change Section R311.3.2 to read:~~

~~R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 8-1/4 inches (210 mm) below the top of the threshold.~~

~~Exception: A top landing is not required where a stairway of not more than two risers is located on the exterior side of the door, provided that the door does not swing over the stairway.~~

~~20. Change Section R311.7.5.1 to read:~~

~~R311.7.5.1 Risers. The 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 openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below do not permit the passage of a four-inch-diameter (102 mm) sphere.~~

~~Exceptions:~~

~~1. The opening between adjacent treads is not limited on spiral stairways.~~

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

~~21. Change Section R311.7.5.2 to read:~~

~~R311.7.5.2 Treads. The tread depth shall be not less than nine 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).~~

~~22. Change Section R312.2.1 to read (items 1 and 2 remain):~~

~~R312.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located 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 operable window shall comply with one of the following:~~

11. Change Sections R306.1.5, R306.1.8, and R306.2 to read:

R306.1.5 Lowest floor. The lowest floor shall be the lowest floor of the lowest enclosed area, including basement and excluding any unfinished flood-resistant enclosure that is usable solely for vehicle parking, building access, or limited (200 square feet or less) storage, provided that such enclosure is not built so as to render

the building or structure in violation of this section.

R306.1.8 Flood-resistant materials. Building materials and installation methods used for flooring and interior and exterior walls and wall coverings below the elevation required in Section R306.2 or R306.3 shall be flood damage-resistant materials that conform to the provisions of FEMA TB-2 and ASCE 24.

R306.2 Flood hazard areas (including A Zones). Areas that have been determined to be prone to flooding and that are not subject to high-velocity wave action shall be designated as flood hazard areas. Flood hazard areas that have been delineated as subject to wave heights greater than or equal to 1-1/2 feet (457 mm) or otherwise designated by the jurisdiction shall be designated as either Coastal A Zones or V, VE, or V1-30 Zones and are subject to the requirements of Section R306.3. Buildings and structures constructed in whole or in part in flood hazard areas shall be designed and constructed in accordance with Sections R306.2.1 through R306.2.4.

12. Change Item 4.2 of Section R306.2.1 to read (exception and other items remain):

    4.2 The floors shall be at or above grade on not less than one side. Where a garage or carport is enclosed by walls, the garage or carport shall be used solely for parking, building access, or storage, and the walls shall be constructed of flood damage resistant materials.

13. Change Section R306.3.1 to read:

    R306.3.1 Location and site preparation.

    1. New buildings and buildings that are determined to be substantially improved shall be located landward of the reach of mean high tide.

    2. For any alteration of sand dunes and mangrove stands, the building official shall require submission of an engineering analysis and a satisfactory Comment Document from FEMA for a Conditional Letter of Map Revision (CLOMR) that demonstrates that the proposed alteration will not increase the potential for flood damage.

14. Change Sections R306.3.6 and R306.3.10 to read:

    R306.3.6 Enclosed areas below required elevation. Enclosed areas lower than the design flood elevation required in Section R306.3.2 are prohibited in Coastal A Zones and Coastal High Hazard Areas.

    Exception: Elevator shaft enclosures designed in accordance with ASCE 24.

    R306.3.10 Tanks. Underground tanks are prohibited in Coastal A Zones or Coastal High Hazard Areas. Aboveground tanks shall be installed at or above the design flood elevation required in Section R306.3.2. Where elevated on platforms, the platforms shall be cantilevered from or knee braced to the building or shall be supported on foundations that conform to the requirements of Section R306.3.

~~23.~~ 15. Replace Section ~~R313~~ R309 with the following:

    Section ~~R313~~ R309. Automatic Fire Sprinkler Systems.

    ~~R313.1~~ R309.1 Townhouse automatic fire sprinkler systems. Notwithstanding the requirements of Section 103.3, 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.

    ~~R313.1.1~~ R309.1.1 Design and installation. Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with Section P2904 or NFPA 13D, NFPA 13, or NFPA 13R.

~~R313.2~~ R309.2 One-family and two-family dwellings automatic fire sprinkler systems. Notwithstanding the requirements of Section 103.3, where installed, an automatic residential fire sprinkler system shall be designed and installed in accordance with Section P2904, or NFPA 13D, NFPA 13, or NFPA 13R.

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.

~~R313.2.1~~ R309.2.1 Design and installation. Automatic residential fire sprinkler systems shall be designed and installed in accordance with Section P2904 or NFPA 13D, 13, or 13R.

~~24.~~ 16. Delete Section ~~R314.2.2~~ R310.2.2.

17. Add Item 7 to Section R310.3 (remainder of Section, including Items 1 through 6 remain) to read:

7. In rooms and areas within dwelling units, basements and attached garages in which Energy Storage Systems are installed.
Exception: A heat detector, listed and interconnected to the smoke alarms, shall be installed in locations within dwelling units and attached garages where smoke alarms cannot be installed based on their listing.

~~25.~~ 18. Delete Exception 2 and change Exception 1 to Section ~~R314.6~~ R310.6 to read:

Exception:

Smoke alarms shall be permitted to be battery operated with a minimum 10-year battery where installed in buildings without commercial power.

~~26.~~ 19. Change Section ~~R314.7~~ R310.7 to read:

~~R314.7~~ R310.7 Fire alarm systems. A fire alarm system complying with Sections ~~R314.7.1~~ R310.7.1 through ~~R314.7.4~~ R310.7.4 shall be installed within a two-family dwelling that is constructed without fire separations in accordance with Exception 3 of Section R302.3 and shall be installed in such a manner that the actuation of an alarm will activate all notification appliances within both dwelling units. Fire alarm systems shall be permitted to be used in other dwelling units in lieu of smoke alarms and shall comply with Sections ~~R314.7.1~~ R310.7.1 through ~~R314.7.4~~ R310.7.4.

~~27.~~ 20. Change Section ~~R314.7.3~~ R310.7.3 to read:

~~R314.7.3~~ R310.7.3 Permanent fixture. Where a household fire alarm system is installed, it shall become a permanent fixture of the dwelling unit.

~~28.~~ 21. Change Section ~~R315.1.1~~ R311.1.1 to read:

~~R315.1.1~~ R311.1.1 Listings. 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.

~~29.~~ 22. Change Section ~~R315.2~~ R311.2 to read:

~~R315.2~~ R311.2 Where required. Carbon monoxide alarms shall be provided in accordance with this section.

~~30.~~ 23. Delete Section ~~R315.2.2~~ R311.2.2.

~~31.~~ 24. Change Section ~~R315.5~~ R311.5 to read (exception remains):

~~R315.5~~ R311.5 Interconnectivity. Where more than one carbon monoxide alarm is required to be installed within an individual dwelling unit in accordance with Section ~~R315.3~~ R311.3, the alarm devices shall be interconnected in such a manner that the

actuation of one alarm will activate all of the alarms in the dwelling. Alarm devices within a two-family dwelling constructed without fire separations in accordance with Exception 3 of Section R302.3 shall be interconnected in such a manner that the actuation of one alarm within either unit will activate all alarms within both dwelling units. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

~~32.~~ 25. Delete Section ~~R315.6~~ R311.6.

~~33.~~ 26. Change Section ~~R315.7.3~~ R311.7.3 to read:

~~R315.7.3~~ R311.7.3 Permanent fixture. Where a household carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy.

27. Change Exception 1 and delete Exceptions 1.1, 1.2, 3, and 4 to Section R316.3 (Exception 2 remains) to read:

1. The aggregate area of the habitable attic is not greater than two-thirds of the floor area of the story below or a maximum of 400 square feet (37.2 square meters).

~~34. Add Section R320.3 to read:~~

~~R320.3 Universal design features for accessibility in dwellings. Dwellings constructed under the IRC not subject to Section R320.1 may comply with Section 1110.17 of the USBC and be approved by the local building department as dwellings containing universal design features for accessibility.~~

~~35. Change Sections R322.1.5, R322.1.8, and R322.2 to read:~~

~~R322.1.5 Lowest floor. The lowest floor shall be the lowest floor of the lowest enclosed area, including basement and excluding any unfinished flood-resistant enclosure that is usable solely for vehicle parking, building access, or limited (200 square feet or less) storage, provided that such enclosure is not built so as to render the building or structure in violation of this section.~~

~~R322.1.8 Flood-resistant materials. Building materials and installation methods used for flooring and interior and exterior walls and wall coverings below the elevation required in Section R322.2 or R322.3 shall be flood damage-resistant materials that conform to the provisions of FEMA TB-2 and ASCE 24.~~

~~R322.2 Flood hazard areas (including A Zones). Areas that have been determined to be prone to flooding and that are not subject to high-velocity wave action shall be designated as flood hazard areas. Flood hazard areas that have been delineated as subject to wave heights greater than or equal to 1-1/2 feet (457 mm) or otherwise designated by the jurisdiction shall be designated as either Coastal A Zones or V, VE, or V1-30 Zones and are subject to the requirements of Section R322.3. Buildings and structures constructed in whole or in part in flood hazard areas shall be designed and constructed in accordance with Sections R322.2.1 through R322.2.4.~~

~~36. Change Item 4.2 of Section R322.2.1 to read (exception and other items remain):~~

~~R322.2.1 Elevation requirements.~~

~~4.2 They shall be at or above grade on not less than one side. Where a garage or carport is enclosed by walls, the garage or carport shall be used solely for parking, building access, or storage, and the walls shall be constructed of flood resistant materials.~~

~~37. Change Section R322.3.1 to read:~~

~~R322.3.1 Location and site preparation.~~

~~1. New buildings and buildings that are determined to be substantially improved shall be located landward of the reach of mean high tide.~~

~~2. For any alteration of sand dunes and mangrove stands, the building official shall require submission of an engineering analysis and a satisfactory Comment Document from FEMA for a Conditional Letter of Map Revision (CLOMR) that demonstrates that the proposed alteration will not increase the potential for flood damage.~~

~~38. Change Sections R322.3.6 and R322.3.10 to read:~~

~~R322.3.6 Enclosed areas below required elevation. Enclosed areas lower than the design flood elevation required in Section R322.3.2 are prohibited in Coastal A Zones and Coastal High Hazard Areas.~~

~~R322.3.10 Tanks. Underground tanks are prohibited in Coastal A Zones or Coastal High Hazard Areas. Aboveground tanks shall be installed at or above the design flood elevation required in Section R322.3.2. Where elevated on platforms, the platforms shall be cantilevered from or knee braced to the building or shall be supported on foundations that conform to the requirements of Section R322.3.~~

28. Change the first sentence in Section R318.1 (remainder of Section remains) to read:

Dwelling units, and detached accessory structures with habitable space shall be provided with a means of egress in accordance with this section.

29. Change the exception to Section R318.3.1 to read:

Exception: The landing or floor on the exterior side shall be not 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.

30. Change Section R318.3.2 (exception remains) to read:

R318.3.2 Floor elevations at other exterior doors. Exterior doors other than the required egress door shall be provided with landings or floors not more than 8-1/4 inches (210 mm) below the top of the threshold.

31. Change Section R318.7.5.1 (exceptions remain) to read:

R318.7.5.1 Risers. The 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 openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below do not permit the passage of a four-inch-diameter (102 mm) sphere.

32. Change Section R318.7.5.2 to read:

R318.7.5.2 Treads. The tread depth shall be not less than nine 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).

33. Change Exceptions 2, 3, and 4 to Section R318.7.6 (remainder of Section, including Exception 1, remains) to read:

2. At an enclosed garage, the top landing at the stair shall be permitted to be not more than 8-1/4 inches (197 mm) below the top of the threshold.

3. Where there are no more than two risers at an exterior door, and the door does not swing over the tread a top landing is not required.

4. An exterior flight of stairs to grade with three or fewer risers serving a deck, porch or patio shall have a bottom landing width of not less than 36 inches (914 mm), provided that the stairway is not the required access to grade serving the required egress door.

34. Change Section R319.1, including Exception 3 to read (Exceptions 1, 2, and 4 remain):

319.1 Emergency escape and rescue opening required. Basements, habitable attics, and every sleeping room designated on the construction documents shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency egress and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court having a minimum width of 36 inches (914 mm) that opens to a public way.

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

35. Delete Section R319.2.2 and change Section R319.2.1 to read:

R319.2.1 Minimum opening area. Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m^2). 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. 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 net clear opening of not less than five square feet (0.465 m^2).

36. Change Section R319.4.4 by deleting "through R319.2.2" from the first sentence (remainder of Section remains).

37. Change Section R321.2.1 (items 1 and 2 remain) to read:

R321.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located 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 operable window shall comply with one of the following:

38.Change Section R321.2.2 by deleting the reference to Section "R319.2.2".

39. Change Section R322.3 by replacing reference to "Section R101.2" with “Section 310.6 of the Virginia Construction Code”.

40. Add Section R322.4 to read:

R322.4 Universal design features for accessibility in dwellings. Dwellings constructed under the IRC not subject to Section R320.1 may comply with Section 1110.17 of the USBC and be approved by the local building department as dwellings containing universal design features for accessibility.

41. Change Section R324.4.5 to read:

R324.4.5 Glazing and wet surfaces. Glazing in walls, enclosures, or fences containing or facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers, and indoor or outdoor swimming pools shall be considered a hazardous location if located less than 60 inches (1524 mm) measured horizontally, in a straight line, from the water's edge and the bottom exposed edge of the glazing is less than 60 inches

(1524 mm) measured vertically above any standing or walking surface. This shall apply to single glazing and each pane in multiple glazing.

42. Add an exception to Section R325.8 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.

43. Add Section R325.8.1 to read:

R325.8.1 Nonowner occupied required heating. Every dwelling unit or portion thereof that 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 R325.8 during the period from October 15 to May 1.

44. Add Section R325.9 to read:

R325.9 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.

45. Add Section R326.5 to read:

R326.5 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 103.5 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.

~~39. Change~~ 46. Delete Section R329.6.2.1 and change Section ~~R324.6.2~~ R329.6.2 to read:

~~R324.6.2~~ R329.6.2 Setback at ridge. Not less than an 18-inch (457 mm) clear setback is required on both sides of a horizontal ridge.

~~40. Change Exception 1 and delete Exceptions 1.1, 1.2, 3, and 4 to Section R326.3 to read (Exception 2 remains):~~

~~R326.3 Story above grade plane. A habitable attic shall be considered a story above grade plane.~~

~~Exceptions: A habitable attic shall not be considered to be a story above grade plane provided that the habitable attic meets all the following:~~

~~1. The aggregate area of the habitable attic is not greater than two-thirds of the floor area of the story below or a maximum of 400 square feet.~~

47. Change Section R330.7 to read:

R330.7 Fire detection. ESS shall be protected by smoke alarms in accordance with Section R310.

~~41.~~ 48. Add Section ~~R331~~ R333 Radon-Resistant Construction.

~~42.~~ 49. Add Section ~~R331.1~~ R333.1 to read:

~~R331.1~~ R333.1 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),~~ BE101.1), such locality shall enforce the provisions contained in Appendix ~~AF~~ BE.

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

~~43.~~ 50. Add Section ~~R332~~ R334 Patio Covers.

~~44.~~ 51. Add Section ~~R332.1~~ R334.1 to read:

~~R332.1~~ R334.1 Use of Appendix ~~AH~~ BF for patio covers. Patio covers shall comply with the provisions in Appendix ~~AH~~ BF.

~~45.~~ 52. Add Section ~~R333~~ R335 Sound Transmission.

~~46.~~ 53. Add Section ~~R333.1~~ R335.1 to read:

~~R333.1~~ R335.1 Sound transmission between dwelling units. Construction assemblies separating dwelling units shall provide airborne sound insulation as required in Appendix ~~AK~~ BG.

Exception: Accessory dwelling units.

~~47.~~ 54. Add Section ~~R333.2~~ R335.2 to read:

~~R333.2~~ R335.2 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 1206.4 of the state amendments to the IBC.

~~48.~~ 55. Add Section ~~R334~~ R336 Fire Extinguishers.

~~49.~~ 56. Add Section ~~R334.1~~ R336.1 to read:

~~R334.1~~ R336.1 Kitchen areas. Other than where the dwelling is equipped with an approved sprinkler system in accordance with Section ~~R313~~ R309, 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.

~~50.~~ 57. Add Section ~~R335~~ R337 Interior Passage.

~~51.~~ 58. Add Sections ~~R335.1~~ R337.1 through ~~R335.6~~ R337.6 to read:

~~R335.1~~ R337.1 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~~ R318.2. This section is not applicable to additions, reconstruction, alteration, or repair.

~~R335.2~~ R337.2 Kitchen. One interior passage route from the egress door to the kitchen shall comply with ~~R335.6~~ R337.6.

~~R335.3~~ R337.3 Living area. One interior passage route from the egress door to at least one living area shall comply with ~~R335.6~~ R337.6.

~~R335.4~~ R337.4 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 ~~R335.6~~ R337.6.

~~R335.5~~ R337.5 Bathroom. Where a dwelling unit has a bathroom on the 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 ~~R335.6~~ R337.6. Bathroom fixture clearances shall comply with R307 and access to fixtures is not required to comply with ~~R335.6~~ R337.6.

~~R335.6~~ R337.6 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 (864 mm) clear width.

2. Doors shall be a nominal 34 inch (864 mm) minimum width. Double doors are permitted to be used to meet this requirement.

~~52.~~ 59. Add Section ~~R336~~ R338 Tiny Houses.

~~53.~~ 60. Add Section ~~R336.1~~ R338.1 to read:

~~R336.1~~ R338.1 General. Appendix ~~AQ~~ BB may be used as an alternative to the requirements of this code where a dwelling is 400 square feet (37 m^2) or less in floor area.

61. Add Section R339 Hemp-Lime (Hempcrete) Construction.

62. Add Section R339.1 to read:

R339.1 General. Appendix BL may be used as an alternative to this code.

~~54.~~ 63. 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 1.0% away from the building.

~~55.~~ 64. Add the following exceptions to Section R403.1 to read:

Exceptions:

1. One-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, not exceeding 256 square feet (24 m^2) of building area, provided that 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 (457 mm).

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 Groups R-3 and R-5 occupancies where the height of the entrance is no more than 30 inches (762 mm) above grade.

~~56.~~ 65. Change Section R403.1.6 to read (exceptions remain):

R403.1.6 Foundation anchorage. Wood sill plates and wood walls supported directly on continuous foundations shall be anchored to the foundation in accordance with this section.

Cold-formed steel framing shall be anchored directly to the foundation or fastened to wood sill plates in accordance with Section R505.3.1 or R603.3.1, as applicable. Wood sill plates supporting cold-formed steel framing shall be anchored to the foundation in accordance with this section.

Wood foundation plates or sills shall be bolted or anchored to the foundation with not less than 1/2-inch-diameter (12.7 mm) steel bolts or approved anchors spaced to provide equivalent anchorage as the steel bolts. Bolts shall be embedded not less than seven inches (178 mm) into concrete or grouted cells of concrete masonry units. The centerline of the bolts shall be located a minimum of 1.75 inches (44.5mm) from the edge of the sill plate. Bolts shall be spaced not more than six feet (1829 mm) on center and there shall be not less than two bolts or anchor straps per piece with one bolt or anchor strap located not more than 12 inches (305 mm) or less than four inches (102 mm) from each end of each piece. A properly sized nut and washer shall be tightened on each bolt to the plate. Interior bearing wall sole plates on monolithic slab foundation that are not part of a braced wall panel shall be positively anchored with approved fasteners. Sill plates and sole plates shall be protected against decay and termites where required by Sections ~~R317~~ R304 and ~~R318~~ R305. Anchor bolts shall be permitted to be located while concrete is still plastic and before it has set. Where anchor bolts resist placement or the consolidation of concrete around anchor bolts is impeded, the concrete shall be vibrated to ensure full contact between the anchor bolts and concrete.

~~57.~~ 66. Delete Section R404.1.9.2.

67. Change Section R404.5.1 by replacing the reference to "Section R106.1" with reference to "Section 109".

~~58.~~ 68. Change Item 2.4 in Section R408.3 to read:

2.4. Dehumidification sized to provide 70 pints (33 liters) of moisture removal per day for every 1,000 square feet (93 m^2) of crawl space floor area.

~~59.~~ 69. Add Section R408.3.1 to read:

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

Where pier and curtain foundations are installed as depicted in Figure R404.1.5.3, 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.

70. Change Section R502.12.1 by replacing the reference to "Section R106.1" with reference to “Section 109”.

~~60.~~ 71. Change Section ~~R506.2.1~~ R506.3.1 to read:

~~R506.2.1~~ R506.3.1 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 eight 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.

~~61.~~ 72. Change Section ~~R506.2.2~~ R506.3.2 to read:

~~R506.2.2~~ R506.3.2 Base. A four-inch-thick (102 mm) base course consisting of clean graded sand, gravel, or crushed stone passing a two-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~~ R401.4.1(2). 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.

73. Change reference to "Section R104.2.2" in footnote “a” to Table R602.3(1) with reference to “Section 112.2”.

~~62.~~ 74. 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.

~~63~~ 75. Add an exception to Section R602.10.9 to read:

Exception: For masonry stem walls, an approved post-installed adhesive anchoring system shall be permitted as an alternative to the Optional Stem Wall Reinforcement detail in Figure R602.10.9. A minimum of two anchors shall be installed as indicated in Figure R602.10.9. Anchors shall be located not more than four inches (102 mm) from each end of the stem wall. Anchors shall be installed into the concrete footing as follows:

1. Five-eighth inch (16 mm) treaded rod using a 3/4 inch (19 mm) diameter drilled hole with a minimum embedment of six inches (152 mm).

2. Number 4 size reinforcing bar using a 5/8-inch (16 mm) diameter drilled hole with a minimum embedment of 4-1/2 inches (114 mm).

A minimum footing thickness of eight inches (203 mm) is required and the minimum distance from each anchor to the edge of the footing shall be 3-3/4 inches (95 mm). The anchoring adhesive and anchors shall be installed in accordance with the manufacturer's instructions and have a minimum tensile capacity of 5,000 lbs. (22

kN). The bond beam reinforcement and attachment of braced wall panels to the stem wall shall be as shown in Figure R602.10.9.

~~64.~~ 76. 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 in this section, 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 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.

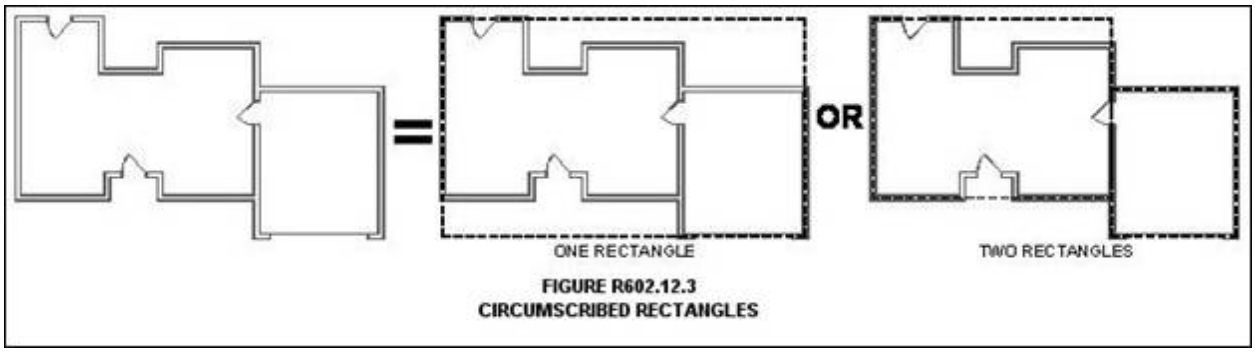


FIGURE R602.12.3
CIRCUMSCRIBED RECTANGLES

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
115	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
130	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 in Items 1, 2, and 3 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 four feet (1220 mm) away. Interior braced wall panels more than four 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.

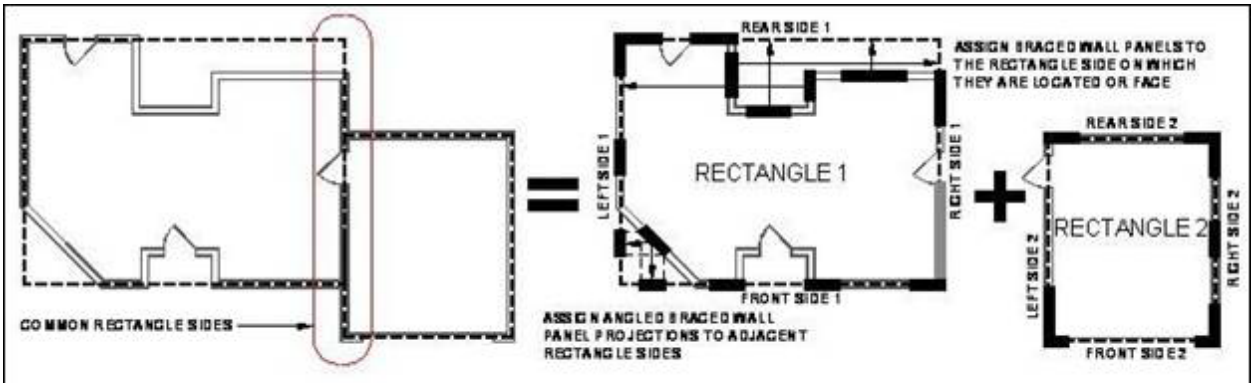


FIGURE R602.12.4.1
BRACED WALL PANEL ASSIGNMENT TO RECTAINGLE SIDES

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 in Items I, 2, and 3. When applying contributing length to angled braced wall panels, apply the requirements in Items I, 2, and 3 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.

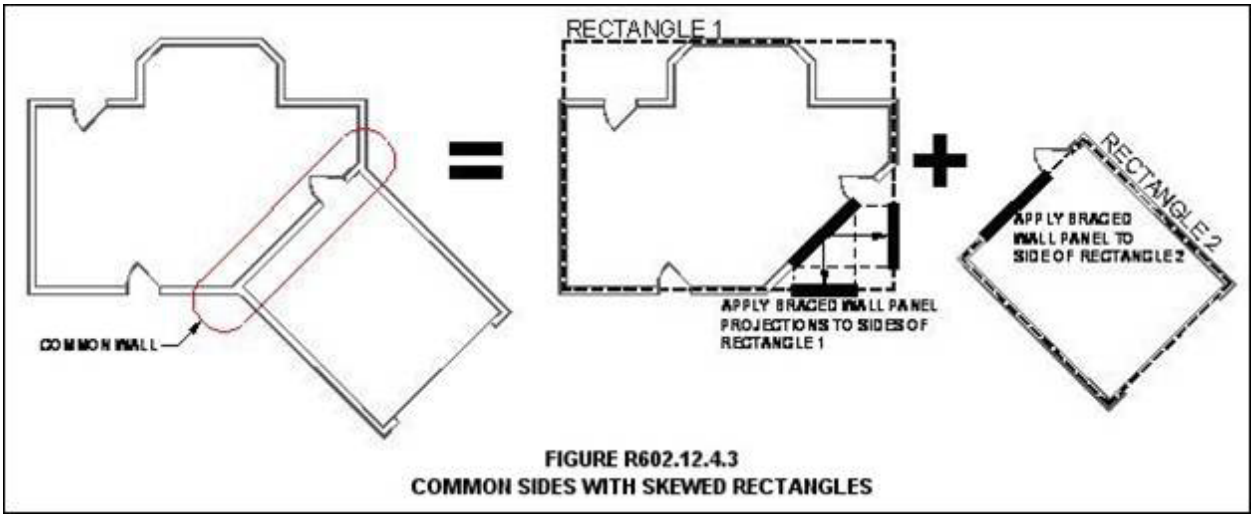


FIGURE R602.12.4.3
COMMON SIDES WITH SKEWED RECTANGLES

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 eight feet (2438 mm) in length shall have a minimum of one braced wall panel.
4. Segments of exterior wall eight feet (2438 mm) or less in length shall be permitted to have no braced wall panels.

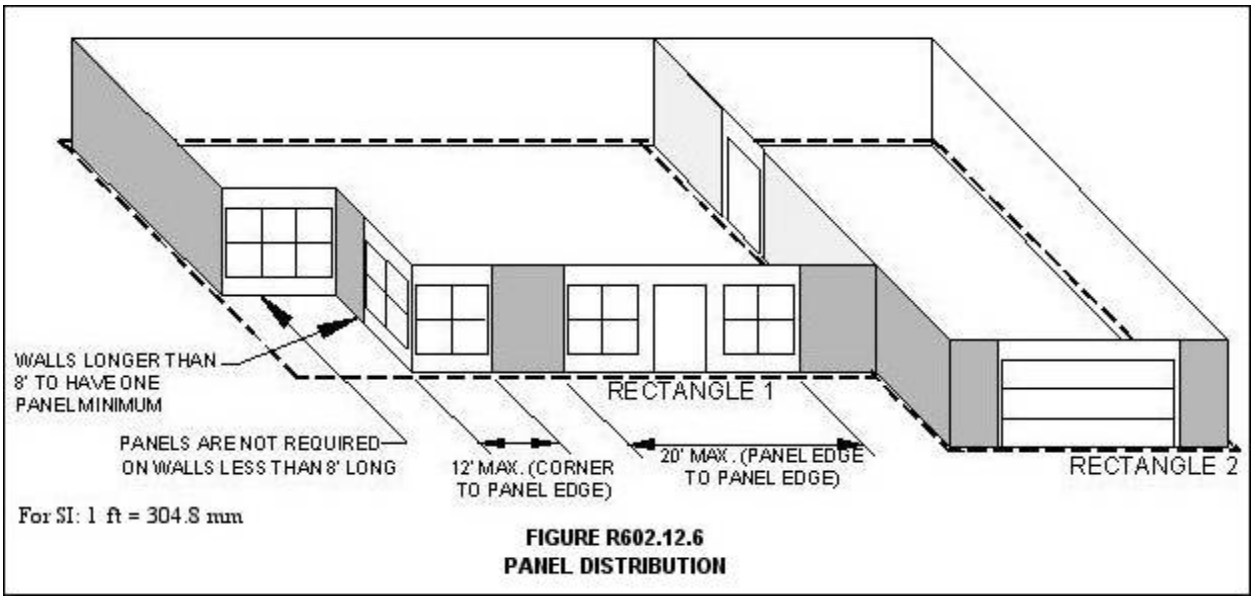


FIGURE R602.12.6
PANEL DISTRIBUTION

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.

77. Change Section R802.10.2 by replacing the reference to "Section R106.1" with reference to “Section 109”.

~~65.~~ 78. Delete Section R905.2.8.5.

~~66.~~ 79. 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 eight 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 two 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 six 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.

80. Delete Sections N1101.1 through N1101.5.2.

81. Delete the following definition from Section N1101.6 (R202):

AUTOMATIC SHUTOFF CONTROL

~~67. Change the wood frame wall R-value categories for Climate Zones 3A, 4A, and 5A in Table N1102.1.3 (R402.1.3) to read:~~

~~Wood Frame Wall R-Value~~
~~15 or 13 + 1[h]~~

~~68. Change the frame wall U-factor categories for Climate Zones 3A, 4A, and 5A in Table N1102.1.2 (R402.1.2) to read:~~

	~~Frame Wall U-Factor~~
	~~0.079~~

82. Change the Wood-Framed Wall U-Factor row and add a row for Attic Roofline U-Factor in Table N1102.1.2 (R402.1.2), portions of table not shown remain, to read:

Climate Zone	3	4 Except Marine	5 And Marine 4
Wood-Framed Wall U-Factor	0.079	0.079	0.079
Attic Roofline U-Factor	0.039	0.032	0.032

83. Change the Wood-Framed Wall R-Value row and add a row for Attic Roofline R-Value in Table N1102.1.3 (R402.1.3), portions of table not shown remain, to read:

Climate Zone	3	4 Except Marine	5 And Marine 4
Wood-Framed Wall R-Value [e]	15 or 13+1	15 or 13+1	15 or 13+1
Attic Roofline R-Factor	30	38	38

~~69.~~ 84. Change Section ~~N1102.2.4 (R402.2.4)~~ N1102.2.5 (R402.2.5) to read:

~~N1102.2.4 (R402.2.4)~~ N1102.2.5 (R402.2.5) 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.

~~70. Change the title of the "Insulation Installation Criteria" category of Table N1102.4.1.1 (R402.4.1.1); change the "Shower/tub on exterior wall" category of Table N1102.4.1.1 (R402.4.1.1), and add footnotes "c" and "d" to Table N1102.4.1.1 (R402.4.1.1) to read:~~

~~Component~~	~~Air Barrier Criteria~~	~~Insulation Installation Criteria[d]~~
~~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.~~

~~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.~~

~~d. Structural integrity of headers shall be in accordance with the applicable building code.~~

~~71.~~ 85. Change Section ~~N1102.4.1.2 (R402.4.1.2)~~ N1102.5.1.2 (R402.5.1.2) to read (exception and During testing: items 1 through 6 ~~remains)~~ remain):

~~N1102.4.1.2 (R402.4.1.2)~~ N1102.5.1.2 (R402.5.1.2) Testing. The building or dwelling unit shall be tested ~~and verified as having an~~ for air ~~leakage rate not exceeding five air changes per hour in Climate Zone 4.~~ leakage. Testing shall be conducted in accordance with RESNET/ICC 380, ASTM E 779, ~~or ASTM E 1827~~ ASTM E1827 or ASTM E3158 and reported at a pressure differential of 0.2 inches w.g. (50 Pa). 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 conducted by a Virginia licensed general contractor, a Virginia licensed HVAC contractor, a Virginia licensed home inspector, a Virginia registered design professional, a certified BPI Envelope Professional, a certified Home Energy Rating System (HERS) rater, or a certified duct and envelope tightness rater. The party conducting the test shall have been trained on the equipment used to perform the test. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope have been sealed.

Note: Should additional sealing be required as a result of the test, consideration may be given to the issuance of temporary certificate of occupancy in accordance with Section 116.1.1.

~~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.~~

~~72.~~ 86. Change the maximum allowed air changes per hour to 5.0 for Climate Zones 3, 4, and 5, in Section ~~N1102.4.1.3 (R402.4.1.3) to read:~~ N1102.5.1.3 (R402.5.1.3).

~~R402.4.1.3 Leakage rate. When complying with Section N1101.2.1 (R401.2.1), the building or dwelling unit shall have an air leakage rate not exceeding 5.0 air changes per hour in Climate Zones 3, 4, and 5 when tested in accordance with Section N1102.4.1.2 (R402.4.1.2).~~

~~73.~~ 87. ~~Add~~ Change Section N1103.1.2 (R403.1.2) and add Section N1103.1.3 (R403.1.3) to read:

N1103.1.2 (R403.1.2) Heat pump supplementary heat. Heat pumps having supplementary electric-resistance, fuel gas or liquid fuel heating systems shall have controls that are configured so that, except during defrost or emergency heating modes, supplemental heating does not energize unless the outdoor temperature is below 40ºF (4ºC).

~~R403.1.3~~ N1103.1.3 (R403.1.3) Heat pump as primary space heat source. Electric resistance heat shall not be used as the primary heat source for electric space heating if a ducted or ductless heat pump can be installed. Electric resistance space heating may be used for defrost, supplemental, or emergency heat. A heat pump shall be designed so that, except during defrost or emergency heating modes, supplemental heating does not energize unless the outdoor temperature is below 40ºF (4ºC).

88. Change Section N1103.3.2 (R403.3.2) to read:

N1103.3.2 (R403.3.2) Building cavities. Building framing cavities used as ducts or plenums shall comply with Section M1601.1.1 of the VRC.

~~74.~~ 89. ~~Change the last~~ Add the following paragraph to the end of Section ~~N1103.3.5 (R403.3.5)~~ N1103.3.7 (R403.3.7) after the exceptions to read:

~~A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.~~ The licensed mechanical contractor installing the mechanical system shall be permitted to perform the duct testing. The contractor shall have been trained on the equipment used to perform the test.

~~75. Change Section N1103.3.7 (R403.3.7) to read:~~

~~N1103.3.7 (R403.3.7) Building cavities. Building framing cavities used as ducts or plenums shall comply with VRC Section M1601.1.1.~~

~~76.~~ 90. ~~Change~~ Delete Section N1103.7.1 (R403.7.1) and change Section N1103.7 (R403.7) to read:

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.

91. Delete Sections N1104.2 (R404.2), N1104.2.1 (R404.2.1), and N1104.2.2 (R404.2.2).

~~77. Change Section N1106.3.2 (R406.3.2) to read:~~

~~Section N1106.3.2 (R406.3.2) Onsite renewables are included. When onsite renewable energy is included for compliance using the Energy Rating Index (ERI) analysis per Section N1106.4 (R406.4), the building thermal envelope shall be greater than or equal to levels of energy efficiency and solar heat gain coefficient in Table N1102.1.2 (R402.1.2), with a ceiling U-factor of 0.026 and a frame wall U-factor of 0.060, or Table N1102.1.3 (R402.1.3), with a ceiling R-value of 49 and a wood frame wall R-value of 20 or 13+5.~~

92. Change Section N1106.6 (R406.6) by replacing the reference to "Section R109.2" with reference to “Section 113.7”.

~~78.~~ 93. ~~Change Section N1109.1 (R501.1) and delete~~ Delete Sections N1109.1.1 (R501.1.1) through ~~N1109.6 (R501.6).~~ N1109.6 (R501.6) and change Section N1109.1 (R501.1) to read:

N1109.1 (R501.1) Scope. The provisions of the Virginia Existing Building Code shall control the alteration, repair, addition, and change of occupancy of existing buildings and structures.

~~79.~~ 94. ~~Change Section N1110.1 (R502.1) and delete~~ Delete Sections N1110.2 (R502.2) through ~~N1110.3.4 (R502.3.4).~~ N1110.2.5 (R502.2.5) and change Section N1110.1 (R502.1) to read:

N1110.1 (R502.1) General. Additions to an existing building, building system, or portion thereof shall conform to the provisions of Section 805 of the VEBC.

~~80.~~ 95. ~~Change Section N1111.1 (R503.1) and delete~~ Delete Sections N1111.1.1 (R503.1.1) through ~~N1111.1.4 (R503.1.4).~~ N1111.1.5 (R503.1.5) and change Section N1111.1 (R503.1) to read:

N1111.1 (R503.1) General. Alterations to any building or structure shall comply with the requirements of Chapter 6 of the VEBC.

~~81.~~ 96. ~~Change Section N1112.1 (R504.1) and delete~~ Delete Section ~~N1112.2 (R504.2).~~ N1112.2 (R504.2) and change Section N1112.1 (R504.1) to read:

N1112.1 (R504.1) General. Buildings and structures, and parts thereof, shall be repaired in compliance with Section 507 of the VEBC.

97. Change Section M1302.1 by replacing the reference to "Section R104.2.2" with reference to “Section 112.2”.

~~82.~~ 98. 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.

~~83. Change Section M1404.1 to read:~~

~~M1404.1 Compliance. Refrigeration cooling equipment shall comply with UL 474, UL484, UL1995, or UL/CSA 60335-2-40.~~

~~84. Add Sections M1411.1.1 through M1411.1.6 to read:~~

~~M1411.1.1 Refrigeration system listing. Refrigeration systems using Group A2L refrigerants shall be listed and labeled to UL 60335-2-40/CAN/CSA C22.2 No. 60335-2-40. Refrigeration systems using Group A1 refrigerants shall be listed to UL 60335-2-40/CAN/CSA C22.2 No. 6-335-2-40 or UL 1995/CSA C22.2 No. 236. The equipment shall be installed in accordance with the listing.~~

~~M1411.1.2 Refrigeration system installation. Refrigeration systems shall be installed in accordance with the manufacturer's installation instructions. After installation, the manufacturer's installation instructions, owner's manuals, service manuals, and any other product literature provided with the equipment shall be attached to the indoor unit or left with the homeowner.~~

~~M1411.1.3 Field installed accessories. All Field installed accessories shall be installed in accordance with the accessory and equipment manufacturer's installation instructions. Accessories installed in the ductwork of Group A2L refrigeration systems shall not contain electric heating elements, open flames, or devices switching electrical loads greater than 2.5 kVA.~~

~~M1411.1.4 Signs and identification. Each refrigeration system using Group A2L refrigerant shall have the following information legibly and permanently indicated on a markable label provided by the equipment manufacturer.~~

~~1. Contact information of the responsible company that installed the refrigeration system, and~~

~~2. The system refrigerant charge and the refrigerant number.~~

~~M1411.1.5 Refrigerant charge. All refrigeration systems shall have refrigerant charge in compliance with the equipment manufacturer's installation instructions and the requirements of the listing. Group A2L refrigerant charge for an individual refrigeration system shall not exceed 34.5 lbs. (15.7 kg).~~

~~M1411.1.6 Group A2L refrigerant piping testing. The piping system containing Group A2L refrigerant shall be tested in accordance with the manufacturer's installation instructions and the requirements of the listing.~~

~~85.~~ 99. 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.

~~86.~~ 100. Change Section M1502.4.2 to read:

M1502.4.2 Duct installation. Exhaust ducts shall be supported at four-foot (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. Ducts shall not be joined with screws or similar fasteners that protrude into the inside of the duct. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

~~87.~~ 101. Change Section M1503.6 to read:

M1503.6 Makeup air required. Exhaust hood systems capable of exhausting more than 400 cubic feet per minute (0.19 m^3/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 m^3/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 m^3/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 1,500 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 3,000 square feet (278.71 m^2), and where natural draft space-heating or water-heating appliances are not located within the air barrier.

~~88.~~ 102. Add an exception to Item ~~7~~ 10 in Section M1602.2 to read:

Exception: The return air within a two-family dwelling constructed without fire separations in accordance with Exception 3 of Section R302.3 shall be permitted to discharge into either dwelling unit.

~~89.~~ 103. 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 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.

104. Change Section G2404.3 by replacing references to "Section R104.2.2" with references to “Section 112.2”.

105. Delete Sections G2411.2 (310.2), G2411.2.1 (310.2.1), G2411.2.2 (310.2.2), G2411.2.3 (310.2.3), G2411.2.4 (310.2.4), and G2411.2.5 (310.2.5).

106. Change Sections G2411.3 (310.3) and G2414.4.4 (403.4.5) to read:

G2411.3 (310.3) Arc-resistant CSST. Corrugated stainless steel tubing (CSST) that is listed with an arc-resistant jacket or coating system in accordance with ANSI LC1/CSA 6.26 shall be electrically continuous and bonded to an effective ground fault current path. Arc-resistant-jacketed CSST shall be considered to be bonded where it

is connected to one or more appliances that are connected to the equipment grounding conductor of the circuit that supplies that appliance. Where arc-resistant CSST is installed in a piping system without an appliance with an equipment grounding conductor, or where the system contains any non-arc-resistant CSST, the piping system shall be bonded in accordance with the manufacturer's installation instructions and ANSI LC1/CSA 6.26 Annex C.

G2414.4.4 (403.4.5) Corrugated stainless steel tubing. Corrugated stainless steel tubing shall be listed in accordance with ANSI LC1/CSA 6.26 and shall be arc-resistant in accordance with Section 5.16 of LC 1/CSA 6.26.

Exception: Corrugated stainless steel tubing installed below grade outside of the building in compliance with Section G2415.11 (404.11) or beneath the building in compliance with Section G2415.14 (404.14) shall not be required to be arc-resistant.

107. Change Section G2415.7 (404.7) to read:

G2415.7 (404.7) Protection against physical damage. Where piping will be concealed within light-frame construction assemblies, the piping shall be protected against penetration by fasteners in accordance with Sections G2415.7.1 through G2415.7.3.

Exception: Black steel piping with a wall thickness Schedule 40 or greater and galvanized steel piping shall not be required to be protected.

108. Change item 6 to Section G2421.2 to read:

6. Means shall be provided downstream of the MP regulator for the connection of a pressure measuring instrument and shall be positioned to allow connection of a pressure measuring instrument. Such means shall be permitted to be a dedicated test port on a regulator, gas control, or manifold, or a plugged tee fitting or plugged manifold port.

~~90.~~ 109. 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 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.

~~91.~~ 110. Change Section G2439.7.2 to read:

G2439.7.2 Duct installation. Exhaust ducts shall be supported at four-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 into the inside of the duct. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

111. Add Exception to Section G2442.5 (618.5) to read:

Exception: Where a two-family dwelling is constructed in accordance with Exception 3 of Section R302.3, the return air shall be permitted to discharge into either dwelling unit.

~~92.~~ 112. 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 P2910, P2911, and P2912.

~~93.~~ 113. 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 103.5 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.

~~94.~~ 114. Add Section P2602.3 to read:

P2602.3 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.

~~95.~~ 115. Change the last sentence of Section ~~P2801.6~~ P2801.5 (first sentence and items 1 through 3 remain) to read:

~~P2801.6 Required pan. Where a storage tank-type water heater or a hot water storage tank is installed in a location where water leakage from the tank will cause damage, the tank shall be installed in a pan constructed of one of the following:~~

~~1. Galvanized steel or aluminum of not less than 0.0236 inch (0.6010 mm) in thickness.~~

~~2. Plastic not less than 0.036 inch (0.9 mm) in thickness.~~

~~3. Other approved materials.~~

A plastic pan shall not be installed beneath a gas-fired water heater.

~~96.~~ 116. 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 P2910, P2911, and P2912.

~~97.~~ 117. Change Section P2902.6 of the IRC to read:

P2902.6 Location of backflow preventers. Access for inspection, testing, service, repair, and replacement shall be provided to backflow prevention assemblies. Backflow prevention assemblies shall be installed between 12 inches (305 mm) and

60 inches (1525 mm) from grade, floor level or service platform and as specified by the manufacturer's instructions. Where the manufacturer's listed installation height conflicts with this requirement, the manufacturer's listed heights shall apply. Access shall be provided to backflow prevention devices ~~and~~ as specified by the manufacturer's instructions.

~~98.~~ 118. Change the second sentence of Section P2903.5 (remainder of section remains) 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.~~

119. Add Exception to Section P2903.10.1 to read:

Exception: Where a two-family dwelling is constructed in accordance with Exception 3 of Section R302.3, a single individual service valve shall be permitted to serve both the dwelling unit and accessory dwelling unit, provided that access to the service valve is available to the occupants of both dwelling units.

~~99.~~ 120. Change the first sentence of Section P2904.1 and item 1 of Section P2904.1 (remainder of Section, including items 2 through 4, remains) to read:

~~P2904.1 General.~~ The design and installation of ~~residential fire~~ automatic sprinkler systems shall be in accordance with NFPA 13D, NFPA 13, NFPA 13R, or Section P2904, which shall be considered to be equivalent to NFPA 13D. ~~Partial residential sprinkler systems shall be permitted to be installed only in buildings not required to be equipped with a residential sprinkler system. Section P2904 shall apply to stand-alone and multipurpose wet-pipe sprinkler systems that do not include the use of antifreeze. A multipurpose fire sprinkler system shall provide domestic water to both fire sprinklers and plumbing fixtures. A stand-alone sprinkler system shall be separate and independent from the water distribution system. A backflow preventer shall not be required to separate a sprinkler system from the water distribution system, provided that the sprinkler system complies with all of the following:~~

1. The system complies with NFPA 13D, NFPA 13, NFPA 13R, or Section P2904.

~~2. The piping material complies with Section P2906.~~

~~3. The system does not contain antifreeze.~~

~~4. The system does not have a fire department connection.~~

~~100.~~ 121. Change Section P2906.2.1 to read:

P2906.2.1 Lead content of drinking water pipe and fittings. Pipe, pipe fittings, joints, valves, faucets, and fixture fittings utilized to supply water for drinking or cooking purposes shall comply with NSF 372.

~~101. Change Section P2906.9.1.2 to read:~~

~~P2906.9.1.2 Chlorinated polyvinyl chloride (CPVC) plastic pipe. Joint surfaces shall be clean and free from moisture. Joints shall be made in accordance with the pipe, fitting or solvent cement manufacturer's installation instructions. Where such instructions require a primer to be used, an approved primer shall be applied, and a solvent cement, orange in color and conforming to ASTM F493, shall be applied to joint surfaces. Where such instructions allow for a one-step solvent cement, yellow, red or green in color and conforming to ASTM F493, to be used, the joint surfaces shall not require application of a primer before the solvent cement is applied. The joint~~

~~shall be made while the cement is wet and in accordance with ASTM D2846 or ASTM F493. Solvent cement joints shall be permitted above ground or below ground.~~

~~102.~~ 122. Change Sections P2910.1 through P2910.14, including subsections, to read:

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

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 P2911 or P2912, as applicable.

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.

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

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

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.

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.

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 P2910.4 shall appear on the signage required by this section.



Figure P2910.4
Pictograph DO NOT DRINK

P2910.5 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.

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.

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.

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.

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

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

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

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.

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

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.

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.

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.

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.

P2910.10.6 Overflow. The storage tank shall be equipped with an overflow pipe having a diameter not less than that shown in Table P2910.10.6. The overflow outlet shall discharge at a point not less than six 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 P2910.10.6
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.

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 eight inches (203 mm) in diameter to allow inspection and cleaning of the tank interior.

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 P2910.8.

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 P2910.10.6. A minimum of one cleanout shall be provided on each drain pipe in accordance with Section P3005.2.

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.

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 two 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.

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

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 five 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 five 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 conform to Table P3002.2.

2. The required separation distance shall not apply where the bottom of the potable water service pipe within five 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 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 five 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 five 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).

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.

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 the provisions of Chapter 30.

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

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.

~~103.~~ 123. Add Sections P2910.15 through P2910.18, including subsections, to read:

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~~ P2903.3.2.

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

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.

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

P2910.16.3 Labeling and marking. Distribution piping labeling and marking shall comply with Section P2901.2.

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

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

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.

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

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

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.

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 P2910.10.8.

P2910.18 Operation and maintenance manuals. Operations and maintenance ~~materials~~ manuals 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.

~~104.~~ 124. Change the title of Section P2911 to "Gray Water Nonpotable Water Systems."

~~105.~~ 125. Change Sections P2911.1 through P2911.6, including subsections, to read:

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.

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.

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

P2911.2.1 Disinfection. Where the intended use or reuse application for nonpotable water requires disinfection, 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 Residual disinfectants. Where chlorine is used for disinfection, the nonpotable water shall contain not more than four 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 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 Filtration required. Gray water utilized for water closet and urinal flushing applications shall be filtered by a 100 micron or finer filter.

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

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

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

Table 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
Public water main	10

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

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.

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.

~~106.~~ 126. Delete Sections P2911.7 through P2911.13, including subsections.

~~107.~~ 127. Change the title of Section P2912 to "Rainwater Nonpotable Water Systems."

~~108.~~ 128. Change Sections P2912.1 through P2912.10, including subsections, to read:

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. The provisions of CSA B805/ICC 805 shall be permitted as an alternative to the provisions contained in this section for the design, construction, installation, alteration, and repair of rainwater nonpotable water systems for the

collection, storage, treatment, and distribution of rainwater for nonpotable applications. Roof runoff or stormwater runoff collection surfaces shall be limited to roofing materials, public pedestrian accessible roofs, and subsurface collection identified in ~~CSA B805/ICC 805 Table 7.1~~ Table 7.1 of CSA B805/ICC 805. Stormwater runoff shall not be collected from any other surfaces.

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

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.

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.

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.

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

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

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 1,000 square feet (92.9 m^2) 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.

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).

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.

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 one unit in 96 units along their entire length and shall not permit the collection or pooling of water at any point.

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

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

P2912.7 Storage tanks. Storage tanks utilized in rainwater nonpotable water systems shall comply with Section P2910.10.

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

Table P2912.8.1
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

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

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.

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.

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

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 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.

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 P2912.4 shall be verified.

~~109.~~ 129. Delete Sections P2912.11 through P2912.16, including subsections.

~~110.~~ 130. Delete Section P2913 in its entirety.

~~111.~~ 131. Add Section P3002.2.2 to read:

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.

~~112. 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 P2910 and P2912.~~

~~113.~~ 132. Delete the exception for Section P3003.9.2.

133. Change Section P3009.4 by replacing the reference to "Section R109" with reference to “Section 113”.

134. 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 P2910 and P2912.

~~114.~~ 135. Add Section E3601.9 to read:

E3601.9 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.

136. Add Exception to Section E3702.15 to read:

Exception: Branch-circuits in a two-family dwelling that is constructed in accordance with Exception 3 of Section R302.3.

137. Add a row for 10 amperes rating to Table E3705.6 (Table 240.6), portions of table not shown remain, to read:

STANDARD AMPERE RATINGS				
10	15	20	25	30

~~115.~~ 138. Change the title and the first sentence of Section E3802.4 (remainder of Section remains) to read:

E3802.4 In unfinished basements. Where Type SE or Type NM cable is run at angles with joists in unfinished basements, cable assemblies containing two or more conductors of sizes six AWG and larger and assemblies containing three or more conductors of sizes eight 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 Type 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 where cable enters the raceway. The sheath of the Type NM or Type 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.~~

139. Change Sections E3901.4.2 and E3901.4.3 to read:

E3901.4.2 Island and peninsular countertops and work surfaces. At least one receptacle shall be installed at each island and peninsular countertop space with a long dimension of 24 inches (610 mm) or greater and a short dimension of 12 inches (305 mm) or greater. A peninsular countertop is measured from the connected perpendicular wall.

E3901.4.3 Receptacle Outlet location. Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in the exception to Section E3901.4.1, or appliances occupying assigned spaces shall not be considered as these required outlets. Required receptacle outlets shall be located in one or more of the following:

1. On or above, but not more than 20 inches (508 mm) above, the counterop or work surface.

2. In a countertop using receptacle outlet assemblies listed for the use in countertops.

3. In a work surface using receptacle outlet assemblies listed for use in work surfaces or listed for use in countertops. [210.52(C)(3)]

Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in E3901.4.1, Exception 1, or appliances occupying assigned spaces shall not be considered as these required outlets.

Exception: To comply with the following conditions (1) and (2), receptacle outlets shall be permitted to be mounted not more than 12 inches (305 mm) below the countertop or work surface. Receptacles mounted below a countertop or work surface in accordance with this exception shall not be located where the countertop or work surface extends more than 6 inches (150 mm) beyond its support base.

1. Construction for the physically impaired.

2. On island and peninsular countertops or work surface where the surface is flat across its entire surface and there are no means to mount a receptacle within 20 inches (508 mm) above the countertop or work surface, such as an overhead cabinet.

140. Change Section E3902.5 to read:

E3902.5 Basement receptacles. 125-volt through 250-volt receptacles installed in unfinished portions or areas of the basement not intended as habitable rooms and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel. (210.8(A)(5)).

~~116.~~ 141. ~~Delete~~ Change exception 3 to Section ~~E3902.17.~~ E3902.14 (remainder of section, including items 1 through 3 and exceptions 1 and 2, remains) to read:

3. GFCI protection shall not be required for listed HVAC equipment.

~~117.~~ 142. Add Exception 2 to Section ~~E3902.20~~ E3902.21 to read:

2. AFCI protection is not required where GFCI protection is required in accordance with Section E3902 and NEC 210.8(A)

~~118.~~ 143. Add the following standards to the list of referenced standards in Chapter 44:

Standard Reference Number	Title	~~Referenced in Code Section Number~~
~~A~~		
NFPA ~~13-19~~ 13-22	Standard for Installation of Sprinkler Systems	
~~NFPA~~		
NFPA ~~13R-19~~ 13R-22	Standard for the Installation of Sprinkler Systems in Low Rise Residential Occupancies	
~~UL 474-2015~~	~~Standard for Safety Dehumidifiers~~	
~~UL 484-2019~~	~~Standard for Room Air Conditioners~~	
~~UL60335-2-40-2019//CAN/CSA C22.2 No. 60335-2-40-19~~	~~Standard for Household and Similar Electrical Appliances, Safety Part 2 -40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers~~	

~~119. Delete the following standards from the list of referenced standards in Chapter 44:~~

~~Standard Reference Number~~	~~Title~~
~~UL/CSA/ANCE 60335-2-40—2012~~	~~Safety of Household and Similar Electric Appliances, Part 2-40: Particular Requirements for Heat Pumps, Air-Conditioners and Dehumidifiers~~
~~NMX-J-521/2-40-ANCE—2014/CAN/CSA-22.2 No. 60335-2-40—12/UL 60335-2-40~~	~~Safety of Household and Similar Electric Appliances, Part 2-40: Particular Requirements for Heat Pumps, Air-Conditioners and Dehumidifiers~~

~~S.~~ R. Add "Marinas" to the list of occupancies in Section 312.1 of the IBC.

~~T.~~ S. Add Section 313 State regulated care facilities (SRCF) to the IBC to read:

313.1 General. Notwithstanding any other requirements of this code, this section applies to the use and occupancy classification of state regulated care facilities addressed in this section.

313.2 Assisted living facilities. Assisted living facilities licensed by the Virginia Department of Social Services shall be classified as one of the occupancies specified in Sections 313.2.1 through 313.2.6.

313.2.1 Group I-1 Condition 1. Facilities with more than 16 persons receiving care, in which all persons receiving care, without any assistance, are capable of responding to an emergency situation to complete building evacuation, shall be classified as Group I-1 Condition 1. Not more than five of the persons may require physical assistance from staff to respond to an emergency, provided all persons requiring assistance reside on a level of exit discharge and the path of egress to the exit does not include steps.

313.2.2 Group I-1 Condition 2. Facilities with more than 16 persons receiving care, in which there are persons who require assistance by not more than one staff member while responding to an emergency situation to complete building evacuation, shall be classified as Group I-1 Condition 2. Not more than five of the persons may require physical assistance from more than one staff member to respond to an emergency situation.

313.2.3 Group I-2 Condition 1. Facilities with more than five persons receiving care who require assistance by more than one staff member when responding to an emergency situation to complete building evacuation, shall be classified as Group I-2 Condition 1.

313.2.4 Group R-4 Condition 1. Facilities with nine to 16 persons receiving care, where all persons receiving care, without any assistance, are capable of responding to an emergency situation to complete building evacuation shall be classified as R-4 Condition 1. Not more than five of the persons may require physical assistance from staff to respond to an emergency, provided all persons requiring assistance reside on a level of exit discharge and the path of egress to the exit does not include steps.

313.2.5 Group R-4 Condition 2. Buildings with nine to 16 persons receiving care, who may require assistance by not more than one staff member when responding to an emergency situation to complete building evacuation, shall be classified as Group R-4 Condition 2. Not more than five of the persons may require physical assistance from staff to respond to an emergency situation.

313.2.6 Group R-2, R-3, or R-5. Facilities with no more than eight persons receiving care, with one or more resident counselors, and all persons 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. Up to five of the persons may require physical assistance from staff to respond to an emergency situation when in compliance with the following:

1. All residents that require physical assistance from staff reside on a level of exit discharge and the path of egress to the exit does not include steps.

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

313.3 ~~Family day homes. Family day homes~~ Home-based child care facilities. Home-based child care facilities registered or licensed by the Virginia Department of Education shall be classified as Group R-2, R-3, or R-5.

313.4 Group homes. Group Homes licensed by the Virginia Department of Behavioral Health and Developmental Services shall be classified as one of the occupancies specified in Sections 313.4.1 through 313.4.3.

313.4.1 Groups R-2, R-3, R-4 Condition 1 or 2, or R-5. Facilities with no more than eight persons receiving care, with one or more resident counselors, shall be classified as Group R-2, R-3, R-4 (Condition 1 or 2), or R-5. Not more than five of the persons may require physical assistance from staff to respond to an emergency situation.

313.4.2 Group R-4 Condition 1. Facilities with eight to 16 persons receiving care, where all persons, without any assistance, are capable of responding to an emergency situation to complete building evacuation shall be classified as Group R-4 Condition 1. Not more than five of the persons may require physical assistance from staff to respond to an emergency, provided all persons requiring assistance reside on a level of exit discharge and the path of egress to the exit does not include steps.

313.4.3 Group R-4 Condition 2. Facilities with eight to 16 persons receiving care or facilities with more than five persons requiring physical assistance from staff to respond to an emergency situation shall be classified as Group R-4 Condition 2.

313.5 Hospice facilities. Hospice facilities licensed by the Virginia Department of Health shall be classified as one of the occupancies specified in Sections 313.5.1 through 313.5.3.

313.5.1 Group I-2. Facilities with 16 or more persons receiving care shall be classified as Group I-2.

313.5.2 Group R-4 Condition 1. Facilities with less than 16 persons receiving care shall be classified as Group R-4 Condition 1.

313.5.3 Group R-5. Facilities with five or fewer persons receiving care are permitted to be classified as Group R-5.

313.6 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 provided all of the following conditions are met:

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 two stories above grade, an automatic sprinkler system shall be provided throughout the building in accordance with Section 903.3.1.1.

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 406.2.7, and add Sections 406.2.7.1, 406.2.7.2, 406.2.7.3 to read:

406.2.7 Electric vehicle charging stations and systems. Where provided, electric vehicle charging systems shall be installed in accordance with NFPA 70.

Electric vehicle charging system equipment shall be listed and labeled in accordance with UL 2202 or UL2750. Electric vehicle supply equipment shall be

listed and labeled in accordance with UL 2594. Accessibility to electric vehicle charging stations shall be provided in accordance with Section 1107. Parking garages with electric vehicle charging stations shall comply with sections 6.4 and 6.5 of NFPA 88A.

406.2.7.1 Emergency disconnecting means. Electric vehicle charging systems shall be provided with the disconnecting means required by NFPA 70 and that device or an additional disconnecting means shall also comply with the following as an emergency disconnect except where located at one- and two-family dwellings:

1. The emergency disconnect shall be installed in a readily accessible location no less than 20 feet (6096 mm) nor more than 100 feet (30,480 mm) from the electric vehicle charging station(s) and in a clear line of sight of the equipment. Where additional charging stations are more than 100 feet (30,480 mm) away, signage shall be provided to indicate the location of the associated emergency disconnect(s).

2. The emergency shutoff shall be marked "EV CHARGER EMERGENCY DISCONNECT" AND "ELECTRIC VEHICLES WILL REMAIN ENERGIZED".

3. The emergency disconnect shall immediately disconnect power to all electric vehicle charging stations within sight of the emergency disconnect or identify which charging stations are controlled.

4. The emergency disconnect shall be of a manual reset type and permitted to be lockable open in accordance with NFPA 70.

406.2.7.2 Impact protection. Where subject to motor vehicle impact, or other physical damage, electric vehicle charging systems shall be protected in accordance with Section 312 of the International Fire Code.

406.2.7.3 Emergency procedures. Emergency procedures shall be posted on an approved sign at an approved and conspicuous location at the electric charging station(s) and shall read:

IN CASE OF FIRE

1. IF POSSIBLE, SHUT OFF AND UNPLUG THE VEHICLE

2. USE THE EV CHARGER EMERGENCY DISCONNECT TO DISCONNECT POWER

3. REPORT THE INCIDENT TO THE FIRE DEPARTMENT

FIRE DEPARTMENT PHONE NUMBER: _____

4. FACILITY ADDRESS: _____

~~B.~~ C. Change ~~Sections~~ Section 407.4 ~~and 407.4.1.1~~ of the IBC to read:

407.4 Means of egress. Group I-2 occupancies shall be provided with means of egress complying with Sections 407.4.1 through 407.4.4 and Chapter 10.

~~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.~~ D. Add Section 407.12 to the IBC to read:

407.12 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.~~ E. 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 431.

~~E.~~ F. ~~Change~~ Delete exception to Section 408.6 of the ~~IBC to read:~~ IBC (remainder of section remains).

~~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.~~ G. 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~~ Virginia Mechanical Code.

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.

H. Change footnote "c" of Table 414.5.1 of the IBC to read:

c. Combustible dusts where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared by a registered design professional. See definition of "Combustible dust" in Chapter 2.

~~G.~~ I. 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 ~~Facility and Aboveground Storage Tank (AST) Regulation (9VAC25-91) and Underground Storage Tanks: Technical Standards and Corrective Action Requirements (9VAC25-580)~~ 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 9VAC25-91 and 9VAC25-580, the provisions of 9VAC25-91 and 9VAC25-580 shall apply. Provisions of the International Fire Code addressing closure of such tanks that are subject to 9VAC25-91 and 9VAC25-580 shall not be applicable.

~~H.~~ J. Change footnote "b" of Table 428.3 of the IBC to read:

b. Shall include walls, floors, ceilings, and construction supporting the floor of the laboratory suite necessary to provide separation from other portions of the building. Fire barriers shall be constructed in accordance with Section 707, and horizontal assemblies shall be constructed in accordance with Section 711.

~~I.~~ K. Delete Section 428.3.3 of the IBC.

~~J.~~ L. Change Section 428.3.7 of the IBC to read:

428.3.7 Ventilation. Ventilation shall be in accordance with the Virginia Mechanical Code. The design and installation of ducts from chemical fume hoods shall be in accordance with NFPA 91.

~~K.~~ M. Add IBC Section 429 to read:

Section 429 Manufactured Homes and Industrialized Buildings.

429.1 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.

429.2 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. Manufactured homes shall be classified as Group R-5 in accordance with Chapter 3 of this code. Additionally, all applicable provisions of Chapter

1 of this code, including 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 ensure 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.

429.2.1 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.

429.2.2 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 of this code.

429.2.3 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~~ a registered design professional (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).

429.3 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.

429.4 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 (0.28 m^2) 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.

429.5 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~~ Virginia Residential Code 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 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 ensure 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.

429.6 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.

429.7 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.

~~L.~~ N. Add Section 430 Aboveground Liquid Fertilizer Tanks to the IBC to read:

430.1 General. This section shall apply to the construction of aboveground liquid fertilizer storage tanks (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.

430.1.1 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, operating temperature, or both or a significant change in the material's compatibility.

430.2 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.

430.3 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.

430.4 Repair, alteration and reconstruction of ALFSTs. Repair, alteration and reconstruction of ALFSTs shall comply with applicable provisions of API 653 and TFI RMIP.

430.5 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.

430.6 Abandoned ALFSTs. Abandoned ALFSTs shall comply with applicable provisions of Section 5704.2.13.2 of the IFC.

~~M.~~ O. Add Section 431 Short-term Holding Areas to the IBC to read:

431.1 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 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 applicable for Group 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 applicable to I-3 occupancies.

8. Where each fire area containing short-term holding areas exceeds 12,000 square feet (1115 m^2), 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.

~~N.~~ P. Add Section 432 Plant Processing or Extraction Facilities to the IBC to read:

432.1 General. The design, construction, and installation of plant processing or extraction facilities in any occupancy group shall comply with Chapter 39 of the International Fire Code.

~~O.~~ Q. Add Section 433 Electrical Energy Storage Systems (ESS) to the IBC to read:

433.1 Scope. Electrical Energy Storage Systems shall comply with the applicable provisions of the International Fire Code.

13VAC5-63-224. Chapter 5 General building heights and areas.

A. Change Section 502.1 to read:

502.1 Address identification. New buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 1/2 inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other approved sign or means shall be used to identify the structure.

B. Add a row to Table 509.1 to read (portions of table not shown remain):

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Lithium-ion and lithium metal battery storage	See Section 320 of the International Fire Code

13VAC5-63-230. Chapter 7 Fire and smoke protection features.

A. Change Item 5 of Section 703.2.2 of the IBC and Section 703.2.3 of the IBC to read:

5. Alternative protection methods as allowed by Section 112.2.

703.2.3 Approved alternate method. The fire resistance of building elements, components or assemblies not complying with Section 703.2.1 or 703.2.2 shall be permitted to be established by an alternative protection method in accordance with Section 112.2.

B. Change Section 703.5 of the IBC to read:

703.7 Fire-resistance assembly marking. Where there is a concealed floor, floor-ceiling, 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."

C. Add Exception 2 to Section 705.2 of the IBC to read:

2. Decks and open porches of buildings of Groups R-3 and R-4.

D. Change Section 706.1 of the IBC to read:

706.1 General. Each portion of a building separated by one or more fire walls shall be considered a separate building. Fire walls shall be constructed in accordance with Sections ~~706.2~~ 706.1.2 through 706.11. The extent and location of such fire walls shall provide a complete separation. Where a fire wall separates occupancies that are required to be separated by a fire barrier wall, the most restrictive requirements of each separation shall apply. Equipment and systems are permitted to serve multiple attached buildings on the same lot where separated by one or more fire walls.

E. Delete Exception 2 to Section 706.1.1 of the ~~IBC.~~ IBC and change Section 706.1.2 of the IBC to read:

706.1.2 Deemed to comply. Fire walls designed and constructed in accordance with NFPA 221 shall be deemed to comply with this section, subject to the limitations of Sections 101.2 and 101.6. The required fire-resistance rating shall be determined by Section 706.4.

F. 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.

G. Change item 3 of Section 716.1.1 of the IBC and Section 716.2.1.4 of the IBC to read:

3. Alternative protection methods as allowed by Section 112.2.

716.2.1.4 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.

H. Change Section 717.5.3 of the IBC to read:

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. Fire dampers are not required where penetrations are tested in accordance with ASTM E119 as part of the fire resistance-rated assembly.

3. Fire and smoke dampers are not required where ducts are used as part of an approved smoke control system in accordance with Section 909.

4. Fire and smoke dampers are not required where the penetrations are in parking garage exhaust or supply shafts that are separated from other building shafts by not less than two-hour fire-resistance-rated construction.

5. Smoke dampers are not required where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

~~l. Add Section 717.6.2.2 to the IBC to read:~~

~~717.6.2.2 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.~~

13VAC5-63-235. Chapter 8 Interior finishes.

The following changes shall be made to Section 806 of the IBC:

1. Delete item 2 of Section 806.1 of the IBC (items 1, 3 and 4 remain).

2. Change Section 806.2 of the IBC to read:

806.2 Combustible decorative materials. 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 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 803.15 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. In Groups B and M occupancies, the amount of combustible fabric partitions suspended from the ceiling and not supported by the floor shall comply with Section 806.4 and shall not be limited.

13VAC5-63-240. Chapter 9 Fire protection systems.

A. Change Section 901.2 (exception remains) of the IBC, and Item 2 of Section 903.2.1.2 of the IBC to read:

901.2 Fire protection systems. Fire protection and life safety systems shall be installed in accordance with this code and the International Fire Code.

Any fire protection or life safety system for which an exception or reduction to the provisions of this code has been granted shall be considered to be a required system.

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.

B. 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.

C. Delete Item 3 and change Item 1 of Section 903.2.3 of the IBC to read:

1. Throughout all Group E fire areas greater than 20,000 square feet (1858 m^2) in area.

D. Add Exception 4 to Section 903.2.6 to read:

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 m^2) or less in Group I-3 facilities, provided such buildings and overhangs are of noncombustible construction.

E. Delete Section 903.2.7.2 of the IBC.

F. Change Section 903.2.8 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, 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.

G. Change Section 903.3.1.2 of the IBC to read:

903.3.1.2 NFPA 13R sprinkler systems. Automatic sprinkler systems in Group R occupancies shall be permitted to be installed throughout in accordance with NFPA 13R where the Group R occupancy meets all of the following conditions:

1. Four stories or fewer above grade plane.

2. For other than Groups R-2 and R-3 occupancies, the floor level of the highest story is 30 feet (9144 mm) or less above the lowest level of fire department vehicle access.

3. For Group R-2 occupancies, the roof assembly is less than 45 feet (13,716 mm) above the lowest level of fire department vehicle access. The height of the roof assembly shall be determined by measuring the distance from the lowest required fire vehicle access road surface adjacent to the building to the eave of the highest pitched roof, the intersection of the highest roof to the exterior wall, or the top of the highest parapet, whichever yields the greatest distance.

4. The floor level of the lowest story is 30 feet (9144 mm) or less below the lowest level of fire department vehicle access.

The number of stories of Group R occupancies constructed in accordance with Sections 510.2 and 510.4 shall be measured from grade plane.

~~G.~~ H. Add Item 5 to Section 903.3.1.2.3 of the IBC to read:

5. 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~~ 7.4 of NFPA 13R.

~~H.~~ I. Add Section 903.3.5.1.1 to the IBC and change Section 903.3.5.2 of the IBC to Section 903.3.5.1.2; both to read as follows:

903.3.5.1.1 Limited area sprinkler systems. Limited area sprinkler systems serving fewer than 20 sprinklers on any single connection are permitted to be connected to the domestic service where a wet automatic standpipe is not available. Limited area sprinkler systems connected to domestic water supplies shall comply with each of the following requirements:

1. Valves shall not be installed between the domestic water riser control valve and the sprinklers.

Exception: An approved indicating control valve supervised in the open position in accordance with Section 903.4.

2. The domestic service shall be capable of supplying the simultaneous domestic demand and the sprinkler demand required to be hydraulically calculated by NFPA 13, NFPA 13R, or NFPA 13D.

903.3.5.1.2 Residential combination services. A single combination water supply shall be allowed provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

~~I.~~ J. Delete Sections 903.3.8 through 903.3.8.5 of the IBC.

~~J.~~ K. Change Section ~~903.4.2~~ 903.4.3 of the IBC to read:

~~903.4.2~~ 903.4.3 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.

~~K.~~ L. Change exceptions 2, 3, 4 and 5 of Section 905.3.1 of the IBC to read (exceptions 1 and 6 remain):

~~905.3.1 Height. Class III standpipe systems shall be installed throughout buildings where four or more stories are above or below grade plane, the floor level of the highest story is located more than 30 feet (9144 mm) above the lowest level of fire department vehicle access, or where the floor level of the lowest story is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.~~

Exceptions:

~~1. Class I standpipes are allowed in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.~~

2. Class I manual wet standpipes are allowed in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1 or Section 903.3.2 and where the highest floor is located not more than 150 feet (45,720 mm) above the lowest level of fire department vehicle access.

3. Class I manual standpipes are allowed in open parking garages where the highest floor is located not more than 150 feet (45,720 mm) above the lowest level of fire department vehicle access.

4. Class I manual dry standpipes are allowed in open parking garages that are subject to freezing temperatures, provided that the hose connections are located as required for Class II standpipes in accordance with Section 905.5.

5. Class I standpipes are allowed in basements equipped throughout with an automatic sprinkler system.

~~6. In determining the lowest level of fire department vehicle access, it shall not be required to consider either of the following:~~

~~6.1. Recessed loading docks for four vehicles or less.~~

~~6.2. Conditions where topography makes access from the fire department vehicle to the building impractical or impossible.~~

~~L.~~ M. 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.

~~M.~~ N. Change Section 907.2.1.1 of the IBC (exception remains) 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.~~

~~N.~~ O. 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.

~~O.~~ P. Change Section 907.3.2 of the IBC to read:

907.3.2 Special locking systems. Where special locking systems are installed on means of egress doors in accordance with Section 407.4.1.1 or ~~1010.2.13~~ 1010.2.12, an automatic detection system shall be installed as required by that section.

~~P.~~ Q. 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 the second sentence of Section 907.5.2.1.2 (first sentence remains) of the IBC to read:

Where the average ambient noise in an A occupancy exceeds 105 dBA, a system arranged to stop or reduce ambient noise shall be provided in accordance with NFPA 72. In all other

occupancies, where the average ambient noise is greater than 105 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.

~~Q.~~ S. Delete Exception 1 from Section 907.5.2.3 and change the following row in Table 907.5.2.3.2 ~~(portions of table not shown remain)~~ of the IBC (portions of table not shown remain) to read:

TABLE 907.5.2.3.2 VISIBLE ALARMS	
NUMBER OF SLEEPING UNITS OR DWELLING UNITS	SLEEPING ACCOMMODATIONS WITH VISIBLE ALARMS

~~R.~~ T. 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.

~~S.~~ U. 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 m^2) 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 official, 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 m^2) in area with a minimum dimension of up to 10 feet (3048 mm).

~~T.~~ V. Delete Section 912.2.2 of the IBC.

~~U.~~ W. Change Sections 912.4 and 912.4.2 of the IBC to read:

912.4 Access. Immediate access to fire department connections shall be provided without obstruction by fences, bushes, trees, walls, or any other fixed or moveable object. Access to fire department connections shall be approved by the fire official.

Exception: Fences, where provided with an access gate equipped with a sign complying with the legend requirements of this section and a means of emergency operation. The gate and the means of emergency operation shall be approved by the fire official.

912.4.2 Clear space around connections. A working space of not less than 36 inches (762 mm) in width, 36 inches (914 mm) in depth, and 78 inches (1981 mm) in height shall be provided in front of and to the sides of wall-mounted fire department connections and around the circumference of free-standing fire department connections, except as otherwise required or approved by the fire official.

~~V.~~ X. 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 that 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 that do not themselves contain a fuel-burning appliance or have an attached garage but that 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 that 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 Group E occupancies located in a building containing a fuel-burning appliance or in a building that 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 that do not themselves contain a fuel-burning appliance or have an attached garage but 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 (30,480 mm) 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.

Y. Change Section 916.1 of the IBC to read:

916.2 Permits. Permits shall be required as set forth in Section 108.

~~W.~~ Z. Change the title of IBC Section 918 to read:

In-Building Emergency Communications Coverage.

~~X.~~ AA. Change Section 918.1 of the IBC to read:

918.1 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.

6. Buildings in localities that do not provide the additional communication equipment required for the operation of the system.

~~Y.~~ BB. Add Sections 918.1.1, 918.1.2, ~~and~~ 918.1.3 , and 918.2 to the IBC to read:

918.1.1 Installation. In-building two-way emergency responder communication coverage systems shall comply with Sections 510.4 and 510.5 of the International Fire Code, except that the acceptance testing procedure required by Section 510.5.4 of the International Fire Code shall be the responsibility of the locality. The building owner shall install cabling. The cable shall be installed in dedicated conduits, raceways, plenums, attics, or roofs and 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.

918.1.2 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.

918.1.3 Inspection. In accordance with Section 113.3, all installations shall be inspected prior to concealment.

~~Z. Add Section 918.2 to the IBC to read:~~

918.2 Acceptance test. Upon completion of installation, after providing reasonable notice to the owner or the owner's 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 1002.2 of the ~~IBC.~~ IBC and change Section 1002.1 of the IBC to read:

1002.1 Maintenance. Means of egress shall be maintained in accordance with the Statewide Fire Prevention Code.

B. Change Section 1004.9 of the IBC to read:

1004.9 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 for the intended configurations 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 Exception 1 of Section 1005.3.1 of the IBC to read:

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 Exception 1 of Section 1005.3.2 of the IBC to read:

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. Add ~~Exception~~ Exceptions 4 and 5 ~~of~~ to Section 1006.2.1 of the IBC to read:

4. In Group R-2 ~~and R-3~~ occupancies where Section 903.2.8, Exception 1 or 2 is applicable, 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.~~

5. Single exit four-story buildings complying with Section 1006.3.4.2.

F. Change the number "49" to "50" in the "A[c], E, M," "B," "F," and "U" rows of Table 1006.2.1 of the IBC.

G. Change the STORY and OCCUPANCY columns of, and add footnote "d" to Table 1006.3.4(1) of the IBC (portions of table, including footnotes, not shown remain) to read:

STORY	OCCUPANCY
Basement, first, second, third, or fourth story above grade plane and occupiable roofs over the first, second, or third story above grade plane	R-2[a, b, c, d]
Fifth story above grade plane and higher	NP
d. 4-story buildings and 3-story buildings with an occupiable roof above the third story shall also comply with Section 1006.3.4.2.	

H. Add Section 1006.3.4.2 to the IBC to read:

1006.3.4.2 Single exit four-story buildings with Group R-2 dwelling units. Four-story buildings with a single exit for Group R-2 dwelling units shall comply with Table 1006.3.4(1) and all of the following:

1. The net floor area of each floor shall not exceed 4,000 square feet (372 m^2).

2. Doors opening into the exit stairway must open in the direction of egress travel.

3. Electrical receptacles shall be prohibited in exit stairway

4. In addition to the requirements for emergency escape and rescue openings in Section 1031.2, sleeping rooms on the fourth story above grade plane shall have not fewer than one emergency escape and rescue opening in accordance with Section 1031.

5. For interior exit stairways:

a. Openings to the interior exit stairway enclosure shall be limited to those required for exit access into the enclosure from normally occupied spaces, those required for egress from the enclosure, and openings to the exterior. Elevators shall not open into the interior exit stairway enclosure. Dwelling unit doors shall not open into the interior exit stairway enclosure.

b. A manual fire alarm system and automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be provided. Smoke detectors shall be located in common spaces outside of dwelling units, including but not limited to gathering areas, laundry rooms, mechanical equipment rooms, storage rooms, interior corridors, interior exit stairways, and exit passageways.

c. Regardless of the stairway construction type, automatic sprinkler locations in interior exit stairways shall comply with the requirements of NFPA 13 for combustible stairways.

6. Exterior exit stairways must be constructed of noncombustible materials or fire-retardant-treated wood framing and sheathing complying with Section 2303.2.

7. The emergency power illumination requirements in Section 1008.3 shall be provided regardless of there being only one means of egress under this section.

~~G.~~ I. Change the number "49" to "50" in the "Maximum Occupant Load per Story" column of

the "A, B[b], E, F[b], M, U" row of Table ~~1006.3.4.2(2)~~ 1006.3.4(2).

~~H.~~ J. Change Exception 2 of Section 1007.1.1 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.

~~I.~~ K. ~~Change~~ Add exception 3 (exceptions 1 and 2 remain) to Section 1009.6.4 of the IBC to read:

~~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 1026. Each area of refuge shall be designed to minimize the intrusion of smoke.~~

~~Exceptions:~~

~~1. Areas of refuge located within an 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.

~~J. Change Section 1010.2.8 of the IBC to read:~~

~~1010.2.8 Emergency supplemental hardware. In Group E occupancies, except Group E day care facilities, Group B educational occupancies, and public buildings, exit access doors from classrooms, offices, and other occupied rooms, except for exit doors and doors across corridors, shall be permitted to be provided with emergency supplemental hardware where all of the following conditions are met:~~

~~1. The door shall be capable of being opened from outside the room with a key, proprietary device provided by the manufacturer, or other approved means.~~

~~2. The door shall be openable from within the room in accordance with Section 1010.2.3, except emergency supplemental hardware is not required to comply with Chapter 11.~~

~~Note: School officials and building owners should consult with their legal counsel regarding provisions of the Americans with Disabilities Act of 1990 (42 USC § 12101 et seq.) and any other applicable requirements.~~

~~3. Installation of emergency supplemental hardware on fire door assemblies must comply with Section 716.2. Modifications shall not be made to listed panic hardware, fire door hardware, or door closures.~~

~~4. The emergency supplemental hardware shall not be capable of being used on other doors not intended to be used and shall have at least one component that requires modification to or is permanently affixed to the surrounding wall, floor, door, or frame assembly construction for it to properly function.~~

~~5. Employees shall engage in lockdown training procedures on how to deploy and remove the emergency supplemental hardware, and its use shall be incorporated in the approved lockdown plan complying with the SFPC.~~

~~6. The emergency supplemental hardware and its components shall be maintained in accordance with the SFPC.~~

~~7. Approved emergency supplemental hardware shall be of consistent type throughout a building.~~

~~Exception: The building official may approve alternate types of emergency supplemental hardware in accordance with Section 110.1 when a consistent device cannot be installed.~~

~~K.~~ L. Change Section 1010.1.5 (exception remains) of the IBC to read:

1010.1.5 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 seven inches (178 mm). Where 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).~~

M. Add Exceptions 4 and 5 (exceptions 1, 2 and 3 remain) to Section 1010.2.1 of the IBC to read:

4. Manual bolts provided in accordance with Section 1010.2.7.

5. One additional operation shall be permitted for release of emergency supplemental hardware provided in accordance with Section 1010.2.7.

~~L.~~ N. Add an exception to Sections 1010.2 and 1010.2.2 of the IBC to read:

Exception: Emergency supplemental hardware provided in accordance with Section ~~1010.2.8~~ 1010.2.7.

~~M.~~ O. Change Section 1010.2.3 of the IBC (exceptions remain) to read:

1010.2.3 Hardware height. Door handles, pulls, latches, locks, and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. Emergency supplemental hardware provided in accordance with Section 1010.2.8, shall be installed 48 inches (1219 mm) maximum above the finished floor. ~~Locks used only for security purposes and not used for normal operation are permitted at any height.~~

~~Exception: Access doors or gates in barrier walls and fences protecting pools, spas, and hot tubs shall be permitted to have operable parts of the latch release on self-latching devices at 54 inches (1370 mm) maximum above the finished floor or ground, provided that the self-latching devices are not also self-locking devices operated by means of a key, electronic opener, or integral combination lock.~~

~~N.~~ P. Change Item 3 of Section 1010.2.4 of the IBC to read:

3. 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:

3.1. The locking device is readily distinguishable as locked.

3.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters one inch (25 mm) high on a contrasting background.

3.3. The use of the key-operated locking device is revocable by the building official for due cause.

~~O.~~ Q. Add Items 11, 11.1, and 11.2 to Section 1010.2.4 of the IBC to read:

11. Egress doors equipped with emergency supplemental hardware complying with Section ~~1010.1.4.4,~~ 1010.2.7 from the egress side provided:

11.1. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS HARDWARE SHALL BE USED BY AUTHORIZED PERSONNEL ONLY. The sign shall be in letters one inch (25 mm) high on a contrasting background.

11.2. The use of the emergency supplemental hardware is revocable by the building official or fire official for due cause.

~~P. Add Exception 6 to Section 1010.2.5 of the IBC to read:~~

~~6. Emergency supplemental hardware provided in accordance with Section 1010.2.8.~~

~~Q. Add Exception 5 to Section 1010.2.1 of the IBC to read:~~

~~5. One additional operation shall be permitted for release of emergency supplemental hardware provided in accordance with Section 1010.2.8.~~

~~R. Delete Section 1010.2.14 of the IBC.~~

R. Change Section 1010.2.7 of the IBC to read:

1010.2.7 Emergency supplemental hardware. In Group E occupancies, except Group E day care facilities, Group B educational occupancies, and public buildings, exit access doors from classrooms, offices, and other occupied rooms, except for exit doors and doors across corridors, shall be permitted to be provided with emergency supplemental hardware where all of the following conditions are met:

1. The door shall be capable of being opened from outside the room with a key, proprietary device provided by the manufacturer, or other approved means.

2. The door shall be openable from within the room in accordance with Section 1010.2.3, except emergency supplemental hardware is not required to comply with Chapter 11.

Note: School officials and building owners should consult with their legal counsel regarding provisions of the Americans with Disabilities Act of 1990 (42 USC § 12101 et seq.) and any other applicable requirements.

3. Installation of emergency supplemental hardware on fire door assemblies must comply with Section 716.2. Modifications shall not be made to listed panic hardware, fire door hardware, or door closures.

4. The emergency supplemental hardware shall not be capable of being used on other doors not intended to be used and shall have at least one component that requires modification to or is permanently affixed to the surrounding wall, floor, door, or frame assembly construction for it to properly function.

5. Employees shall engage in lockdown training procedures on how to deploy and remove the emergency supplemental hardware, and its use shall be incorporated in the approved lockdown plan complying with the SFPC.

6. The emergency supplemental hardware and its components shall be maintained in accordance with the SFPC.

7. Approved emergency supplemental hardware shall be of consistent type throughout a building.

Exception: The building official may approve alternate types of emergency supplemental hardware in accordance with Section 110.1 when a consistent device cannot be installed.

~~S. Add Exceptions 1 and 2 to Section 1010.2.13 of the IBC to read:~~

~~Exceptions:~~

~~1. 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.~~

~~2. Emergency supplemental hardware shall not be considered a delayed egress locking system.~~

~~T.~~ S. ~~Renumber Exceptions 3 and 4 to be Exceptions 2 and 3 of Section 1010.2.9; delete~~ Delete Exception 1 of Section ~~1010.2.9; renumber Exception 2 to be Exception 1 of Section 1010.2.9~~ 1010.2.8 of the ~~IBC; and change Exception 1 to read:~~ IBC (exceptions 2, 3, and 4 remain).

~~Exceptions:~~

~~1. Doors provided with panic hardware or fire exit hardware and serving a Group A or E occupancy shall be permitted to be electrically locked in accordance with Section 1010.2.11.~~

~~U.~~ T. Add Section ~~1010.2.9.5~~ 1010.2.8.5 to the IBC to read:

~~1010.2.9.5~~ 1010.2.8.5 Locking certain residential sliding doors. In dwelling units of Group R-2 buildings, exterior sliding doors that are one story or less above grade, 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.

~~V.~~ U. Add Section ~~1010.2.9.6~~ 1010.2.8.6 to the IBC to read:

~~1010.2.9.6~~ 1010.2.8.6 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.

V. Change Section 1010.2.9 of the IBC to delete reference to Section 1010.2.13 from the list of referenced sections (all other referenced sections remain).

W. Add Exceptions 1 and 2 to Section 1010.2.12 of the IBC to read:

Exceptions:

1. 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.

2. Emergency supplemental hardware shall not be considered a delayed egress locking system.

X. Delete Section 1010.2.13 of the IBC.

~~W.~~ Y. Delete Exception 4 from Section 1011.5.2 of the IBC and ~~Change~~ change Exception 3 of Section 1011.5.2 of the IBC to read:

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 nine 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 six 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).

~~X. Delete Exception 4 from Section 1011.5.2 of the IBC.~~

~~Y.~~ Z. Add Exception 4 to Section 1011.6 of the IBC to read:

4. A floor or landing is not required at the top of an interior flight of exit access stairs within individual dwelling 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, provided that a door does not swing over the stairs.

~~Z.~~ AA. Change Section 1015.8 (Items 1 ~~through 4~~ and 2 remain) of the IBC to read:

1015.8 Window openings. Windows in Groups R-2 and R-3 buildings including dwelling units where the ~~top of the sill~~ bottom of the clear opening 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 shall comply with ~~one of~~ the following:

~~AA.~~ BB. Add Exception 3 to Item ~~5~~ 6 of Section 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.

~~BB.~~ CC. Change the following rows and delete ~~footnote "b"~~ footnotes, "b", “c”, and “d” in Table ~~1020.2, and delete Section 1020.2.1 of the IBC.~~ 1020.2 to read:

Table 1020.2
Corridor Fire-Resistance Rating

Occupancy	Occupant Load Served By Corridor	Required Fire-Resistance Rating (hours)	
		Without sprinkler system	With sprinkler system
R	Greater than 10	1	0.5
I-1	All	Not Permitted	1
I-3	All	Not Permitted	0

~~CC.~~ DD. Add an additional row to Table 1020.3 of the IBC to read:

	Occupancy	Width (minimum)
	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

~~DD. Add Exception 2 to Section 1023.5 of the IBC to read:~~

~~2. For buildings in other than Group H, with no more than two stories above grade plane and are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, structural members, other than columns, that are part of the primary structural frame supporting the roof sheathing, roof slab, or roof deck only and structural members that are secondary members supporting the roof sheathing, roof slab, or roof deck only shall be permitted to penetrate an interior exit stairway enclosure or a ramp enclosure. Such penetrations shall be protected in accordance with Section 714.~~

EE. Change Section 1023.9 of the IBC to read:

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.

~~FF. Add Exception 2 to Section 1024.6 of the IBC to read:~~

~~2. For buildings in other than Group H, with no more than two stories above grade plane and are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, structural members, other than columns, which are part of the primary structural frame supporting the roof sheathing, roof slab, or roof deck only and structural members that are secondary members supporting the roof sheathing, roof slab, or roof deck only shall be permitted to penetrate an interior exit stairway enclosure or a ramp enclosure. Such penetrations shall be protected in accordance with Section 714.~~

~~GG.~~ FF. Change Section 1025.1 of the IBC (exception remains) to read:

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 this section.

~~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 1028.1, Exception 1.~~

~~HH.~~ GG. Change the first paragraph of Section 1026.2 of the IBC to read (Exception ~~remains):~~ and second paragraph remain):

1026.2 Separation. The separation between buildings or refuge areas connected by a horizontal exit shall be provided by a fire wall complying with Section 706, by a fire barrier complying with Section 707, or a horizontal assembly complying with Section 711. The minimum fire-resistance rating of the separation shall be two hours. Opening protectives in horizontal exits shall also comply with Section 716. Duct and air transfer openings in a fire wall or fire barrier that serves as a horizontal exit shall also comply with Section 717. The horizontal exit separation shall extend vertically through all levels of the building unless floor assemblies have a fire-resistance rating of not less than two hours. Openings in horizontal assemblies on the story served by horizontal exits shall be protected in accordance with Sections 712.1.1, 712.1.3, and 712.1.13.

13VAC5-63-250. Chapter 11 Accessibility.

A. Add an exception to Section 1102.1 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. Change Section 1103.2.8 of the IBC to read:

1103.2.8 Raised and lowered areas in places of religious worship. Raised or lowered areas or portions of 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 primarily for the performance of religious ceremonies and are located within an accessible story or mezzanine.

C. Add Section 1103.2.15 to the IBC to read:

1103.2.15 Emergency supplemental hardware. In Group E occupancies, except Group E day care facilities, Group B educational occupancies, and public buildings, emergency supplemental hardware is not required to comply with this chapter when deployed during an active shooter or hostile threat event and provided in accordance with Section ~~1010.2.8~~ 1010.2.7.

D. Change Section 1106.2 of the IBC and replace Table 1106.2 of the IBC with Tables 1106.2(1) and 1106.2(2) to read:

~~1106.1~~ 1106.2 Required. Where parking is provided, accessible parking spaces shall be provided in compliance with Tables 1106.2(1) and 1106.2(2), as applicable, except as required by Sections 1106.3 through 1106.5. 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 1106.2(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 ~~1106.2.2~~ 1106.2(2).	

Table 1106.2(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

E. Add Section 1106.10 to the IBC to read:

1106.10 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.

F. Change Section 1110.2 (exceptions remain) of the IBC to read:

1110.2 Toilet and bathing facilities. Each toilet room and bathing room shall be accessible. Where a floor level is not required to be connected by an accessible route, the only toilet

rooms or bathing rooms provided within the facility shall not be located on the inaccessible floor. Except as provided for in Sections 1110.2.2 through 1110.2.6, at least one of each type of fixture, element, control, or dispenser in each accessible toilet room and bathing room shall be accessible.

G. Add Section 1110.2.6 to the IBC to read:

1110.2.6 Multi-user gender-neutral toilet facility fixtures. Where multi-user facilities are provided to serve all genders, at least two of each fixture type, but only one urinal if more than one urinal is provided, shall comply with ICC A117.1. Water closet and urinal compartments shall comply with Section 1210.3.

H. Change Section 1110.4 of the IBC to read:

1110.4 Adult changing stations and baby diaper changing tables. Where provided, adult changing stations shall be accessible. Where required, adult changing stations and baby diaper changing tables shall be accessible and shall comply with Sections 1110.4.1 through 1110.4.6.

I. Change title of Section 1110.4.1, including Item 4 of Section 1110.4.1 of the IBC (remainder of section, including items 1, 2, and 3 remain) to read:

1110.4.1 Where required - adult changing stations.

4. In highway rest stops.

J. Add Section 1110.4.1.1 to read:

1110.4.1.1 Where required - baby diaper changing tables. Not fewer than one baby diaper changing table that is accessible to both male and female occupants shall be provided in the following locations:

1. In Group A, B, E, and M occupancies.

2. In Group R-1 hotels and motels on each floor level containing a public toilet facility.

3. In highway rest stops.

K. Change Sections 1110.4.2 (Exception remains), 1110.4.3, and 1110.4.4 of the IBC to read:

1110.4.2 Room. Adult changing stations shall be located in toilet rooms that include only one water closet and only one lavatory. Baby diaper changing tables may be located in dressing rooms, changing rooms, or toilet rooms that include more than one water closet and one lavatory, provided that at least one baby diaper changing table is accessible to both male and female occupants. However, where public toilet facilities containing only one water closet and one lavatory are provided, baby diaper changing tables shall be located within such facilities. Fixtures located in such rooms shall be included in determining the number of fixtures provided in an occupancy. The occupants shall have access to the required adult changing station and baby diaper changing table at all times that the associated occupancy is occupied.

1110.4.3 Prohibited location. The accessible route from separate-sex toilet or bathing rooms to an accessible adult changing station or baby diaper changing table shall not require travel through security checkpoints.

1110.4.4 Travel distance. The adult changing station or baby diaper changing table shall be located on an accessible route such that a person is not more than two stories above or

below the story with the adult changing station or baby diaper changing table and the path of travel to such facility shall not exceed 2,000 feet (610 m).

L. Add Sections 1110.4.5 and 1110.4.6 to read:

1110.4.5 Baby diaper changing tables. Baby diaper changing tables shall comply with operable parts and Section 902 of ICC A117.1. Baby diaper changing tables shall support a load capacity of at least 50 pounds and dimensions of minimum 32 inches (762 mm) x minimum 17.5 inches (445 mm) when open. Baby diaper changing tables shall not be located in wheelchair accessible toilet compartments. Baby diaper changing tables located in single-user or family or companion toilet rooms shall not overlap the maneuvering clearance around the water closet or the accessible route to the transfer space when in the useable position.

Exceptions:

1. Self-closing baby diaper changing tables shall be permitted to be measured in the stowed position.

2. In alterations, when provided, baby diaper changing tables shall be permitted outside the maneuvering clearance around the water closet in wheelchair accessible toilet compartments.

1110.4.6 Signage. Required baby diaper changing tables shall be identified with signs that are readily visible and located near the entrance to each facility containing the required baby diaper changing table. Signs shall comply with Section 1112.

~~H.~~ M. Add Sections ~~1110.17~~ 1110.20 and ~~1110.17.1~~ 1110.20.1 to the IBC to read:

~~1110.17~~ 1110.20 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 1108.6.3 may comply with this section and be approved by the local building department as dwellings containing universal design features for accessibility.

~~1110.17.1~~ 1110.20.1 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 1105 of ICC A117.1 with the following changes to those requirements:

1.1. That at least one bedroom be added to the interior spaces required by Section 1105.4 of ICC A117.1.

1.2. In the toilet room or bathroom required by Section 1105 of ICC A117.1, in addition to the lavatory and water closet, a shower or bathtub complying with Section 1104.11.3.2.3 of ICC A117.1 shall be provided and shall include reinforcement for future installation of grab bars in accordance with Section 1104.11.1 of ICC A117.1.

1.3. That the exception to Section 1105.4 of ICC A117.1 is not applicable.

1.4. That there be a food preparation area complying with Section 1105.7 of ICC A117.1 on the entrance level.

1.5. That any thermostat for heating or cooling on the entrance level comply with Section 1102.9 of ICC A117.1.

~~I.~~ N. Delete the exception for Item 1 of Section 1112.1 of the IBC.

13VAC5-63-260. Chapter 12 Interior environment.

A. Add Section 1202.5.4 to the IBC to read:

1202.5.4 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.

B. Add Section 1202.5.5 to the IBC to read:

1202.5.5 Insect screens in Group R occupancies. Every door, window, and other outside opening required for natural ventilation purposes that 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.

C. Add Section 1202.7 to the IBC to read:

1202.7 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 requirements in Items 1 and 2 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 (§ 15.2-2820 et seq.) of Title 15.2 of the Code of Virginia).

D. Change Section 1206.1 of the IBC to read:

1206.1 Scope. Sections 1206.2 and 1206.3 shall apply to common interior walls, partitions, and floor or ceiling assemblies between adjacent dwelling units or between dwelling units and adjacent public areas, such as halls, corridors, stairs, or service areas. Section 1206.4 applies to the construction of the exterior envelope of Group R occupancies within airport noise zones and to the exterior envelope of Groups 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.

E. Add Section 1206.4 to the IBC to read:

1206.4 Airport noise attenuation standards. Where the ~~Ldn~~ Day-Night Average Sound Level (Ldn) is determined to be 65 dBA or greater, the minimum Sound Transmission Class (STC) rating of structure components shall be provided in compliance with Table 1206.4. As an alternative to compliance with Table 1206.4, 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.

F. Add Table 1206.4 to the IBC to read:

Table 1206.4
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

G. Change Sections 1210.3.1 (exceptions remain) and 1210.3.2 and add Sections 1210.3.1.1, 1210.3.1.2, 1210.3.2.1, and 1210.3.2.2 to read:

1210.3.1 Water closet compartment. Each water closet utilized by the public or employees shall ~~comply with Sections 1210.3.1.1 and 1210.3.1.2, as applicable~~ occupy a separate compartment with walls or partitions and a door enclosing the fixtures to ensure privacy. All fully-enclosed compartments shall be provided with occupancy indicators.

~~Exceptions:~~

~~1. A separate room or compartment shall not be required in a single-occupant toilet room with a lockable door.~~

~~2. Toilet rooms located in child day care facilities and containing two or more water closets shall be permitted to have one water closet without an enclosing compartment.~~

~~3. This provision is not applicable to toilet areas located within Group I-3 occupancy housing areas.~~

1210.3.1.1 Separate facilities. Each water closet provided in separate facilities shall occupy a separate compartment with walls or partitions and a door enclosing the fixtures to ensure privacy and shall comply with Section 405.3.1 of the VPC. Accessible water closets and compartments shall comply with ICC A117.1.

1210.3.1.2 Multi-user gender-neutral facilities. Each water closet provided in a multi-user gender-neutral toilet facility shall occupy a separate compartment with walls or partitions, including the doors thereto, that shall extend to the floor and to the ceiling with maximum 1/2-inch (13 mm) clearances at the floor and ceiling, with gaps not exceeding 1/8-inch (3

mm) between the doors and partitions and partitions and walls, and shall comply with Section 405.3.1 of the VPC. Accessible water closet compartments shall comply with ICC A117.1 and the increased toe clearance requirements.

1210.3.2 Urinal separation and partitions. Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy and comply with Sections 1210.3.2.1 and 1210.3.2.2, as applicable. All fully-enclosed compartments shall be provided with occupy indicators.

Exceptions:

1. Urinal partitions shall not be required in a single-occupant, family, or assisted-use toilet room with a lockable door.

2. Toilet rooms located in child day care facilities and containing two or more urinals shall be permitted to have one urinal without partitions.

3. A separate room or compartment shall not be required in a single-occupant toilet room with a lockable door.

4. This provision is not applicable to toilet areas located within Group I-3 occupancy housing areas.

1210.3.2.1 Separate facilities. The walls or partitions for urinals in separate facilities shall begin at a height not more than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal not less than 18 inches (457 mm) or to a point not less than six inches (152 mm) beyond the outermost front lip of the urinal measured from the finished backwall surface, whichever is greater.

1210.3.2.2 Multi-user gender-neutral facilities. Each urinal provided in a multi-user, gender-neutral toilet facility shall occupy a separate compartment with walls or partitions, including the doors thereto, where the partitions extend to the floor and to the ceiling with maximum 1/2-inch (13 mm) clearances, with gaps not exceeding 1/8-inch (3 mm) between the doors and partitions and partitions and walls, or shall all be located in a separate room with a door, enclosing the urinals to ensure privacy. Where an accessible urinal is located within a compartment, grab bars shall not be required for the urinal, the door shall be located to allow for a forward approach to the urinal, and increased toe clearances shall be provided in accordance with A117.1.

13VAC5-63-264. Chapter 13 Energy efficiency.

~~Add~~ Change Section 1301.1 of the IBC and add Section 1301.1.1.1 to the IBC to read:

1301.1. Scope and intent. The scope and intent of this chapter shall be as indicated in Chapter 1.

1301.1.1.1 Changes to the IECC. The following changes shall be made to the IECC:

1. ~~Add~~ Change Section C402.1.6 to read:

C402.1.6 Groups F, S, and U. Appendix CD may be used as an alternative to the building thermal envelope provisions of this code for buildings in Groups F, S, and U that are not designed or equipped to heat the interior to more than 60°F or to cool the interior other than by fans or natural ventilation.

2. Add Exception 7 to Section C402.5.2 to read:

7. Data centers, or any room or space where the primary function is to house server cabinets.

3. Add Exception 5 to Section C403.7.4.1 to read:

5. Individual nontransient dwelling units in Group R-2 or R-3 occupancy where not required by Table C403.7.4.2(1).

~~2. Add an exception to the first paragraph of Section C403.7.7 to read:~~

~~Exception: Where a grease duct serving a Type I hood is installed in accordance with IMC Section 506.3, motorized or gravity dampers shall not be installed.~~

~~3. Add Section C403.2.2.1 to read:~~

~~C403.2.2.1 Dwelling unit mechanical ventilation. Mechanical ventilation shall be provided for dwelling units in accordance with the IMC.~~

4. Delete Section C403.7.5 and Table C403.7.5.

5. Add an exception to the first paragraph of Section C403.7.7 to read:

Exception: Where a grease duct serving a Type I hood is installed in accordance with Section 506.3 of the IMC, motorized or gravity dampers shall not be installed.

~~5.~~ 6. Delete Sections C404.5 through C404.5.2.1, including Tables.

~~6. Change Section C405.4 to read:~~

~~C405.4 Exterior lighting. All exterior lighting, other than low-voltage landscape lighting, shall comply with Section C405.4.1.~~

~~Exception: Where approved because of historical, safety, signage, or emergency considerations.~~

7. Delete Section C405.15 (including subsections).

8. Change item 5 of Section C409.5.1 of the IECC (items 1 through 4 remain) to read:

5. The code official shall be permitted to approve specific software deemed to meet these requirements in accordance with Section 112.

~~7.~~ 9. Change Section C502.1 to read:

C502.1 General. Additions to an existing building, building system, or portion thereof shall conform to the provisions of Section 805 of the VEBC.

~~8.~~ 10. Delete Sections C502.2 through ~~C502.3.6.2~~ C502.3.8.

~~9.~~ 11. Change Section C503.1 to read:

C503.1 General. Alterations to any building or structure shall comply with the requirements of Chapter 6 of the VEBC.

~~10.~~ 12. Delete Sections C503.2 through ~~C503.5~~ C503.6.

~~11.~~ 13. Change Section C504.1 to read:

C504.1 General. Buildings, structures, and parts thereof shall be repaired in compliance with Section ~~510~~ 507 of the VEBC.

~~12.~~ 14. Delete Section C504.2.

~~13.~~ 15. ~~Add~~ Change Appendix CD of the IECC to read:

APPENDIX CD BUILDING ENVELOPE REQUIREMENTS.

D101 Scope.

CD101.1 General. These provisions shall be permitted as an alternative to building thermal envelope requirements for building areas containing uses that are classified as Group F, S or U that are not designed or equipped to be heated to a temperature above 60°F or to be cooled other than by fans or natural ventilation.

CD102 Building Envelope Requirements.

CD102.1 Insulation and fenestration criteria. The building thermal envelope shall meet the requirements of Tables CD102.2(1) and CD102.3 based on the climate zone specified in Chapter 3 CE. Buildings with a vertical fenestration area or skylight area that exceeds that allowed in Table CD102.3 shall comply with the building envelope provisions of ASHRAE/IESNA 90.1.

CD102.2 Specific insulation requirements. Opaque assemblies shall comply with Table CD102.2(1).

CD102.2.1 Roof assembly. The minimum thermal resistance (R-value) of the insulating material installed either between the roof framing or continuously on the roof assembly shall be as specified in Table CD102.2(1) based on construction materials used in the roof assembly.

Exception: Continuously insulated roof assemblies where the thickness of insulation varies one inch (25.4 mm) or less and where the area weighted U-factor is equivalent to the same assembly with the R-value specified in Table CD102.2(1).

Insulation installed on a suspended ceiling with removable ceiling tiles shall not be considered part of the minimum thermal resistance of the roof insulation.

CD102.2.2 Classification of walls. Walls associated with the building envelope shall be classified in accordance with Section CD102.2.2.1 or ~~D102.2.2.2~~ CD102.2.2.2.

CD102.2.2.1 Above-grade walls. Above-grade walls are those walls covered by Section CD102.2.3 on the exterior of the building and completely above grade or walls that are more than ~~15 percent~~ 15% above grade.

CD102.2.2.2 Below-grade walls. Below-grade walls covered by Section CD102.2.4 are basement or first-story walls associated with the exterior of the building that are at least 85% below grade.

CD102.2.2.3 Above-grade walls. The minimum thermal resistance (R-value) of the insulating materials installed in the wall cavity between the framing members and continuously on the walls shall be as specified in Table CD102.2(1) based on framing type and construction materials used in the wall assembly. The R-value of integral insulation installed in concrete masonry units (CMU) shall not be used in determining compliance with Table CD102.2(1). "Mass walls" shall include walls weighing at least (i) 35 pounds per square foot (170 kg/m^2) of wall surface area or (ii) 25 pounds per square foot (120 kg/m^2) of wall surface area if the material weight is not more than 120 pounds per cubic foot (1,900 kg/m^3).

CD102.2.4 Below-grade walls. The minimum thermal resistance (R-value) of the insulating material installed in or continuously on the below-grade walls shall be as specified in Table CD102.2(1) and shall extend to a depth of 10 feet I (3048 mm) below the outside finish ground level or to the level of the floor, whichever is less.

CD102.2.5 Floors over outdoor air or unconditioned space. The minimum thermal resistance (R-value) of the insulating material installed either between the floor framing or continuously on the floor assembly shall be as specified in Table CD102.2(1) based on construction materials used in the floor assembly.

"Mass floors" shall include floors weighing at least (i) 35 pounds per square foot (170 kg/m^2) of floor surface area or (ii) 25 pounds per square foot (120 kg/m^2) of floor surface area if the material weight is not more than 12 pounds per cubic foot (1,900 kg/m^3).

CD102.2.6 Slabs on grade. The minimum thermal resistance (R-value) of the insulation around the perimeter of unheated or heated slab-on-grade floors shall be as specified in Table CD102.2(1). The insulation shall be placed on the outside of the foundation or on the inside of a foundation wall. The insulation shall extend downward from the top of the

slab for a minimum distance as shown in the table or to the top of the footing, whichever is less, or downward to at least the bottom of the slab and then horizontally to the interior or exterior for the total distance shown in the table.

CD102.2.7 Opaque doors. Opaque doors (doors having less than 50% glass area) shall meet the applicable requirements for doors as specified in Table CD102.2(1) and be considered as part of the gross area of above-grade walls that are part of the building envelope.

TABLE CD102.2(1) OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE[a] METHOD			
CLIMATE ZONE	3	4 EXCEPT MARINE	5 AND MARINE 4
Roofs			
Insulation entirely above roof deck	R-15ci	R-15ci	R-15ci
Metal buildings (with R-5 thermal blocks[a])[b]	R-19	R-19	R-19
Attic and other	R-30	R-30	R-30
Walls, above grade			
Mass	R-5.7ci[c, e]	R-5.7ci[c]	R-7.6ci
Metal building[b]	R-13	R-13	R-13 + R-13
Metal framed	R-13	R-13	R-13 + R-3.8ci
Wood framed and other	R-13	R-13	R-13
Walls, below grade			
Below-grade wall[d]	NR	NR	NR
Floors			
Mass	R-5ci	R-10ci	R-10ci
Joist/framing	R-19	R-19	R-19
Slab-on-grade floors			
Unheated slabs	NR	NR	NR
Heated slabs	R-7.5 for 12" below	R-7.5 for 12" below	R-7.5 for 24" below
Opaque doors			
Swinging	U - 0.70	U - 0.70	U - 0.70
Roll-up or sliding	U - 1.45	U - 1.45	U - 1.45

For SI: 1 inch = 25.4 mm

1 pound per square foot = 4.88 kg/m^2

1 pound per cubic foot = 16 kg/m^3

ci = Continuous Insulation

NR = No requirement

a. Thermal blocks are a minimum R-5 of rigid insulation which extends 1-inch beyond the width of the purlin on each side, perpendicular to the purlin.

b. Assembly description can be found in Table CD102.2(2).

c. R-5.7ci is allowed to be substituted with concrete block walls complying with ASTM C90, ungrouted or partially grouted at 32 inches or less on center vertically and 48 inches or less on center horizontally, with ungrouted cores filled with materials having a maximum thermal conductivity of 0.44 Btu-in/h-f^2 °F.

d. Where heated slabs are below grade, below-grade walls shall comply with the exterior insulation requirements for perimeter insulation according to the heated slab-on-grade construction.

e. Insulation is not required for mass walls in Climate Zone 3A located below the "Warm-Humid" line, and in Zone 3B.

TABLE CD102.2(2) METAL BUILDING ASSEMBLY DESCRIPTIONS		
ROOFS	DESCRIPTIONS	REFERENCE
R-19 + R-10	Filled cavity roof. Thermal blocks are a minimum, R-5 of rigid insulation, which extends 1 inch beyond the width of the purlin on each side, perpendicular to the purlin.	ASHRAE/IESNA 90.1-2004 Table A2.3
R-19	Standing seam with single insulation layer. Thermal blocks are a minimum R-5 of rigid insulation, which extends 1 inch beyond the width of the purlin on each side, perpendicular to the purlin. This construction R-19 insulation batts draped perpendicularly over the purlins. Thermal blocks are then placed above the purlin/batt, and the roof deck is secured to the purlins.	ASHRAE/IESNA 90.1-2004 Table A2.3
Walls		
R-13	Single insulation layer The first layer of R-13 insulation batts is installed continuously perpendicular to the girts and is compressed as the metal skin is attached to the girts.	ASHRAE/IESNA 90.1-2004 Table A3.2
R-13 + R-13	Double insulation layer The first layer of R-13 insulation batts is installed continuously perpendicular to the girts and is compressed as the metal skin is attached to the girts.	ASHRAE/IESNA 90.1-2004 Table A3.2
For SI: 1 inch = 25.4 mm.		

CD102.3 Fenestration. Fenestration shall comply with Table CD102.3.

CD102.3.1 Maximum area. The vertical fenestration area (not including opaque doors) shall not exceed the percentage of the gross wall area specified in Table CD102.3. The skylight area shall not exceed the percentage of the gross roof area specified in Table CD102.3.

CD102.3.2 Maximum U-factor and solar heat gain coefficient (SHGC). For vertical fenestration, the maximum U-factor and solar heat gain coefficient (SHGC) shall be as specified in Table CD102.3 based on the window projection factor. For skylights, the maximum U-factor and SHGC shall be as specified in Table CD102.3.

The window projection factor shall be determined in accordance with Equation CD-1.

PF = A/B (Equation CD-1)

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, or an area-weighted PF value shall be calculated and used for all windows and glass doors.

CD102.4 Air leakage.

CD102.4.1 Window and door assemblies. The air leakage of window and sliding or swinging door assemblies that are part of the building envelope shall be determined in accordance with AAMA/WDMA/CSA 101/I.S.2/A440, or NFRC 400 by an accredited, independent laboratory and labeled and certified by the manufacturer and shall not exceed the values in Section C402.4.2 of the 2012 IECC.

Exception: Site-constructed windows and doors that are weatherstripped or sealed in accordance with Section CD102.4.3.

CD102.4.2 Curtain wall, storefront glazing, and commercial entrance doors. Curtain wall, storefront glazing, and commercial glazed swinging entrance doors and revolving doors shall be tested for air leakage at 1.57 pounds per square foot (psf) (75 Pa) in accordance with ASTM E 283. For curtain walls and storefront glazing, the maximum air leakage rate shall be 0.3 cubic foot per minute per square foot (cfm/ft^2) (5.5 m^3/h x m^2) of fenestration area. For commercial glazed swinging entrance doors and revolving doors, the maximum air leakage shall be 1.00 cfm/ft^2 (18.3 m^3/h x m^2) of door area when tested in accordance with ASTM E 283.

CD102.4.3 Sealing of the building envelope. Openings and penetrations in the building envelope shall be sealed with caulking materials or closed with gasketing systems compatible with the construction materials and location. Joints and seams shall be sealed in the same manner or taped or covered with a moisture vapor-permeable wrapping material. Sealing materials spanning joints between construction materials shall allow for expansion and contraction of the construction materials.

CD102.4.4 Outdoor air intakes and exhaust openings. Stair and elevator shaft vents and other outdoor air intakes and exhaust openings integral to the building envelope shall be equipped with not less than a Class I motorized, leakage-rated damper with a maximum leakage rate of four cfm per square foot (6.8 L/s – C m^2) at 1.0 inch water gauge (w.g.) (1250 Pa) when tested in accordance with AMCA 500D.

Exception: Gravity (nonmotorized) dampers are permitted to be used in buildings less than three stories in height above grade.

CD102.4.5 Loading dock weather seals. Cargo doors and loading dock doors shall be equipped with weather seals to restrict infiltration when vehicles are parked in the doorway.

CD102.4.6 Vestibules. A door that separates conditioned space from the exterior shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same time.

Exceptions:

1. Buildings in Climate Zones I and 2 as indicated in Figure C301.1 and Table C301.1.

2. Doors not intended to be used as a building entrance door, such as doors to mechanical or electrical equipment rooms.

3. Doors opening directly from a sleeping unit or dwelling unit.

4. Doors that open directly from a space less than 3,000 square feet (298 m^2) in area.

5. Revolving doors.

6. Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.

TABLE CD102.3 BUILDING ENVELOPE REQUIREMENTS: FENESTRATION			
CLIMATE ZONE	3	4 EXCEPT MARINE	5 AND MARINE 4
Vertical fenestration (40% maximum of above-grade wall)			
U-factor			
Framing materials other than metal with or without metal reinforcement or cladding			
U-factor	0.65	0.40	0.35
Metal framing with or without thermal break			
Curtain Wall/Storefront U-factor	0.60	0.50	0.45
Entrance Door U-factor	~~.90~~ 0.90	~~.85~~ 0.85	~~.80~~ 0.80
All Other U-factor[a]	~~.65~~ 0.65	~~.55~~ 0.55	~~.55~~ 0.55
SHGC-All frame types			
SHGC: PF < 0.25	~~.25~~ 0.25	~~.40~~ 0.40	~~.40~~ 0.40
SHGC: 0.25 = PF < 0.5	~~.33~~ 0.33	NR	NR
SHGC = 0.5	0.40	NR	NR
Skylights (3.0% maximum)			
Glass			
U-Factor	0.90	0.60	0.60
SHGC	0.40	0.40	0.40
Plastic			
U-Factor	1.30	1.30	1.30
SHGC	0.35	0.62	0.62

NR = No requirement

PF = Projection factor (See Section CD102.3.2).

a. All others includes operable windows, fixed windows, and nonentrance doors.

CD102.4.7 Recessed luminaires. When installed in the building envelope, recessed luminaires shall meet one of the following requirements:

1. Type IC rated, manufactured with no penetrations between the inside of the recessed fixture and ceiling cavity and sealed or gasketed to prevent air leakage into the unconditioned space.

2. Type IC or non-IC rated, installed inside a sealed box constructed from a minimum 0.5-inch-thick (12.7 mm) gypsum wallboard or constructed from a preformed polymeric vapor barrier or other air-tight assembly manufactured for this purpose, while maintaining required clearances of not less than 0.5 inch (12.7 mm) from combustible material and not less than three inches (76 mm) from insulation material.

3. Type IC rated, in accordance with ASTM E 283 admitting no more than 2.0 cubic feet per minute (cfm) (0.944 L/s) of air movement from the conditioned space to the ceiling cavity. The luminaire shall be tested at 1.57 psf (75 Pa) pressure difference and shall be labeled.

CD102.5 Moisture control. All framed walls, floors, and ceilings not ventilated to allow moisture to escape shall be provided with an approved vapor retarder having a permeance rating of one perm (5.7 x 10-11 kg/Pa· s · m2) or less when tested in accordance with the dessicant method using Procedure A of ASTM E 96. The vapor retarder shall be installed on the warm-in-winter side of the insulation.

Exceptions:

1. Buildings located in Climate Zones 1 through 3 as indicated in Figure C301.1 and Table C301.1.

2. In construction where moisture or its freezing will not damage the materials.

3. Where other approved means to avoid condensation in unventilated framed wall, floor, roof, and ceiling cavities are provided.

16. Delete the "Automatic Shutoff Control" definition in Section R202.

~~14.~~ 17. Add an exception to Section R401.3 to read:

Exception: Where approved, certificates for multi-family dwelling units shall be permitted to be located off-site at an identified location.

~~15. Change the wood frame wall R-value categories for Climate Zones 3A, 4A, and 5A in Table R402.1.3 to read:~~

~~Wood Frame Wall R-Value~~
~~15 or 13+1[h]~~

~~16. Change the frame wall U-factor categories for Climate Zones 3A, 4A, and 5A in Table R402.1.2 to read:~~

~~Frame Wall U-Factor~~
~~0.079~~

18. Change the Wood-Framed Wall U-Factor row and add a row for Attic Roofline U-Factor in Table R402.1.2 (portions of table not shown remain) to read:

Climate Zone	3	4 Except Marine	5 And Marine 4

Wood-Framed Wall U-Factor	0.079	0.079	0.079
Attic Roofline U-Factor	0.039	0.032	0.032

19. Change the Wood-Framed Wall R-Value row and add a row for Attic Roofline R-Value in Table R402.1.3 (portions of table not shown remain) to read:

Climate Zone	3	4 Except Marine	5 And Marine 4
Wood-Framed Wall R-Value [e]	15 or 13+1	15 or 13+1	15 or 13+1
Attic Roofline R-Factor	30	38	38

~~17.~~ 20. Change Section ~~R402.2.4~~ R402.2.5 to read:

~~R402.2.4~~ R402.2.5 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.

~~18. Change the title of the "Insulation Installation Criteria" category of Table R402.4.1.1; change the "Shower/tub on exterior wall" category of Table R402.4.1.1, and add footnotes "c" and "d" to Table R402.4.1.1 to read:~~

~~Component~~	~~Air Barrier Criteria~~	~~Insulation Installation Criteria [d]~~
~~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.~~
~~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.~~		

~~d. Structural integrity of headers shall be in accordance with the applicable building code.~~

~~19.~~ 21. Change Section ~~R402.4.1.2 to read~~ R402.5.1.2 (Exception and During testing: items 1 through 6 remain):

~~R402.4.1.2~~ R402.5.1.2 Testing. The building or dwelling unit shall be tested ~~and verified as having an~~ for air ~~leakage rate not exceeding five air changes per hour in Climate Zone 4~~ leakage. Testing shall be conducted in accordance with RESNET/ICC 380, ASTM E 779, ~~or~~ ASTM E 1827 or ASTM E3158 and reported at a pressure differential of 0.2 inch w.g. (50 Pascals). 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 conducted by a Virginia licensed general contractor, a Virginia licensed HVAC contractor, a Virginia licensed home inspector, a Virginia registered design professional, a certified BPI Envelope Professional, a certified HERS rater, or a certified duct and envelope tightness rater. The party conducting the test shall have been trained on the equipment used to perform the test. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope have been sealed.

Note: Should additional sealing be required as a result of the test, consideration may be given to the issuance of a temporary certificate of occupancy in accordance with Section 116.1.1.

~~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.~~

~~20.~~ 22. Change the maximum allowed air changes per hour to 5.0 for Climate Zones 3, 4, and 5 in Section ~~R402.4.1.3 to read:~~ R402.5.1.3 of the IECC.

~~R402.4.1.3 Leakage rate: When complying with Section R401.2.1, the building or dwelling unit shall have an air leakage rate not exceeding 5.0 air changes per hour in Climate Zones 3 through 5 when tested in accordance with Section R402.4.1.2.~~

~~21.~~ 23. ~~Add~~ Change Section R403.1.2 of the IECC and add Section R403.1.3 to the IECC to read:

R403.1.2 Heat pump supplementary heat. Heat pumps having supplementary electric-resistance, fuel gas or liquid fuel heating systems shall have controls that are configured so that, except during defrost or emergency heating modes, supplemental heating does not energize unless the outdoor temperature is below 40ºF (4ºC).

R403.1.3 Heat pump as primary space heat source. Electric resistance heat shall not be used as the primary heat source for electric space heating if a ducted or ductless heat pump can be installed. Electric resistance space heating may be used for defrost, supplemental, or emergency heat, A heat pump shall be designed so that, except during

defrost or emergency heating modes, supplemental heating does not energize unless the outdoor temperature is below 40ºF (4ºC).

24. Change Section R403.3.2 to read:

R403.3.2 Building cavities. Building framing cavities used as ducts or plenums shall comply with Section M1601.1.1 of the VRC.

~~22.~~ 25. ~~Change the last~~ Add the following paragraph to the end of Section ~~R403.3.5~~ R403.3.7 after exceptions to read:

~~A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.~~ The licensed mechanical contractor installing the mechanical system shall be permitted to perform the duct testing. The contractor shall have been trained on the equipment used to perform the test.

~~23. Change Section R403.3.7 to read:~~

~~(R403.3.7) Building cavities. Building framing cavities used as ducts or plenums shall comply with VRC Section M1601.1.1.~~

~~24.~~ 26. ~~Change~~ Delete Section R403.7.1 of the IECC and change Section R403.7 of the IECC to read:

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.

27. Delete Sections R404.2, R404.2.1, and R404.2.2.

~~25. Change Section R406.3.2 to read:~~

~~Section N1106.3.2 (R406.3.2) Onsite renewables are included. When onsite renewable energy is included for compliance using the Energy Rating Index (ERI) analysis per Section N1106.4 (R406.4), the building thermal envelope shall be greater than or equal to levels of energy efficiency and solar heat gain coefficient in Table N1102.1.2 (R402.1.2), with a ceiling U-factor of 0.026 and a frame wall U-factor of 0.060, or Table N1102.1.3 (R402.1.3), with a ceiling R-value of 49 and a wood frame wall R-value of 20 or 13+5.~~

~~26.~~ 28. Change Section R501.1 to read:

R501.1 Scope. The provisions of the Virginia Existing Building Code shall control the alteration, repair, addition, and change of occupancy of existing buildings and structures.

~~27.~~ 29. Delete Sections R501.1.1 through R501.6.

~~28.~~ 30. Change Section R502.1 to read:

R502.1 General. Additions to an existing building, building system, or portion thereof shall conform to the provisions of Section 805 of the VEBC.

~~29.~~ 31. Delete Sections R502.2 through ~~R502.3.4~~ R502.2.5.

~~30.~~ 32. Change Section R503.1 to read:

R503.1 General. Alterations to any building or structure shall comply with the requirements of Chapter 6 of the VEBC.

~~31.~~ 33. Delete Sections R503.1.1 through ~~R503.1.4~~ R503.1.5.

~~32.~~ 34. Change Section R504.1 to read:

R504.1 General. Buildings, structures, and parts thereof shall be repaired in compliance with Section 507 of the VEBC.

~~33.~~ 35. Delete Section R504.2.

13VAC5-63-267. Chapter 14 Exterior walls.

A. Delete ~~Section 1402.5~~ Sections 1402.5.1 and 1402.6 of the IBC.

B. Add Section ~~1402.8~~ 1402.11 to the IBC to read:

~~1402.8~~ 1402.11 Air barriers. The exterior wall envelope shall be designed and constructed by providing air barriers that comply with the IECC.

C. Change Section 1406.10.3 of the IBC to read:

1406.10.3 Full-scale test. The metal composite material (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 Section 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. Add the following notation to the list of notations in Section 1602.1 (all other notations remain):~~

~~V_T = Tornado speed, miles per hour (mph) (m/s) determined from Chapter 32 of ASCE 7.~~

~~B. Change Section 1603.1.4 of the IBC to read:~~

~~1603.1.4 Wind and tornado design data. The following information related to wind loads and, where required by Section 1609.5 tornado loads, shall be shown regardless of whether wind loads govern the design of the lateral force-resisting system of the structure:~~

~~1. Basic wind speed, V (mph), tornado speed, V_T, and allowable stress design wind speed, V_{asd}, as determined in accordance with Section 1609.3.1.~~

~~2. Risk category.~~

~~3. Effective plan area, A_e for tornado design in accordance with Chapter 32 of ASCE 7.~~

~~4. Wind exposure. Applicable wind direction if more than one wind exposure is utilized.~~

~~5. Applicable internal pressure coefficients and applicable tornado internal pressure coefficients.~~

~~6. Design wind pressures and their applicable zones with dimensions to be used for exterior component and cladding materials not specifically designed by the registered design professional responsible for the design of the structure, pounds per square foot (kN/m^2). Where design for tornado loads is required, the design pressures shown shall be the maximum of wind or tornado pressures.~~

~~C. Add Exception 4 to Section 1605.1 of the IBC to read:~~

~~4. Where design for tornado loads is required, the alternative allowable stress design load combinations of Section 1605.2 shall not apply when tornado loads govern the design.~~

~~D. Change Sections 1607.14 and 1607.14.3 of the IBC to read:~~

~~1607.14 Roof loads. The structural supports of roofs and marquees shall be designed to resist wind and, where applicable, tornado, snow, and earthquake loads, in addition to the dead load of construction and the appropriate live loads as prescribed in this section or as set forth in Table 1607.1. The live loads acting on a sloping surface shall be assumed to act vertically on the horizontal projection of that surface.~~

~~1607.14.3 Awnings and canopies. Awnings and canopies shall be designed for uniform live loads as required in Table 1607.1 as well as for snow loads and wind and tornado loads as specified in Sections 1608 and 1609.~~

A. Change Section 1607.8.5 of the IBC to read:

1607.8.5 Posting. The maximum weight of vehicles allowed into or on a garage or other structure shall be conspicuously posted by the owner or the owner's authorized agent in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

~~E.~~ B. Change Section 1609.3 of the IBC to read:

1609.3 Basic wind speed. The basic ~~design~~ wind speed, V, in miles per hour (mph), for the determination of the wind loads shall be determined by Figures ~~1609.3(1), 1609.3(2), 1609.3(3), and 1609.3(4)~~ Figures 1609.3(1) through 1609.3(4). The basic ~~design~~ wind speed, V, for use in the design of Risk Category ~~II~~ I buildings and structures shall be obtained from Figure 1609.3(1). The basic ~~design~~ wind speed, V, for use in the design of Risk ~~Categories III and IV~~ Category II buildings and structures shall be obtained from ~~Figures 1609.3(2) and 1609.3(3), respectively~~ Figure 1609.3(2). The basic ~~design~~ wind speed, V, for use in the design of Risk Category ~~I~~ III buildings and structures shall be obtained from Figure ~~1609.3(4)~~ 1609.3(3). The basic wind speed, V, for use in the design of Risk Category IV buildings and structures shall be obtained from Figure 1609.3(4). The basic 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 ~~(62.3 m/s)~~ (62.3 m/s) and areas lower than 4,000 feet in elevation shall use 116 V mph ~~(52 m/s)~~ (52 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~~ Chapter 26 of ASCE 7.

In nonhurricane-prone regions, when the basic ~~design~~ wind speed, V, is estimated from regional climatic data, the basic design wind speed, V, shall be determined in accordance with ~~Section 26.5.3~~ Chapter 26 of ASCE 7.

~~F. Delete Sections 1609.5.1, 1609.5.2, and 1609.5.3 and change Section 1609.5 of the IBC to read:~~

~~1609.5 Tornado loads. The design and construction of Risk Category III and IV buildings and other structures located in the tornado-prone region as shown in Figure 1609.5 shall be in accordance with Chapter 32 of ASCE 7, except as modified by this code.~~

~~G. Add Figure 1609.5 Tornado-Prone Region to the IBC.~~



FIGURE 1609.5 TORNADO-PRONE REGION

~~H. Add Sections 1609.6, 1609.6.1, 1609.6.2, 1609.6.3, 1609.6.3.1, and 1609.6.3.2 to the IBC to read:~~

~~1609.6 Roof systems. Roof systems shall be designed and constructed in accordance with Sections 1609.6.1 through 1609.6.3, as applicable.~~

~~1609.6.1 Roof deck. The roof deck shall be designed to withstand the greater of wind pressures or tornado pressures determined in accordance with ASCE 7.~~

~~1609.6.2 Roof coverings. Roof coverings shall comply with Section 1609.6.1.~~

~~Exception: Rigid tile roof coverings that are air permeable and installed over a roof deck complying with Section 1609.6.1 are permitted to be designed in accordance with Section 1609.6.3.~~

~~Asphalt shingles installed over a roof deck complying with Section 1609.6.1 shall comply with the wind-resistance requirements of Section 1504.2.~~

1609.6.3 Rigid tile. Wind and tornado loads on rigid tiles shall comply with Section 1609.6.3.1 or 1609.6.3.2, as applicable.

1609.6.3.1 Wind loads. Wind loads on rigid tile roof coverings shall be determined in accordance with the following equation:

$$M_a = q_h C_L b L L_a [1.0 - GC_p] \quad \text{(Equation 16-18)}$$

For SI:

$$M_a = \frac{q_h C_L b L L_a [1.0 - GC_p]}{1{,}000}$$

where:

b = Exposed width, feet (mm) of the roof tile.

C_L = Lift coefficient. The lift coefficient for concrete and clay tile shall be 0.2 or shall be determined by test in accordance with Section 1504.3.1.

GC_p = Roof pressure coefficient for each applicable roof zone determined from Chapter 30 of ASCE 7. Roof coefficients shall not be adjusted for internal pressure.

L = Length, feet (mm) of the roof tile.

L_a = Moment arm, feet (mm) from the axis of rotation to the point of uplift on the roof tile. The point of uplift shall be taken at 0.76L from the head of the tile and the middle of the exposed width. For roof tiles with nails or screws (with or without a tail clip), the axis of rotation shall be taken as the head of the tile for direct deck application or as the top edge of the batten for battened applications. For roof tiles fastened only by a nail or screw along the side of the tile, the axis of rotation shall be determined by testing. For roof tiles installed with battens and fastened only by a clip near the tail of the tile, the moment arm shall be determined about the top edge of the batten with consideration given for the point of rotation of the tiles based on straight bond or broken bond and the tile profile.

M_a = Aerodynamic uplift moment, feet-pounds (N-mm) acting to raise the tail of the tile.

q_h = Wind velocity pressure, psf (kN/m^2) determined from Section 26.10.2 of ASCE 7.

Concrete and clay roof tiles complying with the following limitations shall be designed to withstand the aerodynamic uplift moment as determined by this section.

1. The roof tiles shall be either loose laid on battens, mechanically fastened, mortar set, or adhesive set.
2. The roof tiles shall be installed on solid sheathing that has been designed as components and cladding.
3. An underlayment shall be installed in accordance with Chapter 15.
4. The tile shall be single lapped interlocking with a minimum head lap of not less than two inches (51 mm).
5. The length of the tile shall be between 1.0 and 1.75 feet (305 mm and 533 mm).
6. The exposed width of the tile shall be between 0.67 and 1.25 feet (204 mm and 381 mm).
7. The maximum thickness of the tail of the tile shall not exceed 1.3 inches (33 mm).
8. Roof tiles using mortar set or adhesive set systems shall have not less than two-thirds of the tile's area free of mortar or adhesive contact.

1609.6.3.2 Tornado loads. Tornado loads on rigid tile roof coverings shall be determined in accordance with Section 1609.6.3.1, replacing q_h with q_{hT} and (GC_p) with K_{vT} (GC_p) in Equation 16-18, where:

~~q_{hT} = tornado velocity pressure, psf (kN/m^2) determined in accordance with Section 32.10 of ASCE 7.~~

~~K_{vT} = tornado pressure coefficient adjustment factor for vertical winds, determined in accordance with Section 32.14 of ASCE 7.~~

~~I.~~ C. 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.

~~J.~~ D. Change Items ~~1.1 and~~ 1.1, 1.4, and 2.1 of Section 1612.4 of the IBC to read:

1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 113.3.2 and for the final inspection in Section 113.3.3.

1.4 For dry floodproofed nonresidential buildings, the elevation to which the building is dry floodproofed as required for the final inspection in Section 113.3.3.

2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 113.3.2 and for the final inspection in Section 113.3.3.

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, special inspections, or both must comply with the qualification, certification and experience requirements of ASTM E329 or the alternatives listed in this section.

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 the special inspector's agents shall be independent from the person 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, 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, 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 1705. All individuals or agents performing special inspection functions shall operate under the direct supervision of a registered design professional (RDP) in responsible charge of special inspection activities, also known as the "special inspector." The special inspector shall ensure that the individuals under the special inspector's charge are performing only those special inspections or laboratory testing that are consistent with the individual's knowledge, training, and certification for the specified inspection or laboratory testing.

Exceptions:

1. The building official shall be permitted to waive special inspections and tests.

2. Special inspections and tests are not required for:

2.1. One story buildings under 20 feet (6096 mm) in height that do not exceed 5,000 square feet (465 m^2) in building area; or

2.2. Alterations to Group U structures that do not increase loads in accordance with Sections 603.7.3 and 603.7.4 of the VEBC.

3. Unless otherwise required by the building official, special inspections and tests are not required for occupancies in Group R-3, R-4, or R-5 and occupancies in Group U that are accessory to a residential occupancy including 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 ~~2211.1.2~~ 2206.1.1.2 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.

Exception:

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 Section 1704.6 of the IBC to read:

Where required by the provisions of Section 1704.6.1, the owner or the owner's authorized agent shall employ a registered design professional to perform structural observations. The structural observer shall visually observe representative locations of structural systems, details and load paths for general conformance to the approved construction documents. Structural observation does not include or waive the responsibility for the inspections in Section 113 or the special inspections in Section 1705 or other sections of this code. Prior to the commencement of observations, the structural observer shall submit to the building official a written statement identifying the frequency and extent of structural observations. At the conclusion of the work included in the permit, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved.

~~F.~~ G. Change category "14" of Table 1705.3 of the IBC to read:

Type	Continuous Special Inspection	Periodic Special Inspection	Referenced Standard[a]	IBC Reference
14. Inspect formwork for shape, location and dimensions of the concrete member being formed, shoring and reshoring.	--	X	ACI 318: 26.11.1.2(b)	--

~~G.~~ H. Delete Sections 1705.18, 1705.18.1, and 1705.18.2 of the IBC.

I. Change Section 1707.1 of the IBC to read:

1707.1 General. In the absence of approved rules or other approved standards, the building official shall make, or cause to be made, the necessary tests and investigations; or the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in Section 112.2. The cost of all tests and other investigations required under the provisions of this code shall be borne by the owner or the owner's authorized agent.

13VAC5-63-290. Chapter 18 Soils and foundations.

A. Change the exception to Section 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 (23.78m^2) 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.

C. Change Section 1810.3.10.4 of the IBC to read:

1810.3.10.4 Seismic reinforcement. For structures assigned to Seismic Design Category C, a permanent steel casing shall be provided from the top of the micropile down to the point of zero curvature. For structures assigned to Seismic Design Category D, E or F, the micropile shall be considered as an alternative system in accordance with Section 112.2. The alternative system design, supporting documentation and test data shall be submitted to the building official for review and approval.

13VAC5-63-295. Chapter 23 Wood.

A. Change Section 2303.4.6 to read:

2303.4.6 TPI 1 specifications. In addition to Sections 2303.4.1 through 2303.4.5, the design, manufacture and quality assurance of metal-plate-connected wood trusses shall be in accordance with TPI 1. Job-site inspections shall be in compliance with Section 113, as applicable.

B. Change footnote "g" of Table 2304.10.2 of the IBC to read:

g. Nails and staples are carbon steel meeting the specifications of ASTM F1667. Connections using nails and staples of other materials, such as stainless steel, shall be designed by acceptable engineering practice or approved under Section 112.2.

~~A.~~ C. ~~Add~~ Change Exception ~~2~~ to Item 2 of Section 2308.2.3 of the IBC to read:

~~2.~~ Concrete slab-on-grade live load limited only by allowable soil bearing pressure.

~~B. Add Exception 4 to Section 2308.2.3 of the IBC to read:~~

~~4. Where design for tornado loads is required, tornado loads on the main wind force resisting system and all components and cladding shall not exceed the corresponding wind loads on these same elements.~~

13VAC5-63-296. Chapter 24 Glass and glazing.

Change item 2 of Section 2409.1 of the IBC to read:

2. Load requirements specified in Chapter 16 and approval in accordance with the provisions of Section 112.2.

13VAC5-63-297. Chapter 25 Gypsum panel products and plaster.

Change Section 2503.1 of the IBC to read:

2503.1 Inspection. Lath and gypsum panel products shall be inspected in accordance with Section 113.

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 changes 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~~ grade, and multifamily dwellings of any height permitted to be of Types III, IV, and V construction and their detached garages, 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, 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 Section ~~700.12(F)(2)(6)~~ 700.12(I)(2)(6) of NFPA 70 to read:

(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.

3. ~~Delete~~ Change exception 2 to Section 210.8(F) (remainder of section remains) ~~in its entirety.~~ to read:

GFCI protection shall not be required for listed HVAC equipment.

4. Change Section 210.8(A)(5) to read:

Unfinished portions or areas of the basement not intended as habitable rooms.

5. Change Section 210.52(C)(2) to read:

Island and Peninsular Countertops and Work Surfaces. At least one receptacle shall be installed at each island and peninsular countertop space with a long dimension of 24 inches (610 mm) or greater and a short dimension of 12 inches (305 mm) or greater. A peninsular counterop is measured from the connected perpendicular wall.

6. Add Exception to Section 210.52(C)(3) to read:

Exception: To comply with the following conditions (1) and (2), receptacle outlets shall be permitted to be mounted not more than 12 inches (305 mm) below the countertop or work surface.

(1) Construction for the physically impared.

(2) On island and peninsular countertops or work surface where the surface is flat across its entire surface (no backsplashes, dividers, etc.) and there are no means, such as an overhead cabinet, to mount a receptacle within 20 inches (508 mm) above the countertop or work surface. Receptacles mounted below a countertop or work surface in accordance with this exception shall not be located where the countertop or work surface extends more than 6 inches (150 mm) beyond its support base.

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. Delete Section 2702.2.3 of the IBC.

F. Change Sections 2702.2.8 and 2702.2.9 of the IBC to read:

2702.2.8 Group I-2 occupancies. Emergency power shall be provided in accordance with Section 407.11 for Group I-2 occupancies licensed by the Virginia Department of Health as a hospital, nursing, or hospice facility.

2702.2.9 Group I-3 occupancies. 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 that 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 that 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.~~ B. 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. Add the following definitions to Section 202 of the IMC:~~

~~Refrigerant designation. The unique identifying alphanumeric value or refrigerant number assigned to an individual refrigerant and published in ASHRAE Standard 34.~~

~~2. Change Section 401.2 of the IMC to read:~~

~~401.2 Ventilation required. Every occupied space shall be ventilated by natural means in accordance with Section 402 or by mechanical means in accordance with Section 403. Group R dwelling units shall be ventilated by mechanical means in accordance with Section 403. Ambulatory care facilities and Group I-2 occupancies shall be ventilated by mechanical means in accordance with Section 407.~~

1. Change Section 301.1 of the IMC and Section 301.7 of the IMC (exception remains) to read:

301.1 Scope. This chapter shall govern the approval and installation of all equipment and appliances that comprise parts of the building mechanical systems regulated by this code in accordance with Section 102.2.

301.7 Listed and labeled. Appliances regulated by this code shall be listed and labeled for the application in which they are installed and used, unless otherwise approved in accordance with Section 112.2.

~~3.~~ 2. Change the last paragraph of Section 403.3.1.1 (remainder of section and the exception remains) of the IMC to read:

~~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 403.3.1.1. Ventilation rates for occupancies not represented in Table 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.~~

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	--	--
~~Medical procedure rooms[l]~~	~~20~~	~~15~~	-	-
~~Patient rooms[l]~~	~~10~~	~~25~~	-	-

~~Physical therapy rooms~~[i]	~~20~~	~~15~~	-	-
~~i. For spaces that are located in clinic, outpatient facilities as defined in Chapter 2 of the VCC.~~				

With the exception of smoking lounges and other designated areas where smoking is permitted, the ventilation rates in Table 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 403.3.1.1 where approved statistical data document the accuracy of an alternate anticipated occupant density.~~

~~4.~~ 3. ~~Add~~ Delete the "Dressing Rooms" row (in the "Retail stores, sales floors and showroom floors" category) and add the following rows to Table 403.3.1.1 of the IMC to read (rows not shown remain):

4. Change Section 504.4 of the IMC to read:

504.4 Exhaust installation. Dryer exhaust ducts for clothes dryers shall terminate on the outside of the building. Exhaust duct terminations shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination. Ducts shall not be connected or installed with sheet metal screws or other fasteners that will obstruct the exhaust flow. Clothes dryer exhaust ducts shall not be connected to a vent connector, vent or chimney. Clothes dryer exhaust ducts shall not extend into or through ducts or plenums. Clothes dryer exhaust ducts shall be sealed in accordance with Section 603.9.

5. Change Section 504.9.2 of the IMC to read:

504.9.2 Duct installation. Exhaust ducts shall be supported at four-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 into the inside of the duct.

Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

6. Change Item 2 of Section 504.11 to read:

2. Dampers shall be prohibited in the exhaust duct. Penetrations of the shaft and ductwork shall be protected in accordance with Section 607.5.5, Exception 1.

7. Change Exception 1 of Section 505.3 of the IMC to read:

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.

8. Change Item 2 in Section 505.5 to read:

2. Penetrations of the shaft and ductwork shall be protected in accordance with Section 607.5.5.

9. Change Section 505.6 of the IMC to read:

505.6 Other than Group R. In other than Group R occupancies, where electric domestic cooking appliances are utilized for domestic purposes, domestic range hoods shall be permitted for such appliances. Hoods and exhaust systems for such electric domestic cooking appliances shall be in accordance with Sections 505.2 and 505.4. 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 507.1.

10. Delete Sections 506.3.2.5.1 and 506.3.2.5.2 and change Section 506.3.2.5 to read:

506.3.2.5 Grease duct test. Prior to the use or concealment of any portion of a grease duct system, a leakage test shall be performed. Grease ducts shall be considered to be concealed where installed in shafts or covered by coatings or wraps that prevent the grease ducts from being visually inspected on all sides. The permit holder shall be responsible to provide the necessary equipment and perform the grease duct leakage test. A light test shall be performed to determine that all welded and brazed joints are liquid tight. A light test shall be performed by passing a lamp having not less than 1600 lumens through the entire section of ductwork to be tested. The lamp shall be open so as to emit light equally in all directions perpendicular to the duct walls. A light test shall be performed for the entire grease duct system,

including the hood-to-duct connection. The grease duct system shall be permitted to be tested in sections, provided that every joint is tested. For listed factory-built grease ducts, this test shall be limited to duct joints assembled in the field and shall exclude factory welds.

11. Renumber Exceptions 3 through 6 to Section 507.1, as follows: "3" to “2.4”, “4” to “2.5”, “5” to “2.6”, and “6” to “2.7”; and change Exceptions 1, 2.2, and 2.3 to read (remainder of Section and Exceptions remain):

Exceptions:

1. Factory-built commercial exhaust hoods that are listed and labeled in accordance with UL 710, and installed in accordance with Section 304.1, shall not be required to comply with Sections 507.1.5, 507.1.6, 507.2.3, 507.2.5, 507.2.8, 507.2.10, 507.3.1, and 507.3.3.

2.2. Cooking appliances equipped with integral down-draft exhaust systems listed and labeled for the application in accordance with NFPA 96.

2.3. Smoker ovens with integral exhaust systems listed and tested for the application.

12. Add a second sentence to Section 508.2 (first sentence and Exception remain) to read:

Makeup air introduced directly into the exhaust hood cavity shall not be greater than 10 percent of the hood exhaust airflow rate.

~~10.~~ 13. Change Section ~~510.6.1.1~~ 509.6.1.1 of the IMC to read:

~~510.6.1.1~~ 509.6.1.1 Shaft penetrations. Hazardous exhaust ducts that penetrate fire-resistance-rated shafts shall comply with Section 713.11 of the International Building Code.

14. Change Section 512.6 of the IMC to read:

512.6 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.

~~11.~~ 15. Change Section 607.5.5 of the IMC to read:

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. 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. Fire dampers are not required where penetrations are tested in accordance with ASTM E119 as part of the fire-resistance-rated assembly.

3. Fire and smoke dampers are not required where ducts are used as part of an approved smoke control system in accordance with Section 909 of the International Building Code.

4. Fire and smoke dampers are not required where the penetrations are in parking garage exhaust or supply shafts that are separated from other building shafts by not less than two-hour fire-resistance-rated construction.

5. Smoke dampers are not required where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the International Building Code.

~~12. Add Section 607.6.2.2 to the IMC to read:~~

~~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.~~

~~13. Change~~ 16. Revise the "Air-conditioning equipment" row and add the following rows to Table 1101.2 to read:

EQUIPMENT	STANDARDS
~~Refrigeration fittings, including press-connect, flared and threaded~~	~~UL 109 and UL 207~~
Air-conditioning equipment and heat pump equipment	UL 1995 or UL/CSA 60335-2-40
~~Packaged terminal air conditioners and heat pumps~~	~~UL 484 or UL/CSA 60335-2-40~~
~~Split-system air conditioners and heat pumps~~	~~UL 1995 or UL/CSA 60335-2-40~~
~~Dehumidifiers~~	~~UL 474 or UL/CSA 60335-2-40~~
Air/water cooled condensers	UL 1995 or UL/CSA 60335-2-40 or UL/CSA 60335-2-89
Refrigeration equipment	UL 1995 or UL/CSA 60335-2-89
~~Unit coolers~~	~~UL 412 or UL/CSA 60335-2-89~~
~~Commercial refrigerators, freezers, beverage coolers, and walk-in coolers~~	~~UL 471 or UL/CSA 60335-2-89~~
~~Refrigerating units and walk-in coolers~~	~~UL 427 or UL 60335-2-89~~

Refrigeration condensing units	UL 1995 or UL/CSA 60335-2-89
Automatic commercial ice machines	UL 563 or UL/CSA 60335-2-89
~~Refrigerant-containing components and accessories~~	~~UL 207~~

~~14. Add Section 1101.2.1 to read:~~

~~1101.2.1 Group A2L, A2, A3, and B1 high probability equipment. High probability equipment using Group A2L, A2, A3, or B1 refrigerant shall comply with UL 484, UL/CSA 60335-2-40, or UL/CSA 60335-2-89.~~

~~15. Change Sections 1101.7 and 1102.2.1 to read:~~

~~1101.7 Changing refrigerant. Changes of refrigerant in an existing system to a refrigerant with a different refrigerant designation shall only be allowed where in accordance with the following:~~

~~1. The owner or the owner's authorized agent shall be notified prior to making a change of refrigerant, and the change of refrigerant shall not be made where the owner objects to the change.~~

~~2. The change in refrigerant shall be in accordance with one of the following.~~

~~2.1 Written instructions of the original equipment manufacturer.~~

~~2.2 An evaluation of the system by a registered design professional or by an approved agency that validates safety and suitability of the replacement refrigerant.~~

~~2.3 Approved by the code official.~~

~~3. Where the replacement refrigerant is classified into the same safety group, requirements that were applicable to the existing system shall continue to apply.~~

~~4. Where the replacement refrigerant is classified into a different safety group, the system shall comply with the requirements of this standard for a new installation, and the change of refrigerant shall require code official approval.~~

~~1102.2.1 Mixing. Refrigerants with different refrigerant designations shall only be mixed in a system in accordance with both of the following:~~

~~1. The addition of a second refrigerant is allowed by the equipment manufacturer and is in accordance with the manufacturer's written instructions.~~

~~2. The resulting mixture does not change the refrigerant safety group.~~

~~16.~~ 17. Change Table 1103.1 of the IMC to read (portions of table not shown remain):

TABLE 1103.1 REFRIGERANT CLASSIFICATION, AMOUNT AND OEL

Chemical Refrigerant	Formula	Chemical Name of Blend	Refrigerant Safety Group Classification	AMOUNT OF REFRIGERANT PER OCCUPIED SPACE						
				RCL			LFL			OEL[d]
				lb/MCf	ppm	g/m^3	lb/MCf	ppm	g/m^3	ppm
R-11[e]	CCl_3F	trichlorofluoromethane	A1	0.39	1,100	6.1				1,000
R-12[e]	CCl_2F_2	dichlorodifluoromethane	A1	5.6	18,000	90				1,000
R-13[e]	$CClF_3$	chlorotrifluoromethane	A1	—	—	—				1,000
R-13B1[e]	$CBrF_3$	bromotrifluoromethane	A1	—	—	—				1,000
R-13I1	CF_3I	trifluoroiodomethane	A1	1.0	2,000	16				500
R-31	CH_2ClF	chlorofluoromethane	-	-	-	-				-
R-32	CH_2F_2	difluoromethane (methylene fluoride)	A2L	4.8	36,000	77	19.1	144,000	306	1,000
R-41	CH_3F	fluoromethane (methyl fluoride)	-	-	-	-				-
R-50	CH_4	methane	A3	—	—	—		50,000		1,000
R-113[e]	CCl_2FCClF_2	1,1,2-trichloro-1,2,2-trifluoroethane	A1	1.2	2,600	20				1,000
R-114[e]	$CClF_2CClF_2$	1,2-dichloro-1,1,2,2-tetrafluoroethane	A1	8.7	20,000	140				1,000
R-141b	CH_3CCl_2F	1,1-dichloro-1-fluoroethane	—	0.78	2,600	12	17.8	60,000	287	500
R-142b	CH_3CClF_2	1-chloro-1,1-difluoroethane	A2	5.1	20,000	82	20.4	80,000	329	1,000
R-143a	CH_3CF_3	1,1,1-trifluoroethane	A2L	4.4	21,000	70	17.5	82,000	282	1,000
R-152a	CH_3CHF_2	1,1-difluoroethane	A2	2.0	12,000	32	8.1	48,000	130	1,000
R-170	CH_3CH_3	ethane	A3	0.54	7,000	8.6	2.4	31,000	38	1,000
R-E170	CH_3OCH_3	Methoxymethane (dimethyl ether)	A3	1.0	8,500	16	4.0	34,000	64	1,000

R-290	$CH_3CH_2CH_3$	propane	A3	0.59	5,300	9.5	2.4	21,000	38	1,000
R-C318	$(CF_2)_4$	octafluorocyclobutane	A1	41	80,000	650				1,000
R-400A[e]	zeotrope	R-12/114 (50.0/50.0)	A1	10	28,000	160				1,000
R-400B[e]	zeotrope	R-12/114 (60.0/40.0)	A1	11	30,000	170				1,000
R-403B	zeotrope	R-290/22/218 (5.0/56.0/39.0)	A1	18	68,000	290				1,000
R-406A	zeotrope	R-22/600a/142b (55.0/4.0/41.0)	A2	4.7	21,000	75	18.8	82,000	301.9	1,000
R407I	zeotrope	R-32/125/134a(19.5/8.5/72.0)	A1	16	71,100	250				1,000
R-408A	zeotrope	R-125/143a/22 (7.0/46.0/47.0)	A1	21	94,000	330				1,000
R-411A	zeotrope	R-127/22/152a (1.5/87.5/11.0)	A2	2.9	14,000	46	11.6	55,000	185.6	970
R-411B	zeotrope	R-1270/22/152a (3.0/94.0/3.0)	A2	2.8	13,000	45	14.8	70,000	238.3	940
R-412A	zeotrope	R-22/218/142b (70.0/5.0/25.0)	A2	5.1	22,000	82	20.5	87,000	328.6	1,000
R-413A	zeotrope	R-218/134a/600a (9.0/88.0/3.0)	A2	5.8	22,000	93	23.4	88,000	374.9	1,000
R-414B	zeotrope	R-22/124/600a/142b (50.0/39.0/1.5/9.5)	A1	6.0	23,000	96				1,000
R-417A	zeotrope	R-125/134a/600 (46.6/50.0/3.4)	A1	3.5	13,000	55				1,000
R-417B	zeotrope	R-125/134a/600 (79.0/18.3/2.7)	A1	4.3	15,000	69				1,000
R-418A	zeotrope	R-290/22/152a (1.5/96.0/2.5)	A2	4.8	22,000	77	19.2	89,000	308.4	1,000
R-419A	zeotrope	R-125/134a/E170 (77.0/19.0/4.0)	A2	4.2	15,000	67	16.7	60,000	268.6	1,000
R-419B	zeotrope	R-125/134a/E170 (48.5/48.0/3.5)	A2	4.6	17,000	74	18.5	69,000	297.3	1,000
R-420A	zeotrope	R-134a/142b (88.0/12.0)	A1	12	44,000	180				1,000
R-423A	zeotrope	R-134a/227ea (52.5/47.5)	A1	19	59,000	300				1,000
R-424A	zeotrope	R-125/134a/600a/600/601a (50.5/47.0/0.9/1.0/0.6)	A1	6.2	23,000	100				990
R-428A	zeotrope	R-125/143a/290/600a (77.5/20.0/0.6/1.9)	A1	23	84,000	370				1,000
R-429A	zeotrope	R-E170/152a/600a (60.0/10.0/30.0)	A3	0.81	6,300	13	3.2	25,000	83.8	1,000

~~R-430A~~	~~zeotrope~~	~~R-152a/600a (76.0/24.0)~~	~~A3~~	~~1.3~~	~~8,000~~	~~21~~	~~5.2~~	~~32,000~~	~~44.0~~	~~1,000~~
~~R-431A~~	~~zeotrope~~	~~R-290/152a (71.0/29.0)~~	~~A3~~	~~0.68~~	~~5,500~~	~~11~~	~~2.7~~	~~22,000~~	~~38.6~~	~~1,000~~
~~R-432A~~	~~zeotrope~~	~~R-1270/E170 (80.0/20.0)~~	~~A3~~	~~0.13~~	~~1,200~~	~~2.1~~	~~2.4~~	~~22,000~~	~~39.2~~	~~550~~
~~R-433A~~	~~zeotrope~~	~~R-1270/290 (30.0/70.0)~~	~~A3~~	~~0.34~~	~~3,100~~	~~5.5~~	~~2.4~~	~~20,000~~	~~32.4~~	~~760~~
~~R-433B~~	~~zeotrope~~	~~R-1270/290 (5.0-95.0)~~	~~A3~~	~~0.39~~	~~3,500~~	~~6.3~~	~~2.0~~	~~18,000~~	~~32.1~~	~~950~~
~~R-433C~~	~~zeotrope~~	~~R-1270/290 (25.0-75.0)~~	~~A3~~	~~0.41~~	~~3,700~~	~~6.5~~	~~2.0~~	~~18,000~~	~~83.8~~	~~790~~
~~R-435A~~	~~zeotrope~~	~~R-E170/152a (80.0/20.0)~~	~~A3~~	~~1.1~~	~~8,500~~	~~17~~	~~4.3~~	~~34,000~~	~~68.2~~	~~1,000~~
~~R-436A~~	~~zeotrope~~	~~R-290/600a (56.0/44.0)~~	~~A3~~	~~0.50~~	~~4,000~~	~~8.1~~	~~2.0~~	~~16,000~~	~~32.2~~	~~1,000~~
~~R-436B~~	~~zeotrope~~	~~R-290/600a (52.0/48.0)~~	~~A3~~	~~0.51~~	~~4,000~~	~~8.2~~	~~2.0~~	~~16,000~~	~~32.7~~	~~1,000~~
~~R-437A~~	~~zeotrope~~	~~R-125/134a/600/601 (19.5/78.5/1.4/0.6)~~	~~A1~~	~~5.1~~	~~19,000~~	~~82~~				~~990~~
~~R-439A~~	~~zeotrope~~	~~R-32/125/600a (50.0/47.0/3.0)~~	~~A2~~	~~4.7~~	~~26,000~~	~~76~~	~~18.9~~	~~104,000~~	~~303.3~~	~~1,000~~
~~R-440A~~	~~zeotrope~~	~~R-290/134a/152a (0.6/1.6/97.8)~~	~~A2~~	~~1.9~~	~~12,000~~	~~31~~	~~7.8~~	~~46,000~~	~~124.7~~	~~1,000~~
~~R-441A~~	~~zeotrope~~	~~R-170/290/600a/600 (3.1/54.8/6.0/36.1)~~	~~A3~~	~~0.39~~	~~3,200~~	~~6.3~~	~~2.0~~	~~16,000~~	~~31.7~~	~~1,000~~
~~R-443A~~	~~zeotrope~~	~~R-1270/290/600a (55.0/40.0/5.0)~~	~~A3~~	~~0.19~~	~~1,700~~	~~3.1~~	~~2.2~~	~~20,000~~	~~35.6~~	~~640~~
R-444A	zeotrope	R-32/152a/1234ze(E) (12.0/5.0/83.0)	A2L	~~5.1~~ 5.0	21,000	~~81~~ 80	19.9	82,000	~~324.8~~ 319.4	850
R-444B	zeotrope	R-32/152a/1234ze(E) (41.5/10.0/48.5)	A2L	4.3	23,000	~~69~~ 70	17.3	93,000	~~277.3~~ 278.1	930
R-445A	zeotrope	R-744/134a/1234ze(E) (6.0/9.0/85.0)	A2L	~~4.2~~ 5.4	16,000	~~67~~ 87	~~21.7~~ 21.6	63,000	347.4	930
R-446A	zeotrope	R-32/1234ze(E)/600 (68.0/29.0/3.0)	A2L	~~2.5~~ 3.7	~~16,000~~ 23,000	~~39~~ 59	~~13.5~~ 14.8	~~62,000~~ 93,000	~~217.4~~ 237.7	960

R-447A	zeotrope	R-32/125/1234ze(E) (68.0/3.5/28.5)	A2L	~~2.6~~ 5.2	~~16,000~~ 32,000	~~42~~ 83	~~18.9~~ 20.6	~~65,000~~ 128,000	~~303.5~~ 331.4	960
R-447B	zeotrope	R-32/125/1234ze(E) (68.0/8.0/24.0)	A2L	~~23~~ 4.8	~~16,000~~ 30,000	~~42~~ 78	~~20.6~~ 19.5	121,000	312.7	970
~~R-448A~~	~~zeotrope~~	~~R-32/125/1234yf/134a/1234ze(E) (26.0/26.0/20.0/21.0/7.0)~~	~~A1~~	~~24~~	~~110,000~~	~~390~~				~~860~~
~~R-449A~~	~~zeotrope~~	~~R-32/125/1234yf/134a (24.3/24.7/25.3/25.7)~~	~~A1~~	~~23~~	~~100,000~~	~~370~~				~~840~~
R-451A	zeotrope	R-1234yf/134a (89.8/10.2)	A2L	5.3	18,000	81	~~20.3~~ 21.3	~~70,000~~ 74,000	~~326.6~~ 341.6	530
R-451B	zeotrope	R-1234yf/134a (88.8/11.2)	A2L	~~5.3~~ 5.0	18,000	81	~~20.3~~ 21.3	~~70,000~~ 74,000	~~326.6~~ 341.6	530
~~R-452A~~	~~zeotrope~~	~~R-32/125/1234yf (11.0/59.0/30.0)~~	~~A1~~	~~27~~	~~100,000~~	~~440~~				~~790~~
~~R-452B~~	~~zeotrope~~	~~R-32/125/1234yf (67.0/7.0/26.0)~~	~~A2L~~	~~4.8~~	~~30,000~~	~~77~~	~~19.3~~	~~119,000~~	~~310.5~~	~~870~~
~~R-452C~~	~~zeotrope~~	~~R-32/125/1234yf (12.5/61.0/26.5)~~	~~A1~~	~~27~~	~~100,000~~	~~430~~				~~810~~
R-454A	zeotrope	R-32/1234yf (35.0/65.0)	A2L	~~3.2~~ 4.4	~~16,000~~ 21,000	~~52~~ 70	~~18.3~~ 17.5	~~63,000~~ 84,000	~~293.9~~ 281.4	690
R-454B	zeotrope	R-32/1234yf (68.9/31.1)	A2L	~~3.1~~ 4.6	~~19,000~~ 29,000	~~49~~ 74	~~22.0~~ 18.5	~~77,000~~ 115,000	~~352.6~~ 296.8	850
R-454C	zeotrope	R-32/1234yf (21.5/78.5)	A2L	~~4.4~~ 4.6	19,000	~~71~~ 73	~~18.0~~ 18.2	~~62,000~~ 77,000	~~289.5~~ 291.7	620
R-455A	zeotrope	R-744/32/1234yf (3.0/21.5/75.5)	A2L	~~4.9~~ 6.8	~~22,000~~ 30,000	~~79~~ 108	26.9	118,000	432.1	650
~~R-457A~~	~~zeotrope~~	~~R-32/1234yf/152a (18.0/70.0/12.0)~~	~~A2L~~	~~3.4~~	~~15,000~~	~~54~~	~~13.5~~	~~60,000~~	~~216.3~~	~~650~~
~~R-457B~~	~~zeotrope~~	~~R-32/1234yf/152a (35.0/55.0/10.0)~~	~~A2L~~	~~3.7~~	~~19,000~~	~~59~~	~~14.9~~	~~76,000~~	~~239~~	~~730~~

R-459A	zeotrope	R-32/1234yf/1234ze(E) (68.0/26.0/6.0)	A2L	4.3	27,000	69	17.4	107,000	278.7	870
R-459B	zeotrope	R-32/1234yf/1234ze(E) (21.0/69.0/10.0)	A2L	30	25,000	92	23.3	99,000	373.5	640
R-460A	zeotrope	R-32/125/134a/1234ze(E) (12.0/52.0/14.0/22.0)	A1	24	92,000	380				950
R-460C	zeotrope	R-32/125/134a/1234ze(E) (2.5/52.5/46.0/49.0)	A1	20	73,000	310				900
R-462A	zeotrope	R-32/125/143a/134a/600 (9.0/42.0/2.0/44.0/3.0)	A2	3.9	16,000	62	16.6	105,000	265.8	1,000
R-464A	zeotrope	R-32/125/1234ze(E)/227ea (27.0/27.0/40.0/6.0)	A1	27	120,000	430				930
R-465A	zeotrope	R-32/290/1234yf (21.0/7.9/71.1)	A2	2.5	12,000	40	10.0	98,000	160.9	660
R-466A	zeotrope	R-32/125/13I1 (49.0/11.5/39.5)	A1	6.2	30,000	99				860
R-467A	zeotrope	R-32/125/134a/600a (22.0/5.0/72.4/0.6)	A2L	6.7	31,000	110				1,000
R-468A	zeotrope	R-1132a/32/1234yf (3.5/21.5/75.0)	A2L	4.1	16,00	66				610
R-469A	zeotrope	R-744/32/125 (35.0/32.5/32.5)	A1	8	53,000					1,600
R-470A	zeotrope	R-744/32/125/134a/1234ze(E)/227ea (10.0/17.0/19.0/7.0/44.0/3.0)	A1	17	77,00	270				1,100
R-470B	zeotrope	R-744/32/125/134a/1234ze(E)/227ea (10.0/11.5/11.5/3.0/57.0/7.0)	A1	16	72,000	270				1,100
R-471A	zeotrope	R-1234ze(E)/227ea/1336mzz(E) (78.7/4.3/17.0)	A1	9.7	31,000	160				710
R-472A	zeotrope	R-744/32/134a (69.0/12.0/19.0)	A1	4.5	35,000	72				2,700
R-500[d]	azeotrope	R-12/152a (73.8/26.2)	A1	7.4	29,000	120				1,000
R-501	azeotrope	R-22/12 (75.0/25.0)	A1	13	54,000	210				1,000
R-502[d]	azeotrope	R-22/115 (48.8/51.2)	A1	21	73,000	330				1,000
R-503[d]	azeotrope	R-23/13 (40.1/59.9)	—	—	—	—				1,000

R-504[e]	azeotrope	R-32/115 (48.2/51.8)	—	28	140,000	450				1,000
R-507A	azeotrope	R-125/143a (50.0/50.0)	A1	32	130,000	510				1,000
R-509A	azeotrope	R-22/218 (44.0/56.0)	A1	24	75,000	380				1,000
R-510A	azeotrope	R-E170/600a (88.0/12.0)	A3	0.87	7,300	14	3.5	29,000	56.1	1,000
R-511A	azeotrope	R-290/E170 (95.0/5.0)	A3	0.59	5,300	9.5	2.4	21,000	38.0	1,000
R-512A	azeotrope	R-134a/152a (5.0/95.0)	A2	1.9	11,000	31	7.7	45,000	123.9	1,000
R-515A	azeotrope	R-1234ze(E)/227ea (88.0/12.0)	A1	19	63,000	300				810
R-515B	azeotrope	R-1234ze(E)/227ea (91.1/8.9)	A1	18	61,000	290				810
R-516A	azeotrope	R-1234yf/134a/152a (77.5/8.5/14.0)	A2	3.2	13,000	52	13.1	50,000	210.1	590
R-600	$CH_3CH_2CH_2CH_3$	butane	A3	0.15	1,000	2.4	3.0	20,000	48	1,000
R-600a	$CH(CH_3)_2CH_3$	2-methylpropane (isobutane)	A3	0.59	4,000	9.6	2.4	16,000	38	1,000
R-601	$CH_3CH_2CH_2$ CH_2CH_3	pentane	A3	0.18	1,000	2.9	2.2	12,000	35	600
R-601a	$(CH_3)_2CHCH_2CH_3$	2-methylbutane (isopentane)	A3	0.18	1,000	2.9	2.4	13,000	38	600
R-717	NH_3	ammonia	B2L	0.014	320	0.22	7.2	167,000	116	25
R-1130(E)	CHCl=CHCl	trans-1,2-dichloroethene	B2	0.25	1,000	4	16	65,000	258	200
R-1132a	$CF_2=CH_2$	1,1-difluoroethylene	A2	2.0	13,000	33	8.1	50,000	131	500
R-1150	$CH_2=CH_2$	ethene (ethylene)	A3	—	—	—	2.2	31,000	36	200
R-1224yd(Z)	$CF_3CF=CHCl$	(Z)-1-chloro-2,3,3,3-tetrafluoroethylene	A1	23	60,000	370				1,000
R-1234yf	$CF_3CF=CH_2$	2,3,3,3-tetrafluoro-1-propene	A2L	4.7	16,000	75	18.0	62,000	289	500
R-1234ze(E)	$CF_3CH=CHF$	trans-1,3,3,3-tetrafluoro-1-propene	A2L	4.7	16,000	76	18.8	65,000	303	800
R-1270	$CH_3CH=CH_2$	Propene (propylene)	A3	0.1	1,000	1.7				500
R-1336mzz(E)	$CF_3CHCHCF_3$	trans-1,1,1,4,4,4-hexaflouro-2-butene	A1	3.0	7,200	48				400

R-1336mzz(Z)	$CF_3CHCHCF_3$	cis-1,1,1,4,4,4-hexaflouro-2-butene	A1	5.2	13,000	84				500

a. Degrees of hazard are for health, fire, and reactivity, respectively, in accordance with NFPA 704.

b. Reduction to 1-0-0 is allowed if analysis satisfactory to the code official shows that the maximum concentration for a rupture or full loss of refrigerant charge would not exceed the IDLH, considering both the refrigerant quantity and room volume.

c. Class 1 ozone depleting substance; prohibited for new installations.

d. Occupational Exposure Limit based on the OSHA PEL, ACGIH TLV-TWA, the TERA WEEL or consistent value on a time-weighed average (TWA) basis (unless noted C for ceiling) for an 8 hr/d and 40 hr/wk.

~~17. Change Section 1104.3.1 of the IMC to read:~~

~~1104.3.1 Air conditioning for human comfort. High probability systems used for human comfort shall use Group A1 or A2L refrigerant.~~

~~Exceptions:~~

~~1. Listed equipment for residential occupancies containing a maximum of 6.6 pounds (3 kg) of refrigerant.~~

~~2. Listed equipment for commercial occupancies containing a maximum of 22 pounds (10 kg) of refrigerant.~~

~~3. Industrial occupancies.~~

~~18. Change Section 1104.3.2 of the IMC to read:~~

~~1104.3.2 Group A3 and B3 refrigerants. Group A3 and B3 refrigerants shall not be used except where approved.~~

~~Exceptions: This section does not apply to:~~

~~1. Laboratories where the floor area per occupant is not less than 100 square feet (9.3 m^2).~~

~~2. Listed self-contained systems having a maximum of 0.331 pounds (150 g) of Group A3 refrigerant.~~

~~3. Self-contained systems listed per UL 60335-2-89 having a maximum of 1.1 pounds (500g) of Group A3 refrigerant.~~

~~4. Industrial occupancies.~~

~~5. Equipment listed for and used in residential occupancies containing a maximum of 6.6 pounds (3 kg) of Group A2 or B2 refrigerant.~~

~~6. Equipment listed for and used in commercial occupancies containing a maximum of 22 pounds (10 kg) of Group A2 or B2 refrigerant.~~

~~19. Delete Table 1104.3.2 of the IMC.~~

~~20. Delete the exception to Section 1106.3 of the IMC and change Section 1106.3 of the IMC to read:~~

~~1106.3 Class 2 and Class 3 refrigerants. Where refrigerants of Groups A2, A3, B2, and B3 are used, the machinery room shall conform to the Class I, Division 2, hazardous location classification requirements of NFPA 70.~~

18. Change Sections 1104.4.1 and 1104.4.2 (Exception to Section 1104.4.2 remains) to read:

1104.4.1 Noncommunicating spaces. For Group A1 and B1 refrigerants, where the refrigerant-containing parts of a system are located in one or more spaces that do not communicate through permanent openings or HVAC ducts, the volume of the smallest, enclosed occupied space shall be used to determine the permissible quantity of refrigerant in the system. For all other refrigerant classifications, where the refrigerant-containing parts of a system are located in one or more spaces that do not communicate through permanent openings or HVAC ducts, the volume of the smallest, enclosed occupied or unoccupied space shall be used to determine the permissible quantity of refrigerant in the system.

1104.4.2 Communicating spaces. For Group A1 and B1 refrigerants, where an evaporator or condenser is located in an air duct system, the volume of the smallest, enclosed occupied space served by the duct system shall be used to determine the maximum allowable quantity of refrigerant in the system. For all other refrigerant classifications, where an evaporator or condenser is located in an air duct system,

the volume of the smallest, enclosed occupied or unoccupied space served by the duct system shall be used to determine the maximum allowable quantity of refrigerant in the system.

~~21. Delete the exception to Section 1106.4 and change Section 1106.4 of the IMC to read:~~

~~1106.4 Group A2L and B2L refrigerant. Machinery rooms for Group A2L and Group B2L refrigerant shall comply with Sections 1106.4.1 through 1106.4.3.~~

~~22. Change Section 1106.4.1 to the IMC to read:~~

~~1106.4.1 Elevated temperature. Open flame-producing devices or continuously operating hot surfaces over 1290 °F (700 °C) shall not be permanently installed in the room~~

~~23. Change Section 1106.4.2 of the IMC to read:~~

~~1106.4.2 Refrigerant detector. In addition to the requirements of Section 1105.3, refrigerant detectors shall signal an alarm and activate the ventilation system in accordance with the response time specified in Table 1106.4.2.~~

~~24. Replace Table 1106.4.2 of the IMC with the following:~~

~~Table 1106.4.2 GROUP A2L and B2L DETECTOR ACTIVATION~~

~~Activation Level~~	~~Maximum Response Time (seconds)~~	~~ASHRAE 15 Ventilation Level~~	~~Alarm Reset~~	~~Alarm Type~~
~~Less than or equal to the OEL in Table 1103.1~~	~~300~~	~~1~~	~~Automatic~~	~~Trouble~~
~~Less than or equal to the refrigerant concentration level in Table 1103.1~~	~~15~~	~~2~~	~~Manual~~	~~Emergency~~

~~25. Change Section 1106.4.3 of the IMC to read:~~

~~1106.4.3 Mechanical Ventilation. The machinery room shall have a mechanical ventilation system complying with ASHRAE 15.~~

19. Change Exception 2 to Section 1109.2.5 to read (remainder of Section including Exceptions 1 and 3 remain):

2. Piping in a direct refrigeration system where the refrigerant quantity does not exceed the limits of Table 1103.1 for the smallest space through which the piping passes.

20. Add the word "Required" at the beginning of first sentence of Section 1109.3.2, and add a sentence at the end of the Section to read (remainder of Section remains):

For refrigeration systems used in residential occupancies serving only a single dwelling unit or sleeping unit, shaft ventilation shall not be required where the pipe or tube is continuous without fittings in the shaft.

~~26. Add the following standards to the list of referenced standards in Chapter 15 of the IMC:~~

~~Standard Reference Number~~	~~Title~~

~~UL 484-2019~~	~~Standard for Room Air Conditioners~~
~~UL/CSA 60335-2-40-2019~~	~~Household and Similar Electrical Appliances-Safety-Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers~~
~~UL/CSA 60335-2-89-2021~~	~~Household and Similar Electrical Appliances—Safety—Part 2-89: Particular Requirements for Commercial Refrigerating Appliances and Ice-Makers with an Incorporated or Remote Refrigerant Unit or Motor-Compressor~~

~~27. Delete the following standards from the list of referenced standards in Chapter 15 of the IMC:~~

~~Standard Reference Number~~	~~Title~~
~~UL 484-2014~~	~~Standard for Room Air Conditioners~~
~~UL/CSA 60335-2-40-2017~~	~~Household and Similar Electrical Appliances-Safety-Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers~~
~~UL/CSA 60335-2-89-2017~~	~~Household and Similar Electrical Appliances—Safety—Part 2-89: Particular Requirements for Commercial Refrigerating Appliances and Ice-Makers with an Incorporated or Remote Refrigerant Unit or Motor-Compressor~~
~~UL 109—97~~	~~Tube Fittings for Flammable and Combustible Fluids, Refrigeration Service and Marine Use~~
~~UL 207—2009~~	~~Refrigerant-containing Components and Accessories, Nonelectrical - with revisions through June 2014~~

~~E.~~ C. 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. Change Section 301.3 of the IFGC to read:

301.3 Listed and labeled. Appliances regulated by this code shall be listed and labeled for the application in which they are used unless otherwise approved in accordance with Section 112. The approval of unlisted appliances in accordance with Section 112 shall be based on approved engineering evaluation.

3. Delete Section 310.2 (including subsections) of the IFGC.

4. Change Sections 310.3 and 403.4.5 of the IFGC to read:

310.3 Arc-resistant CSST. Corrugated stainless steel tubing (CSST) that is listed with an arc-resistant jacket or coating system in accordance with ANSI LC 1/CSA 6.26 shall be electrically continuous and bonded to an effective ground fault current path. Arc-resistant-jacketed CSST shall be considered to be bonded where it is connected to one or more appliances that are connected to the equipment grounding conductor of the circuit that supplies that appliance. Where arc-resistant CSST is installed in a piping system without an appliance with an equipment grounding conductor, or where the system contains any non-arc-resistant CSST, the piping

system shall be bonded in accordance with the manufacturer's installation instructions and ANSI LC1/CSA 6.26 Annex C.

403.4.5 Corrugated stainless steel tubing. Corrugated stainless steel tubing shall be listed in accordance with ANSI LC 1/CSA 6.26 and shall be arc-resistant in accordance with Section 5.16 of LC 1/CSA 6.26.

Exception: Corrugated stainless steel tubing installed below grade outside of the building in compliance with Section 404.11 or beneath the building in compliance with Section 404.14 shall not be required to be arc-resistant.

~~3.~~ 5. Add Section 404.11.5 to the IFGC to read:

404.11.5 Coating application. Joints in gas piping systems shall not be coated prior to testing and approval.

6. Change the first sentence of Section 407.2 (remainder of Section remains) of the IFGC to read:

Piping shall be supported with metal pipe hooks, metal pipe straps, metal bands, metal brackets, metal hangers or building structural components, suitable for the size of piping, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration.

~~4.~~ 7. Change Item 6 of Section 410.2 of the IFGC to read (Items 1 through 5 and Item 7 remain):

6. Means shall be provided downstream of the MP regulator for the connection of a pressure measuring instrument and shall be positioned to allow connection of a pressure measuring instrument. Such means shall be permitted to be a dedicated test port on a regulator, gas control, or manifold or a plugged tee fitting or plugged manifold port.

~~5.~~ 8. Change Section 614.9.2 of the IFGC to read:

614.9.2 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 into the inside of the duct.

Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

~~6. Add the following standards to the list of referenced standards in Chapter 8 of the IFGC:~~

~~Standard Reference Number~~	~~Title~~	
~~ANSI LC1/CSA 6.26-18~~	~~Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)~~	

~~7. Delete the following standards from the list of referenced standards in Chapter 8 of the IFGC:~~

~~Standard Reference Number~~	~~Title~~

~~ANSI LC1/CSA 6.26-16~~	~~Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)~~

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 103.5 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 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.

~~Service sink. A general purpose sink exclusively intended to be used for facilitating the cleaning of a building or tenant space.~~

~~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 in the IPC to read:

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."

<u>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.</u>

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 Section 306.2.4 and Section ~~311~~ 310 (including subsections) of the IPC ~~in its entirety~~.

5. Change the following rows in Table 403.1 of the IPC (rows not shown remain) to read:

TABLE 403.1
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a] (See Sections 403.1.1 and 403.2)

NO.	CLASSIFICATION	DESCRIPTION	WATER CLOSETS (URINALS: SEE SECTION 424.2)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAINS (SEE SECTION 410)	OTHER
			MALE	FEMALE	MALE	FEMALE			
1	Assembly	Theaters and other buildings for the performing arts and motion pictures[d]	1 per 125	1 per 65	1 per 200		—	1 per 500	1 service sink
			1 per ~~85.5~~[f,g] 85.5[g]						
		~~Nightclubs, bars, taverns, dance halls and buildings for similar purposes~~[d]	~~1 per 40~~	~~1 per 40~~	~~1 per 75~~		—	~~1 per 500~~	~~1 service sink~~
		~~Restaurants, banquet halls and food courts~~[d]	~~1 per 75~~	~~1 per 75~~	~~1 per 200~~		—	~~1 per 500~~	~~1 service sink~~
		Gaming areas	1 per 100 for the first 400 and 1 per 250 for the remainder	1 per 50 for the first 400 and 1 per 150 for the remainder	1 per 250 for the first 750 and 1 per 500 for the remainder exceeding 750		—	1 per 1,000	1 service sink

			exceeding 400	exceeding 400				
			1 per 66.67 for the first 800 and 1 per 187.5 for the remainder exceeding ~~800~~[f, g] 800[g]					
		Auditoriums without permanent seating, art galleries, exhibition halls, museums, lecture halls, libraries, arcades and gymnasiums[d]	1 per 125	1 per 65	1 per 200	—	1 per 500	1 service sink
			1 per 85.5 [g]					
		Passenger terminals (other than airport terminals) and transportation facilities[d]	1 per 500	1 per 500	1 per 750	—	1 per 1,000	1 service sink
		Airport terminals	1 per 500	1 per 100 for the first 500 and 1 per 150 for the remainder	1 per 750	—	1 per 1,000	1 service sink

				exceeding 500				
		Places of worship and other religious services[d]	1 per 150	1 per 75	1 per 200		—	1 per 1,000	1 service sink
			1 per ~~100~~[f, g] 100[g]						
		Coliseums, arenas, skating rinks, pools and tennis courts for indoor sporting events and activities [f]	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1,000	1 service sink
			1 per 52.2 for the first 3,025 and 1 per 80 for the remainder exceeding ~~3, 025~~[f, g] 3,025[g]		1 per 171.4 [g]				
		Stadiums, amusement parks, bleachers and grandstands for outdoor sporting events and activities[f]	1 per 75 for the first 1,500 and 1 per 120 for the remainder exceeding 1,500	1 per 40 for the first 1,520 and 1 per 60 for the remainder exceeding 1,520	1 per 200	1 per 150	—	1 per 1,000	1 service sink
			1 per 52.2 for the first 3,025 and 1 per 80 for the remainder		1 per ~~171.4~~[f, g] 171.4[g]				

			exceeding ~~3,025~~[f, g] 3,025[g]						

6. Add footnote "g" and change footnote "f" to Table 403.1 of the IPC to read:

f. The occupant load for pools shall be in accordance with the "Skating rinks, swimming pools" category of Table 1004.5 of the IBC.

g. Use this fixture ratio for determining the minimum number of fixtures for multi-user gender-neutral toilet facilities.

7. Change ~~Exceptions~~ exception 2 and add exception 3 to Section 403.1.1 of the IPC to read (Exception 1 remains):

2. Where multiuser facilities are designed to serve all genders, the minimum fixture count shall be calculated 100% based on the total occupant load.

3. The total occupant load shall not be required to be divided in half with a distribution of sexes where single-user water closets and bathing room fixtures are provided in accordance with Section 403.1.2.

8. Add Section 403.1.4 and Table 403.1.4 to the IPC to read:

403.1.4 Marina fixtures. Notwithstanding any provision to the contrary, plumbing fixtures shall be provided for marinas in the minimum number shown in Table 403.1.4. 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 403.1.4
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.		

9. Change Exception 6 to Section 403.2 of the IPC to read:

6. Separate facilities shall not be required where multi-user gender-neutral facilities are provided in accordance with Section 405.3 and Section ~~1109.2.6~~ 1110.2.6 of the VCC.

10. Change Section 403.3.3 of the IPC and add Exception 3 to Section 403.3.3 of the IPC (Exceptions 1 and 2 remain ~~as they are~~), to read:

403.3.3 Location of toilet facilities in occupancies other than malls and airports. In occupancies other than covered and open mall buildings and airport terminals, 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).

3. The location and maximum 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.

11. Renumber Section 403.3.5 of the IPC to Section 403.3.6 and Section 403.3.6 of the IPC to Section 403.3.7 and change Section 403.3.5 of the IPC to read:

403.3.5 Location of toilet facilities in airport terminals. In airport terminals, the minimum number of public and employee toilet fixtures shall be located before arriving at and after leaving the main security screening checkpoints and shall comply with the following:

1. Shall be based on the actual use and occupant load of those spaces before and after the main security screening checkpoints.

2. Shall not be more than one story above or below the space required to be provided with toilet facilities.

3. The path of travel to such facilities shall not exceed a distance of 300 feet (91 mm). For e employee toilet facilities, the maximum distance of travel shall be measured from an employee's work area.

~~403.3.6 Pay facilities. Where pay facilities are installed, such facilities shall be in excess of the required minimum facilities. Required facilities shall be free of charge.~~

~~403.3.7 Door locking. Where a toilet room is provided for the use of multiple occupants, the egress door for the room shall not be lockable from the inside of the room. This section does not apply to family or assisted-use toilet rooms.~~

12. Add an exception to Section 405.3.2 of the IPC to read:

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.

13. Change Section 405.3.4 (exceptions remain) and add Sections 405.3.4.1 and 405.3.4.2 to the IPC to read:

405.3.4 Water closet compartment. Each water closet utilized by the public or employees shall comply with Sections 405.3.4.1 and 405.3.4.2, as applicable. All fully-enclosed compartments shall be provided with occupancy indicators.

~~Exceptions:~~

~~1. Water closet compartments shall not be required in a single-occupant toilet room with a lockable door.~~

~~2. Toilet rooms located in child day care facilities and containing two or more water closets shall be permitted to have one water closet without an enclosing compartment.~~

~~3. This provision is not applicable to toilet areas located within Group I-3 housing areas.~~

405.3.4.1 Separate facilities. Each water closet provided in separate facilities shall occupy a separate compartment with walls or partitions and a door enclosing the fixtures to ensure privacy and shall comply with Section 405.3.1. Accessible water closets and compartments shall comply with ICC A117.1.

405.3.4.2 Multi-user gender-neutral facilities. Each water closet provided in a multi-user, gender-neutral toilet facility shall occupy a separate compartment with walls or partitions, including the doors thereto, that shall extend to the floor and to the ceiling with maximum 1/2-inch (13 mm) clearances at the floor and ceiling, with gaps not exceeding 1/8-inch (3 mm) between the doors and partitions and partitions and walls, and shall comply with Section 405.3.1. Accessible water closet compartments shall comply with ICC A117.1 and the increased toe clearance requirements.

14. Change Section 405.3.5 of the IPC (exceptions remain) to read:

405.3.5 Urinal separation and partitions. Each urinal utilized by the public or employees shall occupy a separate area with walls or partitions to provide privacy. The horizontal dimension between walls or partitions at each urinal shall be not less than 30 inches (762 mm). The walls or partitions shall begin at a height not greater than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal not less than 18 inches (457 mm) or to a point not less than six inches (152 mm) beyond the outermost front lip of the urinal measured from the finished backwall surface, whichever is greater. All fully-enclosed compartments shall be provided with occupancy indicators.

~~Exceptions:~~

~~1. Urinal partitions shall not be required in a single-occupant or family-assisted-use toilet room with a lockable door.~~

~~2. Toilet rooms located in child day care facilities and containing two or more urinals shall be permitted to have one urinal without partitions.~~

15. Add Sections 405.3.5.1 and 405.3.5.2 to the IPC to read:

405.3.5.1 Separate facilities. The walls or partitions for urinals in separate facilities shall begin at a height not more than 12 inches (305 mm) from and extend not less than 60 inches (1524 mm) above the finished floor surface. The walls or partitions shall extend from the wall surface at each side of the urinal not less than 18 inches (457 mm) or to a point not less than six inches (152 mm) beyond the outermost front lip of the urinal measured from the finished backwall surface, whichever is greater.

405.3.5.2 Multi-user gender-neutral facilities. Each urinal provided in a multi-user gender-neutral toilet facility shall occupy a separate compartment with walls or partitions, including the doors thereto, where the partitions extend to the floor and to the ceiling with maximum 1/2-inch (13 mm) clearances, with gaps not exceeding 1/8-inch (3 mm) between the doors and partitions and partitions and walls, or shall all be located in a separate room with a door, enclosing the urinals to ensure privacy. Where an accessible urinal is located within a compartment, grab bars shall not be required for the urinal, the door shall be located to allow for a forward approach to the urinal, and increased toe clearances shall be provided in accordance with A117.1.

Exceptions:

1. A separate room or compartment shall not be required in a single-occupant toilet room with a lockable door.

2. This provision is not applicable to toilet areas located within Group I-3 occupancy housing areas.

16. Change Section 423.1 of the IPC to read:

423.1 Water connections. Baptisteries, ornamental and lily pools, aquariums, ornamental fountain basins, swimming pools, footbaths and pedicure baths, and similar constructions, where provided with water supplies, shall be protected against backflow in accordance with Section 608.

17. Add an exception to Section 424.2 of the IPC to read:

Exception: In each multi-user gender-neutral bathroom or toilet room, urinals shall not be substituted for more than 22.5 % of the total number of water closets in Assembly and Educational occupancies. Urinals shall not be substituted for more than 25% of the total number of water closets in all other occupancies.

18. 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.

19. Add Section 603.3 to the IPC to read:

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.

20. Change Section 605.2.1 to read:

605.2.1 Lead content of drinking water pipe and fittings. Pipe, pipe fittings, joints, valves, faucets, and fixture fittings utilized to supply water for drinking or cooking purposes shall comply with NSF 372.

~~21. Change Item 2 of the exception to Section 605.15.2 to read:~~

~~2. The solvent cement used is yellow or green in color.~~

~~22.~~ 21. Change Section 608.15 to read:

608.15 Location of backflow preventers. Access for inspection, testing, service, repair, and replacement shall be provided to backflow prevention assemblies. Backflow prevention assemblies shall be installed between 12 inches (305 mm) and 60 inches (1525 mm) from grade, floor level, or service platform and as specified by the manufacturer's instructions. Where the manufacturer's listed installation height conflicts with this requirement, the manufacturer's listed heights shall apply. Access shall be provided to backflow prevention devices ~~and~~ as specified by the manufacturer's instructions.

~~23.~~ 22. Add Section 703.7 to the IPC to read:

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.

~~24.~~ 23. Delete the exception for Section 705.10.2 of the IPC.

~~25.~~ 24. Change Section 1003.3.2 of the IPC to read:

1003.3.2 Food waste disposers. Where food waste disposers connect to grease interceptors, a solids interceptor shall separate the discharge before connecting to the grease interceptor. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste disposers. Emulsifiers, chemicals, enzymes, and bacteria shall not discharge into the food waste disposer.

~~26.~~ 25. 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.

~~27.~~ 26. Delete the last sentence from Section 1101.7 of the IPC.

~~28.~~ 27. Delete Section 1105.2 of the IPC.

~~29.~~ 28. Delete Section 1106.2.1 and change Section 1106.2 of the IPC to read:

1106.2 Vertical conductors and leaders. Vertical conductors and leaders shall be sized for the maximum projected roof area, in accordance with Tables 1106.2(1) and 1106.2(2).

~~30.~~ 29. Delete Table 1106.2 of the IPC and add Tables 1106.2(1) and 1106.2(2) to the IPC to read:

Table 1106.2(1)
Size of Circular Vertical Conductors and Leaders

Diameter of Leader (inches[a])	Horizontally Projected Roof Area (square feet)											
	Rainfall rate (inches per hour)											
	1	2	3	4	5	6	7	8	9	10	11	12
2	2,280	1,440	960	720	575	480	410	360	320	290	260	240
3	8,800	4,400	2,930	2,200	1,760	1,470	1,260	1,100	980	880	800	730
4	18,400	9,200	6,130	4,600	3,680	3,070	2,630	2,300	2,045	1,840	1,675	1,530
5	34,600	17,300	11,530	8,650	6,920	5,765	4,945	4,325	3,845	3,460	3,145	2,880
6	54,000	27,000	17,995	13,500	10,800	9,000	7,715	6,750	6,000	5,400	4,910	4,500
8	116,000	58,000	38,660	29,000	23,200	19,315	16,570	14,500	12,890	11,600	10,545	9,600

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2.

a. Sizes indicated are the diameter of circular piping. This table is applicable to piping of other shapes, provided the cross-sectional shape fully enclosed a circle of the diameter indicated in this table. For rectangular leaders, see Table 1106.2(2). Interpolation is permitted for pipe sizes that fall between those listed in this table.

Table 1106.2(2)
Size of Rectangular Vertical Conductors and Leaders

Dimensions of Common Leader Sizes width x length (inches)[a,b]	Horizontally Projected Roof Area (square feet)											
	Rainfall rate (inches per hour)											
	1	2	3	4	5	6	7	8	9	10	11	12
1-3/4 x 2-1/2	3,410	1,700	1,130	850	680	560	480	420	370	340	310	280
2 x 3	5,540	2,770	1,840	1,380	1,100	920	790	690	610	550	500	460
2-3/4 x 4-1/4	12,830	6,410	4,270	3,200	2,560	2,130	1,830	1,600	1,420	1,280	1,160	1,060
3 x 4	13,210	6,600	4,400	3,300	2,640	2,200	1,880	1,650	1,460	1,320	1,200	1,100
3-1/2 x 4	15.900	7,950	5,300	3,970	3,180	2,650	2,270	1,980	1,760	1,590	1,440	1,320
3-1/2 x 5	21,310	10,650	7,100	5,320	4,260	3,550	3,040	2,660	2,360	2,130	1,930	1,770
3-3/4 x 4-3/4	21,960	10,980	7,320	5,490	4,390	3,660	3,130	2,740	2,440	2,190	1,990	1,830
3-3/4 x 5-1/4	25,520	12,760	8,500	6,380	5,100	4,250	3,640	3,190	2,830	2,550	2,320	2,120
3-1/2 x 6	27,790	13,890	9,260	6,940	5,550	4,630	3,970	3,470	3,080	2,770	2,520	2,310
4 x 6	32,980	16,490	10,990	8,240	6,590	5,490	4,710	4,120	3,660	3,290	2,990	2,740
5-1/2 x 5-1/2	44,300	22,150	14,760	11,070	8,860	7,380	6,320	5,530	4,920	4,430	4,020	3,690
7-1/2 x 7-1/2	100,500	50,250	33,500	25,120	20,100	16,750	14,350	12,560	11,160	10,050	9,130	8,370

For SI: 1 inch = 25.4mm, 1 square foot = 0.0929 m^2.

a. Sizes indicated are nominal width x length of the opening for rectangular piping.

b. For shapes not included in this table, Equation 11-1 shall be used to determine the equivalent circular diameter, De, of rectangular piping for use in interpolation using the data from Table 1106.2(1).

(Equation 11-1)

De = (width x length)1/2

where:

De = equivalent circular diameter and De, width and length are in inches.

~~31.~~ 30. Change Section 1106.3 and Table 1106.3 of the IPC to read:

1106.3 Building storm drains and sewers. The size of the building storm drain, building storm sewer and their horizontal branches having a slope of 1/2 unit or less vertical in 12 units horizontal (4% slope) shall be based on the maximum projected roof area in accordance with Table 1106.3. The slope of horizontal branches shall be not less than 1/8 unit vertical in 12 units horizontal (1% slope) unless otherwise approved.

Table 1106.3
Size of Horizontal Storm Drainage Piping

Size of Horizontal Piping (inches)	Horizontally Projected Roof Area (square feet)					
	Rainfall rate (inches per hour)					
	1	2	3	4	5	6
1/8 unit vertical in 12 units horizontal (1% slope)						

3	3,288	1,644	1,096	822	657	548
4	7,520	3,760	2,506	1,800	1,504	1,253
5	13,360	6,680	4,453	3,340	2,672	2,227
6	21,400	10,700	7,133	5,350	4,280	3,566
8	46,000	23,000	15,330	11,500	9,200	7,600
10	82,800	41,400	27,600	20,700	16,580	13,800
12	133,200	66,600	44,400	33,300	26,650	22,200
15	218,000	109,000	72,800	59,500	47,600	39,650
1/4 unit vertical in 12 units horizontal (2% slope)						
3	4,640	2,320	1,546	1,160	928	773
4	10,600	5,300	3,533	2,650	2,120	1,766
5	18,880	9,440	6,293	4,720	3,776	3,146
6	30,200	15,100	10,066	7,550	6,040	5,033
8	65,200	32,600	21,733	16,300	13,040	10,866
10	116,800	58,400	38,950	29,200	23,350	19,450
12	188,000	94,000	62,600	47,000	37,600	31,350
15	336,000	168,000	112,000	84,000	67,250	56,000
1/2 unit vertical in 12 units horizontal (4% slope)						
3	6,576	3,288	2,295	1,644	1,310	1,096
4	15,040	7,520	5,010	3,760	3,010	2,500
5	26,720	13,360	8,900	6,680	5,320	4,450
6	42,800	21,400	13,700	10,700	8,580	7,140
8	92,000	46,000	30,650	23,000	18,400	15,320
10	171,600	85,800	55,200	41,400	33,150	27,600
12	266,400	133,200	88,800	66,600	53,200	44,400
15	476,000	238,000	158,800	119,000	95,300	79,250
For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2.						

~~32.~~ 31. Change Section 1106.6 and Table 1106.6 of the IPC to read:

1106.6 Size of roof gutters. The size of semicircular gutters shall be based on the maximum projected roof area in accordance with Table 1106.6.

Table 1106.6 Size of Semicircular Roof Gutters						
Diameter of Gutters (inches)	Horizontally Projected Roof Area (square feet)					
	Rainfall rate (inches per hour)					
	1	2	3	4	5	6
1/16 unit vertical in 12 units horizontal (0.5% slope)						
3	680	340	226	170	136	113
4	1,440	720	480	360	288	240
5	2,500	1,250	834	625	500	416
6	3,840	1,920	1,280	960	768	640
7	5,520	2,760	1,840	1,380	1,100	918
8	7,960	3,980	2,655	1,990	1,590	1,325
10	14,400	7,200	4,800	3,600	2,880	2,400
1/8 unit vertical in 12 units horizontal (1% slope)						
3	960	480	320	240	192	160
4	2,040	1,020	681	510	408	340

5	3,520	1,760	1,172	880	704	587
6	5,440	2,720	1,815	1,360	1,085	905
7	7,800	3,900	2,600	1,950	1,560	1,300
8	11,200	5,600	3,740	2,800	2,240	1,870
10	20,400	10,200	6,800	5,100	4,080	3,400
1/4 unit vertical in 12 units horizontal (2% slope)						
3	1,360	680	454	340	272	226
4	2,880	1,440	960	720	576	480
5	5,000	2,500	1,668	1,250	1,000	834
6	7,680	3,840	2,560	1,920	1,536	1,280
7	11,040	5,520	3,860	2,760	2,205	1,840
8	15,920	7,960	5,310	3,980	3,180	2,655
10	28,800	14,400	9,600	7,200	5,750	4,800
1/2 unit vertical in 12 units horizontal (4% slope)						
3	1,920	960	640	480	384	320
4	4,080	2,040	1,360	1,020	816	680
5	7,080	3,540	2,360	1,770	1,415	1,180
6	11,080	5,540	3,695	2,770	2,220	1,850
7	15,600	7,800	5,200	3,900	3,120	2,600
8	22,400	11,200	7,460	5,600	4,480	3,730
10	40,000	20,000	13,330	10,000	8,000	6,660
For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2.						

~~33.~~ 32. Add Section 1114 Values for Continuous Flow to the IPC.

~~34.~~ 33. Add Section 1114.1 to the IPC to read:

1114.1 Equivalent roof area. Where there is a continuous or semicontinuous discharge into the building storm drain or building storm sewer, such as from a pump, ejector, air conditioning plant, or similar device, each gallon per minute (L/m) of such discharge shall be computed as being equivalent to 96 square feet (9 m^2) of roof area, based on a rainfall rate of 1 inch (25.4 mm) per hour.

34. Change Section 1201.1 of the IPC to read:

1201.1 Scope: The provisions of this chapter shall govern the design and installation of piping and storage systems for nonflammable medical gas systems and nonmedical oxygen systems. All maintenance and operations of such systems shall be in accordance with the Statewide Fire Prevention Code.

35. 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.



Figure 1301.4
Pictograph DO NOT DRINK

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 four 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 six 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 eight 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 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 two 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 five 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 five 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 conform to Table 702.3.

2. The required separation distance shall not apply where the bottom of the potable water service pipe within five 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 five 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 five 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 systems 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 the 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 608.9.

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 Section 1301.10.11.

1301.17.3 Water supply system test. Nonpotable distribution piping shall be tested in accordance with Section ~~312.5~~ 312.6.

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~~ 312.11.

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~~ manuals 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.

36. Change the title of Section 1302 of the IPC to "Gray Water Nonpotable Water Systems."

37. Change Sections 1302.1 through 1302.6, including subsections, of the IPC to read as follows:

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, 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 four 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.

38. Delete Sections 1302.7 through 1302.13.4, including subsections, of the IPC.
39. Change the title of Section 1303 of the IPC to "Rainwater Nonpotable Water Systems."
40. Change Sections 1303.1 through 1303.10, including subsections, of the IPC to read as follows:

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. The provisions of CSA B805/ICC 805 shall be permitted as an alternative to the provisions contained in this section for the design, construction, installation, alteration, and repair of rainwater nonpotable water systems for the

collection, storage, treatment, and distribution of rainwater for nonpotable applications. Roof runoff or stormwater runoff collection surfaces shall be limited to roofing materials, public pedestrian accessible roofs, and subsurface collection identified in CSA B805/ICC 805 Table 7.1. Stormwater runoff shall not be collected from any other surfaces.

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, 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 four 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, equipment, or both, including 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 1,000 square feet (92.9 m^2) 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 one 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 714.

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.

41. Delete Sections 1303.11 through 1303.16.4, including subsections, of the IPC.
42. Change Sections 1304.1 and 1304.2 of the IPC to read as follows:

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.

43. Delete Sections 1304.3 and 1304.4, including subsections, of the IPC.

C. Change Section 2902.1 of the IBC to read:

2902.1 Minimum number of fixtures. Plumbing fixtures shall be provided in the minimum number as shown in Table 403.1 of the VPC based on the actual use of the building or space. Uses not shown in Table 403.1 of the VPC shall be considered individually by the code official. The number of occupants shall be determined by this code.

D. Delete Table 2902.1 and Sections 2902.1.1 through 2902.7.

E. Delete Section 2903, including subsections, of the IBC.

13VAC5-63-330. Chapter 30 Elevators and conveying systems.

A. Add an exception to Section 3002.4 of the IBC to read:

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 3005.4 of the IBC to read:~~

~~3005.4 Machine and control rooms, control spaces, and machinery spaces. Elevator machine rooms, rooms and spaces housing elevator controllers, and machinery spaces outside of but attached to a hoistway that have openings into the hoistway shall be enclosed with fire barriers constructed in accordance with Section 707, 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.~~

~~Exceptions:~~

~~1. For other than fire service access elevators and occupant evacuation elevators, where elevator machine rooms, rooms and spaces housing elevator controllers, and machinery spaces do not abut and do not have openings to the hoistway enclosure they serve, the fire barrier constructed in accordance with Section 707, horizontal assemblies constructed in accordance with Section 711, or both shall be permitted to be reduced to a one-hour fire-resistance rating.~~

~~2. For other than fire service access elevators and occupant evacuation elevators, 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.~~ C. Add Section 3005.7 to the IBC to read:

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.~~ D. Change Section 3006.1 (Items 1 through 5 remain) of the IBC to read:

3006.1 General. Where provided to comply with applicable requirements set forth elsewhere in this code, elevator hoistway openings and enclosed elevator lobbies shall be provided in accordance with the following:

~~F. Change the exception to 3007.6 to read:~~

~~Exception: Where a fire service access elevator has two entrances onto a floor, the second entrance shall be permitted to be protected in accordance with Section 3006.3 of the IBC.~~

~~G.~~ E. 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, passenger elevators for general public use shall comply with this section.

13VAC5-63-336. Chapter 31 Special construction.

A. Change Section 3107.1 of the IBC to read:

3107.1 General. Signs shall be designed and constructed in accordance with this code.

~~A.~~ B. Change the title of IBC Section 3109 to read:

Swimming Pools, Swimming Pool Enclosures, and Aquatic Recreational Facilities.

~~B.~~ C. Change Section 3109.1 of the IBC to read as follows, add Section 3109.1.1 to the IBC to read as follows:

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 two gallons per minute (7.6 lpm).

410.2.5 Temperature. At each showerhead, the heated shower water temperature shall not exceed 120ºF (49ºC) and shall not be less than 90ºF (32ºC).

2. 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.

~~C.~~ D. Delete Section 3113 of the IBC in its entirety.

E. Change item 3 of Section 3114.8.4.2 of the IBC (items 1 and 2 remain) to read:

3. Where all or portions of the profiled steel panel elements are retained and integrated into a seismic force-resisting system other than as permitted by Item 1, seismic design parameters shall be developed from testing and analysis in accordance with Section 112.2 and ASCE 7, Section 12.2.1.1 or 12.2.1.2

13VAC5-63-340. Chapter 33 Safeguards during construction.

A. Delete second sentence of Section 3301.1 of the IBC (first sentence remains), and add a note to read:

Note: Fire Safety During Construction plans may be required by the fire code official prior to construction operations in accordance with the Statewide Fire Prevention Code.

~~A. Delete Section 3302.1 of the IBC.~~

B. Add Sections ~~3302.4~~ 3301.6 and ~~3302.5~~ 3301.7 to the IBC to read:

~~3302.4~~ 3301.6 Separations between construction areas. Separations used in Type I and Type II construction to separate construction areas from occupied portions of the building shall be constructed of materials that comply with one of the following:

1. Noncombustible materials.

2. Materials that exhibit a flame spread index not exceeding 25 when tested in accordance with ASTM E84 or UL 723.

3. Materials exhibiting a peak heat release rate not exceeding 300 kW/m^2 when tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation on specimens at the thickness intended for use.

~~3302.5~~ 3301.7 Fire safety requirements for buildings of Types IV-A, IV-B, and IV-C construction. Buildings of Types IV-A, IV-B, and IV-C construction designed to be greater than six stories above grade plane shall comply with the following requirements during construction unless otherwise approved by the building code official:

1. Standpipes shall be provided in accordance with Section 3311.

2. A water supply for fire department operations, as approved by the fire code official and the fire chief.

3. Where building construction exceeds six stories above grade plane and noncombustible protection is required by Section 602.4, at least one layer of noncombustible protection shall be installed on all building elements on floor levels, including mezzanines, more than four levels below active mass timber construction before additional floor levels can be erected.

Exception: Shafts and vertical exit enclosures shall not be considered part of the active mass timber construction.

4. Where building construction exceeds six stories above grade plane, required exterior wall coverings shall be installed on floor levels, including mezzanines, more than four levels below active mass timber construction before additional floor levels can be erected.

Exception: Shafts and vertical exit enclosures shall not be considered part of the active mass timber construction.

C. Delete Section 3302 (including subsections) of the IBC.

~~C.~~ D. Delete IBC Sections 3303 and 3305 in their entirety.

~~D.~~ E. Change Section 3310.2 of the IBC to read:

3310.2 Maintenance of means of egress. Means of egress and required accessible means of egress shall be maintained at all times during construction.

~~E.~~ F. ~~Chance~~ Change Section 3312.1 of the IBC to read:

3312.1 Completion before occupancy. In buildings where an automatic sprinkler system is required by this code, it shall be unlawful to occupy any portion of a building or structure until the automatic sprinkler system installation has been tested and approved, except as provided in Section 116.1.1.

~~F.~~ G. Delete exception to Section 3313.1 and change Section 3313.1 of the IBC to read:

3313.1 Where required. An approved water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible building materials arrive on the site, on commencement of vertical combustible construction, and on installation of a standpipe system in buildings under construction, in accordance with the Virginia Statewide Fire Prevention Code.

~~G.~~ H. Delete Sections 3313.2, 3313.3, 3313.3.1, 3313.3.2, 3313.3.3, 3313.4, and 3313.5 of the IBC.

13VAC5-63-360. Chapter 35 Referenced standards.

A. Add the following standards to the list of referenced standards in Chapter 35 of the IBC:

Standard ~~reference number~~ Reference Number	Title
ASTM ~~E329-02~~ E329-25a	Standard Specification for Agencies Engaged in ~~the Testing and/or Inspection of Materials Used in~~ Construction Inspection, Testing, or Special Inspection
API 650-09	Welded Steel Tanks for Oil Storage
API 653-09	Tank Inspection, Repair, Alteration and Reconstruction
NFPA 88A-23	Standard for Parking Structures
NFPA ~~91-15~~ 91-20	Standard for Exhaust Systems for Air Conveying of Vapors, Mists and Particulate Solids
TFI RMIP-09	Aboveground Storage Tanks Containing Liquid Fertilizer, Recommended Mechanical Integrity Practices
~~UL 2075-13~~	~~Standard for Gas and Vapor Detectors and Sensors~~
UL 2750-23	Wireless Power Transfer Equipment for Electric Vehicles
~~ASCE/SEI 7-22~~	~~Minimum Design Loads and Associated Criteria for Buildings and Other Structures~~

~~B. Delete the following standards from the list of referenced standards in Chapter 35 of the IBC:~~

~~Standard reference number~~	~~Title~~

~~ASCE/SEI 7-16~~	~~Minimum Design Loads and Associated Criteria for Buildings and Other Structures~~

13VAC5-63-400. Chapter 1 Administration; Section 101 General.

A. Section 101.1 Short title. The Virginia Uniform Statewide Building Code, Part II, Existing Buildings, may be cited as the "Virginia Existing Building Code" or as the "VEBC."

B. Section 101.2 Incorporation by reference. Chapters 2 through 16 of the ~~2021~~ 2024 International Existing Building Code, published by the International Code Council, Inc., are adopted and incorporated by reference to be an enforceable part of the VEBC. The term "IEBC" means the ~~2021~~ 2024 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 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 catchlines of the Virginia Administrative Code sections and cross references between sections or chapters of the 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 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.

D. Section 101.4 Arrangement of code provisions. The VEBC is comprised of the combination of (i) the provisions of Chapter 1, Administration, which are established herein, (ii) Chapters 2 through 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 VEBC, any reference to a provision of Chapter 1 of the IEBC in the provisions of Chapters 2 through 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 in this section, 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 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 through 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 VCC, unless the context clearly indicates otherwise.
4. 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.
5. 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.

6. 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: See Section 101.2 of the VCC for a list of major codes and standards referenced in the VCC.

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 through 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 through 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 through 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 provisions relating to the scope and enforcement of the code. Any provisions of Chapters 2 through 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 provisions in this subsection, where administrative requirements of Chapters 2 through 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 that 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 govern the repair, alteration, change of occupancy, addition, relocation of, ~~construction~~ and rehabilitation activities in existing buildings and structures.

C. 102.2.1 Group I-2 or I-3 applicability. A change of occupancy to Group I-2 or I-3 from another occupancy classification shall comply with the provisions of the VCC as required for new construction, not Chapter 7 of this code. All other provisions of the VEBC, including change of occupancy within an existing Group I-2 or I-3 classification, are applicable to Group I-2 or I-3.

D. 102.2.2 Reconstruction, alteration, or repair in Group R-5 occupancies. Compliance with this section shall be an acceptable alternative to compliance with this code at the discretion of the owner or owner's agent. The VCC may be used for the reconstruction, alteration, or repair of Group R-5 buildings or structures subject to the following criteria:

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 the VCC applicable to newly constructed buildings or structures.

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

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

5. In accordance with § 36-99.2 of the Code of Virginia, installation or replacement of glass shall comply with Section ~~R308~~ R324 or Chapter 24 of the VCC.

6. Compliance with Section 307.2 of this code is required as applicable.

~~Exceptions:~~

~~1.~~ 7. ~~This section shall not be construed to permit noncompliance with any~~ Compliance with applicable flood load or flood-resistant construction requirements of the VCC is required.

~~2.~~ 8. 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.~~ 9. Repair or replacement of smoke alarms shall be with devices listed in accordance with UL217 and that are no more than 10 years from the date of manufacture. Battery-only powered devices shall be powered by a 10-year sealed battery.

E. 102.2.3 Additions. Where one or more newly constructed fire walls that comply with Section 706 of the VCC is provided between an addition and the existing building, structure, or portions thereof, the addition shall be considered a separate building, and therefore, not an addition within the scope of this code. Such separate building, including the fire wall, shall be constructed in accordance with the VCC and shall not place the existing building or structure in nonconformance with the building code under which the existing building, structure, or the affected portions thereof was built or as previously approved.

13VAC5-63-420. Section 103 Application of code.

A. Section 103.1 General. All administrative provisions of the VCC, including 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 VEBC, 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. A building or structure undergoing a change of occupancy shall comply with the provisions of this code for change of occupancy, except as provided for in Section 102.2.1 for Group I-2 or I-3. Permitting, inspections, and certificate of occupancy issuance shall be in accordance with the administrative provisions of the VCC.

When impractical to achieve compliance with this code for the new occupancy, 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. The local building department shall enforce the provisions of Section 1101 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~~ International Fire Code shall not be applicable unless required for compliance with the provisions of Section 1101.

F. Section 103.4 Nonrequired equipment. The following criteria for nonrequired equipment are 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 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~~ Virginia Property Maintenance Code (VPMC).

I. Section 103.6 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 registered design professional 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.

J. Section 103.7 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.

K. Section 103.8 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.

L. 103.9 Construction documents. Construction documents shall be submitted with the application for a permit. The work proposed to be performed on an existing building or structure shall be classified on the construction documents as repairs, alterations, change of occupancy, addition, historic building, or moved building. Alterations shall further be classified as Level 1 or Level 2. Any required elevation certificate shall be prepared by a Virginia certified land surveyor or Virginia registered design professional ~~civil engineer licensed in Virginia~~.

Exception: Construction documents or classification of the work does not need to be submitted when the building official determines the proposed work does not require such documents, classification, or identification.

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 definitions in Section 202 of the IEBC to read:

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 Commonwealth Transportation Board.

Change of occupancy. ~~Either~~ Any of the following shall be considered a change of occupancy where the current VCC requires a greater degree of structural strength, fire protection, means of egress, ventilation, ~~or~~ sanitation or electrical requirements in a special occupancy described in Section 708.1 of the VEBC than is existing in the current building or structure:

1. Any change in the occupancy classification of a building or structure.
2. Any change in the purpose of, or a change in the level of activity within, a building or structure.
3. A change of use.

Note: The use and occupancy classification of a building or shall be determined in accordance with Chapter 3 of the VCC.

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.

Existing structure. A structure (i) for which a legal building permit has been issued under any edition of the USBC, (ii) that has been previously approved, or (iii) that was 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.

C. Add the following definitions to Section 202 of the IEBC to read:

Moved building or structure. An existing building or structure that is moved to a new location.

Roof covering. The covering applied to the roof deck or spaced supports for weather resistance, energy performance, fire classification, or appearance.

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.

D. Delete the following definitions from Section 202 of the IEBC:

Ambulatory care facility
Approved
Approved agency
Dangerous
Deferred submittal
Facility
Flood hazard area
Lowest floor
Occupiable roof
Peer review
Photovoltaic panel system
Registered design professional in responsible charge
Relocatable building
Roof repair
Storm shelter
Unsafe
Work area

13VAC5-63-431. Chapter 3 General provisions and special detailed requirements.

Replace Chapter 3 of the IEBC with the following:

1. Section 301 General.

   301.1 Applicability. The applicable provisions of this chapter shall be used in conjunction with the requirements in this code and shall apply to all construction and rehabilitation.

   301.2 Occupancy and use. When determining the appropriate application of the referenced sections of this code, the occupancy and use of a building shall be determined in accordance with Chapter 3 of the VCC.

2. Section 302 Building Materials and Systems.

   302.1 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 and alterations, provided no hazard to life, health, or property is created. Hazardous materials shall not be used where the VCC would not permit hazardous materials use in buildings or structures of similar occupancy, purpose, and location.

   302.2 Existing seismic force-resisting systems. Where the existing seismic force-resisting system is a type that can be designated ordinary, values of R, Ω_0, and C_d for the existing seismic force-resisting system shall be those specified by the VCC for an ordinary system unless it is demonstrated that the existing system will provide performance equivalent to that of a detailed, intermediate, or special system.

   302.3 Smoke alarms. Repair or replacement of smoke alarms shall be with devices listed in accordance with UL217 and that are no more than 10 years from the date of manufacture. Battery-only powered devices shall be powered by a 10-year sealed battery.

3. Section 303 Fire escapes.

   303.1 Where permitted. Fire escapes shall comply with this section and shall not constitute more than 50% of the required number of exits nor more than 50% of the required exit capacity.

303.1.1 Existing fire escapes. Existing fire escapes shall continue to be accepted as a component in the means of egress.

303.1.2 New fire escapes. For other than Group I-2, newly constructed fire escapes shall be permitted only where exterior stairs cannot be utilized due to lot lines limiting stair size or due to the sidewalks, alleys, or roads at grade level.

Exception: Replacement fire escapes or existing fire escapes undergoing repairs shall comply with Sections 303.3 and 303.4 if feasible, and if not feasible, to the greatest extent possible.

303.2 Location. Where located on the front of the building and where projecting beyond the building line, the lowest landing shall not be less than seven feet (2134 mm) or more than 12 feet (3658 mm) above grade and shall be equipped with a counterbalanced stairway to the street. In alleyways and thoroughfares less than 30 feet (9144 mm) wide, the clearance under the lowest landing shall not be less than 12 feet (3658 mm).

303.3 Construction. The fire escape shall be designed to support a live load of 100 pounds per square foot (4788 Pa) and shall be constructed of steel or other approved noncombustible materials. Fire escapes constructed of wood not less than nominal two inches (51 mm) thick are permitted on buildings of Type V construction. Walkways and railings located over or supported by combustible roofs in buildings of Types III and IV construction are permitted to be of wood not less than nominal two inches (51 mm) thick.

303.4 Dimensions. Stairs shall be at least 22 inches (559 mm) wide with risers not more than, and treads not less than, eight inches (203 mm) and landings at the foot of stairs not less than 40 inches (1016 mm) wide by 36 inches (914 mm) long, located not more than nine inches (203 mm) below the door.

303.5 Opening protectives. Openings within 10 feet (3048 mm) of newly constructed fire escape stairways shall be protected by fire assemblies having minimum 3/4-hour-fire-resistance ratings.

Exception: Opening protection shall not be required in buildings equipped throughout with an approved automatic sprinkler system.

303.6 Fire escape access and details. Newly constructed fire escapes shall comply with all of the following requirements:

1. Occupants shall have unobstructed access to the fire escape without having to pass through a room subject to locking.

2. Access to a new fire escape shall be through a door, except that windows shall be permitted to provide access from single dwelling units or sleeping units in Groups R-1, R-2, and I-1 occupancies or to provide access from spaces having a maximum occupant load of 10 in other occupancy classifications.

2.1. The window shall have a minimum net clear opening of 5.7 square feet (0.53 m^2) or five square feet (0.46 m^2) where located at grade.

2.2. The minimum net clear opening height shall be 24 inches (610 mm) and net clear opening width shall be 20 inches (508 mm).

2.3. The bottom of the clear opening shall not be greater than 44 inches (1118 mm) above the floor.

2.4. The operation of the window shall comply with the operational constraints of the VCC.

3. In all buildings of Group E occupancy, up to and including the 12th grade, buildings of Group I occupancy, rooming houses, and child care centers, ladders of any type are prohibited on fire escapes used as a required means of egress.

4. Section 304 Glass replacement and replacement windows.

304.1 Replacement glass. In accordance with § 36-99.2 of the Code of Virginia, installation or replacement of glass shall comply with Chapter 24 of the VCC.

304.2 Replacement window opening devices. In Group R-2 or R-3 buildings containing dwelling units, window opening control devices complying with ASTM F 2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

1. The window is operable;

2. The window replacement includes replacement of the sash and the frame;

3. The top of the sill of the window opening is at a height less than 36 inches (915 mm) above the finished floor;

4. The window will permit openings that will allow passage of a four-inch diameter (102 mm) sphere when the window is in its largest opened position; and

5. The vertical distance from the top of the sill of the window opening to the finished grade or other surface below, on the exterior of the building, is greater than 72 inches (1829 mm).

The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section 1031.3.1 of the VCC.

Exceptions:

1. Operable windows where the top of the sill of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space, or building, and that are provided with window fall prevention devices that comply with ASTM F 2006.

2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F 2090.

304.3 ~~Replacement window emergency~~ Emergency escape and rescue openings. Emergency escape and rescue openings shall be in compliance with Section 307. ~~Where windows are required by the VCC or International Residential Code to provide emergency escape and rescue openings in Groups R-2 and R-3 occupancies and one-family and two-family dwellings and townhouses regulated by the International Residential Code, replacement windows shall be exempt from the requirements of Sections 1031.2.1 and 1031.3 of the VCC or Sections R310.1.1, R310.2.1, R310.2.3, R310.4.1, R310.4.2, R310.4.2.1, R310.4.2.2, and R310.4.3 of the International Residential Code, provided the replacement window meets the following conditions:~~

~~1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.~~

~~2. The replacement of the window is not part of a change of occupancy.~~

~~304.3.1 Operational constraints. Where bars, grilles, grates, or similar devices are installed over emergency escape and rescue openings as permitted by Section 1031.2.1 of the VCC, smoke alarms shall also be provided in accordance with Section 907.2.11 of the VCC. In R-5 occupancies, bars, grilles, grates, or similar devices are permitted to be installed over emergency escape and rescue openings in accordance with Section R310.4.4 of the VRC.~~

5. Section 305 Seismic force-resisting systems.

305.1 General. Where this code requires consideration of the seismic force-resisting system of an existing building subject to repair, alteration, change of occupancy, addition, or moving of existing buildings, the seismic evaluation and design shall be based on Section 305.2.

305.2 Seismic evaluation and design procedures. The seismic evaluation and design shall be based on the procedures specified in the VCC or ASCE 41. The procedures contained in Appendix A of this code shall be permitted to be used as specified in Section 305.2.2.

305.2.1 Compliance with VCC-level seismic forces. Where compliance with the seismic design provisions of the VCC is required, the criteria shall be in accordance with one of the following:

1. 100% of the values in the VCC. Where the existing seismic force-resisting system is a type that can be designated as "Ordinary," values of R, Ω_0, and C_d used for analysis in accordance with Chapter 16 of the VCC shall be those specified for structural systems classified as "Ordinary" in accordance with Table 12.2-1 of ASCE 7, unless it can be demonstrated that the structural system will provide performance equivalent to that of a "Detailed," "Intermediate" or "Special" system.

2. ASCE 41, using a Tier 3 procedure and the two level performance objective in Table 305.2.1 for the applicable risk category.

Table 305.2.1 Performance Objectives for Use in ASCE 41 for Compliance with VCC-Level Seismic Forces		
Risk Category (Based on VCC Table 1604.5)	Structural Performance Level for Use with BSE-1E Earthquake Hazard Level	Structural Performance Level for Use with BSE-2N Earthquake Hazard Level
I	Life Safety (S-3)	Collapse Prevention (S-5)
II	Life Safety (S-3)	Collapse Prevention (S-5)
III	Damage Control (S-2)	Limited Safety (S-4)
IV	Immediate Occupancy (S-1)	Life Safety (S-3)

305.2.2 Compliance with reduced VCC-level seismic forces. Where seismic evaluation and design is permitted to meet reduced VCC seismic force levels, the criteria used shall be in accordance with one of the following:

1. The VCC using 75% of the prescribed forces. Values of R, Ω_0 and C_d used for analysis shall be as specified in Section 305.2.1 of this code.

2. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A as specified in Items 2.1 through 2.5 and subject to the limitations of the respective Appendix A chapters shall be deemed to comply with this section.

2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in Risk Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.

2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Risk Category I or II are permitted to be based on the procedures specified in Chapter A2.

2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Risk Category I or II are permitted to be based on the procedures specified in Chapter A3.

2.4. Seismic evaluation and design of soft, weak, or open-front wall conditions in multi-unit residential buildings of wood construction in Risk Category I or II are permitted to be based on the procedures specified in Chapter A4.

2.5. Seismic evaluation and design of concrete buildings assigned to Risk Category I, II, or III are permitted to be based on the procedures specified in Chapter A5.

3. ASCE 41, using the performance objective in Table 305.2.2 for the applicable risk category.

Table 305.2.2 Performance Objectives for Use in ASCE 41 for Compliance with Reduced VCC-Level Seismic Forces	
Risk Category (Based on VCC Table 1604.5)	Structural Performance Level for Use with BSE-1E Earthquake Hazard Level
I	Life Safety (S-3)
II	Life Safety (S-3)
III	Damage Control (S-2[a])
IV	Immediate Occupancy (S-1)

a. Tier 1 evaluation at the Damage Control performance level shall use the Tier 1 Life Safety checklists and Tier 1 Quick Check provision midway between those specified for Life Safety and Immediate Occupancy performance

6. Section 306 Higher education laboratories.

306.1 Change of occupancy in existing higher education laboratories. Where the use of new or different hazardous materials or a change in the amount of hazardous materials in existing higher education laboratories 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, such laboratories shall comply with the applicable operational and maintenance requirements in Chapter 38 of the SFPC. Approval under this section is contingent upon operational requirements in the SFPC being complied with and maintained.

306.1.1 Hazardous materials in existing higher education 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 306.1.1(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 Higher Education Laboratories

Floor Level		Percentage of the Maximum Allowable Quantity per Control Area[a]	Number of Control Areas per Floor	Fire-Resistance Rating for Fire Barriers and Horizontal Assemblies in Hours[b]
Above Grade Plane	Higher than 20	5	1	2
	10-20	10	1	2
	7-9	25	2	2
	4-6	50	2	2
	3	75	2	1
	2	100	3	1
	1	100	4	1
Below Grade Plane	1	75	3	1
	2	50	2	1
	Lower than 2	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.

Table 306.1.1(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 Higher Education Laboratories

Floor Level		Percentage of the Maximum Allowable Quantity per Control Area[a]	Number of Control Areas per Floor	Fire-Resistance Rating for Fire Barriers and Horizontal Assemblies in Hours[b]
Above Grade Plane	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
Below Grade Plane	1	75	3	1
	2	50	2	1
	Lower than 2	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.

306.1.2 Automatic fire alarm and detection systems. A 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 the building is not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the VCC.

306.1.3 System supervision and monitoring. Automatic fire alarm and 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 onsite location.

306.1.4 Restricted materials in storage and use. Where approved by the building official, the storage and use of the following hazardous materials prohibited by VCC 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 Sections 3805.2.1 and 3805.2.2 of the SFPC.

7. Section 307 Emergency Escape and Rescue Openings.

307.1 Replacement window emergency escape and rescue openings. Where an emergency escape and rescue opening is required to be provided in Groups R-2 and R-3 occupancies by the VCC and for one-family and two-family dwellings and townhouses regulated by the VRC, replacement windows shall be exempt from the requirements of Sections 1031.2.1 and 1031.3 of the VCC or Sections R319.1.1,

R319.2.1, R319.2.3, R319.4.1, R319.4.2, R319.4.2.1, R319.4.2.2 and R319.4.3 of the VRC, provided the replacement window meets the following conditions:

1. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.
2. The replacement of the window is not part of a change of occupancy.

307.1.2 Operational constraints. Where bars, grilles, grates, or similar devices are installed over emergency escape and rescue openings as permitted by Section 1031.2.1 of the VCC, smoke alarms shall also be provided in accordance with Section 907.2.11 of the VCC. In R-5 occupancies, bars, grilles, grates, or similar devices are permitted to be installed over emergency escape and rescue openings in accordance with section R319.4.4 of the VRC.

307.2 Alterations, additions, and change of occupancy. Where an alteration, addition, or change of occupancy creates a new room or space or changes the occupancy of a room or space such that an emergency escape and rescue opening is required to be provided in Groups R-2 and R-3 occupancies by the VCC and for one-family and two-family dwellings and townhouses regulated by the VRC, then a new emergency escape and rescue opening shall be provided in accordance with the Section 1031 of the VCC or Section 319 of the VRC.

Exception: An existing operable window with clear opening area not less than 4 square feet (0.38 m^2) and minimum opening height and width of 22 inches (559 mm) and 20 inches (508 mm), respectively, shall be accepted as an emergency escape and rescue opening.

8. Section 308 Electrical. (RESERVED)
9. Section 309 Mechanical. (RESERVED)
10. Section 310 Plumbing. (RESERVED)

13VAC5-63-432.5. Chapter 4 Accessibility.

Replace Chapter 4 of the IEBC with the following:

1. Section 401 General

401.1 Scope. The applicable provisions of this chapter shall apply to ~~all construction~~ repairs, alterations, additions, change of occupancy, and rehabilitation to existing buildings, including those identified as historic buildings.

2. Section 402 Change of Occupancy.

402.1 Change of occupancy. Existing buildings or structures that undergo a change of occupancy are not required to be provided with additional accessibility features. Any alterations undertaken in connection with a change of occupancy shall conform to the applicable requirements of Section 404.

3. Section 403 Additions.

403.1 Additions. Accessibility provisions for new construction shall apply to additions. An addition that affects the accessibility to, or contains an area of, a primary function shall comply with the requirements in Section 404.3, as applicable. An addition that decreases or has the effect of decreasing accessibility of a building, facility or element thereof, below the requirements for new construction at the time of the addition is prohibited. Accessibility requirements for sites, buildings, structures, facilities, elements and spaces are not required to exceed that required by the VCC for new construction at the time of the addition.

403.2 Accessible dwelling units and sleeping units. Where Group I-1, I-2, I-3, R-1, R-2, or R-4 dwelling or sleeping units are being added, the requirements of Section 1108 of the VCC for accessible units apply only to the quantity of spaces being added.

403.3 Type A dwelling or sleeping units. Where more than 20 Group R-2 dwelling or sleeping units are being added, the requirements of Section 1108 of the VCC for Type A units and Chapter 9 of the VCC for visible alarms apply only to the quantity of the spaces being added.

403.4 Type B dwelling or sleeping units. Where four or more Group I-1, I-2, R-1, R-2, R-3, or R-4 dwelling or sleeping units are being added, the requirements of Section 1108 of the VCC for Type B units and Chapter 9 of the VCC for visible alarms apply only to the quantity of spaces being added.

4. Section 404 Alterations.

404.1 General. An alteration of an existing facility shall not impose a requirement for greater accessibility than that which would be required for new construction. ~~Alterations shall not reduce or have the effect of reducing accessibility of a facility or portion of a facility.~~ An alteration that decreases or has the effect of decreasing accessibility of a building, facility or element thereof, below the requirements for new construction at the time of the alteration is prohibited. Accessibility requirements for sites, buildings, structures, facilities, elements and spaces are not required to exceed that required by the VCC for new construction at the time of the alteration.

404.2 Alterations. A facility that is altered shall comply with the applicable provisions in this section and Chapter 11 of the VCC, except as modified by Sections 404.3 and 404.4, unless technically infeasible. Where compliance with this section is technically infeasible, the alteration shall provide access to the maximum extent technically feasible.

Exceptions:

1. The altered element or space is not required to be on an accessible route, unless required by Section 404.3.

2. Accessible means of egress required by Chapter 10 of the VCC are not required to be provided in existing facilities.

3. The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall be permitted to meet the provisions for a Type B dwelling unit.

404.3 Alterations affecting an area containing a primary function. Where an alteration affects or could affect the usability of or access to an area containing a primary function, the route to the primary function area shall be accessible. Toilet facilities and drinking fountains serving the area of primary function, including the route from the area of primary function to these facilities, shall be accessible.

Exceptions:

1. The cumulative costs of providing the accessible route, toilet facilities, and drinking fountains are not required to exceed 20% of the costs of the alterations affecting the area of primary function.

2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets, and signs.

3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, installation, or alteration of fire protection systems and abatement of hazardous materials.

4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of a facility.

5. This provision does not apply to altered areas limited to Type B dwelling and sleeping units.

404.4 Scoping for alterations. The provisions of Sections 404.4.1 through 404.1.15 shall apply to alterations to existing buildings and facilities.

404.4.1 Entrances. Where an alteration includes alterations to an entrance and the facility has an accessible entrance on an accessible route, the altered entrance is not required to be accessible unless required by Section 404.3. Signs complying with Section 1112 of the VCC shall be provided.

Exception: Where an alteration includes alterations to an entrance and the facility has an accessible entrance, the altered entrance is not required to be accessible, unless required by Section 404.3. Signs complying with Section 1112 of the VCC shall be provided.

404.4.2 Elevators. Altered elements of existing elevators shall comply with ASME A17.1/CSA B44 and ICC A117.1. Such elements shall also be altered in elevators programmed to respond to the same hall call control as the altered elevator.

404.4.3 Platform lifts. Platform (wheelchair) lifts complying with ICC A117.1 and installed in accordance with ASME A18.1 shall be permitted as a component of an accessible route.

404.4.4 Stairways and escalators. Where an escalator or stairway is added where none existed previously and major structural modifications are necessary for installation, an accessible route shall be provided between the levels served by the escalator or stairways in accordance with Section 1104.4 of the VCC.

404.4.5 Ramps. Where steeper slopes than allowed by Section 1012.2 of the VCC are necessitated by space limitations, the slope of ramps in or providing access to existing facilities shall comply with Table 404.4.5.

Table 404.4.5 Ramps	
Slope	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3 inches
Steeper than 1:12 but not steeper than 1:10	6 inches
For SI: 1 inch = 25.4 mm	

404.4.6 Accessible dwelling or sleeping units. Where Group I-1, I-2, I-3, R-1, R-2, or R-4 dwelling or sleeping units are being altered, the requirements of Section 1108 of the VCC for Accessible units apply only to the quantity of the spaces being altered.

404.4.7 Type A dwelling or sleeping units. Where more than 20 Group R-2 dwelling or sleeping units are being altered, the requirements of Section 1108 of the VCC for Type A units and Chapter 9 of the VCC for visible alarms apply only to the quantity of the spaces being altered.

404.4.8 Type B dwelling or sleeping units. Where four or more Group I-1, I-2, R-1, R-2, R-3, or R-4 dwelling or sleeping units are being altered, the requirements of Section 1108 of the VCC for Type B units and Chapter 9 of the VCC for visible alarms apply only to the quantity of the spaces being altered.

~~Exceptions~~ Exception: Groups I-1, I-2, R-2, R-3, and R-4 dwelling or sleeping units where the first certificate of occupancy was issued before March 15, 1991, are not required to provide Type B dwelling or sleeping units.

404.4.9 Jury boxes and witness stands. In alterations, accessible wheelchair spaces are not required to be located within the defined area of raised jury boxes or witness stands and shall be permitted to be located outside these spaces where ramp or lift access poses a hazard by restricting or projecting into a required means of egress.

404.4.10 Toilet and bathing rooms. Where it is technically infeasible to alter existing toilet and bathing rooms to be accessible, an accessible single-user, family, or assisted-use toilet or bathing room constructed in accordance with Section 1110.2.1 of the VCC is permitted. The single-user, family, or assisted-use toilet or bathing room shall be located on the same floor and in the same area as the existing toilet or bathing rooms. Directional signs shall be provided at the inaccessible toilet and bathing rooms indicating the location of the nearest single-user, family, or assisted-use toilet room or bathing room. These directional signs shall include the International Symbol of Accessibility and sign characters shall meet the visual character requirements in accordance with ICC A117.1.

404.4.10.1 Additional toilet and bathing facilities. In assembly and mercantile occupancies, where additional toilet fixtures are added, not fewer than one accessible family or assisted-use toilet room shall be provided where required by Section 1110.2.1 of the International Building Code. In recreational facilities, where additional bathing rooms are being added, not fewer than one family or assisted-use bathing room shall be provided where required by Section 1110.2.1 of the International Building Code.

404.4.11 Dressing, fitting, and locker rooms. Where it is technically infeasible to provide accessible dressing, fitting, or locker rooms at the same location as similar types of rooms, one accessible room on the same level shall be provided. Where separate-sex facilities are provided, accessible rooms for each sex shall be provided. Separate sex facilities are not required where only unisex rooms are provided.

404.4.12 Fuel dispensers. Operable parts of replacement fuel dispensers shall be permitted to be 54 inches (1370 mm) maximum, measuring from the surface of the vehicular way where fuel dispensers are installed on existing curbs.

404.4.13 Thresholds. The maximum height of thresholds at doorways shall be 3/4 inch (19.1 mm). Such thresholds shall have beveled edges on each side.

404.4.14 Amusement rides. Where the structural or operational characteristics of an amusement ride are altered to the extent that the amusement ride's performance differs from that specified by the manufacturer or the original design, the amusement ride shall comply with requirements for new construction in Section 1111.4.8 of the VCC.

404.4.15 Dining areas. An accessible route to raised or sunken dining areas or to outdoor seating areas is not required provided that the same services and décor are provided in an accessible space usable by any occupant and not restricted to use by people with a disability.

5. Section 405 Historic Buildings.

405.1 General. These provisions shall apply to facilities designated as historic buildings or structures that undergo alterations unless technically infeasible. Where compliance with the requirements for accessible routes, entrances, or toilet rooms would threaten or destroy the historic significance of the facility, the alternative requirements of Sections 405.1.1 through 405.1.5 for that element shall be permitted.

405.1.1 Site arrival points. At least one accessible route from a site arrival point to an accessible entrance shall be provided.

405.1.2 Multilevel buildings and facilities. An accessible route from an accessible entrance to public spaces on the level of the accessible entrance shall be provided.

405.1.3 Entrances. Where an entrance cannot be made accessible in accordance with Section 404.4.1, an accessible entrance that is unlocked while the building is occupied shall be provided or a locked accessible entrance with a notification system or remote monitoring shall be provided.

Signs complying with Section 1112 of the VCC shall be provided at the primary entrances and the accessible entrance.

405.1.4 Toilet and bathing facilities. Where toilet rooms are provided, at least one accessible single-user, family, or assisted-use toilet or bathing room complying with Section 1110.2.1 of the VCC and Section 403.2.1 of the International Plumbing Code shall be provided.

405.1.5 Type B units. Type B dwelling or sleeping units required by Section 1108 of the VCC are not required to be provided in historic buildings or structures.

13VAC5-63-433. Chapter 5 Repairs.

Replace Chapter 5 of the IEBC with the following:

1. Section 501 General.

501.1 Scope. Repairs, including the patching, restoration, or replacement of damaged materials, elements, equipment, or fixtures shall comply with the requirements of this chapter. Repairs to historic buildings need only comply with Chapter 9. Portions of the existing building or structure not being repaired shall not be required to comply with the requirements of this code applicable to newly constructed buildings or structures. Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the provisions of Chapter 6. Routine maintenance required by Section 302, 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 repairs in this section.

501.2 Conformance. The work shall not make the building less conforming than it was before the repair was undertaken. Repairs shall be done in a manner that maintains the following:

1. Level of fire protection that is existing.
2. Level of protection that is existing for the means of egress.
3. Level of accessibility that is existing.

2. Section 502 Structural.

502.1 General. Structural repairs shall be in compliance with this section and Section 501.2. Regardless of the scope of repair, new structural members and connections used for repair or rehabilitation shall comply with the detailing provisions of the VCC for new buildings of similar structure, purpose, and location.

502.1.1 Structural concrete. Assessment, design, and repairs to structural concrete shall be in accordance with ACI CODE 562. Assessment and design of repairs of seismic force-resisting concrete elements that result in changes of strength, stiffness, or ductility from predamage conditions shall be in accordance with Section 305.

502.2 Less than substantial structural damage. For damage less than substantial structural damage, repairs shall be allowed that restore the building to its predamage state.

502.3 Substantial structural damage to vertical elements of the lateral force-resisting system. A building that has sustained substantial structural damage to the vertical elements of its lateral force-resisting system shall be evaluated in accordance with Section 502.3.1 and either repaired in accordance with Section 502.3.2 or repaired and rehabilitated in accordance with Section 502.3.3, depending on the results of the evaluation.

Exceptions:

1. Buildings assigned to Seismic Design Category A, B, or C whose substantial structural damage was not caused by earthquake need not be evaluated or rehabilitated for load combinations that include earthquake effects.

2. One-family and two-family dwellings need not be evaluated or rehabilitated for load combinations that include earthquake effects.

502.3.1 Evaluation. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the building official. The evaluation shall establish whether the damaged building would comply with the provisions of the VCC for load combinations that include wind or earthquake effects if repaired to its predamage state, except that the seismic forces shall be the reduced VCC-level seismic forces.

Wind loads for this evaluation shall be those prescribed in Section 1609 of the VCC. Earthquake loads for this evaluation, if required, shall be permitted to be 75% of those prescribed in Section 1613 of the VCC. Alternatively, compliance with ASCE 41, using the performance objective in Table 305.2.2 for the applicable risk category, shall be deemed to meet the earthquake evaluation requirement.

502.3.2 Extent of repair for compliant buildings. If the evaluation establishes that the building in its predamage condition complies with the provisions of Section 502.3.1, then repairs shall be permitted that restore the building to its predamage state.

502.3.3 Extent of repair for noncompliant buildings. If the evaluation does not establish that the building in its predamage condition complies with the provisions of Section 502.3.1, then the building shall be rehabilitated to comply with the provisions of this section. The wind loads for the repair shall be as required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance with the VCC. The earthquake loads for this rehabilitation design shall be those required by the building code in effect at the time of original construction, but not less than the reduced VCC-level seismic forces. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the VCC for new buildings of similar structure, purpose, and location. Alternatively, compliance with ASCE 41, using the performance objective in Table 305.2.2 for the applicable risk category shall be deemed to meet the earthquake rehabilitation requirement.

502.4 Substantial structural damage to gravity load-carrying components. Gravity load-carrying components that have sustained substantial structural damage shall be rehabilitated to comply with the applicable provisions for dead and live loads in the VCC. Snow loads shall be considered if the substantial structural damage was caused by or related to snow load effects. Existing gravity load carrying structural elements shall be permitted to be designed for live loads approved prior to the damage. If the approved live load is less than that required by Section 1607 of the VCC, the area designed for the nonconforming live load shall be posted with placards of approved design indicating the approved live load. Nondamaged gravity load-carrying components that receive dead, live, or snow loads from rehabilitated components shall also be rehabilitated if required to comply with the design

loads of the rehabilitation design or shown to have the capacity to carry the design loads of the rehabilitation design. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the VCC for new buildings of similar structure purpose and location.

502.4.1 Lateral force-resisting elements. Regardless of the level of damage to gravity elements of the lateral force-resisting system, if substantial structural damage to gravity load-carrying components was caused primarily by wind or earthquake effects, then the building shall be evaluated in accordance with Section 502.3.1 and, if noncompliant, rehabilitated in accordance with Section 502.3.3.

Exceptions:

1. Buildings assigned to Seismic Design Category A, B, or C whose substantial structural damage was not caused by earthquake need not be evaluated or rehabilitated for load combinations that include earthquake effects.

2. One-family and two-family dwellings need not be evaluated or rehabilitated for load combinations that include earthquake effects.

3. Section 503 Flood Hazard Areas.

503.1 Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3 of the VCC or Section ~~R322~~ R306 of the International Residential Code, as applicable, any repair that constitutes substantial improvement or repair of substantial damage of the existing building or structure shall comply with the flood design requirements for new construction and all aspects of the existing building or structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the VCC or Section ~~R322~~ R306 of the International Residential Code, as applicable, any repairs that do not constitute substantial improvement or repair of substantial damage of the existing building or structure are not required to comply with the flood design requirements for new construction.

4. Section 504 Electrical.

504.1 Material. Existing electrical wiring and equipment undergoing repair shall be allowed to be repaired or replaced with like material.

504.1.1 Receptacles. Replacement of electrical receptacles shall comply with the applicable requirements of Section 406.4(D) of NFPA 70.

504.1.2 Plug fuses. Plug fuses of the Edison-base type shall be used for replacements only where there is no evidence of over fusing or tampering per applicable requirements of Section 240.51(B) of NFPA 70.

504.1.3 Nongrounding-type receptacles. For replacement of nongrounding-type receptacles with grounding-type receptacles and for branch circuits that do not have an equipment grounding conductor in the branch circuitry, the grounding conductor of a grounding-type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system or to any accessible point on the grounding electrode conductor in accordance with Section 250.130(C) of NFPA 70.

504.1.4 Group I-2 receptacles. Non-"hospital grade" receptacles in patient bed locations of Group I-2 shall be replaced with "hospital grade" receptacles, as required by NFPA 99 and Article 517 of NFPA 70.

504.1.5 Grounding of appliances. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the existing branch circuit for these appliances shall be permitted to be grounded to the grounded circuit conductor in accordance with Section 250.140 of NFPA 70.

5. Section 505 Mechanical.

505.1 General. Existing mechanical systems undergoing repair shall not make the building less conforming than it was before the repair was undertaken.

505.2 Mechanical draft systems for manually fired appliances and fireplaces. A mechanical draft system shall be permitted to be used with manually fired appliances and fireplaces where such a system complies with all of the following requirements:

1. The mechanical draft device shall be listed and installed in accordance with the manufacturer's installation instructions.

2. A device shall be installed that produces visible and audible warning upon failure of the mechanical draft device or loss of electrical power at any time that the mechanical draft device is turned on. This device shall be equipped with a battery backup if it receives power from the building wiring.

3. A smoke detector shall be installed in the room with the appliance or fireplace. This device shall be equipped with a battery backup if it receives power from the building wiring.

6. Section 506 Plumbing.

506.1 Materials. Plumbing materials and supplies shall not be used for repairs that are prohibited in the International Plumbing Code.

506.2 ~~Water closet replacement~~ Maximum flow and water consumption. The maximum water flow and consumption ~~flow rates and quantities~~ for all replaced ~~water closets~~ plumbing fixtures shall ~~be 1.6 gallons (6 L) per flushing cycle~~ comply with the Virginia Plumbing Code or Virginia Residential Code as applicable.

~~Exception: Blowout-design water closets 3.5 gallons (13 L) per flushing cycle.~~

7. Section 507 Energy Conservation.

507.1 General. Except as permitted by Sections 302.1 and 501.1, repairs shall comply with the VECC.

Exception: Where a building was constructed to comply with the requirements of the building code under which the building or structure or the affected portion thereof was built or as previously approved by the building official, repairs need not comply with the VECC, provided the repairs, as documented, do not result in reduced energy efficiency.

507.2 Application. For the purposes of this section, the following shall be considered repairs:

1. Glass-only replacements in an existing sash and frame.

2. Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving door, provided that an existing vestibule that separates a conditioned space from the exterior shall not be removed.

3. Repairs where only the bulb, the ballast, or both within the existing luminaires in a space are replaced, provided that the replacement does not increase the installed interior lighting power.

13VAC5-63-433.3. Chapter 6 Alterations.

Replace Chapter 6 of the IEBC with the following:

1. Section 601 General.

601.1 General. Except as modified in Chapter 9 or this chapter, alterations to any building or structure shall comply with the requirements of the VCC for new construction. Alterations shall be such that the existing building or structure is no less conforming to the provisions of the VCC than the existing building or structure was prior to the alteration. Portions of the building or structure not being altered shall not be required to comply with the requirements of the VCC.

Exceptions:

1. Any stairway replacing an existing stairway shall not be required to comply with the requirements of Section 1011 of the VCC where the existing space and construction does not allow a reduction in pitch or slope.

2. Handrails otherwise required to comply with Section 1011.11 of the VCC shall not be required to comply with the requirements of Section ~~1014.6~~ 1014.7 of the VCC regarding full extension of the handrails where such extensions would be hazardous due to plan configuration.

3. Where the current level of safety or sanitation is proposed to be reduced, the portion altered shall conform to the requirements of the VCC.

4. Alterations 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. New structural

members added as part of the alteration shall comply with the VCC. Alterations of existing buildings in flood hazard areas shall comply with Section 601.3.

601.2 Levels of alterations. Alterations to any building or structure shall be classified as the following:

601.2.1 Level 1. Level 1 alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose or the removal without replacement of materials, elements, equipment, or fixtures. Level 1 alterations shall comply with the applicable provisions of Section 602.

601.2.2 Level 2. Level 2 alterations shall comply with the applicable provisions of Sections 602 and 603 and shall include the following:

1. The addition or elimination of any door or window.
2. The addition or elimination of any wall, floor, or ceiling assembly.
3. The reconfiguration or extension of any system.
4. The installation of any additional equipment, materials, elements, or fixtures.

601.3 Flood hazard areas. In flood hazard areas, alterations that constitute substantial improvement shall require that the building comply with Section 1612 of the VCC or Section ~~R322~~ R306 of the International Residential Code, as applicable.

601.4 Energy conservation. Except as modified by this section, alterations to an existing building, building system, or structure shall conform to the applicable provisions of the Virginia Energy Conservation Code or Virginia Residential Code as they relate to new construction without requiring the unaltered portions of the existing building, building system, or structure to comply with the VECC or VRC.

601.4.1 Opaque walls. Where the existing stud wall cavity that is part of the thermal envelope is exposed during the alteration, such exposed cavities between framing members shall be filled with insulation having a minimum nominal value of not less than R-3 per inch or filled to the minimum prescriptive insulation requirement in Table R402.1.3 or Table C402.1.3 of the VECC.

Exception: Where less than 60 square feet (5.574 m^2) of the existing stud cavities that are part of the thermal envelope are exposed.

601.4.2 Floors. Where the existing framed floor cavity that is part of the thermal envelope is exposed during the alteration, such exposed cavities between framing members shall be filled with insulation having a minimum nominal value of not less than R-3 per inch or filled to the minimum prescriptive insulation requirement in Table R402.1.3 or Table C402.1.3 of the VECC.

Exception: Where less than 60 square feet (5.574 m^2) of the existing framed floor cavities that are part of the thermal envelope are exposed.

601.4.3 Ceilings and vented attics. Where the existing rafter cavity that is part of the thermal envelope is exposed during the alteration, such exposed cavities between framing members shall be filled with insulation having a minimum nominal value of not less than R-3 per inch or filled to the minimum prescriptive insulation requirement in Table R402.1.3 or Table C402.1.3 of the VECC. Where the existing framed floor or truss bottom chord cavity of a vented attic is exposed during the alteration, the exposed cavities shall be filled with insulation having a minimum nominal value of not less than R-3 per inch or filled to the minimum prescriptive insulation requirement in Table R402.1.3 or Table C402.1.3 of the VECC. If the existing insulation laying on such vented attic floor is removed, such insulation shall be replaced with insulation complying with the minimum prescriptive insulation requirement in Table R402.1.3 or Table C402.1.3 of the VECC.

Exception: Where less than 60 square feet (5.574 m^2) of the existing rafter, framed vented attic floor, or truss bottom chord cavities that are part of the thermal envelope is exposed.

601.4.4 Fenestration. Where an existing fenestration unit is replaced, the replacement fenestration unit shall comply with the requirements for U-factor and SHGC as specified in Table R402.1.2 or Table ~~C402.4~~ C402.5 of the VECC, as applicable. Where more than one fenestration unit is to be replaced, an area-weighted average of the U-factor, SHGC, or both of all replacement fenestration units shall be permitted.

601.4.4.1 Converting fenestration unit to opaque wall. Where existing fenestration units are converted into an opaque exterior wall assembly, the new portion of wall shall comply with Section 601.4.1.

601.4.5 Roof replacement. Roof replacements shall comply with Section C402.2.1 and Section C402.1.2, C402.1.3, C402.1.4, ~~C402.1.5,~~ or C407 of the VECC where all of the following conditions are met. For purposes of this section, roof area shall mean an area of the existing roof of the same building that is bounded by exterior walls, different roof levels, roof edges or perimeters, roof dividers, building expansion joints, or parapets.

1. The roof replacement exceeds 75% or 30,000 square feet (2787.1 m^2) of the roof area, whichever is less.
2. The roof assembly is part of the building thermal envelope, as defined by the VECC.
3. The roof assembly contains insulation entirely above the roof deck.

601.4.6 Lighting. Lighting alterations shall comply with Section 601.4.6.1 or 601.4.6.2, as applicable.

601.4.6.1 Commercial Lighting. Altered commercial lighting shall comply with Section C405 of the VECC.

Exception: Alterations that replace less than 10% of the luminaires within a space, provided the replacement luminaires do not increase the existing interior lighting power as determined by Section C405.3.1 of the VECC.

601.4.6.2 Residential lighting. Altered residential lighting shall comply with Section R404 of the VECC.

Exception: Alterations that replace less than 50% of the total luminaires within a space, provided the replacement luminaires do not decrease the efficacy of the lighting equipment as required by Section R404.1 of the VECC.

601.4.7 Ducts. In R-5 occupancies, where ducts from an existing heating and cooling system are extended, such duct systems with less than 40 linear feet (12.19 m) in unconditioned spaces shall not be required to be tested in accordance with Section ~~R403.3.3~~ R403.3.5 of the VECC.

601.4.8 System sizing. Altered heating and cooling equipment shall comply with Section 601.4.8.1 or 601.4.8.2 ~~through~~ and 601.4.8.2.1, as applicable.

601.4.8.1 Commercial system sizing. New commercial heating and cooling equipment that is part of an alteration shall be sized in accordance with Section C403.1.1 of the VECC based on the existing building features as modified by the alteration.

Exception: Where it has been demonstrated to the code official that compliance with this section would result in heating or cooling equipment that is incompatible with the rest of the heating or cooling system.

601.4.8.2 Residential heating and cooling systems. New residential heating and cooling and duct systems that are part of the alteration shall comply with Section R403 of the VECC and this section.

Exception: Where ducts from an existing heating and cooling system are extended to an addition.

601.4.8.2.1 Residential system sizing. New residential heating and cooling equipment that is part of an alteration shall be sized in accordance with Section R403.7 of the VECC based on the existing building features as modified by the alteration.

601.5 Accessibility. Accessibility shall be provided in accordance with applicable provisions of Section 404.

2. Section 602 Alteration - Level 1.

602.1 Scope. Level 1 alterations as described in Section 601.2.1 shall comply with the requirements of this section.

602.2 Conformance. Alterations shall be done in a manner that maintains the following:

1. Level of fire protection that is existing.
2. Level of protection that is existing for the means of egress.

602.3 Building elements and materials. Building elements and materials shall comply with the applicable provisions of Sections 302 and 602.3.1 through 602.3.3.

602.3.1 Interior finishes and trim. All newly installed interior finish and trim materials and wall, floor, and ceiling finishes shall comply with Chapter 8 of the VCC.

602.3.2 Materials and methods. All new building elements and materials shall comply with the materials and methods requirements in the VCC, International Energy Conservation Code, International Mechanical Code, and International Plumbing Code, as applicable, that specify material standards,

detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

602.3.2.1 Reroofing. Materials and methods of application used for recovering or replacing an existing roof covering shall comply with Chapter 15 of the VCC, except as modified by Section 302.1 and this section.

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 (2.0% slope) in Section 1507 of the VCC for roofs that provide positive roof drainage.

2. Recovering or replacing an existing roof covering shall not be required to meet the requirement of secondary (emergency overflow) drains or scuppers in Section 1502 of the VCC for roofs that provide positive roof drainage. For the purposes of this exception, existing secondary drainage or scupper systems required in accordance with the VCC shall not be removed unless they are replaced by secondary drains or scuppers designed and installed in accordance with Section 1502 of the VCC.

3. 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 VCC.

602.3.2.1.1 Roof recover permitted. 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. Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface is covered with gypsum board, mineral fiber, glass fiber, or other approved materials securely fastened in place.

3. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tearoff of existing roof coverings.

4. Where the new roof covering is installed in accordance with the roof covering manufacturer's approved instructions.

602.3.2.1.2 Roof recover not permitted. 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.

602.3.2.1.3 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 counter-flashings shall not be reinstalled where rusted, damaged, or deteriorated. Aggregate surfacing materials shall not be reinstalled. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

602.3.2.2 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 systems.

Exception: Structural elements where the additional dead load from the roofing or equipment does not increase the force in the element by more than 5.0%; or where the addition of a second layer of roof covering weighing three pounds per square foot (0.1437kN/m^2) or less over an existing, single layer of roof covering.

602.3.3 International Fuel Gas Code. The following sections of the International Fuel Gas Code shall constitute the fuel gas materials and methods requirements for Level 1 alterations.

1. All of Chapter 3, entitled "General Regulations," except Sections 303.7 and 306.

2. All of Chapter 4, entitled "Gas Piping Installations," except Sections 401.8 and 402.3. Sections 401.8 and 402.3 shall apply when the work being performed increases the load on the system such that the existing pipe does not meet the size required by code. Existing systems that are modified shall not require resizing as long as the load on the system is not increased and the system length is not increased even if the altered system does not meet code minimums.

3. All of Chapter 5, entitled "Chimneys and Vents."

4. All of Chapter 6, entitled "Specific Appliances."

3. Section 603 Alteration - Level 2.

603.1 Scope. Level 2 alterations as described in Section 601.2.2 shall comply with the requirements of this section.

Exception: Buildings in which the alteration is exclusively the result of compliance with the accessibility requirements of Section 404.3 shall be permitted to comply with Section 602.

603.2 Level 1 alteration compliance. In addition to the requirements of this section, all alterations shall comply with the applicable requirements of Section 602.

603.3 Compliance. All new construction elements, components, systems, and spaces shall comply with the requirements of the VCC.

Exceptions:

1. Windows may be added without requiring compliance with the light and ventilation requirements of the VCC.

2. Where an approved automatic sprinkler system is installed throughout the story, the required fire-resistance rating for any corridor located on the story shall be permitted to be reduced in accordance with the VCC. In order to be considered for a corridor rating reduction, such system shall provide coverage for the stairway landings serving the floor and the intermediate landings immediately below.

3. In other than Groups A and H occupancies, the maximum length of a newly constructed or extended dead-end corridor shall not exceed 50 feet (15240 mm) on floors equipped with an automatic sprinkler system installed in accordance with the VCC.

4. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be seven feet (2134 mm).

5. Where provided in below-grade transportation stations, new escalators shall be permitted to have a clear width of less than 32 inches (815 mm).

603.4 Fire-resistance ratings. In buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the VCC has been added and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code.

603.5 Mechanical. In mechanically ventilated spaces, existing mechanical ventilation systems that are altered, reconfigured, or extended shall provide not less than five cubic feet per minute (cfm) (0.0024 m^3/s) per person of outdoor air and not less than 15 cfm (0.0071 m^3/s) of ventilation air per person or not less than the amount of ventilation air determined by the Indoor Air Quality Procedure of ASHRAE 62.1.

603.5.1 Local exhaust. All newly introduced devices, equipment, or operations that produce airborne particulate matter, odors, fumes, vapor, combustion products, gaseous contaminants, pathogenic and allergenic organisms, and microbial contaminants in such quantities as to affect adversely or impair health or cause discomfort to occupants shall be provided with local exhaust.

603.7 Structural. Structural elements and systems within buildings undergoing Level 2 alterations shall comply with Sections 603.7.1 through 603.7.6.

603.7.1 New structural elements. New structural elements in alterations, including connections and anchorage, shall comply with the VCC.

603.7.2 Minimum design loads. The minimum design loads on existing elements of a structure that do not support additional loads as a result of an alteration shall be the loads applicable at the time the building was constructed.

603.7.3 Existing structural elements carrying gravity loads. Any existing gravity load-carrying structural element for which an alteration causes an increase in design gravity load of more than 5.0% shall be strengthened, supplemented, replaced, or otherwise altered as needed to carry the increased gravity load required by the VCC for new structures. Any existing gravity load-carrying structural element whose gravity load-carrying capacity is decreased as part of the alteration shall be shown to have the capacity to resist the applicable design gravity loads required by the VCC for new structures.

Exception: Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the existing building and its alteration comply with the conventional light-frame construction methods of the VCC or the provisions of the International Residential Code.

603.7.3.1 Design live load. Where the alteration does not result in increased design live load, existing gravity load-carrying structural elements shall be permitted to be evaluated and designed for live loads approved prior to the alteration. If the approved live load is less than that required by Section 1607 of the VCC, the area designed for the nonconforming live load shall be posted with placards of approved design indicating the approved live load. Where the alteration does result in increased design live load, the live load required by Section 1607 of the VCC shall be used.

603.7.4 Existing structural elements resisting lateral loads. Except as permitted by Section 603.7.5, where the alteration increases design lateral loads in accordance with Section 1609 or 1613 of the VCC, where the alteration results in a prohibited structural irregularity as defined in ASCE 7, or where the alteration decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall be shown to meet the requirements of Sections 1609 and 1613 of the VCC. For purposes of this section, compliance with ASCE 41, using a Tier 3 procedure and the two-level performance objective in Table 305.2.2 for the applicable risk category, shall be deemed to meet the requirements of Section 1613 of the VCC.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10% greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with VCC Sections 1609 and 1613. Reduced VCC level seismic forces in accordance with Section 305.2.2 shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces, and capacities shall account for the cumulative effects of additions and alterations since original construction.

2. Buildings of Group R occupancy with no more than five dwelling or sleeping units used solely for residential purposes that are altered based on the conventional light-frame construction methods of the VCC or in compliance with the provisions of the IRC.

3. Where such alterations involve only the lowest story of a building and the change of occupancy provisions of Chapter 7 do not apply, only the lateral force-resisting components in and below that story need comply with this section.

603.7.5 Voluntary lateral force-resisting system alterations. Alterations of existing structural elements and additions of new structural elements that are initiated for the purpose of increasing the lateral force-resisting strength or stiffness of an existing structure and that are not required by other sections of this code shall not be required to be designed for forces conforming to the VCC, provided that an engineering analysis is submitted to show that:

1. The capacity of existing structural elements required to resist forces is not reduced;

2. The lateral loading to existing structural elements is not increased either beyond their capacity or more than 10%;

3. New structural elements are detailed and connected to the existing structural elements as required by the VCC;

4. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the VCC; and

5. Voluntary alterations to lateral force-resisting systems conducted in accordance with Appendix A and the referenced standards of this code shall be permitted.

603.7.6 Voluntary seismic improvements. Alterations to existing structural elements or additions of new structural elements that are not otherwise required by this chapter and are initiated for the purpose of improving the performance of the seismic force resisting system of an existing structure or the performance of seismic bracing or anchorage of existing nonstructural elements shall be permitted, provided that an engineering analysis is submitted demonstrating the following:

1. The altered structure and the altered nonstructural elements are no less conforming to the provisions of the VCC with respect to earthquake design than they were prior to the alteration.

2. New structural elements are detailed as required for new construction.

3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required for new construction.

4. The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

13VAC5-63-433.5. Chapter 7 Change of occupancy.

Replace Chapter 7 of the IEBC with the following:

1. Section 701 General.

701.1 Scope. The provisions of this chapter shall apply where a change of occupancy occurs, except as modified by Section 906 for historic buildings. Compliance with the current VCC for the change of occupancy shall only be required as prescribed in this chapter. Compliance shall be only as necessary to meet the specific provisions of the applicable International Codes and is not intended to require the entire building be brought into compliance.

Exception: Chapter 14 shall be permitted as a compliance alternative to this chapter for a change of occupancy to buildings that will not continue to be or are not proposed to be Institutional Group I occupancies, High-Hazard Group H occupancies, or Residential Group R-5.

701.2 Work undertaken in connection with a change of occupancy. Any repairs, alterations, or additions undertaken in connection with a change of occupancy shall conform to the applicable requirements for the work as classified in this code and as modified by this chapter.

2. Section 702 Special Use and Occupancy.

702.1 Compliance with the building code. Where a building undergoes a change of occupancy to one of the special use or occupancy categories described in Chapter 4 of the VCC, the building shall comply with all of the requirements of Chapter 4 of the VCC applicable to the special use or occupancy.

<u>702.2 Alterations or additions. Alterations or additions to buildings that convert the building to types, or create building features, within the scope of Chapter 4 of the VCC shall conform to the applicable requirements for the work as classified in this code and as modified by this chapter.</u>

~~702.2~~ <u>702.3</u> Incidental uses. Where a portion of a building undergoes a change of occupancy to one of the incidental uses listed in Table 509 of the VCC, the incidental use shall comply with the applicable requirements of Section 509 of the VCC.

3. Section 703 Building Elements and Materials.

703.1 Interior finish. In areas of the building undergoing a change of occupancy classification, the interior finish of walls and ceilings shall comply with the requirements of the VCC for the new occupancy classification.

703.2 Enclosure of vertical openings. When a change of occupancy classification is made to a higher hazard category as shown in Table 705.2, protection of existing vertical openings shall be in accordance with Sections 703.2.1 through 703.2.3.

703.2.1 Stairways. Interior stairways shall be protected as required by Section 705.1.

703.2.2 Other vertical openings. Interior vertical openings, other than stairways, within the area of the change of occupancy shall be protected as required by the VCC.

Exceptions:

1. Existing one-hour interior shaft enclosures shall be accepted where a higher rating is required.

2. Vertical openings, other than stairways, in buildings of other than Group I occupancy and connecting less than six stories shall not be required to be enclosed and are permitted if the entire building is provided with an approved automatic sprinkler system.

703.2.3 Shaft openings. All openings into existing vertical shaft enclosures shall be protected by fire assemblies having a fire protection rating of not less than one hour and shall be maintained self-closing or shall be automatic-closing by actuation of a smoke detector. All other openings shall be fire protected in an approved manner. Existing fusible link-type automatic door-closing devices shall be permitted in all shafts except stairways if the fusible link rating does not exceed 135°F (57°C).

4. Section 704 Fire Protection.

704.1 Fire protection systems. Fire protection systems shall be provided in accordance with Sections 704.2 through 704.4.

704.2 Fire sprinkler system. Where a building undergoes a change of occupancy that requires an automatic fire sprinkler system to be provided based on the new occupancy in accordance with Section 903 of the VCC, such automatic fire sprinkler system shall be provided throughout the area where the change of occupancy occurs.

704.3 Fire alarm and detection system. Where a building undergoes a change of occupancy that requires a fire alarm and detection system to be provided based on the new occupancy in accordance with Section 907 of the VCC, such fire alarm and detection system shall be provided throughout the area where the change of occupancy occurs. Existing alarm notification appliances shall be automatically activated throughout the building. Where the building is not equipped with a fire alarm system, alarm notification appliances shall be provided throughout the area where the change of occupancy occurs in accordance with Section 907 of the VCC as required for new construction.

704.4 Standpipe system. Where a building undergoes a change of occupancy that requires a standpipe system to be provided based on the new occupancy in accordance with Section 905 of the VCC, such standpipe system shall be provided to serve the area where the change of occupancy occurs.

5. Section 705 Means of Egress.

705.1 General. Means of egress in buildings undergoing a change of occupancy shall comply with Sections 705.2 through 705.4.

705.2 Means of egress, hazards. Hazard categories in regard to life safety and means of egress shall be in accordance with Table 705.2.

TABLE 705.2
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, R-5
5 (Lowest Hazard)	F-2, S-2, U

705.3 Means of egress for change to higher hazard category. When a change of occupancy classification is made to a higher hazard category (lower number) as shown in Table 705.2, the means of egress serving the area of the change of occupancy shall comply with the requirements of Chapter 10 of the VCC, except as modified in Sections 705.3.1 through 705.3.7.

705.3.1 Corridor fire-resistance ratings. The following exceptions apply to the fire-resistance rated corridor provisions in the VCC:

1. Existing corridor walls constructed on both sides of wood lath and plaster in good condition or 1/2-inch-thick (12.7 mm) gypsum wallboard are equivalent to a one-hour fire-resistance rating. Such walls shall either terminate at the underside of a ceiling of equivalent construction or extend to the underside of the floor or roof next above.

2. Dwelling unit or sleeping unit corridor doors and transom openings are permitted to comply with any of the following:

2.1 Be at least 1-3/8-inch (35 mm) solid-core wood or approved equivalent, shall not have any glass panels other than approved wired glass or other approved glazing material in metal frames, and shall be equipped with approved door closers.

2.2 Meet the requirements of "Guidelines on Fire Ratings of Archaic Materials and Assemblies" (VEBC Resource A) for a rating of 15 minutes or more.

2.3 In buildings protected throughout with an approved automatic sprinkler system, resist smoke, be reasonably tight fitting, and not contain louvers.

2.4 In group homes with a maximum of 15 occupants and that are protected with an approved automatic smoke detection system, closing devices may be omitted.

2.5 Transoms in corridor walls shall be either glazed with 1/4-inch (6.4 mm) wired glass set in metal frames or other glazing assemblies having a fire-protection rating as required for the door and permanently secured in the closed position or sealed with materials consistent with the corridor construction.

3. Openings in a corridor and any window in a corridor not opening to the outside air shall be sealed with materials consistent with the corridor construction.

705.3.2 Dead-end corridors. Dead-end corridors shall not exceed 35 feet (10670 mm).

Exceptions:

1. Where dead-end corridors of greater length are permitted by the VCC.

2. In other than Groups A and H occupancies, the maximum length of an existing dead-end corridor shall be 50 feet (15240 mm) in buildings equipped throughout with an automatic fire alarm system installed in accordance with the VCC.

3. In other than Groups A and H occupancies, the maximum length of an existing dead-end corridor shall be 70 feet (21356 mm) in buildings equipped throughout with an automatic sprinkler system installed in accordance with the VCC.

4. In other than Groups A and H occupancies, the maximum length of an existing, newly constructed, or extended dead-end corridor shall not exceed 50 feet (15240 mm) on floors equipped with an automatic sprinkler system installed in accordance with the VCC.

705.3.3 Emergency escape and rescue openings. ~~An existing operable window with clear opening area not less than four square feet (0.38 m^2) and minimum opening height and width of 22 inches (559 mm) and 20 inches (508 mm), respectively, shall be accepted as an emergency~~ Emergency escape and rescue opening shall be in compliance with Section 307.

705.3.4 Fire escapes. Fire escapes shall be in compliance with Section 303.

705.3.5 Interior stairway fire-resistance ratings. Existing interior stairways connecting two or more floors shall be enclosed with approved assemblies having a fire-resistance rating of not less than one hour with approved opening protectives from the highest floor where the change of occupancy classification occurs to and including the level of exit discharge and all floors below.

Exceptions:

1. Where interior stairway enclosure is not required by the VCC.

2. Unenclosed existing stairways need not be enclosed in a continuous vertical shaft if each story is separated from other stories by one-hour fire-resistance-rated construction or approved wired glass set in steel frames and all exit corridors are sprinklered. The openings between the corridor and the occupant space shall have at least one sprinkler head above the openings on the tenant side. The sprinkler system shall be permitted to be supplied from the domestic water supply systems, provided the system is of adequate pressure, capacity, and sizing for the combined domestic and sprinkler requirements.

3. In Group A occupancies, a minimum 30-minute enclosure shall be permitted to protect all interior stairways not exceeding three stories.

4. In Group B occupancies, a minimum 30-minute enclosure shall not be permitted to protect all interior stairways not exceeding three stories. This enclosure shall not be required in the following locations:

4.1 Buildings not exceeding 3,000 square feet (279 m^2) per floor.

4.2 Buildings protected throughout by an approved automatic fire sprinkler system.

5. In Group E occupancies, the enclosure shall not be required for interior stairways not exceeding three stories when the building is protected throughout by an approved automatic fire sprinkler system.

6. In Group F occupancies, the enclosure shall not be required in the following locations:

6.1 Interior stairways not exceeding three stories.

6.2 Special purpose occupancies where necessary for manufacturing operations and direct access is provided to at least one protected stairway.

6.3 Buildings protected throughout by an approved automatic sprinkler system.

7. In Group H occupancies, the enclosure shall not be required for interior stairways not exceeding three stories where stairways are necessary for manufacturing operations and every floor level has direct access to at least two remote enclosed stairways or other approved exits.

8. In Group M occupancies, a minimum 30-minute enclosure shall be permitted to protect all interior stairways not exceeding three stories. This enclosure shall not be required in the following locations:

8.1 Stairways connecting only two floor levels.

8.2 Occupancies protected throughout by an approved automatic sprinkler system.

9. In Group R-1 occupancies, the enclosure shall not be required for interior stairways not exceeding three stories in the following locations:

9.1 Buildings protected throughout by an approved automatic sprinkler system.

9.2 Buildings with fewer than 25 dwelling units or sleeping units where every sleeping room above the second floor is provided with direct access to a fire escape or other approved second exit by means of an approved exterior door or window having a sill height of not greater than 44 inches (1118 mm) and where:

9.2.1 Any exit access corridor exceeding eight feet (2438 mm) in length that serves two means of egress, one of which is an unprotected vertical opening, has at least one of the means of egress separated from the vertical opening by a one-hour fire barrier; and

9.2.2 The building is protected throughout by an automatic fire alarm system, installed and supervised in accordance with the VCC.

10. In Group R-2 occupancies, a minimum 30-minute enclosure shall be permitted to protect interior stairways not exceeding three stories. This enclosure shall not be required in the following locations:

10.1 Interior stairways not exceeding two stories with not more than four dwelling units per floor.

10.2 Buildings protected throughout by an approved automatic sprinkler system.

10.3 Buildings with not more than four dwelling units per floor where every sleeping room above the second floor is provided with direct access to a fire escape or other approved second exit by means of an approved exterior door or window having a sill height of not greater than 44 inches (1118 mm), and the building is protected throughout by an automatic fire alarm system complying with the VCC.

11. Stairway enclosure is not required in one-family and two-family dwellings.

12. Group S occupancies where connecting not more than two floor levels or where connecting not more than three floor levels and the structure is equipped throughout with an approved automatic sprinkler system.

13. Group S occupancies where stairway protection is not required for open parking garages and ramps.

705.3.6 Stairway geometry. Existing stairways are not required to be altered to meet tread depth and riser height requirements of the VCC.

705.3.7 Stairway handrails. Existing stairways are required to have a VCC compliant handrail on one side up to a required egress width of 66 inches (1676 mm) and both sides when the required egress width exceeds 66 inches (1676 mm).

705.4 Means of egress for change of occupancy to equal or lower hazard category or without a change in classification. When a change of occupancy classification is made to an equal or lesser hazard category (higher number) as shown in Table 705.2 or a change of occupancy without a change of classification is made, the means of egress shall be deemed acceptable provided the means of egress serving the area of the change of occupancy meets the egress capacity and occupant load based means of egress provisions in Chapter 10 of the VCC for the new occupancy.

6. Section 706 Heights and Areas.

706.1 General. Heights and areas of buildings and structures undergoing a change of occupancy classification shall comply with Sections 706.2 through 706.5.

706.2 Heights and areas, hazards. Hazard categories in regard to height and area shall be in accordance with Table 706.2.

TABLE 706.2
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-2[a], R-4
3	E, F-1, S-1, M
4 (Lowest Hazard)	B, F-2, S-2, A-5, R-3, R-5, U

a. A building or portion of a building undergoing a change of occupancy classification to a Group R-2 occupancy shall be classified as category 3 where the building is protected throughout with an automatic sprinkler system in accordance Section 903.3.1.1 of the International Building Code.

706.3 Height and area for change to higher hazard category. When a change of occupancy classification is made to a higher hazard category as shown in Table 706.2, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the VCC for the new occupancy classification.

Exception: For high-rise buildings constructed in compliance with a previously issued permit, the type of construction reduction specified in Section 403.2.1 of the VCC is permitted. This shall include the reduction for columns. The high-rise building is required to be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the VCC.

706.3.1 Fire wall alternative. In other than Groups H, F-1, and S-1, fire barriers and horizontal assemblies constructed in accordance with Sections 707 and 711, respectively, of the VCC shall be permitted to be used in lieu of fire walls to subdivide the building into separate buildings for the purpose of complying with the area limitations required for the new occupancy where all of the following conditions are met:

1. The buildings are protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the International Building Code.

2. The maximum allowable area between fire barriers, horizontal assemblies, or any combination thereof shall not exceed the maximum allowable area determined in accordance with Chapter 5 of the VCC without an increase allowed for an automatic sprinkler system in accordance with Section 506 of the VCC.

3. The fire-resistance rating of the fire barriers and horizontal assemblies shall be not less than that specified for fire walls in Table 706.4 of the VCC.

Exception: Where horizontal assemblies are used to limit the maximum allowable area, the required fire-resistance rating of the horizontal assemblies shall be permitted to be reduced by one hour provided the height and number of stories increases allowed for an automatic sprinkler system by Section 504 of the VCC are not used for the buildings.

706.4 Height and area for change to equal or lesser hazard category. When a change of occupancy classification is made to an equal or lesser hazard category as shown in Table 706.2, the height and area of the existing building shall be deemed acceptable.

706.5 Fire barriers. When a change of occupancy classification is made to a higher hazard category as shown in Table 706.2, fire barriers in separated mixed use buildings shall comply with the fire-resistance requirements of the VCC.

Exception: Where the fire barriers are required to have a one-hour-fire-resistance rating, existing wood lath and plaster in good condition or existing 1/2-inch-thick (12.7 mm) gypsum wallboard shall be permitted.

7. Section 707 Exterior Wall Fire-Resistance Ratings.

707.1 Exterior wall fire-resistance ratings, hazards. Hazard categories in regard to fire-resistance ratings of exterior walls shall be in accordance with Table 707.1.

TABLE 707.1
EXPOSURE OF EXTERIOR WALLS HAZARD CATEGORIES

RELATIVE HAZARD	OCCUPANCY CLASSIFICATIONS
1 (Highest Hazard)	H
2	F-1, M, S-1
3	A, B, E, I, R
4 (Lowest Hazard)	F-2, S-2, U

707.2 Exterior wall rating for change of occupancy classification to a higher hazard category. When a change of occupancy classification is made to a higher hazard category as shown in Table 707.1, exterior walls shall have fire resistance and exterior opening protectives as required by the VCC.

707.3 Exterior wall rating for change of occupancy classification to an equal or lesser hazard category. When a change of occupancy classification is made to an equal or lesser hazard category as shown in Table 707.1, existing exterior walls, including openings, shall be accepted.

707.4 Opening protectives. Openings in exterior walls shall be protected as required by the VCC. Where openings in the exterior walls are required to be protected because of their distance from the lot line, the sum of the area of such openings shall not exceed 50% of the total area of the wall in each story.

Exceptions:

1. Where the VCC permits openings in excess of 50%.
2. Protected openings shall not be required in buildings of Group R occupancy that do not exceed three stories in height and that are located not less than three feet (914 mm) from the lot line.
3. Where exterior opening protectives are required, an automatic sprinkler system throughout may be substituted for opening protection.
4. Exterior opening protectives are not required when the change of occupancy group is to an equal or lower hazard classification in accordance with Table 707.1.

8. Section 708 Electrical and Lighting.

708.1 Special occupancies. Where a building undergoes a change of occupancy to one of the following special occupancies as described in NFPA 70, the electrical wiring and equipment of the building that contains the proposed occupancy shall comply with the applicable requirements of NFPA 70:

1. Hazardous locations.
2. Commercial garages, repair, and storage.
3. Aircraft hangars.
4. Gasoline dispensing and service stations.
5. Bulk storage plants.

6. Spray application, dipping, and coating processes.

7. Health care facilities.

8. Places of assembly.

9. Theaters, audience areas of motion picture and television studios, and similar locations.

10. Motion picture and television studios and similar locations.

11. Motion picture projectors.

12. Agricultural buildings.

708.2 Service upgrade. When a new occupancy is required to have a higher electrical load demand per NFPA 70 and the service cannot accommodate the increased demand, the service shall be upgraded to meet the requirements of NFPA 70 for the new occupancy.

708.3 Number of electrical outlets. Where a building undergoes a change of occupancy, the number of electrical outlets shall comply with NFPA 70 for the new occupancy.

708.4 Lighting. Lighting shall comply with the requirements of the VCC for the new occupancy.

9. Section 709 Mechanical and Ventilation.

709.1 Mechanical and ventilation requirements. Where a building undergoes a change of occupancy such that the new occupancy is subject to different kitchen exhaust requirements or to increased ventilation requirements in accordance with the International Mechanical Code, the new occupancy shall comply with the respective International Mechanical Code provisions.

10. Section 710 Plumbing.

710.1 Increased demand. Where a building or portion thereof undergoes a change of occupancy, such that the new occupancy is subject to increased or different plumbing fixture requirements or to increased water supply requirements in accordance with the International Plumbing Code, the new occupancy shall comply with the respective International Plumbing Code provisions.

Exception: In other than Group R or I occupancies or child care facilities classified as Group E, where the occupant load is increased by 20% or less in the area where the change of occupancy occurs, additional plumbing fixtures required based on the increased occupant load in quantities specified in the International Plumbing Code are not required.

710.2 Interceptor required. If the new occupancy will produce grease or oil-laden wastes, interceptors shall be provided as required in the International Plumbing Code.

710.3 Chemical wastes. If the new occupancy will produce chemical wastes, the following shall apply:

1. If the existing piping is not compatible with the chemical waste, the waste shall be neutralized prior to entering the drainage system, or the piping shall be changed to a compatible material.

2. No chemical waste shall discharge to a public sewer system without the approval of the sewage authority.

11. Section 711 Structural.

711.1 Gravity loads. Buildings subject to a change of occupancy where such change in the nature of occupancy results in higher uniform or concentrated loads based on Table 1607.1 of the VCC shall comply with the gravity load provisions of the VCC.

Exception: Structural elements whose stress is not increased by more than 5.0%.

711.2 Snow and wind loads. Buildings and structures subject to a change of occupancy where such change in the nature of occupancy results in higher wind or snow risk categories based on Table 1604.5 of the VCC shall be analyzed and shall comply with the applicable wind or snow load provisions of the VCC.

Exception: Where the new occupancy with a higher risk category is less than or equal to 10% of the total building floor area. The cumulative effect of the area of occupancy changes shall be considered for the purposes of this exception.

711.3 Seismic loads. Existing buildings with a change of occupancy shall comply with the seismic provisions of Sections 711.3.1 and 711.3.2.

711.3.1 Compliance with VCC-level seismic forces. Where a building is subject to a change of occupancy that results in the building being assigned to a higher risk category based on Table 1604.5

of the VCC, the building shall comply with the requirements for VCC-level seismic forces as specified in Section 305.2.1 for the new risk category.

Exceptions:

1. Specific detailing provisions required for a new structure are not required to be met where it can be shown that an equivalent level of performance and seismic safety is obtained for the applicable risk category based on the provision for reduced VCC-level seismic forces as specified in Section 305.2.2.

2. Where the area of the new occupancy with a higher hazard category is less than or equal to 10% of the total building floor area and the new occupancy is not classified as Risk Category IV. For the purposes of this exception, buildings occupied by two or more occupancies not included in the same risk category, shall be subject to the provisions of Section 1604.5.1 of the VCC. The cumulative effect of the area of occupancy changes shall be considered for the purposes of this exception.

3. Unreinforced masonry bearing wall buildings in Risk Category III when assigned to Seismic Design Category A or B shall be allowed to be strengthened to meet the requirements of Appendix A.

4. Specific seismic detailing requirements of Section 1613 of the VCC for a new structure shall not be required to be met where the seismic performance is shown to be equivalent to that of a new structure. A demonstration of equivalence shall consider the regularity, overstrength, redundancy, and ductility of the structure.

5. When a change of occupancy results in a structure being reclassified from Risk Category I or II to Risk Category III and the structure is located where the seismic coefficient, SDS, is less than 0.33, compliance with the seismic requirements of Section 1613 of the VCC is not required.

711.3.2 Access to Risk Category IV. Where a change of occupancy is such that compliance with Section 711.3.1 is required and the building is assigned to Risk Category IV, the operational access to the building shall not be through an adjacent structure unless that structure conforms to the requirements for Risk Category IV structures. Where operational access is less than 10 feet (3048 mm) from either an interior lot line or from another structure, access protection from potential falling debris shall be provided by the owner of the Risk Category IV structure.

12. Section 712 Accessibility.

712.1 General. Existing buildings that undergo a change of occupancy classification shall comply with Section 402.

13VAC5-63-434. Chapter 8 Additions.

Replace Chapter 8 of the IEBC with the following:

~~1.~~ A. Section 801 General.

801.1 Scope. Additions to any building or structure shall comply with the requirements of the VCC for new construction without requiring the existing building or structure to comply with any requirements of those codes or of these provisions, except as required by this chapter. Where an addition impacts the existing building or structure, that portion shall comply with this code. Where a fire wall that complies with Section 706 of the VCC is provided between the addition and the existing building, the addition shall be considered a separate building.

Note: Where one or more newly constructed fire walls that comply with Section 706 of the VCC are provided between an existing building, structure, or portions thereof and a new building, this chapter is not applicable per Section 102.2.3.

801.2 Creation or extension of nonconformity. An addition shall not create or extend any nonconformity in the existing building to which the addition is being made with regard to accessibility, structural strength, fire safety, means of egress, or the capacity of mechanical, plumbing, or electrical systems. Alterations to the existing building or structure shall be made so that the existing building or structure,

together with the addition, are no less conforming to the provisions of the VCC than the existing building or structure was prior to the addition.

Exceptions:

1. Existing buildings that are less than four stories above or less than four stories below grade plane are required to comply with Section 3002.4 of the VCC when the addition causes the building to be more than four stories above or more than four stories below grade plane.
2. Existing buildings that are four or more stories above, or four or more stories below grade plane and do not have elevators sized to accommodate an ambulance stretcher, compliance with Section 3002.4 of the VCC is required only for the addition for fire department emergency access to all floors of the addition where two or more stories are added.

801.3 Compliance with the building code. Alterations or additions to buildings that convert the building to types, or create building features, within the scope of Chapter 4 of the VCC shall conform to the applicable requirements for the work as classified in this code and as modified by this chapter.

Exceptions:

1. In existing buildings where the highest occupied floor or occupied roof is less than the height for a high-rise building compliance with section 403 of the VCC is required when the alteration or addition causes the building to become a high-rise building.
2. In existing buildings that are a high-rise building and do not have elevators sized to accommodate a fire service access elevator, compliance with Section 403.6.1 of the VCC is required only for the addition where two or more stories are added for fire department emergency access to all floors of the addition.

~~801.3~~ 801.4 Other work. Any repair or alteration work within an existing building to which an addition is being made shall comply with the applicable requirements for the work as classified in this code.

~~2.~~ B. Section 802 Heights and Areas.

802.1 Height limitations. No addition shall increase the height of an existing building beyond that permitted under the applicable provisions of Chapter 5 of the VCC for new buildings.

802.2 Area limitations. No addition shall increase the area of an existing building beyond that permitted under the applicable provisions of Chapter 5 of the VCC for new buildings unless fire separation as required by the VCC is provided.

Exceptions: The following shall be permitted beyond that permitted by the VCC.

1. In-filling of floor openings such as elevator and exit stairway shafts.
2. The addition of nonoccupiable spaces such as elevators, stairs, and vestibules.

802.3 Fire protection systems. Existing fire areas increased by the addition shall comply with Chapter 9 of the VCC.

~~3.~~ C. Section 803 Structural.

803.1 Compliance with the VCC. Additions to existing buildings or structures are new construction and shall comply with the VCC.

803.2 Existing structural elements carrying gravity load. Any existing gravity load-carrying structural element for which an addition and its related alterations cause an increase in design gravity load of more than 5.0% shall be strengthened, supplemented, replaced, or otherwise altered as needed to carry the increased gravity load required by the VCC for new structures. Any existing gravity load-carrying structural element whose gravity load-carrying capacity is decreased shall be considered an altered element subject to the requirements of Section 603.7.3. Any existing element that will form part of the lateral load path for any part of the addition shall be considered an existing lateral load-carrying structural element subject to the requirements of Section 803.3.

Exception: Buildings of Group R occupancy with no more than five dwelling units or sleeping units used solely for residential purposes where the existing building and the addition comply with the conventional light-frame construction methods of the VCC or the provisions of the International Residential Code.

803.2.1 Design live load. Where the addition does not result in increased design live load, existing gravity load-carrying structural elements shall be permitted to be evaluated and designed for live loads

approved prior to the addition. If the approved live load is less than that required by Section 1607 of the VCC, the area designed for the nonconforming live load shall be posted with placards of approved design indicating the approved live load. Where the addition does result in increased design live load, the live load required by Section 1607 of the VCC shall be used.

803.3 Existing structural elements carrying lateral load. Where the addition is structurally independent of the existing structure, existing lateral load-carrying structural elements shall be permitted to remain unaltered. Where the addition is not structurally independent of the existing structure, the existing structure and its addition acting together as a single structure shall be shown to meet the requirements of Sections 1609 and 1613 of the VCC. For purposes of this section, compliance with ASCE 41, using a Tier 3 procedure and the two-level performance objective in Table 305.2.1 for the applicable risk category, shall be deemed to meet the requirements of Section 1613.

Exceptions:

1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the addition considered is not more than 10% greater than its demand-capacity ratio with the addition ignored shall be permitted to remain unaltered. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces, and capacities shall account for the cumulative effects of additions and alterations since original construction. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations involving VCC-level seismic forces in accordance with Section 305.2.1.

2. Buildings of Group R occupancy with no more than five dwelling or sleeping units used solely for residential purposes where the existing building and the addition comply with the conventional light-frame construction methods of the VCC or the provisions of the International Residential Code.

3. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10% of the roof dead load. For the purposes of this exception, "roof" shall mean the roof level above a particular story.

803.4 Voluntary addition of structural elements to improve the lateral force-resisting system. Voluntary addition of structural elements to improve the lateral force-resisting system of an existing building shall comply with Section 603.7.5.

803.5 Snow drift loads. Any structural element of an existing building subject to additional loads from the effects of snow drift as a result of an addition shall comply with the VCC.

Exceptions:

1. Structural elements whose stress is not increased by more than 5.0%.

2. Buildings of Group R occupancy with no more than five dwelling units or sleeping units used solely for residential purposes where the existing building and the addition comply with the conventional light-frame construction methods of the VCC or the provisions of the International Residential Code.

4. D. Section 804 Flood Hazard Areas.

804.1 Flood hazard areas. Additions and foundations in flood hazard areas shall comply with the following requirements:

1. For horizontal additions that are structurally interconnected to the existing building:

1.1. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 of the International Building Code or Section R322 R306 of the International Residential Code, as applicable.

1.2. If the addition constitutes substantial improvement, the existing building and the addition shall comply with Section 1612 of the International Building Code or Section R322 R306 of the International Residential Code, as applicable.

2. For horizontal additions that are not structurally interconnected to the existing building:

2.1. The addition shall comply with Section 1612 of the International Building Code or Section ~~R322~~ R306 of the International Residential Code, as applicable.

2.2. If the addition and all other proposed work when combined constitute substantial improvement, the existing building and the addition shall comply with Section 1612 of the International Building Code or Section ~~R322~~ R306 of the International Residential Code, as applicable.

3. For vertical additions and all other proposed work that when combined constitute substantial improvement, the existing building shall comply with Section 1612 of the International Building Code or Section ~~R322~~ R306 of the International Residential Code, as applicable.

4. For a raised or extended foundation, if the foundation work and all other proposed work when combined constitute substantial improvement, the existing building shall comply with Section 1612 of the International Building Code or Section ~~R322~~ R306 of the International Residential Code, as applicable.

5. For a new foundation or replacement foundation, the foundation shall comply with Section 1612 of the International Building Code or Section ~~R322~~ R306 of the International Residential Code, as applicable.

~~5.~~ E. Section 805 Energy Conservation.

805.1 General. Additions to an existing building or portion thereof shall conform to the provisions of the VECC as those provisions relate to new construction without requiring the unaltered portion of the existing building to comply with the VECC. Additions shall not overload existing building systems. An addition shall be deemed to comply with the VECC if the addition alone complies or if the existing building and addition comply with the VECC as a single building.

805.2 Residential compliance. Residential additions shall comply with Section 805.2.1 or 805.2.2.

805.2.1 Prescriptive compliance. Additions shall comply with Sections 805.2.1.1 through 805.2.1.4.

805.2.1.1 Building envelope. New building envelope assemblies that are part of the addition shall comply with Sections R402.1, R402.2, ~~R402.3.1~~ R402.4.1 through ~~R402.3.5~~ R402.4.5, and ~~R402.4~~ R402.5 of the VECC.

~~Exception:~~ Exceptions: 1. The building envelope of the addition shall be permitted to comply through a ~~Total UA~~ component performance analysis, as determined in Section R402.1.5 of the VECC, where the total building thermal envelope thermal conductance of the existing building ~~and~~ including the addition and any alterations that are part of the project is less than or equal to the ~~Total UA generated for~~ total building thermal envelope thermal conductance of the existing building. 2. Building envelope of the addition tightness shall be considered acceptable when the items listed in Table N1102.5.1.1 (R402.5.1.1) of the VRC, applicable to the method of construction, are field verified with visual inspection(s). Where required by the building official, an approved party, independent from the installer, shall inspect the air barrier.

805.2.1.2 Heating and cooling systems. New heating, cooling, and duct systems that are part of the addition shall comply with Section R403 of the VECC.

805.2.1.3 Service hot water systems. New service hot water systems that are part of the addition shall comply with Section R403.4 of the VECC.

805.2.1.4 Lighting. New lighting systems that are part of the addition shall comply with Section R404.1 of the VECC.

805.2.2 Performance compliance. The addition shall comply with the simulated performance alternative where the annual energy cost or energy use of the addition and the existing building and any alterations that are part of the project is less than or equal to the annual energy cost of the existing building when modeled in accordance with Section R405 of the VECC.

805.3 Commercial Compliance. Commercial additions shall comply with Section 805.3.1 or 805.3.2.

Exception: Commercial additions complying with ANSI/ASHRAE/IESNA 90.1.~~805.3.1 Prescriptive compliance. Additions shall comply with Sections C402, C403, C404, and C405 of the VECC.~~

805.3.1 Prescriptive compliance. Additions shall comply with Sections C402, C403, C404, and C405 of the VECC.

805.3.2 Performance compliance. The addition shall comply with the simulated performance alternative where the annual energy cost or energy use of the addition and the existing building and any alterations that are part of the project is less than or equal to the annual energy cost or use of the existing building when modeled in accordance with Section C407 of the VECC.

13VAC5-63-434.5. Chapter 9 Historic buildings.

Replace Chapter 9 of the IEBC with the following:

1. Section 901 General.

901.1 Scope. ~~It is the intent of this chapter to provide means for the preservation~~ The repair, alteration, addition, change of occupancy, rehabilitation and relocation of historic buildings shall comply with this chapter. The provisions of this code relating to construction involving historic buildings shall not be mandatory unless such construction constitutes a life safety hazard. Accessibility shall be provided in accordance with Section 405.

901.2 Report. The code official shall be permitted to require that a historic building undergoing repair, alteration, or change of occupancy be investigated and evaluated by a registered design professional or other qualified person or agency as a condition of determining compliance with this code.

901.3 Special occupancy exceptions. When a building in Group R-3 is also used for Group A, B, or M purposes such as museum tours, exhibits, and other public assembly activities or for museums less than 3,000 square feet (279 m^2), the code official may determine that the occupancy is Group B when life safety conditions can be demonstrated in accordance with Section 901.2. Adequate means of egress in such buildings, which may include a means of maintaining doors in an open position to permit egress, a limit on building occupancy to an occupant load permitted by the means of egress capacity, a limit on occupancy of certain areas or floors, or supervision by a person knowledgeable in the emergency exiting procedures, shall be provided.

2. Section 902 Flood hazard areas.

902.1 Flood hazard areas. In flood hazard areas, if all proposed work, including repairs, work required because of a change of occupancy, and alterations, constitutes substantial improvement, then the existing building shall comply with Section 1612 of the International Building Code or Section ~~R322~~ R306 of the International Residential Code, as applicable.

Exception: If a historic building will continue to be a historic building after the proposed work is completed, then the proposed work is not considered a substantial improvement. For the purposes of this exception, a historic building is:

1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places;

2. Determined by the Secretary of the U.S. Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or

3. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.

3. Section 903 Repairs.

903.1 General. Repairs to any portion of a historic building or structure shall be permitted with original or like materials and original methods of construction, subject to the provisions of this chapter. Hazardous materials, such as asbestos and lead-based paint, shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose, and location.

903.2 Moved buildings. Foundations of moved historic buildings and structures shall comply with the VCC. Moved historic buildings shall otherwise be considered ~~a~~ historic ~~building~~ buildings for the purposes of this code. Moved historic buildings and structures shall be sited so that exterior wall and opening requirements comply with the VCC or with the compliance alternatives of this code.

903.3 Replacement. Replacement of existing or missing features using original materials shall be permitted. Partial replacement for repairs that match the original in configuration, height, and size shall

be permitted. Replacement glazing in hazardous locations shall comply with the safety glazing requirements of Chapter 24 of the VCC.

Exception: Glass block walls, louvered windows, and jalousies repaired with like materials.

4. SECTION 904 (RESERVED).

5. Section 905 Alterations.

905.1 General. The provisions of Chapter 6, as applicable, shall apply to facilities designated as historic structures that undergo alterations, unless technically infeasible.

905.2 Exit signs and egress path markings. Where new exit signs or egress path markings would damage the historic character of the building or structure, alternative exit signs and egress path markings are permitted with approval of the code official. Alternative signs and egress path markings shall identify the exits and egress path.

6. Section 906 Change of Occupancy.

906.1 General. Historic buildings undergoing a change of occupancy shall comply with the applicable provisions of Chapter 7, except as specifically permitted in this chapter. When Chapter 7 requires compliance with specific requirements of Chapter 6 and when those requirements are subject to exceptions elsewhere in this code, the same exceptions shall apply to this section.

906.2 Building area. When a change of occupancy classification is made to a higher hazard category as indicated in Table 706.2, the allowable floor area for historic buildings undergoing a change of occupancy shall be permitted to exceed by 20% the allowable areas specified in Chapter 5 of the VCC.

906.3 Location on property. Historic structures undergoing a change of use to a higher hazard category in accordance with Section 707.1 may use alternative methods to comply with the fire-resistance and exterior opening protective requirements. Such alternatives shall comply with Section 901.2.

906.4 Occupancy separation. Required occupancy separations of one hour may be omitted when the building is provided with an approved automatic sprinkler system throughout.

906.5 Automatic fire-extinguishing systems. Every historical building or portion thereof that cannot be made to conform to the construction requirements specified in Chapter 7 or this chapter for the occupancy or use and such change constitutes a fire hazard shall be deemed to be in compliance if those spaces undergoing a change of occupancy are provided with an approved automatic fire-extinguishing system.

Exception: When the building official approves an alternative life-safety system.

906.6 Means of egress. Existing door openings and corridor and stairway widths less than those required elsewhere in this code shall be permitted, provided there is sufficient width and height for a person to pass through the opening or traverse the exit and that the capacity of the exit system is adequate for the occupant load or where other operational controls to limit occupancy are approved by the code official.

906.7 Door swing. Existing front doors need not swing in the direction of exit travel, provided that other approved exits having sufficient capacity to serve the total occupant load are provided.

906.8 Transoms. In corridor walls required by Chapter 7 to be fire-resistance rated, existing transoms may be maintained if fixed in the closed position and fixed wired glass set in a steel frame or other approved glazing shall be installed on one side of the transom.

906.9 Interior finishes and trim materials. When a change of occupancy classification is made to a higher hazard category as indicated in Table 705.2, existing nonconforming interior finish and trim materials shall be permitted to be treated with an approved fire-retardant coating in accordance with the manufacturer's instructions to achieve the required fire rating.

Exception: Such nonconforming materials need not be treated with an approved fire-retardant coating where the building is equipped throughout with an automatic sprinkler system installed in accordance with the VCC and the nonconforming materials can be substantiated as being historic in character.

906.10 One-hour-fire-resistant assemblies. Where one-hour-fire-resistance-rated construction is required by this code, it need not be provided, regardless of construction or occupancy, where the existing wall and ceiling finish is wood lath and plaster.

906.11 Stairways, railings, and guards. Existing stairways, railings, and guards shall comply with the requirements of Section 705. The code official shall approve alternative stairways, railings, and guards if found to be acceptable or judged to meet the intent of Section 705.

Exception: For buildings less than 3,000 square feet (279 m^2), existing conditions are permitted to remain at all stairways, railings, and guards.

906.12 Exit stair live load. When a change of occupancy classification is made to a higher hazard category as indicated in Table 706.2, existing stairways shall be permitted to remain where it can be shown that the stairway can support a 75-pounds-per-square-foot (366 kg/m^2) live load.

7. Section 907 Structural.

907.1 General. Historic buildings shall comply with the applicable structural provisions for the work as classified in Section 103.9.

Exception: The code official shall be authorized to accept existing floors and approve operational controls that limit the live load on any such floor.

13VAC5-63-435. Chapter 10 Moved buildings and structures.

Replace Chapter 10 of the IEBC with the following:

1. Section 1001 General.

1001.1 Scope. This chapter provides requirements for moved buildings and structures.

1001.2 Conformance. Any repair, alteration, or change of occupancy undertaken within the moved building or structure shall comply with the requirements of this code applicable to the work being performed. Any field fabricated elements shall comply with the requirements of the VCC or the International Residential Code as applicable.

1001.3 Required inspection and repairs. The code official shall be authorized to inspect or to require approved professionals to inspect at the expense of the owner the various structural parts of a moved building or structure to verify that structural components and connections have not sustained structural damage. Any repairs required by the code official as a result of such inspection shall be made prior to the final approval.

2. Section 1002 Requirements.

1002.1 Location on the lot. The building or structure shall be located on the lot in accordance with the requirements of the VCC or the International Residential Code as applicable.

1002.2 Foundation. The foundation system of moved buildings and structures shall comply with the VCC or the International Residential Code as applicable.

1002.2.1 Connection to the foundation. The connection of the moved building or structure to the foundation shall comply with the VCC or the International Residential Code as applicable.

1002.3 Wind loads. Buildings and structures shall comply with VCC or International Residential Code wind provisions at the new location as applicable.

Exceptions:

1. Detached one-family and two-family dwellings and Group U occupancies where wind loads at the new location are not higher than those at the previous location.

2. Structural elements whose stress is not increased by more than 10%.

1002.4 Seismic loads. Buildings and structures shall comply with VCC or International Residential Code seismic provisions at the new location as applicable.

Exceptions:

1. Structures in Seismic Design Categories A and B and detached one-family and two-family dwellings in Seismic Design Categories A, B, and C where the seismic loads at the new location are not higher than those at the previous location.

2. Structural elements whose stress is not increased by more than 10%.

1002.5 Snow loads. Buildings and structures shall comply with VCC or International Residential Code snow loads as applicable where snow loads at the new location are higher than those at the previous location.

Exception: Structural elements whose stress is not increased by more than 5.0%.

1002.6 Flood hazard areas. If moved into a flood hazard area, buildings and structures shall comply with Section 1612 of the VCC or Section ~~R322~~ R306 of the International Residential Code, as applicable.

13VAC5-63-438. Chapter 12 Construction safeguards.

Replace Chapter 12 of the IEBC with the following:

1. Section 1201 General.

1201.1 Scope. The provisions of this chapter shall govern safety during construction that is under the jurisdiction of this code and the protection of adjacent public and private properties.

Note: Fire Safety During Construction plans may be required by the Fire Code Official prior to construction operations in accordance with the Statewide Fire Prevention Code.

1201.2 Storage and placement. Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers, or adjoining property for the duration of the construction project.

1201.3 Alterations, repairs, and additions. Required exits, existing structural elements, fire protection devices, and sanitary safeguards shall be maintained at all times during alterations, repairs, or additions to any building or structure.

Exceptions:

1. When such required elements or devices are being altered or repaired, adequate substitute provisions shall be made.
2. When the existing building is not occupied.

1201.4 Manner of removal. Waste materials shall be removed in a manner that prevents injury or damage to persons, adjoining properties, and public rights-of-way.

1201.5 ~~Fire safety during construction. Fire safety during construction shall comply with the applicable requirements of the International Building Code and the applicable provisions of Chapter 33 of the International Fire Code.~~ Section deleted.

1201.6 Protection of pedestrians. Pedestrians shall be protected during construction and demolition activities as required by Sections 1201.6.1 through 1201.6.7 and Table 1201.6. Signs shall be provided to direct pedestrian traffic.

1201.6.1 Walkways. A walkway shall be provided for pedestrian travel in front of every construction and demolition site unless the applicable governing authority authorizes the sidewalk to be fenced or closed. Walkways shall be of sufficient width to accommodate the pedestrian traffic, but in no case shall they be less than four feet (1219 mm) in width. Walkways shall be provided with a durable walking surface. Walkways shall be accessible in accordance with Chapter 11 of the International Building Code and shall be designed to support all imposed loads and in no case shall the design live load be less than 150 pounds per square foot (psf) (7.2 kN/m^2).

1201.6.2 Directional barricades. Pedestrian traffic shall be protected by a directional barricade where the walkway extends into the street. The directional barricade shall be of sufficient size and construction to direct vehicular traffic away from the pedestrian path.

1201.6.3 Construction railings. Construction railings shall be at least 42 inches (1067 mm) in height and shall be sufficient to direct pedestrians around construction areas.

1201.6.4 Barriers. Barriers shall be a minimum of eight feet (2438 mm) in height and shall be placed on the side of the walkway nearest the construction. Barriers shall extend the entire length of the construction site. Openings in such barriers shall be protected by doors which are normally kept closed.

1201.6.4.1 Barrier design. Barriers shall be designed to resist loads required in Chapter 16 of the International Building Code unless constructed as follows:

1. Barriers shall be provided with two-inch by four-inch (51 mm by 102 mm) top and bottom plates.

2. The barrier material shall be a minimum of 3/4-inch (19.1 mm) boards or 1/4-inch (6.4 mm) wood structural use panels.

3. Wood structural use panels shall be bonded with an adhesive identical to that for exterior wood structural use panels.

4. Wood structural use panels 1/4-inch (6.4 mm) or 1/16-inch (1.6 mm) in thickness shall have studs spaced not more than two feet (610 mm) on center.

5. Wood structural use panels 3/8-inch (9.5 mm) or 1/2-inch (12.7 mm) in thickness shall have studs spaced not more than four feet (1219 mm) on center, provided a two-inch by four-inch (51 mm by 102 mm) stiffener is placed horizontally at the mid-height where the stud spacing exceeds two feet (610 mm) on center.

6. Wood structural use panels 5/8-inch (15.9 mm) or thicker shall not span over eight feet (2438 mm).

1201.6.5 Covered walkways. Covered walkways shall have a minimum clear height of eight feet (2438 mm) as measured from the floor surface to the canopy overhead. Adequate lighting shall be provided at all times. Covered walkways shall be designed to support all imposed loads. In no case shall the design live load be less than 150 psf (7.2 kN/m^2) for the entire structure.

Exception: Roofs and supporting structures of covered walkways for new, light-frame construction not exceeding two stories above grade plane are permitted to be designed for a live load of 75 psf (3.6 kN/m^2) or the loads imposed on them, whichever is greater. In lieu of such designs, the roof and supporting structure of a covered walkway are permitted to be constructed as follows:

1. Footings shall be continuous two-inch by six-inch members.

2. Posts not less than four inches by six inches shall be provided on both sides of the roof and spaced not more than 12 feet (3658 mm) on center.

3. Stringers not less than four inches by 12 inches shall be placed on edge upon the posts.

4. Joists resting on the stringers shall be at least two inches by eight inches and shall be spaced not more than two feet (610 mm) on center.

5. The deck shall be planks at least two inches (51 mm) thick or wood structural panels with an exterior exposure durability classification at least 23/32-inch (18.3 mm) thick nailed to the joists.

6. Each post shall be knee-braced to joists and stringers by two-inch by four-inch minimum members four feet (1219 mm) long.

7. A two-inch by four-inch minimum curb shall be set on edge along the outside edge of the deck.

1201.6.6 Repair, maintenance, and removal. Pedestrian protection required by Section 1201.6 shall be maintained in place and kept in good order for the entire length of time pedestrians may be endangered. The owner or the owner's agent, upon the completion of the construction activity, shall immediately remove walkways, debris, and other obstructions and leave such public property in as good a condition as it was before such work was commenced.

TABLE 1201.6
PROTECTION OF PEDESTRIANS

HEIGHT OF CONSTRUCTION	DISTANCE OF CONSTRUCTION TO LOT LINE	TYPE OF PROTECTION REQUIRED
8 feet or less	Less than 5 feet	Construction railings
	5 feet or more	None
More than 8 feet	Less than 5 feet	Barrier and covered walkway

	5 feet or more, but not more than 1/4 the height of construction	Barrier and covered walkway
	5 feet or more, but between 1/4 and 1/2 the height of construction	Barrier
	5 feet or more, but exceeding 1/2 the height of construction	None

1201.6.7 Adjacent to excavations. Every excavation on a site located five feet (1524 mm) or less from the street lot line shall be enclosed with a barrier not less than six feet (1829 mm) high. Where located more than five feet (1524 mm) from the street lot line, a barrier shall be erected when required by the code official. Barriers shall be of adequate strength to resist wind pressure as specified in Chapter 16 of the International Building Code.

~~1201.8~~ 1201.7 Separations between construction areas. Separations used in Type I and Type II construction to separate construction areas from occupied portions of the building shall be constructed of materials that comply with one of the following:

1. Noncombustible materials.
2. Materials that exhibit a flame spread index not exceeding 25 when tested in accordance with ASTM E84 or UL 723.
3. Materials exhibiting a peak heat release rate not exceeding 300 kW/m^2 when tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation on specimens at the thickness intended for use.

2. Section 1202 Protection of Adjoining Properties.

1202.1 Protection required. Adjoining public and private property shall be protected from damage during construction and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights, and roofs. Provisions shall be made to control water runoff and erosion during construction or demolition activities. The person making or causing an excavation to be made shall provide written notice to the owners of adjoining buildings advising them that the excavation is to be made and that the adjoining buildings should be protected. This notification shall be delivered not less than 10 days prior to the scheduled starting date of the excavation.

3. Section 1203 Temporary Use of Streets, Alleys and Public Property.

1203.1 Storage and handling of materials. The temporary use of streets or public property for the storage or handling of materials or equipment required for construction or demolition and the protection provided to the public shall comply with the provisions of the applicable governing authority and this chapter.

1203.2 Obstructions. Construction materials and equipment shall not be placed or stored so as to interfere with access to fire hydrants, standpipes, fire or police alarm boxes, catch basins, or manholes nor shall such material or equipment be located within 20 feet (6.1 m) of a street intersection or placed so as to obstruct normal observations of traffic signals or to hinder the use of public transit loading platforms.

1203.3 Utility fixtures. Building materials, fences, sheds, or any obstruction of any kind shall not be placed to obstruct free approach to any fire hydrant, fire department connection, utility pole, manhole, fire alarm box, or catch basin or to interfere with the passage of water in the gutter. Protection against damage shall be provided to such utility fixtures during the progress of the work, but sight of them shall not be obstructed.

4. Section 1204 Fire Extinguishers.

1204.1 Where required. All structures under construction, alteration, or demolition shall be provided with not less than one approved portable fire extinguisher in accordance with Section 906 of the International Building Code and sized for not less than ordinary hazard as follows:

1. At each stairway on all floor levels where combustible materials have accumulated.

2. In every storage and construction shed.

3. Additional portable fire extinguishers shall be provided where special hazards exist including the storage and use of flammable and combustible liquids.

1204.2 Fire hazards. The provisions of this code and of the International Fire Code shall be strictly observed to safeguard against all fire hazards attendant upon construction operations.

5. Section 1205 Means of Egress.

1205.1 Stairways required. Where a building has been constructed to a building height of 50 feet (15,240 mm) or four stories or where an existing building exceeding 50 feet (15,240 mm) in building height is altered, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses.

1205.2 Maintenance of means of egress. Required means of egress shall be maintained at all times during construction, demolition, remodeling or alterations, and additions to any building.

Exception: Approved temporary means of egress systems and facilities.

6. Section 1206 Standpipe Systems.

1206.1 Where required. In buildings required to have standpipes by Section 905.3.1 of the International Building Code, not less than one standpipe shall be provided for use during construction. Such standpipes shall be installed prior to construction exceeding 40 feet (12,192 mm) in height above the lowest level of fire department vehicle access. Such standpipe shall be provided with fire department hose connections at accessible locations adjacent to usable stairways. Such standpipes shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

1206.2 Buildings being demolished. Where a building or portion of a building is being demolished and a standpipe exists within such a building, such standpipe shall be maintained in an operable condition so as to be available for use by the fire department. Such standpipe shall be demolished with the building but shall not be demolished more than one floor below the floor being demolished.

1206.3 Detailed requirements. Standpipes shall be installed in accordance with the provisions of Chapter 9 of the International Building Code.

Exception: Standpipes shall be either temporary or permanent in nature and with or without a water supply, provided that such standpipes conform to the requirements of Section 905 of the International Building Code as to capacity, outlets, and materials.

7. Section 1207 Automatic Sprinkler System.

1207.1 Completion before occupancy. In portions of a building where an automatic sprinkler system is required by this code, it shall be unlawful to occupy those portions of the building until the automatic sprinkler system installation has been tested and approved, except as provided in Section 116.1.1 of the VCC.

1207.2 Operation of valves. Operation of sprinkler control valves shall be permitted only by properly authorized personnel and shall be accompanied by notification of duly designated parties. When the sprinkler protection is being regularly turned off and on to facilitate connection of newly completed segments, the sprinkler control valves shall be checked at the end of each work period to ascertain that protection is in service.

8. Section 1208 Accessibility.

1208.1 Construction sites. Structures, sites, and equipment directly associated with the actual process of construction, including scaffolding, bridging, material hoists, material storage, or construction trailers, are not required to be accessible.

9. Section 1209 Water Supply for Fire Protection.

1209.1 When required. An approved water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material arrives on the site, on commencement of vertical combustible construction, and on installation of a standpipe system during alterations, repairs, or additions to any building or structure in accordance with the Virginia Statewide Fire Prevention Code.

10. Section 1210 Demolition.

1210.1 Construction documents. Construction documents and a schedule for demolition shall be submitted where required by the building official. Where such information is required, no work shall be done until such construction documents, schedule, or both are approved.

1210.2 Pedestrian protection. The work of demolishing any building shall not be commenced until pedestrian protection is in place as required by Chapter 33 of the VCC.

1210.3 Means of egress. A horizontal exit shall not be destroyed unless and until a substitute means of egress has been provided and approved.

1210.4 Vacant lot. Where a structure has been demolished or removed, the vacant lot shall be filled and maintained to the existing grade or in accordance with the ordinances of the jurisdiction having authority.

1210.5 Water accumulation. Provisions shall be made to prevent the accumulation of water or damage to any foundations on the premises or the adjoining property.

1210.6 Utility connections. Service utility connections shall be discontinued and capped in accordance with the approved rules and the requirements of the applicable governing authority.

1210.7 Fire safety during demolition. Fire safety during demolition shall comply with the applicable requirements of the VCC and the applicable provisions of Chapter 33 of the International Fire Code.

13VAC5-63-439. Chapter 13 Referenced standards.

Replace Chapter 13 of the IEBC with the following:

Referenced standards are listed in the following table:

Standard reference number	Title
ACI 562-21	Assessment, Repair, and Rehabilitation of Existing Concrete Structures
API 653-09	Tank Inspection, Repair, Alteration and Reconstruction
ASCE/SEI ~~7-16~~ 7-22	~~American Society of Civil Engineers Structural Engineering Institute~~ Minimum Design Loads and Associated Criteria for Buildings and Other Structures
ASCE/SEI 41-17	~~American Society of Civil Engineers Structural Engineering Institute~~ Seismic Evaluation and Retrofit of Existing Buildings
ASHRAE ~~62.1-2016~~ 62.1-2022	~~American Society of Heating, Refrigerating and Air Conditioning Engineers~~ Ventilation for Acceptable Indoor Air Quality
ASHRAE ~~90.1-2016~~ 90.1-2022	~~American Society of Heating, Refrigerating and Air Conditioning Engineers~~ Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings
ASME A17.1/CSA ~~B44-2016~~ B44-2022	~~American Society of Mechanical Engineers~~ Safety Code for Elevators and Escalators
ASME ~~A18.1-2014~~ A18.1-2023	~~American Society of Mechanical Engineers~~ Safety Standard for Platform Lifts and Stairway Chairlifts
ASTM E84-21a	Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM E136-22	Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C

ASTM E1354-17	Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
ASTM ~~F2006-17~~ F2006-21	~~ASTM International~~ Standard Safety Specification for Window Fall Prevention Devices for Non-Emergency Escape (Egress) and Rescue (Ingress) Windows
ASTM ~~F2090-17~~ F2090-21	~~ASTM International~~ Specification for Window Fall Prevention Devices with Emergency (Egress) Release Mechanisms
~~IBC-21~~ IBC-24	International Building Code
ICC A117.1-17	Accessible and Usable Buildings and Facilities
~~IECC-21~~ IECC-24	International Energy Conservation Code
~~IFC-21~~ IFC-24	International Fire Code
~~IFGC-21~~ IFGC-24	International Fuel Gas Code
~~IMC-21~~ IMC-24	International Mechanical Code
~~IPC-21~~ IPC-24	International Plumbing Code
~~IRC-21~~ IRC-24	International Residential Code
NFPA ~~13-19~~ 13	Standard for the Installation of Sprinkler Systems
NFPA 70-96	National Electrical Code
NFPA ~~70-20~~ 70-23	National Electrical Code
NFPA ~~99-18~~ 99-24	Health Care Facilities Code
UL 217-15	Single and Multiple Station Smoke Alarms - with revisions through November 2016
UL 723-18	Standard for Test for Surface Burning Characteristics of Building Materials
USBC, Volume I, 1987 Edition	Virginia Uniform Statewide Building Code
TFI RMIP-09	Aboveground Storage Tanks Containing Liquid Fertilizer, Recommended Mechanical Integrity Practices

13VAC5-63-440. Chapter 14 Compliance alternative - Change of occupancy.

Replace Chapter 14 of the IEBC with the following:

Section 1401 General

1401.1 Scope. The provisions of this chapter are applicable when the exception to Section 701.1 is applied.

1401.2 Change of occupancy. The change of occupancy shall be evaluated in accordance with the evaluation process specified in Sections 1402 through 1404.

1401.2.1 Plumbing, mechanical, and electrical systems. Plumbing, mechanical, and electrical systems shall conform to the applicable requirements of Sections 708, 709, and 710.

1401.3 Work undertaken in connection with a change of occupancy. Any repairs, alterations, or additions undertaken in connection with a change of occupancy shall conform to the applicable requirements of this code for the work as classified in this code and as modified by this chapter.

Section 1402 Evaluation Process

1402.1 Evaluation process. The evaluation process specified in this section shall be followed in its entirety to evaluate existing buildings for work covered by this chapter. The existing building shall be evaluated in accordance with the provisions of this section and Sections 1403 and 1404. The evaluation shall be comprised of three categories as described in Sections 1402.1.1 through 1402.1.3.

1402.1.1 Fire safety. Included within the fire safety category are the structural fire resistance, automatic fire detection, fire alarm, automatic sprinkler system, and fire suppression system features of the facility.

1402.1.2 Means of egress. Included within the means of egress category are the configuration, characteristics, and support features for means of egress in the facility.

1402.1.3 General safety. Included within the general safety category are the fire safety parameters and the means-of-egress parameters.

1402.2 Occupancy basis. The evaluation of the building per this chapter shall be based on the new occupancy. A partial building change of occupancy shall be evaluated in accordance with Section 1402.2.1 or 1402.2.2 as applicable.

1402.2.1 Separated change of occupancy. Where a portion of the building undergoes a change of occupancy and that portion is separated from the remainder of the building in accordance with Section 508.4 of the VCC, only the portion of building undergoing the change of occupancy shall conform to the provisions of this chapter based on the new occupancy classification.

1402.2.2 Nonseparated change of occupancy. Where a portion of the building undergoes a change of occupancy and that portion is not separated from the remainder of the building in accordance with Section 508.4 of the VCC, the provisions of this chapter shall apply to the entire building based on all the occupancy classifications in the building.

1402.3 Structural evaluation. The existing building shall be evaluated to determine adequacy of the existing structural systems for the proposed change of occupancy. The evaluation shall demonstrate that the existing building with the work completed is capable of resisting the loads specified in Chapter 16 of the VCC.

1402.4 Submittal. The results of the evaluation as required in Section 1402.1 shall be submitted to the code official. Table 1404.1 shall be utilized for tabulating the results of the evaluation. References to other sections of this code indicate that compliance with those sections is required in order to gain credit in the evaluation outlined in this section.

Section 1403 Evaluation data

1403.1 Building height and number of stories. The value for building height and number of stories shall be the lesser value determined by the formula in Section 1403.1.1. Section 504 of the VCC shall be used to determine the allowable height and number of stories of the building. Subtract the actual building height from the allowable height and divide by 12-1/2 feet (3810 mm). Enter the height value and its sign (positive or negative) in Table 1404.1 under Safety Parameter 1403.1, Building Height, for fire safety, means of egress, and general safety. The maximum score for a building shall be 10.

1403.1.1 Height formula. The following formulas shall be used in computing the building height value:

$$Height\ value, feet = \frac{(AH) - (EBH)}{12.5} \times CF$$

(Equation 14-1)

Note: Where mixed occupancies are separated and individually evaluated as indicated in Section 1404.3.1, the values AH, AS, EBH, and EBS shall be based on the height of the occupancy being evaluated.

$$\text{Height value, stories} = (AS - EBS) \times CF$$

(Equation 14-2)

AH = Allowable height in feet (mm) from Section 504 of the VCC.

EBH = Existing building height in feet (mm).

AS = Allowable height in stories from Section 504 of the VCC.

EBS = Existing building height in stories.CF = 1 if (AH) - (EBH) is positive.

CF = Construction-type factor shown in Table 1403.6(2) if (AH) - (EBH) is negative.

1403.2 Building area. The value for building area shall be determined by the formula in Section 1403.2.2. Section 506 of the VCC and the formula in Section 1403.2.1 shall be used to determine the allowable area of the building. Subtract the actual building area from the allowable area and divide by 1,200 square feet (112 m^2). Enter the area value and its sign (positive or negative) in Table 1404.1 under Safety Parameter 1403.2, Building Area, for fire safety, means of egress, and general safety. In determining the area value, the maximum permitted positive value for area is 50% of the fire safety score as listed in Table 1404.2, Mandatory Safety Scores.

1403.2.1 Allowable area formula. The following formula shall be used in computing allowable area:

$$A_a = A_t + (NS \times I_f)$$

(Equation 14-3)

where:

A_a = Allowable building area per story (square feet).

A_t = Tabular allowable area factor (NS, S1, S13R, or SM value, as applicable) in accordance with Table 506.2 of the VCC.

N_S = Tabular allowable area factor in accordance with Table 506.2 of the VCC for a nonsprinklered building (regardless of whether the building is sprinklered).

I_f = Area factor increase due to frontage as calculated in accordance with Section 506.3 of the VCC.

1403.2.2 Area formula. The following formula shall be used in computing the area value. Determine the area value for each occupancy floor area on a floor-by-floor basis. For each occupancy, choose the minimum area value of the set of values obtained for the particular occupancy.

$$\text{Area value}_i = \frac{\text{Allowable area}_i}{1200\,\text{square feet}}\left[1 - \left(\frac{\text{Actual area}_i}{\text{Allowable area}_i} + \ldots + \frac{\text{Actual area}_n}{\text{Allowable area}_n}\right)\right]$$

(Equation 14-4)

where:

i = Value for an individual separated occupancy on a floor.

n = Number of separated occupancies on a floor.

1403.3 Compartmentation. Evaluate the compartments created by fire barriers or horizontal assemblies that comply with Sections 1403.3.1 and 1403.3.2 and which are exclusive of the wall elements considered under Sections 1403.4 and 1403.5. Conforming compartments shall be figured as the net area and do not include shafts, chases, stairways, walls, or columns. Using Table 1403.3, determine the appropriate compartmentation value (CV) and enter that value into Table 1404.1 under Safety Parameter 1403.3, Compartmentation, for fire safety, means of egress, and general safety. For compartment sizes that fall between categories, the determination of the CV shall be permitted to be obtained by linear interpolation.

TABLE 1403.3 COMPARTMENTATION VALUES					
OCCUPANCY	CATEGORIES				
	a	b	c	d	e Compartment

	Compartment size equal to or greater than 15,000 square feet	Compartment size of 10,000 square feet	Compartment size of 7,500 square feet	Compartment size of 5,000 square feet	size of 2,500 square feet or less
A-1, A-3	0	6	10	14	18
A-2	0	4	10	14	18
A-4, B, E, S-2	0	5	10	15	20
F, M, R, S-1	0	4	10	16	22
For SI: 1 square foot = 0.0929m^2.					

1403.3.1 Wall construction. A wall used to create separate compartments shall be a fire barrier conforming to Section 707 of the VCC with a fire-resistance rating of not less than two hours. Where the building is not divided into more than one compartment, the compartment size shall be taken as the total floor area on all floors. Where there is more than one compartment within a story, each compartmented area on such story shall be provided with a horizontal exit conforming to Section 1026 of the VCC. The fire door serving as the horizontal exit between compartments shall be so installed, fitted, and gasketed that such fire door will provide a substantial barrier to the passage of smoke.

1403.3.2 Floor/ceiling construction. A floor/ceiling assembly used to create compartments shall conform to Section 711 of the VCC and shall have a fire-resistance rating of not less than two hours.

1403.4 Tenant and dwelling unit separations. Evaluate the fire-resistance rating of floors and walls separating tenants, including dwelling units, and not evaluated under Sections 1403.3 and 1403.5.

Table 1403.4 SEPARATION VALUES					
OCCUPANCY	CATEGORIES				
	a	b	c	d	e
A-1	0	0	0	0	1
A-2	-5	-3	0	1	3
R	-4	-2	0	2	4
A-3, A-4, B, E, F, M, S-1	-4	-3	0	2	4
S-2	-5	-2	0	2	4

1403.4.1 Categories. The categories for tenant and dwelling unit separations are:

1. Category a - No fire partitions; incomplete fire partitions; no doors; doors not self-closing or automatic-closing.
2. Category b - Fire partitions or floor assemblies with less than one-hour fire-resistance ratings or not constructed in accordance with Section 708 or 711 of the VCC, respectively.
3. Category c - Fire partitions with one-hour or greater fire-resistance ratings constructed in accordance with Section 708 of the VCC and floor assemblies with one-hour but less than two-hour fire-resistance ratings constructed in accordance with Section 711 of the VCC or with only one tenant within the floor area.

4. Category d - Fire barriers with one-hour but less than two-hour fire-resistance ratings constructed in accordance with Section 707 of the VCC and floor assemblies with two-hour or greater fire-resistance ratings constructed in accordance with Section 711 of the VCC.

5. Category e - Fire barriers and floor assemblies with two-hour or greater fire-resistance ratings and constructed in accordance with Sections 707 and 711 of the VCC, respectively.

1403.5 Corridor walls. Evaluate the fire-resistance rating and degree of completeness of walls that create corridors serving the floor and that are constructed in accordance with Section 1020 of the VCC. This evaluation shall not include the wall elements considered under Sections 1403.3 and 1403.4. Under the categories and groups in Table 1403.5, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.5, Corridor Walls, for fire safety, means of egress, and general safety.

Table 1403.5 CORRIDOR WALL VALUES

OCCUPANCY	CATEGORIES			
	a	b	c[a]	d[a]
A-1	-10	-4	0	2
A-2	-30	-12	0	2
A-3, F, M, R, S-1	-7	-3	0	2
A-4, B, E, S-2	-5	-2	0	5

a. Corridors not providing at least one-half the exit access travel distance for all occupants on a floor shall use Category b.

1403.5.1 Categories. The categories for corridor walls are:

1. Category a - No fire partitions; incomplete fire partitions; no doors; or doors not self-closing.

2. Category b - Less than one-hour fire-resistance rating or not constructed in accordance with Section 708.4 of the VCC.

3. Category c - one-hour to less than two-hour fire-resistance rating, with doors conforming to Section 716 of the VCC or without corridors as permitted by Section 1020 of the VCC.

4. Category d - two-hour or greater fire-resistance rating, with doors conforming to Section 716 of the VCC.

1403.6 Vertical openings. Evaluate the fire-resistance rating of interior exit stairways or ramps, hoistways, escalator openings, and other shaft enclosures within the building and openings between two or more floors.

Table1403.6(1) contains the appropriate protection values. Multiply that value by the construction-type factor found in 1403.6(2). Enter the vertical opening value and its sign (positive or negative) in Table 1404.1 under Safety Parameter 1403.6, Vertical Openings, for fire safety, means of egress, and general safety. If the structure is a one-story building or if all the unenclosed vertical openings within the building conform to the requirements of Section 713 of the VCC, enter a value of two. The maximum positive value for this requirement shall be two.

Table 1403.6(1) VERTICAL OPENING PROTECTION VALUE

PROTECTION	VALUE
None (unprotected opening)	-2 times number of floors connected
Less than 1 hour	-1 times number of floors connected

1 to less than 2 hours	1
2 hours or more	2

TABLE 1403.6(2) CONSTRUCTION-TYPE FACTOR									
FACTOR	TYPE OF CONSTRUCTION								
	IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
	1.2	1.5	2.2	3.5	2.5	3.5	2.3	3.3	7

1403.6.1 Vertical opening formula. The following formula shall be used in computing vertical opening value.

$$VO = PV \times CF$$

(Equation 14-5)

VO = Vertical opening value.

PV = Protection value from Table 1403.6(1).

CF = Construction-type factor from Table 1403.6(2).

1403.7 HVAC systems. Evaluate the ability of the HVAC system to resist the movement of smoke and fire beyond the point of origin. Under the categories in Section 1403.7.1, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.7, HVAC Systems, for fire safety, means of egress, and general safety.

1403.7.1 Categories. The categories for HVAC systems are:

1. Category a - Plenums not in accordance with Section 602 of the International Mechanical Code. - 10 points.
2. Category b - Air movement in egress elements not in accordance with Section 1020.6 of the VCC. - 5 points.
3. Category c - Both Categories a and b are applicable. - 15 points.
4. Category d - Compliance of the HVAC system with Section 1020.6 of the VCC and Section 602 of the International Mechanical Code. - 0 points.
5. Category e - Systems serving one story; or a central boiler/chiller system without ductwork connecting two or more stories. + 5 points.

1403.8 Automatic fire detection. Evaluate the smoke detection capability based on the location and operation of automatic fire detectors in accordance with Section 907 of the VCC and Section 606 of the International Mechanical Code. Under the categories and occupancies in Table 1403.8, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.8, Automatic Fire Detection, for fire safety, means of egress, and general safety.

Table 1403.8 AUTOMATIC FIRE DETECTION VALUES						
OCCUPANCY	CATEGORIES					
	a	b	c	d	e	f
A-1, A-3, F, M, R, S-1	-10	-5	0	2	6	-
A-2	-25	-5	0	5	9	-
A-4, B, E, S-2	-4	-2	0	4	8	-

1403.8.1 Categories. The categories for automatic fire detection are:

1. Category a - None.

2. Category b - Existing smoke detectors in HVAC systems.

3. Category c - Smoke detectors in HVAC systems. The detectors are installed in accordance with the requirements for new buildings in the International Mechanical Code.

4. Category d - Smoke detectors throughout all floor areas other than individual sleeping units, tenant spaces, and dwelling units.

5. Category e - Smoke detectors installed throughout the floor area.

6. Category f - Smoke detectors in corridors only.

1403.9 Fire alarm systems. Evaluate the capability of the fire alarm system in accordance with Section 907 of the VCC. Under the categories and occupancies in Table 1403.9, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.9, Fire Alarm System, for fire safety, means of egress, and general safety.

Table 1403.9 FIRE ALARM SYSTEM VALUES

OCCUPANCY	CATEGORIES			
	a	b[a]	c	d
A-1, A-2, A-3, A-4, B, E, R	-10	-5	0	5
F, M, S	0	5	10	15

a. For buildings equipped throughout with an automatic sprinkler system, add two points for activation by a sprinkler water-flow device.

1403.9.1 Categories. The categories for fire alarm systems are:

1. Category a - None.

2. Category b - Fire alarm system with manual fire alarm boxes in accordance with Section 907.4 of the VCC and alarm notification appliances in accordance with Section 907.5.2 of the VCC.

3. Category c - Fire alarm system in accordance with Section 907 of the VCC.

4. Category d - Category c plus a required emergency voice/alarm communications system and a fire command station that conforms to Section 911 of the VCC and contains the emergency voice/alarm communications system controls, fire department communication system controls, and any other controls specified in Section 911 of the VCC where those systems are provided.

1403.10 Smoke control. Evaluate the ability of a natural or mechanical venting, exhaust, or pressurization system to control the movement of smoke from a fire. Under the categories and occupancies in Table 1403.10, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.10, Smoke Control, for means of egress and general safety.

Table 1403.10 SMOKE CONTROL VALUES

OCCUPANCY	CATEGORIES					
	a	b[a]	c	d	e	f
A-1, A-2, A-3	0	1	2	3	6	6
A-4, E	0	0	0	1	3	5
B, M, R	0	2a	3a	3a	3a	4a
F, S	0	2a	2s	3a	3a	3a

a. This value shall be zero if compliance with Category d or e in Section 1403.8.1 has not been obtained.

1403.10.1 Categories. The categories for smoke control are:

1. Category a - None.

2. Category b - The building is equipped throughout with an automatic sprinkler system. Openings are provided in exterior walls at the rate of 20 square feet (1.86 m^2) per 50 linear feet (15 240 mm) of exterior wall in each story and distributed around the building perimeter at intervals not exceeding 50 feet (15 240 mm). Such openings shall be readily openable from the inside without a key or separate tool and shall be provided with ready access thereto. In lieu of operable openings, clearly and permanently marked tempered glass panels shall be used.

3. Category c - One enclosed exit stairway, with ready access thereto, from each occupied floor of the building. The stairway has operable exterior windows, and the building has openings in accordance with Category b.

4. Category d - One smokeproof enclosure and the building has openings in accordance with Category b.

5. Category e - The building is equipped throughout with an automatic sprinkler system. Each floor area is provided with a mechanical ~~airhandling~~ air handling system designed to accomplish smoke containment. Return and exhaust air shall be moved directly to the outside without recirculation to other floor areas of the building under fire conditions. The system shall exhaust not fewer than six air changes per hour from the floor area. Supply air by mechanical means to the floor area is not required. Containment of smoke shall be considered as confining smoke to the floor area involved without migration to other floor areas. Any other tested and approved design that will adequately accomplish smoke containment is permitted.

6. Category f - Each stairway shall be one of the following: a smokeproof enclosure in accordance with Section 1023.12 of the VCC, pressurized in accordance with Section 909.20.5 of the VCC, or shall have operable exterior windows.

1403.11 Means of egress capacity and number. Evaluate the means of egress capacity and the number of exits available to the building occupants. In applying this section, the means of egress are required to conform to the following sections of the VCC: 1003.7, 1004, 1005, 1006, 1007, 1016.2, 1026.1, 1028.3, 1028.5, 1030.2, 1030.3, 1030.4, and 1031. The number of exits credited is the number that is available to each occupant of the area being evaluated. Existing fire escapes shall be accepted as a component in the means of egress when conforming to Section 303.

Under the categories and occupancies in Table 1403.11, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.11, Means of Egress Capacity, for means of egress and general safety.

Table 1403.11 MEANS OF EGRESS VALUES

OCCUPANCY	CATEGORIES				
	a [a]	b	c	d	e
A-1, A-2, A-3, A-4, E	-10	0	2	8	10
M	-3	0	1	2	4
B, F, S	-1	0	0	0	0
R	-3	0	0	0	0

a. The values indicated are for buildings six stories or less in height. For buildings over six stories above grade plane, add an additional -10 points.

1403.11.1 Categories. The categories for means-of-egress capacity and number of exits are:

1. Category a - Compliance with the minimum required means-of-egress capacity or number of exits is achieved through the use of a fire escape in accordance with Section 303.

2. Category b - Capacity of the means of egress complies with Section 1005 of the VCC, and the number of exits complies with the minimum number required by Section 1006 of the VCC.

3. Category c - Capacity of the means of egress is equal to or exceeds 125% of the required means-of-egress capacity, the means of egress complies with the minimum required width dimensions specified in the VCC, and the number of exits complies with the minimum number required by Section 1006 of the VCC.

4. Category d - The number of exits provided exceeds the number of exits required by Section 1006 of the VCC. Exits shall be located a distance apart from each other equal to not less than that specified in Section 1007 of the VCC.

5. Category e - The area being evaluated meets both Categories c and d.

1403.12 Dead ends. In spaces required to be served by more than one means of egress, evaluate the length of the exit access travel path in which the building occupants are confined to a single path of travel. Under the categories and occupancies in Table 1403.12, determine the appropriate value and enter that value into 1404.1 under Safety Parameter 1403.12, Dead Ends, for means of egress and general safety.

Table 1403.12 DEAD-END VALUES

OCCUPANCY	CATEGORIES[a]			
	a [a]	b	c	d
A-1, A-3, A-4, B, F, M, R, S	-2	0	2	-4
A-2, E	-2	0	2	-4

a. For dead-end distances between categories, the dead-end value shall be obtained by linear interpolation.

1403.12.1 Categories. The categories for dead ends are:

1. Category a - Dead end of 35 feet (10 670 mm) in nonsprinklered buildings or 70 feet (21 340 mm) in sprinklered buildings.

2. Category b - Dead end of 20 feet (6096 mm) or 50 feet (15 240 mm) in Group B in accordance with Section 1020.5, Exception 2, of the VCC.

3. Category c - No dead ends or ratio of length to width (l/w) is less than ~~2.5:1.4~~ 2.5:1.

4. Category d - Dead ends exceeding Category a.

1403.13 Maximum exit access travel distance to an exit. Evaluate the length of exit access travel to an approved exit. Determine the appropriate points in accordance with the following equation and enter that value into Table 1404.1 under Safety Parameter 1403.13, Maximum Exit Access Travel Distance for means of egress and general safety. The maximum allowable exit access travel distance shall be determined in accordance with Section 1017.1 of the VCC.

$$\text{Points} = 20 \times \frac{\text{Maximum allowable travel distance} - \text{Maximum actual travel distance}}{\text{Maximum allowable travel distance}} \quad \text{(Equation 14-6)}$$

1403.14 Elevator control. Evaluate the passenger elevator equipment and controls that are available to the fire department to reach all occupied floors. Emergency recall and in-car operation of elevators shall be provided in accordance with the building code under which the building or the affected portion thereof was constructed or previously approved. Under the categories and occupancies in Table 1403.14, determine the appropriate value and enter that value into Table 1404.1 under Safety

Parameter 1403.14, Elevator Control, for fire safety, means of egress and general safety. The values shall be zero for a single-story building.

Table 1403.14 ELEVATOR CONTROL VALUES				
ELEVATOR TRAVEL	CATEGORIES			
	a	b	c	d
Less than 25 feet of travel above or below the primary level of elevator access for emergency fire-fighting or rescue personnel	-2	0	0	2
Travel of 25 feet or more above or below the primary level of elevator access for emergency fire-fighting or rescue personnel	-4	NP	0	4
For SI: 1 foot = 304.8 mm. NP = Not permitted.				

1403.14.1 Categories. The categories for elevator controls are:

1. Category a - No elevator.
2. Category b - Any elevator without Phase I emergency recall operation and Phase II emergency in-car operation.
3. Category c - All elevators with Phase I emergency recall operation and Phase II emergency in-car operation as required by the building code under which the building or the affected portion thereof was constructed or previously approved.
4. Category d - All meet Category c or Category b where permitted to be without Phase I emergency recall operation and Phase II emergency in-car operation, and at least one elevator that complies with new construction requirements serves all occupied floors.

1403.15 Means-of-egress emergency lighting. Evaluate the presence of and reliability of means-of-egress emergency lighting. Under the categories and occupancies in Table 1403.15, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.15, Means-of-Egress Emergency Lighting, for means of egress and general safety.

Table 1403.15 MEANS-OF-EGRESS EMERGENCY LIGHTING VALUES			
NUMBER OF EXITS REQUIRED BY SECTION 1006 OF THE INTERNATIONAL BUILDING CODE	CATEGORIES		
	a	b	c
Two or more exits	NP	0	4
Minimum of one exit	0	1	1
NP= Not permitted			

1403.15.1 Categories. The categories for means-of-egress emergency lighting are:

1. Category a - Means-of-egress lighting and exit signs not provided with emergency power in accordance with Section 2702 of the VCC.
2. Category b - Means-of-egress lighting and exit signs provided with emergency power in accordance with Section 2702 of the VCC.
3. Category c - Emergency power provided to means-of-egress lighting and exit signs, which provides protection in the event of power failure to the site or building.

1403.16 Mixed occupancies. Where a building has two or more occupancies that are not in the same occupancy classification, the separation between the mixed occupancies shall be evaluated in accordance with this section. Where there is no separation between the mixed occupancies or the separation between mixed occupancies does not qualify for any of the categories indicated in Section 1403.16.1, the building shall be evaluated as indicated in Section 1404.3.1, and the value for mixed occupancies shall be zero. Under the categories and occupancies in Table 1403.16, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.16, Mixed Occupancies, for fire safety and general safety. For buildings without mixed occupancies, the value shall be zero.

Table 1403.16 MIXED OCCUPANCY VALUES[a]			
OCCUPANCY	CATEGORIES		
	a	b	c
A-1, A-2, R	-10	0	10
A-3, A-4, B, E, F, M, S	-5	0	5
a. For fire-resistance ratings between categories, the value shall be obtained by linear interpolation.			

1403.16.1 Categories. The categories for mixed occupancies are:

1. Category a - Occupancies separated by minimum one-hour fire barriers, minimum one-hour horizontal assemblies, or both.
2. Category b - Separations between occupancies in accordance with Section 508.4 of the VCC.
3. Category c - Separations between occupancies having a fire-resistance rating of not less than twice that required by Section 508.4 of the VCC.

1403.17 Automatic sprinklers. Evaluate the ability to suppress a fire based on the installation of an automatic sprinkler system in accordance with Section 903.3.1.1 of the VCC. "Required sprinklers" shall be based on the requirements of this code. Under the categories and occupancies in Table 1403.17, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.17, Automatic Sprinklers, for fire safety, means of egress divided by two, and general safety. High-rise buildings defined in Chapter 2 of the VCC that undergo a change of occupancy to Group R shall be equipped throughout with an automatic sprinkler system in accordance with Section 403 of the VCC and Chapter 9 of the VCC.

Table 1403.17 SPRINKLER SYSTEM VALUES						
OCCUPANCY	CATEGORIES					
	a[a]	b[a]	c	d	e	f
A-1, A-3, F, M, R, S-1	-6	-3	0	2	4	6
A-2	-4	-2	0	1	2	4
A-4, B, E, S-2	-12	-6	0	3	6	12
a. These options cannot be taken if Category a in Section 1403.18 is used.						

1403.17.1 Categories. The categories for automatic sprinkler system protection are:

1. Category a - Sprinklers are required throughout; sprinkler protection is not provided or the sprinkler system design is not adequate for the hazard protected in accordance with Section 903 of the VCC.

2. Category b - Sprinklers are required in a portion of the building; sprinkler protection is not provided or the sprinkler system design is not adequate for the hazard protected in accordance with Section 903 of the VCC.

3. Category c - Sprinklers are not required; none are provided.

4. Category d - Sprinklers are required in a portion of the building; sprinklers are provided in such portion; the system is one that complied with the code at the time of installation and is maintained and supervised in accordance with Section 903 of the VCC.

5. Category e - Sprinklers are required throughout; sprinklers are provided throughout in accordance with Chapter 9 of the VCC.

6. Category f - Sprinklers are not required throughout; sprinklers are provided throughout in accordance with Chapter 9 of the VCC.

1403.18 Standpipes. Evaluate the ability to initiate attack on a fire by making a supply of water available readily through the installation of standpipes in accordance with Section 905 of the VCC. "Required Standpipes" shall be based on the requirements of the VCC. Under the categories and occupancies in Table 1403.18, determine the appropriate value and enter that value into Table 1404.1 under Safety Parameter 1403.18, Standpipes, for fire safety, means of egress, and general safety.

Table 1403.18 STANDPIPE SYSTEM VALUES

OCCUPANCY	CATEGORIES			
	a[a]	b	c	d
A-1, A-3, F, M, R, S-1	-6	0	4	6
A-2	-4	0	2	4
A-4, B, E, S-2	-12	0	6	12

a. This option cannot be taken if Category a or Category b in Section 1403.17 is used.

1403.18.1 Standpipe categories. The categories for standpipe systems are:

1. Category a - Standpipes are required; standpipe is not provided or the standpipe system design is not in compliance with Section 905.3 of the VCC.

2. Category b - Standpipes are not required; none are provided.

3. Category c - Standpipes are required; standpipes are provided in accordance with Section 905 of the VCC.

4. Category d - Standpipes are not required; standpipes are provided in accordance with Section 905 of the VCC.

1403.19 Incidental uses. Evaluate the protection of incidental uses in accordance with Section 509.4.2 of the VCC. Do not include those where this code requires automatic sprinkler systems throughout the building, including covered and open mall buildings, high-rise buildings, public garages, and unlimited-area buildings. Assign the lowest score from Table 1403.19 for the building or floor area being evaluated and enter that value into Table 1404.1 under Safety Parameter 1403.19, Incidental Uses, for fire safety, means of egress and general safety. If there are no specific occupancy areas in the building or floor area being evaluated, the value shall be zero.

Table 1403.19 INCIDENTAL USE AREA VALUES

	PROTECTION PROVIDED

PROTECTION REQUIRED BY TABLE 509 OF THE VCC	None	1 hour	AS	AS with CRS	1 hour and AS	2 hours	2 hours and AS
2 hours and AS	-4	-3	-2	-2	-1	-2	0
2 hours, or 1 hour and AS	-3	-2	-1	-1	0	0	0
1 hour and AS	-3	-2	-1	-1	0	-1	0
1 hour	-1	0	-1	-1	0	0	0
1 hour, or AS with CRS	-1	0	-1	-1	0	0	0
AS with CRS	-1	-1	-1	-1	0	-1	0
1 hour or AS	-1	0	0	0	0	0	0

AS = Automatic sprinkler system;
CRS - Construction capable of resisting the passage of smoke (see Section 509.4.2 of the VCC).

Section 1404 Evaluation Scores

1404.1 Building Score. After determining the appropriate data from Section 1403, enter those data in Table 1404.1 and total the building score.

TABLE 1404.1 SUMMARY SHEET-BUILDING CODE					
Existing occupancy _____			Proposed Occupancy _____		
Year building was constructed _____			Number of stories_____ Height in feet _____		
Type of construction _____			Area per floor _____		
Percentage of open perimeter increase _____%					
Completely suppressed:	Yes____	No____	Corridor wall rating_____		
			Type: _____		
Fire-resistance rating of vertical opening enclosures _____					
Type of HVAC system _____, serving number of floors _____					
Automatic fire detection:	Yes____	No____	Type and Location: _____		
Fire alarm system:	Yes____	No____	Type: _____		
Smoke control:	Yes____	No____	Type: _____		
Adequate exit routes:	Yes____	No____	Dead ends: _____	Yes___	No____
Maximum exist access travel distance _____			Elevator controls:	Yes____	No____
Means of egress emergency lighting:	Yes____	No____	Mixed occupancies:	Yes____	No____
Standpipes	Yes____	No____	~~Patient ability for self-preservation~~ _____		
Incidental use	Yes____	No____	~~Patient concentration~~ _____		
~~Smoke compartmentation less than 22,500 sq. feet (2092 m^2)~~	~~Yes~~____	~~No~~____	~~Attendant-to-patient ratio~~ _____		

SAFETY PARAMETERS	FIRE SAFETY (FS)	MEANS OF EGRESS (ME)	GENERAL SAFETY (GS)
1403.1 Building Height			
1403.2 Building Area			
1403.3 Compartmentation			
1403.4 Tenant and Dwelling Unit Separations			
1403.5 Corridor Walls			
1403.6 Vertical Openings			
1403.7 HVAC Systems			
1403.8 Automatic Fire Detection			
1403.9 Fire Alarm System			
1403.10 Smoke Control	****		
1403.11 Means of Egress	****		
1403.12 Dead Ends	****		
1403.13 Maximum Exit Access Travel Distance	****		
1403.14 Elevator Control			
1403.15 Means of Egress Emergency Lighting	****		
1403.16 Mixed Occupancies		****	
1403.17 Automatic Sprinklers		÷ 2 =	
1403.18 Standpipes			
1403.19 Incidental Use			
Building score - total value			
****No applicable value to be inserted.			

1404.2 Safety scores. The values in Table 1404.2 are the required mandatory safety scores for the evaluation process listed in Section 1403.

TABLE 1404.2 MANDATORY SAFETY SCORES[a]			
OCCUPANCY	FIRE SAFETY (MFS)	MEANS OF EGRESS (MME)	GENERAL SAFETY (MGS)
A-1	20	31	31
A-2	21	32	32
A-3	22	33	33
A-4, E	29	40	40
B	30	40	40
F	24	34	34
M	23	40	40
R	21	38	38
S-1	19	29	29
S-2	29	39	39
a. MFS = Mandatory Fire Safety,			

MME = Mandatory Means of Egress,
MGS = Mandatory General Safety

1404.3 Final scores. The mandatory safety score in Table 1404.2 shall be subtracted from the building score in Table 1404.1 for each category. Where the final score for any category equals zero or more, the building is in compliance with the requirements of this section for that category. Where the final score for any category is less than zero, the building is not in compliance with the requirements of this section.

1404.3.1 Mixed occupancies. For mixed occupancies, the following provisions shall apply:

1. Where the separation between mixed occupancies does not qualify for any category indicated in Section 1403.16, the mandatory safety scores for the occupancy with the lowest general safety score in Table 1404.2 shall be utilized. (See Section 1404.3.1).

2. Where the separation between mixed occupancies qualifies for any category indicated in Section 1403.16, the mandatory safety scores for each occupancy shall be placed against the evaluation scores for the appropriate occupancy.

TABLE 1404.3 FINAL SCORES[a]

FORMULA	T1404.1	T1404.2		SCORE	PASS	FAIL
FS - MFS ≥ 0	_____ (FS) -	_____ (MFS)	=	_____	_____	_____
ME - MME ≥ 0	_____ (ME) -	_____ (MME)	=	_____	_____	_____
GS - MGS ≥ 0	_____ (GS) -	_____ (MGS)	=	_____	_____	_____

a. FS = Fire Safety
MFS = Mandatory Fire Safety.
ME = Means of Egress.
MME = Mandatory Means of Egress.
GS = General Safety.
MGS = Mandatory General Safety.

13VAC5-63-444. Appendix B Supplementary accessibility requirements for existing buildings and facilities.

A. Change ~~Sections~~ Section B101.3 ~~and B101.4~~ of the IEBC ~~to read:~~ by replacing the reference to "Section 306.7.16" with a reference to "Section 405".

~~B101.3 Qualified historic buildings and facilities subject to Section 106 of the National Historic Preservation Act. Where an alteration or change of occupancy is undertaken to a qualified historic building or facility that is subject to Section 106 of the National Historic Preservation Act, the federal agency with jurisdiction over the undertaking shall follow the Section 106 process. Where the state historic preservation officer or Advisory Council on Historic Preservation determines that compliance with the requirements for accessible routes, ramps, entrances, or toilet facilities would threaten or destroy the historic significance of the building or facility, the alternative requirements of Section 405 for that element are permitted.~~

~~B101.4. Qualified historic buildings and facilities not subject to Section 106 of the National Historic Preservation Act. Where an alteration or change of occupancy is undertaken to a qualified historic building or facility that is not subject to Section 106 of the National Historic Preservation Act, and the entity undertaking the alterations believes that compliance with the requirements for accessible routes, ramps, entrances, or toilet facilities would threaten or destroy the historic significance of the building or facility, the entity shall consult with the state historic preservation officer. Where the state historic preservation officer determines that compliance with the accessibility requirements for accessible routes, ramps, entrances, or~~

~~toilet facilities would threaten or destroy the historical significance of the building or facility, the alternative requirements of Section 405 for the element are permitted.~~

B. Change Section B101.4 of the IEBC by replacing the reference to "Section 306.7.18" with a reference to “Section 405”.

~~B.~~ C. Change ~~the first sentence in~~ Section B101.5 of the IEBC ~~to read:~~ by replacing the reference to "Section 306.7.16" with a reference to "Section 405".

~~B101.5 Displays. In qualified historic buildings and facilities where alternative requirements of Section 405 are permitted, displays and written information shall be located where they can be seen by a seated person.~~

~~C.~~ D. Change ~~the first sentence in~~ Section 102.2.3 of the IEBC ~~to read:~~ by replacing the reference to "Section 306.7.1" with a reference to "Section 404.3".

~~B102.2.3 Direct connections. New direct connections to commercial, retail, or residential facilities shall, to the maximum extent feasible, have an accessible route complying with Section 404.3 from the point of connection to boarding platforms and transportation system elements used by the public.~~

13VAC5-63-450. Chapter 1 Administration; Section 101 General.

A. Section 101.1 Short title. The Virginia Uniform Statewide Building Code, Part III, the Virginia Maintenance Code, may be cited as the "Virginia Property Maintenance Code," or the short title of "VPMC."

B. Section 101.2 Incorporation by reference. Chapters 2 through 8 of the ~~2021~~ 2024 International Property Maintenance Code, published by the International Code Council, Inc., are adopted and incorporated by reference to be an enforceable part of the VPMC. The term "IPMC" means the ~~2021~~ 2024 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 VPMC 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~~ section. 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 VPMC, 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 VPMC is comprised of the combination of (i) the provisions of Chapter 1, Administration, which are established herein, (ii) Chapters 2 through 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.

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 through 8 of the IPMC, or in the state amendments to the IPMC, means the VPMC, 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 through 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 through 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 through 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 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.

13VAC5-63-470. 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, structures, 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.

C. Section 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.

D. Section 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 103.3.1 of the VCC.

E. Section 103.2.3 Responsibility. The owner of a structure shall provide and maintain all buildings, structures, systems, facilities, and associated equipment in compliance with this code unless it is specifically expressed or implied that it is the responsibility of the tenant or occupant.

Note: Where an owner states that a tenant is responsible for performing any of the owner's duties under this code, the code official may request information needed to verify the owner's statement, as allowed by § 55.1-1209 A 5 of the Code of Virginia. A tenant's responsibility is limited and protected under the Virginia Residential Landlord and Tenant Act.

F. 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.

G. 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 an owner's designated managing agents and to any individual dwelling units subject to the rental inspection ordinance not located in a rental inspection 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 in this section, 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 in this section, 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 in this section, 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 that 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 12 (§ 55.1-1200 et seq.) of Title 55.1 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 C 1 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 C 3 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 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~~ VPMC. 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 C 4 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 C 7 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~~ rates for inspections conducted during the normal business hours established by the locality. Nothing in this provision 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 and 104.4.3 for certification.

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~~ The 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~~ the code official. ~~and~~ DHCD shall be notified by the code official or their designee within 60 days ~~after retaining or terminating~~ of the separation of 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 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.

K. Section 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.

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.

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.

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.

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.

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.

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.

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. Reports of inspections conducted for the purpose of verifying compliance with the requirements of the USBC for elevators, escalators, and related conveyances shall include the name and certification number of the elevator mechanic performing the tests witnessed by the third-party inspector or 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.

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.

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.

U. Section 104.5.4 Manufactured home park tenant notification. If a notice of violation is issued to a manufactured home park owner for violations of this code that jeopardize the health or safety of tenants of the park, a copy of the notice shall be provided to each affected tenant of the manufactured home park. The terms, "manufactured home park" and "owner," as used in this section, shall be as defined in the Manufactured Home Lot Rental Act (Chapter 13.3 (§ 55-248.41 et seq.) of Title 55 of the Code of Virginia).

13VAC5-63-485. Section 105 Violations.

A. Section 105.1 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 105.2 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, tenant or the person responsible for the maintenance of the structure or a notice of unsafe structure in accordance with Section 106 when a building or structure is determined by the code official to be an unsafe 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. The notice shall be issued by either delivering a copy by mail to the last known address of the responsible party, by delivering the notice in person, by leaving it in the possession of any person in charge of the premises, by electronic service, or by posting the notice in a conspicuous place if the person in charge of the premises cannot be found. When the owner is not the responsible party to whom the notice of violation or correction notice is issued, a copy of the notice shall also be delivered to the owner.

C. Section 105.3 Correction notice. The correction notice shall be a written notice of the defective conditions. The correction notice shall require correction of the violation within a reasonable time unless an emergency condition exists as provided under the unsafe building provisions of Section 106. 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.

D. Section 105.4 Notice of violation. If the code official determines there are violations of this code a written notice of violation may be issued to the owner, tenant, 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 105.3. In addition, the code official shall issue a notice of violation for any uncorrected violation remaining from a correction notice established in Section 105.3. The code official shall provide the section numbers for any code provisions cited in the notice of violation to the owner, tenant, or the person responsible for the maintenance or use of the building or structure. The notice shall require correction of the violation within a reasonable time. The owner, tenant, or person to whom the notice of violation has been issued shall be responsible for contacting the code official within the timeframe 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.

Exception:

Notices issued for failing to maintain buildings and structures as required by Section 103.2, as evidenced by multiple or repeated violations on the same property are not required to include a compliance deadline for correcting defects.

E. Section 105.5 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 (13VAC5-52) 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.

F. Section 105.6 Further action when violation not corrected. If the responsible party has not complied with the notice of violation, or notice of unsafe structure, the code official may request 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 or legal counsel so authorizes, the code official may issue or obtain a summons or warrant.

G. Section 105.6.1 Further action for corrected violations: Compliance with a notice of violation or notice of unsafe structure notwithstanding, the code official may request legal proceedings be instituted for prosecution when a responsible party is served with three or more separate notices of violation or notice of unsafe structure for the same property within any five consecutive years. Legal proceedings shall not be instituted under this section for violation notices issued pursuant to the initial inspection of the property. Legal proceedings for violations that have been abated in residential rental dwelling units within a multifamily apartment development may only be instituted for such violations that affect safe, decent, or sanitary living conditions.

Exception: Legal proceedings shall not be instituted for violations that have been abated on owner-occupied single family dwellings.

H. Section 105.7 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 106 Unsafe structures.

A. Section 106.1 General. This section shall apply to existing structures which are classified as unsafe. All conditions causing such structures to be classified as unsafe 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. When the code official determines that an unsafe structure constitutes such a hazard that it should be demolished, 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 106.3 Notice of unsafe structure. When a structure is determined by the code official to be an unsafe structure, a written notice of unsafe structure shall be issued by personal service to the owner, the owner's agent, or the person in control of such structure. If the notice is unable to be issued by personal service, 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. The notice shall specify the section numbers for any code provisions cited, 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. The notice of unsafe structure shall indicate the right of appeal by referencing the appeals section of this code. The person to whom the notice has been issued shall be responsible for contacting the code official within the timeframe established for any reinspections to ensure the violations have been corrected. The code official will be responsible for making such inspection and verifying the violations have been corrected.

Note: Whenever possible, the notice should also be given to any tenants of the affected structure.

C. Section 106.4 Vacating unsafe structure. The code official is authorized to order occupants to vacate the unsafe structure or prohibit occupancy of the unsafe structure. When an unsafe structure is ordered to be vacated or prohibited from occupancy, the code official shall include the order in the notice of unsafe structure, or issue a separate order.

D. Section 106.5 Posting of placard. An unsafe structure that has been issued an order to vacate or prohibited from occupancy shall be posted with the following wording at each entrance to the structure: "THIS

STRUCTURE IS UNSAFE AND ITS USE OR OCCUPANCY HAS BEEN PROHIBITED BY THE CODE OFFICIAL." 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.

E. Section 106.6 Revocation of certificate of occupancy. If a notice of unsafe structure 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.

F. Section 106.7 Vacant and open structures. When an unsafe structure is open for public entry, 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.

G. Section 106.8 Emergency repairs and demolition. To the extent permitted by the locality, the code official may authorize emergency repairs or demolition to unsafe structures when it is determined that there is an imminent danger of any portion of the unsafe structure collapsing or falling and when life is endangered. Emergency repairs or demolition 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 fails to comply with a notice to demolish under non-emergency conditions issued under Section 106.3 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, emergency demolition or non-emergency 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: 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.

J. Section 106.9 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 structures and prohibit the use of such spaces.

13VAC5-63-500. Section 107 Appeals.

A. Section 107.1 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 107.2 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 107.3 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 107.4 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 107.5 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. When the local governing body has established a fee for the filing of an appeal, the building department shall establish a written policy for the process and methods of payments. The written request for appeal is not considered to be complete and filed until the fee is paid. 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. Reaffirmation of a prior code decision does not constitute a new application of code subject to appeal.

F. Section 107.6 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 107.7 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 explained in writing, signed by the chairman and retained

as part of the record of the appeal. Copies of the written decision shall be sent to all parties by certified mail. In addition, the written decision 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 the written decision. Application forms are available from the Office of the State Review Board, 600 East Main Street, Richmond, Virginia 23219, (804) 371-7150."

H. Section 107.8 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 written decision 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:

Applicable building code. The local or statewide building code and referenced standards in effect at the time the building or portion thereof was constructed, altered, renovated, or underwent a change of occupancy. See Section 103 for the application of the code.

Maintained. To keep unimpaired in an appropriate condition, operation, and continuance as installed in accordance with the applicable building code, or as previously approved, and in accordance with the applicable operational and maintenance provisions of this code.

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 determined by the code official to be dangerous to the health, safety, and welfare of the occupants of the structure or the public because of but not limited to any of the following conditions:

1. The structure contains unsafe equipment;

2. The structure is so damaged, decayed, dilapidated, structurally unsafe, or of such faulty construction or unstable foundation that partial or complete collapse is likely;

3. The structure is vacant~~,~~ and unsecured or open;

4. The degree to which the structure is in disrepair or lacks maintenance, ventilation, illumination, sanitary or heating facilities, or other essential equipment;

5. The required plumbing and sanitary facilities are inoperable.

C. Change the following definition in Section 202 of the IPMC to read:

Infestation. The presence of insects, rodents, vermin, or other pests in sufficient number to adversely affect the structure or health, safety, and welfare of the occupants.

D. Delete the following definitions from Section 202 of the IPMC:

Approved agency
Condemn
Cost of such demolition or emergency repairs
Dangerous
Equipment support
Inoperable motor vehicle
Labeled
Neglect
Openable area
Peer review
Pest elimination
Power safety cover
Safety cover
Strict liability offense
Ultimate deformation
Workmanlike

13VAC5-63-520. Chapter 3 General requirements.

A. Delete the following sections from Chapter 3 of the IPMC:

1. Section 301.2 Responsibility.
2. Section 302.1 Sanitation.
3. Section 302.4 Weeds.
4. Section 302.6 Exhaust vents.
5. Section 302.8 Motor vehicles.
6. Section 302.9 Defacement of property.
~~7. Section 303.2 Enclosures.~~
~~8.~~ 7. Section 304.1.1 ~~Unsafe~~ Potentially unsafe conditions.
~~9.~~ 8. Section 304.18.1 Doors.
~~10.~~ 9. Section 304.18.2 Windows.
~~11.~~ 10. Section 304.18.3 Basement hatchways.
~~12.~~ 11. Section 305.1.1 ~~Unsafe~~ Potentially unsafe conditions.
~~13.~~ 12. Section 306 Component serviceability (all provisions).
13. Section 307.1.1 Height.
14. Section 307.2 Guards.
15. Section 307.2.1 Height.
~~14.~~ 16. Section 308.2 Disposal of rubbish.
~~15.~~ 17. Section 308.2.1 Rubbish storage facilities.
~~16.~~ 18.Section 308.2.2 Refrigerators.
~~17.~~ 19. Section 308.3 Disposal of garbage.
~~18.~~ 20. Section 308.3.1 Garbage facilities.
~~19.~~ 21. Section 308.3.2 Containers.

~~20.~~ 22. Section 309.2 Owner.

~~21.~~ 23. Section 309.3 Single occupant.

~~22.~~ 24. Section 309.4 Multiple occupancy.

~~23.~~ 25. Section 309.5 Occupant.

B. Change the following sections in Chapter 3 of the IPMC to read:

1. Section 301.1 Scope. The provisions of this chapter shall govern the minimum conditions for the maintenance of structures and equipment and for the maintenance of exterior property to the extent that this code is applicable.

2. Section 301.3 Vacant structures. Vacant structures shall be maintained in a clean, safe, secure, and sanitary condition as provided for in this code.

3. Section 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 applicable building code.

4. Section 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.

5. Section 302.5 Rodent harborage. ~~All structures~~ Structures shall be kept free from rodent harborage and infestation. ~~Structures in which rodents are found~~ Rodents found in structures 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.

6. Section 303.2 Enclosures. Swimming pool, hot tub, and spa ~~barriers~~ enclosures shall be maintained in accordance with the applicable ~~building code~~ provisions of Sections 303.2.1 and 303.2.2 ~~or ordinance under which such barriers were constructed~~.

7. Section 303.2.1 Barriers. Swimming pool, hot tub and spa barriers shall be maintained in accordance with the applicable building code or ordinance under which such barriers were constructed.

8. Section 303.2.2 Safety covers. Swimming pool power safety covers, and spa or hot tub lockable safety covers shall be maintained in accordance with the applicable building code under which such safety covers were installed.

~~7.~~ 9. Section 304.1 General. The exterior of a structure shall be maintained in good repair and structurally sound.

~~8.~~ 10. Section 304.3 Premises identification. Address numbers of buildings shall be maintained in accordance with the applicable building code or when required by ordinance.

~~9.~~ 11. Section 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 water shall be discharged in a manner to protect the foundation or slab of buildings and structures from the accumulation of roof drainage.

~~10.~~ 12. Section 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 an 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 repellant fans, are used.

~~11.~~ 13. Section 304.18 Building security. Devices designed to provide security for the occupants and property within, when required by the applicable building code or when provided, shall be maintained unless their removal is approved by the building official.

~~12.~~ 14. Section 304.19 Gates. To the extent required by the applicable building code 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.

~~13.~~ 15. Section 305.1 General. The interior of a structure and equipment therein shall be maintained in good repair, structurally sound, and in a sanitary condition.

~~14.~~ 16. Section 307.1 General. Handrails and guards required or provided when a building was constructed shall be maintained in accordance with the applicable building code.

~~15.~~ 17. Section 308.1 Accumulation of rubbish or garbage. The interior of every structure shall be free from excessive accumulation of rubbish or garbage.

~~16.~~ 18. Change the title of Section 309 ~~Pest Infestation and extermination~~ to "Pest infestation and termination".

~~17.~~ 19. Section 309.1 Infestation. ~~All structures~~ Structures shall be kept free from insect and rodent infestation. ~~Structures in which insects or rodents are found~~ Insect or rodent infestations found in structures 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.

C. Add the following sections to Chapter 3 of the IPMC:

1. Section 305.7 Carbon monoxide alarms. Carbon monoxide alarms shall be maintained as approved.

2. Section ~~310~~ 312 Lead-based paint.

3. Section ~~310.1~~ 312.1 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.

4. Section ~~311~~ 313 Aboveground liquid fertilizer storage tanks (ALFST).

5. Section ~~311.1~~ 313.1 General. ALFSTs shall be maintained in accordance with the requirements of Section 1101.16 of the VEBC and the requirements of the VCC applicable to such ALFSTs when newly constructed and the requirements of the VEBC 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.

13VAC5-63-540. Chapter 6 Mechanical and electrical requirements.

A. Delete the following sections from Chapter 6 of the IPMC:

1. Section 601.2 Responsibility.

2. Section 603.6 Energy conservation devices.

3. Section 604.2 Service.

4. Section 604.3.2 Abatement of electrical hazards associated with fire exposure.

B. Change the following sections in Chapter 6 of the IPMC to read:

1. Section 601.1 General. The provisions of this chapter shall govern the maintenance of mechanical and electrical facilities and equipment.

2. Section 602 Heating and cooling facilities.

3. Section 602.1 Facilities required. Heating and cooling facilities shall be maintained and operated in structures as required by this section.

4. Section 602.2 Heat supply. Every owner and operator of a Group R-2 apartment building or other residential building 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~~ April 15 to maintain a 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.

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~~ the applicable building code.

5. Section 602.3 Occupiable work spaces. Indoor occupiable work spaces shall be supplied with heat during the period from October ~~1~~ 15 to ~~May~~ April 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.

6. Section 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~~ 1 to October 1 to maintain a temperature of not more than 77°F ~~(25°F)~~ (25°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~~ applicable building code.

7. Section 603.1 Mechanical equipment and appliances. Required or provided mechanical equipment, appliances, fireplaces, solid fuel-burning appliances, cooking appliances, chimneys, vents, and water heating appliances shall be maintained in compliance with the code under which the appliances, system, or equipment was installed, kept in safe working condition, and capable of performing the intended function.

8. Section 603.2 Removal of combustion products. Where required by the code under which installed, fuel-burning equipment and appliances shall be connected to an approved chimney or vent.

9. Section 603.5 Combustion air. Where required by the code under which installed, a supply of air for complete combustion of the fuel shall be provided for the fuel-burning equipment.

10. Section 604.1 Electrical system. Required or provided electrical systems and facilities shall be maintained in accordance with the applicable building code.

11. Section 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 deterioration or damage or for similar reasons, the code official shall require the defects to be corrected to eliminate the hazard.

12. Section 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 VEBC.

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 inspector per Section 113.7 of the VCC, 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; or

18. Electronic control, signaling, and communication equipment.

13. Section 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 VEBC.

Exception: Electrical switches, receptacles, and fixtures that shall be allowed to be repaired or reused where an inspection report from the equipment manufacturer or an approved representative of the equipment manufacturer, a third party licensed or certified electrician, or an electrical engineer indicates that the equipment has not sustained damage that requires replacement.

14. Section 605.1 Electrical components. Electrical equipment, wiring, and appliances shall be maintained in accordance with the applicable building code.

15. Section 605.2 Power distribution and receptacles. Required or provided power circuits and receptacles shall be maintained in accordance with the applicable building code, and ground fault and arc-fault circuit interrupter protection shall be provided where required by the applicable building code. All receptacle outlets shall have the appropriate faceplate cover for the location when required by the applicable building code.

16. Section 605.3 Lighting distribution and luminaires. Required or provided lighting circuits and luminaires shall be maintained in accordance with the applicable building code.

17. Section 605.4 Flexible cords. Flexible cords shall not be run through doors, windows, or cabinets or concealed within walls, floors, or ceilings.

18. Section 606.1 General. Elevators, dumbwaiters, platform lifts, wheelchair lifts, moving walks, and escalators shall be maintained in compliance with ASME A17.1 and ASME A18.1. An annual periodic inspection is required of all elevators, lifts, walks, and escalators. A locality shall be permitted to require a six-month periodic inspection. Periodic tests are required of all elevators, lifts, walks, and escalators at the intervals listed in ASME A17.1 Appendix N and ASME A18.1 Appendix D. Periodic tests shall be witnessed by the code official. The code official may provide for such inspections and test witnessing by an approved agency or through agreement with other local certified elevator inspectors. An approved agency includes any individual, partnership, or corporation that has met the certification requirements established in the VCS. The most current certificate of inspection shall be on display at all times within the elevator or attached to the escalator, 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. Where not displayed in the elevator or attached to the escalator, there shall be a notice of where the certificate of inspection is available for inspection.

19. Section 607.2 Clothes dryer exhaust duct. Required or provided clothes dryer exhaust systems shall be maintained in accordance with the applicable building code.

C. Add the following sections to Chapter 6 of the IPMC:

1. Section 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.

2. Section 603.7 Fuel tanks and systems. Fuel gas or combustible or flammable liquid containers, tanks, and piping systems shall be maintained in compliance with the code under which they were installed, kept

in safe working condition, and capable of performing the intended function or removed or abandoned in accordance with the Virginia Statewide Fire Prevention Code.

~~3. Section 607.2 Clothes dryer exhaust duct. Required or provided clothes dryer exhaust systems shall be maintained in accordance with the applicable building code.~~

13VAC5-63-545. Chapter 7 Fire safety requirements.

A. Delete the following sections from Chapter 7 of the IPMC:

1. Section 701.2 Responsibility.
2. Section 703.2 Unsafe conditions.
3. Section 703.7 Vertical shafts.
4. Section 704.1.2 Required fire protection systems.
5. Section 704.1.3 Fire protection systems.
6. Section 704.2.1 Records.
7. Table 704.2 FIRE PROTECTION SYSTEM MAINTENANCE STANDARDS.
8. Section 704.2.2 Records information.
9. Section 704.3.1 Emergency impairments.
10. Section 704.4 Removal of or tampering with equipment.
11. Section 704.4.1 Removal of or tampering with appurtenances.
12. Section 704.4.2 Removal of existing ~~occupant~~ occupant-use hose lines.
13. Section 704.4.3 Termination of monitoring service.
14. Section 704.5.2 Clear space around connections.
15. Section 704.6.1 Where required.
16. Section 704.6.1.1 Group R-1.
17. Section 704.6.1.2 Groups R-2, R-3, R-4, and I-1.
18. Section 704.6.1.3 Installation near cooking appliances.
19. Section 704.6.1.4 Installation near bathrooms.
20. Section 704.6.2 Interconnection.
21. Section 704.6.3 Power source.
22. Section 704.6.4 Smoke detection system.
23. Section 704.7 Single-station and multiple-station smoke alarms (all provisions).
24. Section 705.1 General.

B. Change the following sections in Chapter 7 of the IPMC:

1. Section 701.1 General. The provisions of this chapter shall govern the maintenance of fire safety facilities and equipment.

2. Section 702.1 General. The means of egress system shall be maintained in accordance with the applicable building code and Chapter 10 of the SFPC to provide a safe, continuous, and unobstructed path of travel from any point in a building or structure to the public way.

3. Section 702.2 Aisles. The required width of aisles shall be maintained in accordance with the applicable building code.

4. Section 702.3 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.

5. Section 702.4 Emergency escape and rescue openings. Required emergency escape and rescue openings shall be maintained in accordance with the code in effect at the time of construction and 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.

6. Section 703.3 Maintenance. The required fire-resistance rating of fire-resistance-rated construction, including walls, firestops, shaft enclosures, partitions, smoke barriers, floors, fire-resistive coatings and sprayed fire-resistant materials applied to structural members, and joint systems, shall be maintained. Such elements shall be visually inspected annually by the owner and maintained as constructed in accordance with the applicable building code. Records of inspections and repairs shall be maintained. Where concealed, such elements shall not be required to be visually inspected by the owner unless the concealed space is accessible by the removal or movement of a panel, access door, ceiling tile, or entry to the space.

7. Section 703.8 Opening protective closers. Where openings are required to be protected, opening protectives shall be maintained self-closing or automatic-closing by smoke detection.

8. Section 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.

9. Section 704.1.1 Maintenance. Fire protection systems shall be maintained in accordance with the applicable building code and the Statewide Fire Prevention Code.

10. Section 704.2 Records. Inspection, testing, and maintenance records shall be maintained in accordance with the Statewide Fire Prevention Code.

11. Section 704.3 Systems out of service. Where a required fire protection system is taken out of service, it shall be taken out of service in accordance with the Statewide Fire Prevention Code, and the fire department and the fire code official shall be notified immediately.

12. Section 704.5 Fire department connection access. Ready access to fire department connections shall be maintained at all times.

13. Section 704.5.1 Clear space around connections. A working space of not less than 36 inches (914 mm) in width, 36 inches (914 mm) in depth, and 78 inches (1981 mm) in height shall be maintained in front of and to the sides of wall-mounted fire department connections and around the circumference of free-standing fire department connections.

14. Section 704.6 Single-station and multiple-station smoke alarms. Required or provided single-station and multiple-station smoke alarms shall be maintained in accordance with the applicable building code.

13VAC5-63-549. Chapter 8 Referenced standards.

~~Change the~~ A. Add the following referenced standards ~~in~~ to Chapter 8 of the IPMC ~~as follows (standards not shown remain the same)~~:

Standard reference number	Title	
ASSE 5010-1013-1	Field Test Procedure for a Reduced Pressure Principle Assembly Using a Differential Pressure Gauge, 1991	
ASSE 5010-1015-1	Field Test Procedure for a Double Check Valve Assembly Using a Duplex Gauge, 1991	
ASSE 5010-1015-2	Field Test Procedure for a Double Check Valve Assembly Using a Differential Pressure Gauge - High- and Low-Pressure Hose Method, 1991	
ASSE 5010-1015-3	Field Test Procedure for a Double Check Valve Assembly Using a Differential Pressure Gauge - High Pressure Hose Method, 1991	

ASSE 5010-1015-4	Field Test Procedure for a Double Check Valve Assembly Using a Site Tube, 1991	
ASSE 5010-1020-1	Field Test Procedures for a Pressure Vacuum Breaker Assembly, 1991	
ASSE 5010-1047-1	Field Test Procedure for a Reduced Pressure Detector Assembly Using a Differential Pressure Gauge, 1991	
ASSE 5010-1048-1	Field Test Procedure for a Double Check Detector Assembly Using a Duplex Gauge, 1991	
ASSE 5010-1048-2	Field Test Procedure for a Double Check Detector Assembly Using a Differential Pressure Gauge - High- and Low-Pressure Hose Method, 1991	
ASSE 5010-1048-3	Field Test Procedure for a Double Check Detector Assembly Using a Differential Pressure Gauge - High-Pressure Hose Method, 1991	~~505.3.2~~
ASSE 5010-1048-4	Field Test Procedure for a Double Check Detector Assembly Using a Site Tube, 1991	~~505.3.2~~
CAN/CSA-B64.10-01	Manual for the Selection and Installation of Backflow Prevention Devices/Manual for the Maintenance and Field Testing of Backflow Prevention Devices	~~505.3.2~~
ASME A18.1-2023	Safety Standard for Platform Lifts and Stairway Chairlifts	

B. Delete the following standards from the list of referenced standards in Chapter 8 of the IPMC:

Standard reference number	Title
ASTM F1346-1991 (2018)	Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs
NFPA 10-22	Standard for Portable Fire Extinguishers
NFPA 12-22	Standard on Carbon Dioxide Extinguishing Systems
NFPA 12A-22	Standard on Halon 1301 Fire Extinguishing Systems
NFPA 17-21	Standard for Dry Chemical Extinguishing Systems
NFPA 17A-21	Standard for Wet Chemical Extinguishing Systems
NFPA 25-23	Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems
NFPA 204-21	Standard for Smoke and Heat Venting
NFPA 750-23	Standard on Water Mist Fire Protection Systems
NFPA 2001-22	Standard on Clean Agent Fire Extinguishing Systems
UL 268-2016	Smoke Detectors for Fire Alarm Systems—with revisions through July 2016

Documents Incorporated by Reference (13VAC5-63)

International Code Council, Inc., 200 Massachusetts Avenue, NW, Suite 250, Washington, DC 20001 (http://www.iccsafe.org/):

International Building Code - ~~2021~~ 2024 Edition

International Energy Conservation Code - ~~2021~~ 2024 Edition

International Existing Building Code - ~~2021~~ 2024 Edition

International Fire Code - ~~2021~~ 2024 Edition

International Fuel Gas Code - ~~2021~~ 2024 Edition

International Mechanical Code - ~~2021~~ 2024 Edition

International Property Maintenance Code - ~~2021~~ 2024 Edition

International Plumbing Code - ~~2021~~ 2024 Edition

International Residential Code - ~~2021~~ 2024 Edition

International Swimming Pool and Spa Code - ~~2021~~ 2024 Edition

International Zoning Code - ~~2021~~ 2024 Edition

ICC 600 - 20, Standard for Residential Construction in High-wind Regions

ICC/ANSI A117.1-17, Accessible and Usable Buildings and Facilities, Approved November 26, 2003

American Architectural Manufacturers Association, 1827 Walden Office Square, Suite 550 Schaumburg, IL 60173-4268

AAMA/WDMA/CSA 101/I.S.2/A440 - 05, North American Fenestration Standard/Specification for Windows, Doors, and Skylights

American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036

ANSI/DASMA 108 - 2017, Standard Method for Testing Sectional Garage Doors, Rolling Doors and Flexible Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference

ANSI/RESNET/ICC 380 - 2019, Standard for Testing Airtightness of Building Enclosures, Airtightness of Heating and Cooling Air Distribution and Airflow of Mechanical Ventilation Systems

ANSI LC 1/CSA ~~6.26-18~~ 6.26-19, Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)

Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206 (https://www.acca.org/):

Manual J-16, Residential Load Calculation, Eighth Edition

Manual S-14, Residential Equipment Selection

Air Movement and Control Association International, 30 West university Drive, Arlington Heights, IL 60004-1806

AMCA 500D-98, Laboratory Methods for Testing Dampers for Rating

American Concrete Institute, 38800 Country Club Drive, Farmington Hills, MI 48331 (http://www.concrete.org/)

ACI 318-14, Building Code Requirements for Structural Concrete

ACI 562-21, Assessment, Repair, and Rehabilitation of Existing Concrete Structures

American Iron and Steel Institute, 25 Massachusetts Avenue, NW Suite 800, Washington, DC 20001

AISI S230-19, Standard for Cold-formed Steel Framing - Prescriptive Method for One- and Two-family Dwellings

American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005-4070 (http://www.api.org/):

API 650-09, Welded Tanks for Oil Storage, Eleventh Edition, June 2007 (Addendum 1, November 2008, Addendum 2, November 2009, effective May 1, 2010)

API 653-09, Tank Inspection, Repair, Alteration, and Reconstruction

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle, NE, Atlanta, GA 30329-2305 (https://www.ashrae.org/)

ASHRAE 34-2019, Designation and Safety Classification of Refrigerants

ASHRAE ~~62.1-13~~ 62.1-2022, Ventilation for Acceptable Indoor Air Quality

ASHRAE ~~90.1-04~~ 90.1-2022, Energy Standard for Buildings Except Low-rise Residential Buildings

American Society of Testing Materials International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 (http://www.astm.org/):

ASTM C90-2016A, Specification for Load-bearing Concrete Masonry Units

ASTM C199-84 (2016), Standard Test Method for Pier Test for Refractory Mortar

ASTM C315-07 (2016), Standard Specification for Clay Flue Liners and Chimney Pots

ASTM C1261-13, Standard Specification for Firebox Brick for Residential Fireplaces

ASTM D1003-13, Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics

ASTM D1557-12e1, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3(2700 kN-m/m^3))

ASTM D2846/D2846--2017BE1, Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems

ASTM ~~E84-2018B~~ E84-21A, Standard Test Methods for Surface Burning Characteristics of Building Materials

ASTM E90-90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions

ASTM E96-00e01, Standard Test Methods for Water Vapor Transmission of Materials

ASTM E108-17, Standard Test Methods for Fire Tests of Roof Coverings

ASTM E119-2018B, Standard Test Methods for Fire Tests of Building Construction and Materials

ASTM E136-22, Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C

ASTM E283-04, Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen

ASTM ~~E329-02~~ E329-25a, Standard Specification for Agencies Engaged in ~~the Testing and/or Inspection of Materials Used in~~ Construction Inspection, Testing, or Special Inspection

ASTM E330/E330M-14, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

~~ASTM F493-14, Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings~~

ASTM E779-10, Standard Test Method for Determining Air Leakage Rate by Fan Pressurization

ASTM E1354-17, Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter

ASTM E1827-11, Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door

ASTM F493-14, Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings

ASTM F1504-14, Standard Specification for Folded Poly (Vinyl Chloride (PVC) Pipe for Existing Sewer and Conduit Rehabilitation

ASTM F1871-11, Standard Specification for Folded/Formed Poly (Vinyl Chloride) Pipe Type A for Existing Sewer and Conduit Rehabilitation

ASTM ~~F2006-17~~ F2006-21, Standard Safety Specification for Window Fall Prevention Devices for Nonemergency Escape (Egress) and Rescue (Ingress) Windows

ASTM ~~F2090-17~~ F2090-21, Standard Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms

National Standards of Canada, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W5N6 (http://www.csa.ca)

CAN/CSA-B64.10-01, Manual for the Selection and Installation of Backflow Prevention Devices/Manual for the Maintenance and Field Testing of Backflow Prevention Devices, June 2003,

CSA B805 - 2018/ICC 805 - 2018, Rainwater Harvesting Systems

American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990 (https://www.asme.org/):

ASME ~~A17.1/CSA B44-19~~ A17.1/CSA B44-2022, Safety Code for Elevators and Escalators

ASME A17.3 2008, Safety Code for Existing Elevators and Escalators

ASME ~~A18.1 2008~~ A18.1-2023, Safety Standard for Platform Lifts and Stairway Chairlifts

American Society of Sanitary Engineering, 901 Canterbury Road, Suite A, Westlake, OH 44145 (http://www.asse-plumbing.org/):

ASSE 1010-2004, Performance Requirements for Water Hammer Arrestors

ASSE 1022-03, Performance Requirements for Backflow Preventer for Beverage Dispensing Equipment

ASSE 1024-04, Performance Requirements for Dual Check Valve Type Backflow Preventers (for Residential Supply Service or Individual Outlets)

ASSE 5010-1013-1, Field Test Procedure for a Reduced Pressure Principle Assembly Using a Differential Pressure Gauge, 1991

ASSE 5010-1015-1, Field Test Procedure for a Double Check Valve Assembly Using a Duplex Gauge, 1991

ASSE 5010-1015-2, Field Test Procedure for a Double Check Valve Assembly Using a Differential Pressure Gauge - High- and Low-Pressure Hose Method, 1991

ASSE 5010-1015-3, Field Test Procedure for a Double Check Valve Assembly Using a Differential Pressure Gauge - High Pressure Hose Method, 1991

ASSE 5010-1015-4, Field Test Procedure for a Double Check Valve Assembly Using a Site Tube, 1991

ASSE 5010-1020-1, Field Test Procedures for a Pressure Vacuum Breaker Assembly, 1991

ASSE 5010-1047-1, Field Test Procedure for a Reduced Pressure Detector Assembly Using a Differential Pressure Gauge, 1991

ASSE 5010-1048-1, Field Test Procedure for a Double Check Detector Assembly Using a Duplex Gauge, 1991

ASSE 5010-1048-2, Field Test Procedure for a Double Check Detector Assembly Using a Differential Pressure Gauge - High- and Low-Pressure Hose Method, 1991

ASSE 5010-1048-3, Field Test Procedure for a Double Check Detector Assembly Using a Differential Pressure Gauge - High-Pressure Hose Method, 1991

ASSE 5010-1048-4, Field Test Procedure for a Double Check Detector Assembly Using a Site Tube, 1991

American Society of Civil Engineers/Structural Engineering Institute, 1801 Alexander Bell Drive, Reston, VA 20191-4400 (http://www.asce.org/sei/)

ASCE/SEI 7-22, Minimum Design Loads for Buildings and Other Structures

ASCE/SEI 24-14, Flood Resistant Design and Construction

ASCE/SEI ~~41-13~~ 41-17, Seismic Evaluation and Retrofit of Existing Buildings

American Wood Council, 222 Catocin Circle, Suite 201, Leesburg, VA 20175 (http://www.awc.org/):

AWC WFCM-18, Wood Frame Construction Manual for One- and Two-Family Dwellings

Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. 127 Park Street, NE, Vienna, VA 22180

MSS SP 58 - 2018, Pipe Hangers and Supports

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471 (http://www.nfpa.org/):

NFPA ~~13-19~~ 13-22, Installation of Sprinkler Systems

NFPA ~~13R-19~~ 13R-22, Installation of Sprinkler Systems in Residential Occupancies Up to and Including Four Stories in Height

NFPA 70-96; National Electrical Code

NFPA ~~70-20~~ 70-23, National Electrical Code

NFPA ~~72-19~~ 72-22, National Fire Alarm and Signaling Code

NFPA 88A-23, Standard for Parking Structures

NFPA 91-20, Standard for Exhaust Systems for Air Conveying of Vapors, Mists and Particulate Solids

NFPA 96-24, Standard for Smoke Control Systems

NFPA ~~99-21~~ 99-24, Health Care Facilities Code

NFPA 101-21, Life Safety Code

NFPA 105-19, Standard for the Installation of Smoke Door Assemblies

NFPA 285-19, Standard Method of Test for the Evaluation of Flammability Characteristics of Exterior Nonload-bearing Wall Assemblies Containing Combustible Components

NFPA 495-18, Explosive Materials Code

NFPA 701-19, Standard Methods of Fire Tests for Flame-propagation of Textiles and Films

NFPA ~~704~~ 704-22, Standard System for the Identification of the Hazards of Materials for Emergency Response

NFPA 720-15, Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment

National Fenestration Rating Council, Inc., 6305 Ivy Lane, Suite 140, Greenbelt, MD 20770

NFRC 100 - 2020, Procedure for Determining Fenestration Products U-factors

NFRC 400 - 2001, Procedure for Determining Fenestration Product Air Leakage--Second Edition

NSF 50-2015, Equipment for Swimming Pools, Spas, Hot Tubs and Other Recreational Water Facilities, NSF International, 789 Dixboro Road, P.O. Box 130140, Ann Arbor, MI 48113 (http://nsf.org)

TFI RMIP-09, Aboveground Storage Tanks Containing Liquid Fertilizer, Recommended Mechanical Integrity Practices, December 2009, The Fertilizer Institute, 820 First Street, NE, Suite 430, Washington, DC 20002

Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062 (http://www.ul.com):

~~UL 217-15, Single- and Multiple-station Smoke Alarms with revisions through November 2016~~

UL 109-97, Tube Fittings for Flammable and Combustible Fluids, Refrigeration Service and Marine Use

UL 197 - 2010, Commercial Electric Cooking Appliances - with revisions through January 2018

UL 207—2009, Refrigerant-containing Components and Accessories, Nonelectrical—with revisions through June 2014

UL 217-2015, Single and Multiple Station Smoke Alarms - with revisions through November 2016

UL 263-11, Fire Tests of Building Construction and Materials

UL 294-2018, Access Control System Units - with revisions through October 2018

UL 474-2015, Standard for Safety Dehumidifiers

UL 484-2019, Standard for Room Air Conditioners

UL 710-2012, Exhaust Hoods for Commercial Cooking Equipment - with revisions through February 2021

UL 710B-2011, Recirculating Systems - with revisions through February 2019

UL 723-2018, Standard for Test of Surface Burning Characteristics of Building Materials

UL 790-04, Standard Test Methods for Fire Tests of Roof Coverings-with Revisions through October 2008

UL 921-2020, Standard for Commercial Dishwashers

UL 1784-15, Air Leakage Tests of Door Assemblies, with Revisions through February 2015

UL 1034-2011, Burglary-Resistant Electric Locking Mechanisms - with revisions through June 2020

UL 2034-2017, Standard for Single and Multiple Station Carbon Monoxide Alarms, with revisions through September 2018

~~UL 2075-2013, Gas and Vapor Detectors and Sensors (Second Edition, March 5, 2013)~~

UL 2162-2014, Commercial Wood-Fired Baking Ovens - Refractory Type - with revisions through August 2019

UL 2202-2009, Electric Vehicle (EV) Charging System Equipment - with revisions through February 2018

UL 2594-2016, Electric Vehicle (EV) Supply Equipment

UL 2750-23, Wireless Power Transfer Equipment for Electric Vehicles

UL/CSA 60335-2-40-2019, Standards for Household and Similar Electrical Appliances, Safety part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers

UL/CSA 60335-2-89-2021, Household and Similar Electrical Appliances-Safety-Part 2-89: Particular Requirements for Commercial Refrigerating Appliances and Ice-Makers with an Incorporated or Remote Refrigerant Unit or Motor-Compressor

UL 8782-2017, Pollution Control Units for Commercial Cooking

Interim Remediation Guidance for Homes with Corrosion from Problem Drywall, April 2, 2010, Joint Report, Consumer Products Safety Commission and Department of Housing and Urban Development

Department of Housing and Community Development

Review and Update of the Industrialized Building Safety Regulations (IBSR)

13VAC5-91-20. Application and compliance.

A. In accordance with § 36-81 of the Code of Virginia, registered industrialized buildings shall be acceptable in all localities as meeting the requirements of the Industrialized Building Safety Law (Chapter 4 (§ 36-70 et seq.) of Title 36 of the Code of Virginia), which shall supersede the building codes and regulations of the counties, municipalities, and state agencies. Local requirements affecting industrialized buildings, including zoning, utility connections, preparation of the site, and maintenance of the unit shall remain in full force and effect. All building officials are authorized to and shall enforce the provisions of the Industrialized Building Safety Law (Chapter 4 (§ 36-70 et seq.) of Title 36 of the Code of Virginia) and this chapter.

B. In accordance with § 36-78 of the Code of Virginia, no person, firm, or corporation shall offer for sale or rental, or sell or rent, any industrialized building subject to any provisions of this chapter unless it conforms with the applicable provisions of this chapter.

Further, any industrialized building constructed before January 1, 1972, shall remain subject to the ordinances, laws, or regulations in effect at the time such industrialized building was constructed. Additionally, as a requirement of this chapter, any industrialized building bearing the label of a compliance assurance agency and Virginia registration seal shall remain subject to the provisions of this chapter that were effective when such building was constructed, regardless of whether the building has been relocated.

C. In accordance with § 36-99 of the Code of Virginia and in accordance with the USBC, the installation or erection of industrialized buildings and alterations, additions, or repairs to industrialized buildings are regulated by the USBC and not this chapter. The USBC provides for administrative requirements for permits, inspections, and certificates of occupancy for such work.

~~D. The use of off-site manufactured intermodal freight containers, moving containers, or storage containers as building modules or components of an industrialized building may be approved by the administrator in accordance with 13VAC5-91-150.~~

~~In reviewing the use of intermodal freight containers as structural building components, the administrator may accept evaluation reports from accredited third-party evaluation services.~~

~~E.~~ D. Off-site manufactured intermodal freight containers, moving containers, and storage containers placed on site temporarily or permanently for use as a storage container are not subject to this chapter.

13VAC5-91-40. Inspection and enforcement by administrator.

A. The SBCO is designated as the administrator's representative for the enforcement of this chapter and shall act as the building official for registered industrialized buildings. It shall have authority to make inspections ~~during reasonable hours~~ at the manufacturing facilities and at building sites where industrialized buildings are being installed during reasonable hours without prior notice. The SBCO shall have authority to issue inspection reports for correction of violations caused by the manufacturer and to take such other actions as are required to enforce this chapter.

B. The SBCO will maintain a list of approved compliance assurance agencies. Each manufacturer producing registered industrialized buildings will contract with one or more compliance assurance agencies for required evaluation, monitoring, and inspection services. The contract will delineate the services to be provided by the compliance assurance agency. The compliance assurance agency will notify the SBCO within 30 days of signing a new contract or terminating an existing contract with any manufacturer.

13VAC5-91-80. Limitation of manufacturer's liability.

The manufacturer of a registered industrialized building shall not be required to remedy violations caused by on-site work by others not under ~~his~~ the manufacturer's control or violations involving components and materials furnished by others and not included with the registered industrialized building.

13VAC5-91-160. Use of model codes and standards.

A. Industrialized buildings entering the production assembly line after the effective date of the ~~2021~~ 2024 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 assembly line during a one-year period after the effective date of the ~~2021~~ 2024 edition of this chapter:

1. ICC International Building Code - ~~2018~~ 2021 Edition
2. ICC International Plumbing Code - ~~2018~~ 2021 Edition
3. ICC International Mechanical Code - ~~2018~~ 2021 Edition
4. National Fire Protection Association Standard Number 70 (National Electrical Code) - ~~2017~~ 2020 Edition
5. ICC International Fuel Gas Code - ~~2018~~ 2021 Edition
6. ICC International Energy Conservation Code - ~~2018~~ 2021 Edition
7. ICC International Residential Code - ~~2018~~ 2021 Edition

B. The following documents are adopted and incorporated by reference to be an enforceable part of this chapter:

1. ICC International Building Code - ~~2021~~ 2024 Edition
2. ICC International Plumbing Code - ~~2021~~ 2024 Edition
3. ICC International Mechanical Code - ~~2021~~ 2024 Edition
4. National Electrical Code - ~~2020~~ 2023 Edition

5. ICC International Fuel Gas Code - ~~2021~~ 2024 Edition

6. ICC International Energy Conservation Code - ~~2021~~ 2024 Edition

7. ICC International Residential Code - ~~2021~~ 2024 Edition

8. ICC/MBI 1200-2021 Standard for Off-site Construction: Planning, Design, Fabrication and Assembly

9. ICC/MBI 1205-2021 Standard for Off-site construction: Inspection and Regulatory Compliance

C. As the ~~2021~~ 2024 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 ~~2021~~ 2024 edition of the Virginia Industrialized Building Safety Regulations or the ~~2021~~ 2024 edition of this chapter.

The codes and standards referenced in this section may be procured from:

International Code Council, Inc.
200 Massachusetts Avenue, NW, Suite 250
Washington, DC 20001

13VAC5-91-245. Manufacturer's data plate.

A. All of the following information shall be placed on a permanent manufacturer's data plate in the vicinity of the electrical distribution panel or in some other location that is readily accessible for inspection. The compliance assurance agency shall approve the form and location of the data plate and shall ensure that the data plate is complete:

1. Manufacturer's name and address.

2. Compliance assurance agency certification label number.

3. Serial number of each module of the building.

4. Serial number of the Virginia registration seal.

5. Date of manufacture of the building.

6. List of codes and standards under which the building was evaluated and constructed and the type of construction and occupancy classification under those codes and standards.

7. Design live roof load, design floor live load, design wind speed, and design ground snow load.

8. Thermal resistance ("R") values.

9. Special conditions or limitations concerning the use of the building under the codes and standards applicable to the building; however, a list of such conditions or limitations that are furnished separately with the building shall satisfy this requirement.

10. Special instructions for handling, installation, and erection of the building; however, a list of such instructions that are furnished separately with the building shall satisfy this requirement.

11. Designation of electrical service ratings, directions for water and drain connections and, where applicable, identification of permissible type of gas for appliances.

12. Name of manufacturer and model designation of major factory installed appliances.

B. The manufacturer shall maintain copies of the data plate and reports of inspection, tests, and any corrective action taken for a minimum period of 10 years from the date of manufacture of the building.

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. Closed panel construction shall require one registration seal for every 600 square feet, or part thereof, of floor area.

D. 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. 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.

E. 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.

F. In accordance with § 36-85.1 of the Code of Virginia, any person or corporation having paid the fee for an approved registration seal that 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. 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.

G. When requested by a compliance assurance agency, replacement seals may be issued by the SBCO for registered industrialized buildings provided that the previous seal was defaced or destroyed and that sufficient documentation exists to show that the structure was registered, including a data plate, full plans, owner’s manual, or other data deemed pertinent by the SBCO.

Documents Incorporated by Reference (13VAC5-91)

International Code Council, 200 Massachusetts Avenue NW, Suite 250, Washington, DC 20001 (http://shop.iccsafe.org/codes.html):

ICC International Plumbing Code - ~~2018~~ 2021 Edition

ICC International Mechanical Code - ~~2018~~ 2021 Edition

ICC International Building Code - ~~2018~~ 2021 Edition

ICC International Residential Code - ~~2018~~ 2021 Edition

ICC International Fuel Gas Code - ~~2018~~ 2021 Edition

ICC International Energy Conservation Code - ~~2018~~ 2021 Edition

ICC International Plumbing Code - ~~2021~~ 2024 Edition

ICC International Mechanical Code - ~~2021~~ 2024 Edition

ICC International Building Code - ~~2021~~ 2024 Edition

ICC International Residential Code - ~~2021~~ 2024 Edition

ICC International Fuel Gas Code - ~~2021~~ 2024 Edition

ICC International Energy Conservation Code - ~~2021~~ 2024 Edition

ICC/MBI 1200-2021 Standard for Off-site Construction: Planning, Design, Fabrication and Assembly

ICC/MBI 1205-2021 Standard for Off-site construction: Inspection and Regulatory Compliance

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471 (http://www.nfpa.org/):

NFPA 70, National Electrical Code - ~~2017~~ 2020 Edition,

NFPA 70, National Electrical Code - ~~2020~~ 2023 Edition

ASTM ~~Standard Number E541-10 - Standard Specification for Agencies Engaged in System Analysis and Compliance Assurance for Manufactured Building, American Society for Testing and Materials~~ International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 (http://www.astm.org/):

ASTM E541-10 - Standard Specification for Agencies Engaged in System Analysis and Compliance Assurance for Manufactured Building

Department of Housing And Community Development

Review and Update of the Virginia Amusement Device Regulations (VADR)

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 ~~B77.1-2017~~ B77.1-2022 for the regulation of passenger tramways; and

2. American Society for Testing and Materials (ASTM) Standard Nos. ~~F747-21a~~ F747-24, ~~F770-21a~~ F770-24, F1159-16e1, ~~F1193-18a~~ F1193-25, ~~F1957-99 (2017)~~ F1957-24, ~~F2007-18~~ F2007-24, F2137-19, ~~F2291-21~~ F2291-25, ~~F2374-21a~~ F2374-24, ~~F2375-09 (2017)~~ F2375-25, ~~F2376-21a~~ F2376-24, F2460-19, ~~F2461-20a~~ F2461-23, ~~F2959-21~~ F2959-25a, ~~F2960-16~~ F2960-23, ~~F2970-20~~ F2970-22, ~~F2974-20~~ F2974-24a, and ~~F3054-18~~ F3054-23 for the regulation of amusement devices.

The standards referenced in this subsection may be procured from:

	ANSI 25 W 43rd Street New York, NY 10036	ASTM 100 Barr Harbor Dr. West Conshohocken, PA 19428-2959

B. The provisions of this chapter govern where they are in conflict with any provisions of the standards incorporated by reference in this chapter.

C. The following requirements supplement the provisions of the ASTM standards incorporated by reference in this chapter:

1. The operator of an amusement device shall be at least 16 years of age, except when the person is under the supervision of a parent or guardian and engaged in activities determined not to be hazardous by the Commissioner of the Virginia Department of Labor and Industry;

2. The amusement device shall be attended by an operator at all times during operation except that (i) one operator is permitted to operate two or more amusement devices provided they are within the sight of the operator and operated by a common control panel or station and (ii) one operator is permitted to operate two small mechanical rides with separate controls provided the distance between controls is no more than 35 feet and the controls are equipped with a positive pressure switch; and

3. The operator of an amusement device shall not be (i) under the influence of any drugs that may affect the operator's judgment or ability to assure the safety of the public or (ii) under the influence of alcohol.

D. Where an amusement device was manufactured under previous editions of the standards incorporated by reference in this chapter, the previous editions shall apply to the extent that they are different from the current standards.

13VAC5-31-75. Local building department.

A. In accordance with §§ 36-98.3 and 36-105 of the Code of Virginia, the local building department shall be responsible for the enforcement of this chapter and may charge fees for such enforcement activity. The total amount charged for any one permit to operate an amusement device or devices or the renewal of such permit shall not exceed the following, except that when a private inspector is used by the owner or operator of the device, the fees shall be reduced by 75%:

1. $55 for each small mechanical ride or inflatable amusement device covered by the permit. Multi-device inflatables, or "bounce parks" shall have separate fees for each device connected to the inflatable park;

2. $75 for each circular ride, institutional trampoline, or flat-ride less than 20 feet in height covered by the permit, except concession go-karts.

Concession go-kart fees shall not exceed $300 per track, for tracks with up to 20 karts. An additional fee of up to $10 may be charged for each additional kart in excess of 20;

3. $100 for each spectacular ride covered by the permit that cannot be inspected as a circular ride or flat-ride in subdivision 2 of this subsection due to complexity or height, except zip lines. Zip line fees shall not exceed $150 for each zip line. For the purposes of this section, each portion from launch point to landing point shall be considered a separate zip line and each zip line between a launch point and landing point shall also be considered a separate zip line;

4. $200 for each coaster covered by the permit that exceeds 30 feet in height;

5. $400 for each coaster covered by the permit that exceeds 60 feet in height; and

6. The local building department may charge an additional fee for permits and inspections of generators and associated wiring for amusement device events. Generators subject to these fees are those used exclusively with amusement devices and that are inspected by the local building department. The fee per event shall not exceed $165 and shall not exceed the actual cost to perform the inspection or inspections.

Exception: Small portable generators serving only cord and plug connected equipment loads are not subject to the fee.

Notwithstanding the fee limitations established in this section, the local building department shall be permitted to increase the fees up to 50% when requested to perform weekend or after-hour inspections. The local building department shall also be permitted to increase fees up to 50% when a reinspection is required.

B. Notwithstanding the provisions of subsection A of this section, when an amusement device is constructed in whole or in part at a site for permanent operation at that site and is not intended to be disassembled and moved to another site, then the local building department may utilize permit and inspection fees established pursuant to the USBC to defray the cost of enforcement. This authorization does not apply to an amusement device that is only being reassembled, undergoing a major modification at a site or being moved to a site for operation.

C. A permit application shall be made to the local building department at least five days before the date in which the applicant intends to operate an amusement device. The application shall include the name of the owner, operator, or other person assuming responsibility for the device, a general description of the device including any serial or identification numbers available, the location of the property on which the device will be operated, and the length of time of operation. The permit application shall indicate whether a private inspector will be used. If a private inspector

is not used, the applicant shall give reasonable notice when an inspection is sought and may stipulate the day such inspection is requested provided it is during the normal operating hours of the local building department. In addition to the information required on the permit application, the applicant shall provide proof of liability insurance of an amount not less than $1 million per occurrence or proof of equivalent financial responsibility. The local building department shall be notified of any change in the liability insurance or financial responsibility during the period covered by the permit.

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

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

F. In addition to obtaining a certificate of inspection in conjunction with a permit application for amusement devices permanently fixed to a site, a new certificate of inspection shall also be obtained prior to the operation of an amusement device following a major modification, prior to each seasonal operation of a device, at least once during the operating season and prior to resuming the operation of a device following an order from a local building department to cease operation. This requirement shall not apply to small mechanical rides meeting the conditions outlined in subsection D of this section.

G. For amusement devices manufactured prior to 1978, the owner or operator shall have the information required by 10.1 through 10.6 of ASTM F1193 available at the time of inspection. In addition, the operator of any amusement device shall be responsible for obtaining all

manufacturer's notifications, service bulletins and safety alerts issued pursuant to ASTM F770 and the operator shall comply with all recommendations and requirements set out in those documents. A copy of all such documents shall be made available during an inspection.

H. In the enforcement of this chapter, local building department personnel shall have authority to conduct inspections at any time an amusement device would normally be open for operation or at any other time if permission is granted by the owner or operator, to issue an order to temporarily cease operation of an amusement device upon the determination that the device may be unsafe or may otherwise endanger the public and to accept and approve or deny requests for modifications of the rules of this chapter in accordance with the modification provisions of the USBC.

I. 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 under this chapter 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.

J. In accordance with § 36-98.3 of the Code of Virginia and 13VAC5-31-10 B, the procedures for violations of this chapter shall be as prescribed in the USBC.

K. In accordance with § 36-98.1 of the Code of Virginia, the Virginia Department of General Services (DGS) shall function as the local building department for the application of this chapter to amusement devices located on state-owned property. In accordance with §§ 36-98.2 and 36-114 of the Code of Virginia, appeals of the application of this chapter by the DGS shall be made directly to the State Building Code Technical Review Board. Further, as a condition of this chapter, such appeals shall be filed within 14 calendar days after receipt of the decision of DGS.

Documents Incorporated by Reference (13VAC5-31)

American National Standards Institute (ANSI), 25 West 43rd Street, 4th Floor, New York, NY 10036 (http://www.ansi.org/)

ANSI ~~B77.1-2017~~ B77.1-2022, Passenger Ropeways – Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyors – Safety ~~Standard, American National Standards Institute (ANSI), 25 West 43rd Street, 4th Floor, New York, NY 10036 (http://www.ansi.org/)~~ Requirements

American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 (http://www.astm.org/):

ASTM ~~F747-21a~~ F747-24, Standard Terminology Relating to Amusement Rides and Devices

ASTM ~~F770-21a~~ F770-24, Standard Practice for Ownership, Operation, Maintenance, and Inspection of Amusement Rides and Devices

ASTM F1159-16e1, Standard Practice for Design of Amusement Rides and Devices that are Outside the Purview of Other F24 Design Standards

ASTM ~~F1193-18a~~ F1193-25, Standard Practice for Quality, Manufacture, and Construction of Amusement Rides and Devices

ASTM ~~F1957-99 (2017)~~ F1957-24, Standard Test Method for Composite Foam Hardness-Durometer Hardness

ASTM ~~F2007-18~~ F2007-24, Standard Practice for Classification, Design, Manufacture, and Operation of Concession Go-Karts and Facilities

ASTM F2137-19, Standard Practice for Measuring the Dynamic Characteristics of Amusement Rides and Devices

ASTM ~~F2291-21~~ F2291-25, Standard Practice for Design of Amusement Rides and Devices

ASTM ~~F2374-21a~~ F2374-24, Standard Practice for Design, Manufacture, Operation, and Maintenance of Inflatable Amusement Devices

ASTM ~~F2375-09 (2017)~~ F2375-25, Standard Practice for Design, Manufacture, Installation and Testing of Climbing Nets and Netting/Mesh used in Amusement Rides, Devices, Play Areas and Attractions

ASTM ~~F2376-21a~~ F2376-24, Standard Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems

ASTM F2460-19, Standard Practice for Special Requirements for Bumper Boats

ASTM ~~F2461-20a~~ F2461-23, Standard Practice for Manufacture, Construction, Operation and Maintenance of Aquatic Play Equipment

ASTM ~~F2959-21~~ F2959-25a, Standard Practice for Aerial Adventure Courses

ASTM ~~F2960-16~~ F2960-23, Standard Practice for Permanent Amusement Railway Ride Tracks and Related Devices

~~ASTM F2974-20, Standard Guide for Auditing Amusement Rides and Devices~~

ASTM ~~F2970-20~~ F2970-22, Standard Practice for Design, Manufacture, Installation, Operation, Maintenance, Inspection and Major Modification of Trampoline Courts

ASTM F2974-24a, Standard Guide for Auditing Amusement Rides and Devices

ASTM ~~F3054-18~~ F3054-23, Standard Practice for Operations of Amusement Railway Rides, Devices, and Facilities

Department of Housing And Community Development

Review and Update of the Virginia Certification Standards (VCS)

13VAC5-21-10. Definitions.

A. The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Active certificate" means a certificate that is not revoked, suspended, or inactive.

"Applicant" means a person seeking a certificate.

"BCAAC" means the Building Code Academy Advisory Committee appointed pursuant to subdivision 7 of § 36-137 of the Code of Virginia.

"BHCD" means the Virginia Board of Housing and Community Development.

"Certificate" means a certificate of competence issued pursuant to subdivision 6 of § 36-137 of the Code of Virginia concerning the content, application, and intent of specified subject areas of the building and fire prevention regulations promulgated by the BHCD and issued to present or prospective personnel of local governments and to any other persons seeking to become qualified to perform inspections pursuant to Chapter 6 (§ 36-97 et seq.) of Title 36 of the Code of Virginia, Chapter 9 (§ 27-94 et seq.) of Title 27 of the Code of Virginia, and any regulations adopted thereunder, who have completed training programs or in other ways demonstrated adequate knowledge.

"Certificate holder" means a person to whom a certificate has been issued.

"Code academy" means the Virginia Building Code Academy established under subdivision 14 of § 36-139 of the Code of Virginia or individual or regional training academies accredited by the department pursuant to subdivision 7 of § 36-137 of the Code of Virginia.

"Department" means the Virginia Department of Housing and Community Development.

"Inactive certificate" means a certificate where the certificate holder has not attended the periodic training courses designated by the department or has not met the continuing education requirements.

"Provisional certificate" means a temporary certificate issued in accordance with 13VAC5-21-51 C.

"SFPC" means the Virginia Statewide Fire Prevention Code ~~(13VAC5-51)~~ (13VAC5-52).

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

"USBC" means the Virginia Uniform Statewide Building Code (13VAC5-63).

"VADR" means the Virginia Amusement Device Regulations (13VAC5-31).

B. Words and terms used in this chapter that are defined in the USBC, VADR, or SFPC and that are not defined in this chapter shall have the meaning ascribed to them in those regulations unless the context clearly indicates otherwise.

13VAC5-21-51. Issuance and maintenance of certificates.

A. Certificates will be issued when an applicant has complied with the current applicable requirements of this chapter. Certificates will be classified as active or inactive. An inactive certificate will be considered out of compliance and a noncompliance notice will be issued to the certificate holder. In such cases, notification shall also be provided to the locality or company employing the certificate holder. Exceptions to the issuance of a noncompliance notice may be considered where there is a separation from employment by medical or military leave for 12 consecutive months or more during the continuing education period. An inactive certificate may be reinstated as an active certificate after completing makeup training courses designed by the department.

B. All certificates issued since June 1978 are valid unless revoked or suspended, except that provisional certificates shall remain valid as set out under subsection C of this section.

C. A provisional certificate may be issued to (i) a person who has been directed by the department to obtain a certificate; (ii) an applicant requesting a certificate under the alternative training provisions of 13VAC5-21-45; (iii) an applicant when the required training has not been provided or offered; (iv) an inactive certificate holder when the issuance of a provisional certificate is determined to be warranted by the department; or (v) a person who, due to extenuating and warranting circumstances either on behalf of the code academy or beyond the person's control, has not fully complied with the eligibility requirements of training and competency established herein.

Such a provisional certificate may be issued when the applicant or person has satisfactorily completed the code academy core module, and completed any training through the code academy or through other providers determined to warrant the issuance of the provisional certificate.

The provisional certificate is valid for a period of one year after the date of issuance and shall only be issued once to any individual, except that a provisional certificate shall remain valid when the required training has not been provided or offered.

D. All certificate holders shall attend periodic maintenance training as designated by the department and shall attend ~~16~~ 24 hours of continuing education every two years as approved by the department. If a certificate holder possesses more than one certificate, the ~~16~~ 24 hours shall satisfy the continuing education requirement for all certificates.

Note: The number of CE hours required by the VCS at the start of a CE reporting period is applicable through the end of that CE reporting period. When the number of CE hours required by this section is changed, the new requirement is applicable to CE reporting periods beginning after the effective date of the updated VCS.

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Editorial Corrections and Correlations for 2024 Proposed Regulation

Uniform Statewide Building Code (USBC)

- *Revised definition for "Farm Building or Structure" for consistency with the Code of Virginia (added the words "or combination thereof), to read:*

  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.

- *Correlation with HB 258 (2026 Regular Session) which updates Code of Virginia terminology related to early childhood care and education.*

  - Revised Exception to Section 308.5, to read:

    Exception: ~~Family day homes~~ Home-based child care facilities under Section 313.3.

  - Revised Section 313.3, to read:

    ~~Family day homes. Family day homes~~ Home-based child care facilities. Home-based child care facilities registered or licensed by the Virginia Department of Education shall be classified as Group R-2, R-3, or R-5.

- *Section G2414.4.4: Added the word "Section" (three instances), the IRC section numbers equivalent to IFGC Sections 404.11 and 404.14, and enclosed the IFGC section numbers in parenthesis, for consistency with other IRC/VRC fuel gas sections, to read:*

  G2414.4.4 (403.4.5) Corrugated stainless steel tubing. Corrugated stainless steel tubing shall be listed in accordance with ANSI LC1/CSA 6.26 and shall be arc-resistant in accordance with Section 5.16 of LC 1/CSA 6.26.

Exception: Corrugated stainless steel tubing installed below grade outside of the building in compliance with Section G2415.11 (404.11) or beneath the building in compliance with Section G2415.14 (404.14) shall not be required to be arc-resistant.

- *Section E3902.5: Correlated to match the VCC changes (code change proposal E2701.1.1(1)-24), to read:*

  E3902.5 Basement receptacles. 125-volt through 250-volt receptacles installed in unfinished portions or areas of the basement not intended as habitable rooms and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel. (210.8(A)(5)).

- *Table 403.3.1.1: Deleted existing Virginia amendment related to Medical Facilities as these occupancy classifications are now addressed in the 2024 IMC.*

- *Chapter 27, Subsection B, Charging Statement 3: Revised to be more reflective of the existing amendment (intended to only capture HVAC equipment), and to correlate with the equivalent IRC/VRC Section E3902.14 as shown in the Base Document, to read:*

  ~~Delete~~ Change exception 2 to Section 210.8(F) (remainder of section remains) ~~in its entirety.~~ to read:
  GFCI protection shall not be required for listed HVAC equipment.

- *Section 404.1 of the VEBC: Certain portions of new text were not underlined in the proposal. Revised to accurately identify new text:*

  404.1 General. An alteration of an existing facility shall not impose a requirement for greater accessibility than that which would be required for new construction. ~~Alterations shall not reduce or have the effect of reducing accessibility of a facility or portion of a facility.~~ An alteration that decreases or has the effect of decreasing accessibility of a building, facility or element thereof, below the requirements for new construction at the time of the alteration is prohibited. Accessibility requirements for sites, buildings, structures, facilities, elements and spaces are not required to exceed that required by the VCC for new construction at the time of the alteration.

- *Section 202 of the VPMC, Code Change Proposal PM202-24: No changes made to the definition for "Unsafe structure" as 13VAC5-63-430 already reflects this proposed change.*

- *Section 606.1 of the VPMC: Certain portions of new text were not underlined in the proposal.*

    - *Revised Section 606.1 to accurately identify new text:*

        General. Elevators, dumbwaiters, platform lifts, wheelchair lifts, moving walks, and escalators shall be maintained in compliance with ASME A17.1 and ASME A18.1. An annual periodic inspection is required of all elevators, lifts, walks, and escalators. A locality shall be permitted to require a six-month periodic inspection. Periodic tests are required of all elevators, lifts, walks, and escalators at the intervals listed in ASME A17.1 Appendix N and ASME A18.1 Appendix D. Periodic tests shall be witnessed by the code official. The code official may provide for such inspections and test witnessing by an approved agency or through agreement with other local certified elevator inspectors. An approved agency includes any individual, partnership, or corporation that has met the certification requirements established in the VCS. The most current certificate of inspection shall be on display at all times within the elevator or attached to the escalator, 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. Where not displayed in the elevator or attached to the escalator, there shall be a notice of where the certificate of inspection is available for inspection.

    - *Added ASME A18.1-2023 to the list of referenced standards in Chapter 8 of the VPMC*

- *Minor editorial changes throughout to comport with the Virginia's Regulation Information System Style Manual.*