This document created by the Florida Department of Business and Professional Regulation - 850-487-1824

Total Mods for report: 90
The utilization of up to date referenced standards is a recognized component of complete system of building and fire safety. These updated references allow for the utilization of newer technologies and safety equipment to protect lives and property.

The NFPA Standards, which are developed in a consensus process by subject matter experts and users, have long been recognized as an important part of the International Codes as well as other construction documents and some have been updated since the publication of the 2018 edition of the IBC.

Updating these standards takes advantage of improvements in formatting of the documents, technology developed since the last edition, and reduces emerging risks in the built environment.

**Fiscal Impact Statement**

- **Impact to local entity relative to enforcement of code**
  This will prevent local enforcers from utilizing outdated standards in the review and inspection of construction projects and will ease the burden of utilizing two different editions of these standards should a contractor desire to utilize the more up to date referenced standards.

- **Impact to building and property owners relative to cost of compliance with code**
  These standards must be complied with in accordance with the existing code provisions. This will allow them to use the most recent and up to date information available in the construct of properties.

- **Impact to industry relative to the cost of compliance with code**
  None identified.

- **Impact to small business relative to the cost of compliance with code**
  None identified.

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  These are existing standards that have their connections with health, safety, and welfare previously established. There are no new base code provisions proposed with these standards.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  Many of these NFPA Standards have undergone revisions to be better products through a revision and reformatting process driven by the code enforcement and engineering communities. The updated standards also take advantage of technology improvements since the last editions of the standards.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  It does not.

- **Does not degrade the effectiveness of the code**
  It does not.
Mod 8180 including Mod 8180-A1

NFPA (Standards not listed remain unchanged)

12 - 4518: Standard on Carbon Dioxide Fire Extinguishing Systems

12A - 4518: Standard on Halon 1301 Fire Extinguishing Systems

13 - 4619: Standard for Installation of Sprinkler Systems

13D - 4619: Standard for Installation of Sprinkler Systems in One-and Two-family Dwellings and Manufactured Homes

13R - 4619: Standard for Installation of Sprinkler Systems in Low Rise Residential Occupancies

14 - 4619: Standard for the Installation of Standpipe and Hose Systems

16 - 4519: Standard for the Installation of Foam-water and Foam-water Spray Systems

20 - 4619: Standard for the Installation of Stationary Pumps for Fire Protection

40 - 4619: Standard for the Storage and Handling of Cellulose Nitrate Film

72 - 4619: National Fire Alarm and Signaling Code

80 - 4619: Standard for Fire Doors and Other Opening Protectives

92 - 4518: Standard for Smoke Control Systems

105 - 4319: Standard for Smoke Door Assemblies and Other Opening Protectives

110 - 4319: Standard for Emergency and Standby Power Systems

111 - 4319: Standard for Stored Electrical Emergency Emergency and Standby Power Systems

211 - 4619: Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances

652 - 4619: Standard on the Fundamentals of Combustible Dust

750 - 4519: Standard on Water Mist Fire Protection Systems

780 - 4417: Standard for the Installation of Lightning Protection Systems

2001 - 4518: Standard on Clean Agent Fire Extinguishing Systems
Rationale
This updates my original proposed modification. After the March TAC meeting, and after discussions with the State Fire Marshals Office, it was identified that the most direct and less complicated way to deal with differences between these proposals and the referenced standards in the Florida Fire Code would be to revise these proposals to be in conformity with those referenced standards in the proposed Florida Fire Code. This does not reduce the effectiveness of the safety provisions in any of the reference standards, and provides for an easier path to conformity between the Florida Building Code and the Florida Fire Prevention Code. The attached withdraws some of the original proposed modifications to the residential portion of the Florida Building Code, but retains and further modifies the following standards: NFPA 105 - 16 NFPA 110 - 16 NFPA 111 - 16 NFPA 780 is not referenced in the FFC so the alternative proposal to update that standard to 2017 remains.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
None
Impact to building and property owners relative to cost of compliance with code
None
Impact to industry relative to the cost of compliance with code
None
Impact to Small Business relative to the cost of compliance with code
None identified.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
No impact
Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
No impact
Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
No impact
Does not degrade the effectiveness of the code
No impact

Alternate Language
Rationale
Major changes in the 2017 edition of NFPA 780 provide greater oversight and new understanding of lightning protection systems and lightning hazards. New definitions include ground loop conductor, integral lightning protection system, mast-type lightning protection system, rated impulse withstand voltage level (withstand voltage) (u w), smart structure, solar array, and solar panel. Other changes assist facility managers, installers, and AHJs: added requirements concerning physical on-site inspections of completed installations and periodic inspections or testing, updated figures illustrate air terminal protection for lower roof protection, new requirements cover test and connection points for concrete-encased electrodes to enable periodic maintenance and testing of the ground system, new bonding requirements address long horizontal metal bodies on roofs, new requirements pertain to ungrounded metal bodies, new Annexes cover technologies used in state-of-the-art systems: Annex J, Protection of Smart Structures; and Annex K, Guide to International Standards Dealing with the Selection of SPDs for Use on Photovoltaic (PV) Installations.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
This comment will not have a fiscal impact on the local entity.
Impact to building and property owners relative to cost of compliance with code
This comment will not have a fiscal impact on a building or property owner.
Impact to industry relative to the cost of compliance with code
This comment will not have a fiscal impact on industry.
Impact to Small Business relative to the cost of compliance with code
None identified.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This comment will enhance the health, safety, and welfare of the general public by ensure mandatory or permitted lightning protection systems are installed to the most current nationally recognized consensus standard.
Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This comment will improve the code by referencing the most current edition of the NFPA 780.
Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
This comment in no way discriminates against materials, products, methods, or systems of construction.

Does not degrade the effectiveness of the code
This comment enhances the effectiveness of the code.

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<td>Comment: Both NFPA 80 and 105 should both be updated to the 2019 edition as originally proposed in order to avoid a conflict. Should the Florida Fire Prevention Code updates to the 2019 editions of NFPA 80 and 105.</td>
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<tr>
<td><strong>F8180-G1</strong></td>
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<tr>
<td>Proponent: Robby Dawson</td>
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<td>Comment: I agree with Mr. Holland's proposed modification and thank him for catching one of the referenced standards I overlooked.</td>
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<td>Proponent: Robby Dawson</td>
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<td>Comment: See attached summary of standards updated.</td>
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NFPA (Standards not listed remain unchanged) – Comments 5/1/19

To provide alternative for conformity with the Florida Fire Prevention Code.


40 - 1619: Standard for the Storage and Handling of Cellulose Nitrate Film Withdraw - Remains 2016 edition


105 - 131916: Standard for Smoke Door Assemblies and Other Opening Protectives Modified – Consistent with NFPA 1/101

110 - 131916: Standard for Emergency and Standby Power Systems Modified – Consistent with NFPA 1/101

111 - 131916: Standard for Stored Electrical Emergency and Standby Power Systems Modified – Consistent with NFPA 1/101


780 - 1417: Standard for the Installation of Lightning Protection Systems (From alternate language proposal/consistent with NFPA 1, unchanged)
I fully support the proposed modification to update the selected list of referenced NFPA codes and standards with the addition of:

NFPA 780 - 14 Standard for the Installation of Lightning Protection Systems
NFPA (Standards not listed remain unchanged)

12 - 4518: Standard on Carbon Dioxide Fire Extinguishing Systems

12A - 4518: Standard on Halon 1301 Fire Extinguishing Systems

13 - 4619: Standard for Installation of Sprinkler Systems

13D - 4619: Standard for Installation of Sprinkler Systems in One-and Two-family Dwellings and Manufactured Homes

13R - 4619: Standard for Installation of Sprinkler Systems in Low Rise Residential Occupancies

14 - 4619: Standard for the Installation of Standpipe and Hose Systems

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111 - 4319: Standard for Stored Electrical Emergency Emergency and Standby Power Systems

211 - 4619: Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances

652 - 4619: Standard on the Fundamentals of Combustible Dust

750 - 4519: Standard on Water Mist Fire Protection Systems

2001 - 4518: Standard on Clean Agent Fire Extinguishing Systems
Florida Building Code Proposal

Supporting Information to Code Changes F8180 and F8204

This document summarizes the changes to the NFPA standards that are proposed to be updated to the newest editions in these two code change proposals. All standards not noted here or in the proposals are not included as the ICC references the most recent standards in the balance of the noted documents.

Each of these summaries is derived from the "Origin and Development" section of each of the individual documents which contains a complete history of all previous revisions of the standard, as well as the significant changes from the most recent editions that are covered in this summary. The link noted in each summary will provide access to the most recent and full document referenced.

If there are any further questions or concerns, please contact:

Robby Dawson
NFPA Southeastern Regional Director
dawson@nfpa.org
804-401-9063

NFPA 12-18: Standard on Carbon Dioxide Fire Extinguishing Equipment - The 2018 edition introduces a new requirement to conduct testing of integrated fire protection and life safety systems in accordance with NFPA 4. In addition, a new section on pipe hangers and supports and a new annex section on full discharge testing have also been added to more clearly explain the testing process. Finally, the equivalency statement was revised to use the standard text, which specifies that the authority having jurisdiction is responsible for approving an equivalent system, method, or device. www.nfpa.org/12

12A-18: Standard on Halon 1301 Fire Extinguishing Systems – The only change in the 2018 edition is in the annex chapter on nozzle and piping calculations (Annex H). It was revised to correct errors, comply with the Manual of Style for NFPA Technical Committee Documents, and clarify the details of the procedure. www.nfpa.org/12A

13-19: Standard for Installation of Sprinkler Systems - The 2019 edition of NFPA 13 has undergone a complete reorganization to make the document more functional and easier to navigate. It is now fashioned in the order of how one would approach the design of a sprinkler system. Users will now find hazard classifications, water supplies, and underground piping at the beginning of the standard. Chapter 8 has been divided into several new chapters, breaking out general rules for sprinkler locations into one chapter and several other chapters specific to sprinkler technology. The storage chapters have also been reorganized by sprinkler technology and address ceiling-only design. Chapter 25 has been revised and now contains all the requirements for in-rack sprinklers.

Requirements for vertical pipe chases have been clarified as have requirements for electrical equipment rooms where sprinklers can be omitted. Additionally, new beam rules for residential sprinklers have been added and details provided.

Due to the extensive reorganization of the 2019 edition, new features have been added to help users locate requirements and identify sections with technical changes. The 2016–2019 Roadmap comparing the section numbers of the 2016 edition to the 2019 edition has been compiled and is located in the document after the index. It is provided for information only and should be used as a quick-reference locator. Technical changes from the last edition are also indicated and should be used as a guide. Shaded text identifies requirements that have been modified as a result of additions and deletions with the exception of tables and figures. New requirements are marked with the symbol. www.nfpa.org/13

13D-19: Standard for Installation of Sprinkler Systems in One-and Two-family Dwellings and Manufactured Homes - The 2019 edition adds beam rules for sprinklers installed under and adjacent to beams (along with new figures), requirements for closets where ventless clothes dryers are installed, and requirements where pressure-reducing and pressure-regulating valves are installed. A section has been added to Chapter 12 to address inactive systems in structures left vacant for a period of time. Requirements for the use of well pumps as a water supply have been clarified. In addition, images have been added to clarify sprinkler location and clearances needed around fireplaces. www.nfpa.org/13D
13R - 19: Standard for Installation of Sprinkler Systems in Low Rise Residential Occupancies - The 2019 edition adds a new definition for carport, as well as several new requirements that address where pipe and tube listed for light hazard can be used in an ordinary hazard application, beam rules for sprinklers installed under and adjacent to beams (along with new figures), waste and linen systems, installation of fuel-fired equipment, and obstructions in hallways. Chapter 9, Water Supplies, is reorganized, and the domestic demand tables are moved from the annex to the body of the standard, and values updated. In addition, new images clarifying sprinkler location and clearances needed around fireplaces are added. www.ntfpa.org/13R

14 - 19: Standard for the Installation of Standpipe and Hose Systems - In the 2019 edition, the terminology has been made consistent throughout the document by changing the terms outlet(s) and hose outlet(s) to hose connection(s), as this is the more appropriate term. The definitions for the terms hose connection and hose valve also have been revised to clarify what is meant by each term as used in the document. Definitions and requirements for distance monitoring and automated inspection and testing have been added because technology now allows for monitoring of certain conditions as well as inspecting and testing standpipe systems from a remote location.

A definition for open parking garage has been added along with a requirement that permits manual standpipes in open parking garages under a certain height. The signage for pressure requirements is no longer required when the pressure is 150 psi or less, as NFPA 13E requires a standard pressure of 150 psi unless a sign indicates a higher pressure is required. The maximum pressure permitted at any point in the system has been increased from 350 psi to 400 psi. Subsection 7.8.1 has been revised to clarify that the required pressure is to be calculated at the outlet of the hose valve. The hydraulic calculation procedures have been revised to clarify that additional standpipes should be calculated at the point of connection rather than at the topmost outlet.

Subsection 7.11.2 has been revised to delineate between a standpipe system main drain and individual standpipe drains. Revisions have been made to the required number of fire department connections due to the ease with which a single connection can be compromised. A new Chapter 13 on maritime standpipe and hose systems has been added. www.nfpa.org/14

16 - 19: Standard for the Installation of Foam-water and Foam-water Spray Systems - The 2010 edition of NFPA 16 reorganized in a fashion consistent with that of the 2019 edition of NFPA 13 — to present information in the order in which it is needed when planning and designing a foam-water sprinkler/spray system. Technical changes include the addition of requirements for working drawings using information from both NFPA 11 and NFPA 13 to provide a comprehensive list of information. Information about the type of foam concentrate piping was extracted from NFPA 11 to be consistent with that standard. Information was also extracted from NFPA 30 to address containment, drainage, and spill control. www.nfpa.org/16

20 - 19: Standard for the Installation of Stationary Pumps for Fire Protection - The 2019 edition of NFPA 20 is revised to recognize new technologies, including automated inspection and testing, distance monitoring, automated valves, and self-regulating variable speed fire pump units. Provisions are added to require that a single entity be responsible for acceptable fire pump unit performance. A new definition for lowest permissible suction pressure is added to provide a better understanding of the maximum available flow by connecting it to a suction pressure.

Requirements are added to clarify where manifolding of fire pump test piping is permitted, as well as where combining fire pump test piping with relief valve discharge piping is permitted. New definitions are added to differentiate between standby power and alternate power to ensure proper application of these terms throughout the document. The term very tall building is defined and the requirements pertaining to these buildings are expanded, including those for automatic tank refill valves.

New requirements and annex material are added to help package designers through the evaluation of mass elastic systems. The requirements for hydraulic cranking systems are revised to distinguish between systems used as primary cranking systems and those used as secondary cranking systems.

Annex C is revised significantly to make data formatting more universal. www.nfpa.org/20

40 - 19: Standard for the Storage and Handling of Cellulose Nitrate Film - In the 2019 edition, the terms standard roll and single- and double-roll containers were replaced by terminology used by modern archivists. A new definition for decompostion was added, along with a new requirement for inspection and maintenance of portable fire extinguishers to comply with NFPA 10. Changes were made to the extended term storage vault requirements to allow for flexible storage configurations. Requirements for openings in, and exhaust capacities of, projection booths were
revised to reflect modern practices and equipment, and a new requirement for temperature and humidity control was added. [www.nfpa.org](http://www.nfpa.org)

72 - 19: National Fire Alarm and Signaling Code - The 2019 edition reflects a number of changes. The requirements for fire service access elevators and occupant evacuation elevators (OEE) were completely revised to coordinate with changes made in ASME A17.1/CSA B44. The requirements for occupant evacuation operation (OEO) are revised extensively. Annex text is added for clarification, as in Figure A.21.8, Simplified Occupant Evacuation Operation (EOE) Elevator System Interface with the Building Fire Alarm System Based on ASME A17.1, Section 2.27.11, and NFPA 72, Section 21.6. In addition to the requirements for area of refuge (area of rescue assistance), Chapter 24 is revised to include requirements for stairway communications systems, elevator landing communications systems, and occupant evacuation elevator lobby communications systems.

A review was accomplished and revisions made to ensure alignment of NFPA 72 with the Manual of Style for NFPA Technical Committee Documents. These editorial revisions include the breakout of paragraphs with multiple requirements into individually numbered paragraphs for each requirement and the minimization of use of exceptions. For many years, when codes required visual (or visible) notification in addition to audible notification, strobe lights meeting the requirements of Chapter 16 were used. With newer LED products that can be used for fire alarm, the terms strobe, light, and visible are essentially changed to visual notification appliance. The terms speaker and high power speaker array (HPA) are changed to loudspeaker and high power loudspeaker array (HPLA) for consistency.

Perhaps the most significant change to the Code pertains to carbon monoxide. In August 2016, the Standards Council voted to relocate material that is in NFPA 720, Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment, to various chapters of NFPA 72. These requirements are essentially incorporated into Chapter 17 for carbon monoxide detectors; Chapter 14 for installation, testing, and maintenance; Chapter 29 for carbon monoxide alarms; and new Annex H. Chapter 29 is greatly expanded, and a significant amount of annex text has been added for explanation. NFPA 720 is to be withdrawn as the requirements are moved to NFPA 72.

Chapter 14, Inspection, Testing, and Maintenance, is greatly modified to incorporate valve-regulated lead-acid (VRLA) batteries. The inspection and testing requirements are revised in Tables 14.3.1 and 14.4.3.2. This also expands the annex language to address use and testing of these batteries. Several new terms are introduced, and these are defined in Chapter 3. [www.nfpa.org](http://www.nfpa.org)

80 - 19: Standard for Fire Doors and Other Opening Protectives - The 2019 edition includes new definitions in Chapter 3 for inspection mark and field label to assist in the application of inspection, testing, and maintenance provisions in Chapter 5. Chapter 4 contains updated provisions for job site preparation of fire doors for fire tests. Subsection 4.9.4 has been updated with new provisions for measuring clearance under the bottom of fire doors and with a new requirement addressing bottom clearance with the presence of latching hardware devices. Chapter 5 has been updated to include fire protective curtain assemblies in its application and a new section that addresses inspection marks. New subsection 19.2.2 requires damper manufacturer's installation and maintenance instructions be maintained on site for new damper installations. The detailed damper installation criteria from Chapter 19 have been deleted and left with reliance on the damper manufacturer's installation instructions and the damper listing. Chapter 19 also continues to update the requirements for the inspection, testing, and maintenance of fire and smoke dampers with the addition of new 19.5.2.3.3 for a remote inspection method. A new 19.5.1.3 clarifies application of inspection requirements for single inaccessible dampers.

Annex A contains new and revised figures for typical steel door frame installations. Globally, ANSI UL 10B, Fire Tests of Door Assemblies, and ANSI UL 10C, Standard for Positive Pressure Fire Tests of Door Assemblies, have been added as equivalent standards to NFPA 252. Editorial updates have been made to Chapter 4 and Chapter 5 to clean up duplicate language and relocate text to the appropriate sections. Referenced publications and extracted sections have been updated as needed. [www.nfpa.org](http://www.nfpa.org)

92 - 18: Standard for Smoke Control Systems - New to the 2018 edition of NFPA 92 is the addition of requirements regarding the verification of dedicated smoke control equipment through use of the weekly self-test function. A new annex on tenability was added to provide guidelines for designers to assess tenable conditions in spaces protected by smoke control systems, in connected spaces, and of means of egress elements during the operation of a smoke control system. [www.nfpa.org](http://www.nfpa.org)

105 - 19: Standard for Smoke Door Assemblies and Other Opening Protectives - Changes for the 2019 edition of NFPA 105 focus primarily on the provisions for smoke dampers. New 7.3.1.2 requires smoke damper
manufacturer’s installation and maintenance instructions be maintained on site for new smoke damper installations. Chapter 7 also continues to update the requirements for the inspection, testing, and maintenance of smoke dampers with the addition of new 7.6.3.3 on a remote inspection method. A new 7.6.2.3 clarifies application of inspection requirements for single inaccessable dampers. Section 7.5 contains new requirements to further clarify and update the process for smoke damper acceptance testing. A new opening protective is addressed by new Chapter 9, which applies to smoke-protective curtain assemblies for hoistways. A new definition is added to Chapter 3 to describe a smoke-protective curtain assembly for hoistways. Referenced publications and extracted sections have been updated as needed. www.nfpa.org/105.

110 - 19: Standard for Emergency and Standby Power Systems - For the 2019 edition, several existing requirements have been clarified to assist users with the proper application. Clarifications include the location and access to the remote emergency stop switch, testing of fuel in accordance with the manufacturer’s recommendations in lieu of an ASTM standard, and battery charger specifications. www.nfpa.org/110

111 - 19: Standard for Stored Electrical Emergency and Standby Power Systems - In the 2019 edition, Table 4.2.2 has been revised to cover the interruption time without reference to specific SEPSS types. www.nfpa.org/111

211 - 19: Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances - The 2019 edition includes updated references such as product listings. In addition, installation of decorative shrouds at the termination of a factory-built chimney are permitted per the standard requirements. www.nfpa.org/211

652 - 19: Standard on the Fundamentals of Combustible Dust - The 2019 edition of NFPA 652 contains the following changes: NFPA 652 is intended to be the fundamentals document for combustible dust. As such, definitions that are considered fundamental to the topic of combustible dust reside in NFPA 652 and be extracted into the industry and commodity-specific standards. This ensures consistency in documents dealing with dust. Changes to this edition reflect this, and several definitions are added from industry and commodity-specific documents that also are considered fundamental to combustible dust.

Provisions were added to designate the requirements that are meant to be retroactive. Management system requirements, such as housekeeping, personal protective equipment (PPE), and hot work are now in Chapter 8, Management Systems.

Material was added to Chapter 5 that helps the user evaluate the requirements for mixtures of types of combustible dust, such as a mixture containing metal dust and agricultural dust.

Changes were made to the deadlines to include the completion of dust hazard analysis (DHA) for existing processes and facility compartments. The deadline for completion of a DHA is now September 7, 2020. This aligns with industry and commodity-specific dust standards. NFPA 652 now also requires that the DHA be reviewed and updated every 5 years.

Chapter 9, Hazard Management: Mitigation and Prevention, was expanded to include requirements on equipment design and operation. This includes air material separators (AMS), air moving devices (AMDs), duct systems, sight glasses, abort gates and dampers, bulk storage enclosures, size reduction equipment, pressure protection systems, material feeding devices, bucket elevators, enclosed conveyors, mixers and blenders, and dryers. Requirements for fans for continuous dust control are also added. Changes are made to the requirements for equipment isolation to remove the exemption for small diameter ductwork. Note that this is consistent with the current requirements in NFPA 654.

The committee modified the material on electrostatic discharges to provide clarity to the user regarding conductive equipment, bonding and grounding, flexible connectors, particulate transport rates, grounding of personnel, flexible intermediate bulk containers (FIBCs), and rigid intermediate bulk containers (RIBCs). www.nfpa.org/652

750 - 19: Standard on Water Mist Fire Protection Systems - The 2019 edition of NFPA 750 contains updates that clarify the definitions of a grid system water mist system and twin-fluid system, which devices can be used as automatic means, which components can be used as provisions for cleaning, and the requirements for pressure-indicating devices used on a common manifold system. Further updates clarify that a listed system requires that any mixed components or systems have been tested together and expand requirements to include configurations allowed in current listed solutions. New sections have been added specifying design, testing, and installation of preaction water mist systems. Another section has been added to prevent debris and contaminants from entering a water mist system.
by requiring a strainer or filter after the fire department connection (FDC). It also clarifies the location of the FDC on a low-pressure water mist system. Throughout the standard, the terms "pressure container" and "pressurized container" have been replaced with the newly defined term "pressure vessel," and the phrase "safety device to release excess pressure" has been replaced with "pressure relief device." These changes were made to maintain consistency with industry practices and terminology. The edition also incorporates revisions that update referenced documents, extracts, and formatting to comply with the Manual of Style for NFPA Technical Committee Documents.

www.nfpa.org/750

**780 - 17: Standard for the Installation of Lightning Protection Systems** - For the 2017 edition, new requirements have been added relative to physical on-site inspection of the completed installation and for periodic inspections or testing for compliance to this standard per the authority having jurisdiction. New definitions have been added for the following terms: ground loop conductor, integral lightning protection system, mast-type lightning protection system, rated impulse withstand voltage level (withstand voltage) (UW), smart structure, solar array, and solar panel. These definitions add clarity to the terms as used in the standard.

Several figures illustrating air terminal protection for lower roof protection have been updated. New requirements have been established for test and connection points for concrete-encased electrodes to enable periodic maintenance and testing of the ground system. Zero property line conditions have been re-evaluated and revised. New bonding requirements have been added for long horizontal metal bodies on roofs. The Committee revised many requirements pertaining to ungrounded metal bodies, removing the term isolated (ungrounded) for consistency. Section 5.3 pertaining to Facilities That Handle or Process Combustible or Explosive Dust has been updated, providing specific reference to NFPA 61, Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities; NFPA 122, Standard for Fire Prevention and Control in Metal/Nometal Mining and Metal Mining Processing Facilities; and NFPA 664, Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities. Section 5.9 provides new criteria for installations on fabric structures.

Chapter 7, Protection for Structures Containing Flammable Vapors, Flammable Gases, or Liquids That Can Give Off Flammable Vapors was rewritten. Sections in Chapter 8, Protection of Structures Housing Explosive Materials, that pertain to single or multiple mats, railroad tracks, installation of air terminals on earth-covered magazines, wharves, and piers for explosives operations and cranes were revised. Chapter 12, Protection for Solar Arrays, was revised to provide more specific criteria.

Two new annexes, Annex J, Protection of Smart Structures, and Annex K, Guide to International Standards Dealing with the Selection of SPDs for Use on Photovoltaic (PV) Installations, have been added to the 2017 edition. Annex L, Lightning Risk Assessment, has been revised to provide greater clarity and correlation of requirements with other lightning protection standards. www.nfpa.org/780

**NOTE:** This is the suggested alternative offered by Bryan Holland to the original proposal.

**2001 - 18: Standard on Clean Agent Fire Extinguishing Systems** - For the 2018 edition, the chapter on inspection, testing, maintenance, and training was completely reorganized to improve usability of the standard and to comply with the Manual of Style for NFPA Technical Committee Documents. As part of this revision, the content was split into two distinct chapters: Chapter 7, Approval of Installations, and Chapter 8, Inspection, Servicing, Testing, Maintenance, and Training. Definitions of inspection, maintenance, and service were added, as well as a requirement for integrated fire protection and life safety systems to be tested in accordance with NFPA 4. In addition, the standard now requires an egress time study for all clean agent systems, not just those where the design concentration is greater than the NOAEL. A definition of abort switch was added, and the definition of clean agent was revised. A requirement to install dirt traps at the end of each pipe run was added. The requirements for pipe and fittings were reviewed and updated in accordance with the latest reference standards. A new section on pipe hangers and supports was added. New requirements regarding release mechanisms were added. www.nfpa.org/2001
### F7792

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<th>Commission Action</th>
<th>Alternate Language</th>
<th>General Comments</th>
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<td>Brad Schiffer</td>
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<td>Impact to building and property owners relative to cost of compliance with code</td>
<td>Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction</td>
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<td>Impact to industry relative to the cost of compliance with code</td>
<td>Does not discriminate against materials, products, methods, or systems of construction</td>
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<td>Impact to small business relative to the cost of compliance with code</td>
<td>Does not degrade the effectiveness of the code</td>
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</table>

**Summary of Modification**

This clarifies that if an elevator hoistway is protected by a method other than an enclosed elevator lobby by adding a lobby required to allow a fire service access elevator to have a second entrance does not require travel without going through the lobby.

**Rationale**

This clarifies that when to comply when adding an elevator lobby only to allow a second entrance on a fire access elevator it does not require travel to another Exit without travel through the lobby. This will apply when the hoistway opening is not protected by an enclosed elevator lobby.

**Impact to local entity relative to enforcement of code**

Clarifies when an additional Exit without travel through an elevator is required.

**Impact to building and property owners relative to cost of compliance with code**

Will save on design and construction of small areas with private elevators.

**Impact to industry relative to the cost of compliance with code**

Will save on design and construction of small areas with private elevators.

**Impact to small business relative to the cost of compliance with code**

Will save on design and construction of small areas with private elevators.
Rationale
Better defines intent of Code mod.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
Better clarifies Mod intent.
Impact to building and property owners relative to cost of compliance with code
Better clarifies Mod intent thus should reduce cost.
Impact to industry relative to the cost of compliance with code
Better clarifies Mod intent thus should reduce cost.
Impact to Small Business relative to the cost of compliance with code
Will save on design and construction of small areas with private elevators.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This clarifies that if an elevators hoistway is protected by a method other than an enclosed elevator lobby by adding a lobby required to allow a fire service access elevator to have a second entrance does not require travel without going through the lobby.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This clarifies that if an elevators hoistway is protected by a method other than an enclosed elevator lobby by adding a lobby required to allow a fire service access elevator to have a second entrance does not require travel without going through the lobby.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Does not.

Does not degrade the effectiveness of the code
Does not.
1016.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section.

1. Exit access through an enclosed elevator lobby is permitted. Access to not less than one of the required exits shall be provided without travel through the enclosed elevator lobbies required by Section 3006, not to apply if the lobby is only provided to meet the requirements of Section 3007.6 Exception 1. Where the path of exit access travel passes through an enclosed elevator lobby, the level of protection required for the enclosed elevator lobby is not required to be extended to the exit unless direct access to an exit is required by other sections of this code.
1016.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section.

1. Exit access through an enclosed elevator lobby is permitted. Access to not less than one of the required exits shall be provided without travel through the enclosed elevator lobbies required by Section 3006 unless the lobby is only provided to meet the requirements of Section 3007.6 Exception 1. Where the path of exit access travel passes through an enclosed elevator lobby, the level of protection required for the enclosed elevator lobby is not required to be extended to the exit unless direct access to an exit is required by other sections of this code.
## Summary of Modification

Allow electrically locked egress doors in occupancies that have a lower risk than those currently allowed. Also clarifies all types of electrical locking systems such as panic hardware, fire exit hardware, or door knobs or levers.

## Rationale

This "special locking arrangement" allows for immediate egress with one-handed operation of the door hardware. Code officials and specifiers have asked why this option is allowed in only these occupancies. No reason is known other than the current allowed occupancies in Section 1010.1.9.9 match those in Section 1010.1.9.8.

## Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**: none
- **Impact to building and property owners relative to cost of compliance with code**: No cost impact unless the building owner chooses to install these shall be permitted locking systems.
- **Impact to industry relative to the cost of compliance with code**: No cost impact unless the building owner chooses to install these shall be permitted locking systems.
- **Impact to small business relative to the cost of compliance with code**: No cost impact unless the building owner chooses to install these shall be permitted locking systems.

## Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**: yes
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**: yes
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**: does not
- **Does not degrade the effectiveness of the code**: does not
Taking a close look at the FBC original mod, noticed this proposed further revision (which was approved as a floor mod during the ICC's IBC code development process) was missed in the FBC mod. Many, but not all, electric door locks are electromagnetic. Hence this proposed further revision.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**
- Only a very minor impact, if any impact.

**Impact to building and property owners relative to cost of compliance with code**
- Allows flexibility regarding the type of electric door lock (providing the electric door lock complies with all the required provisions).

**Impact to industry relative to the cost of compliance with code**
- Consistent with nationwide practices.

**Impact to Small Business relative to the cost of compliance with code**
- No cost impact unless the building owner chooses to install these shall be permitted locking systems.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
- Maintains current requirements for doors in the means of egress
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
- Permits equivalent products
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
- Does not discriminate
- Does not degrade the effectiveness of the code
- Does not degrade effectiveness of the code
Further revise as follows:

3. Operation of the door hardware directly interrupts the power to the electromagnetic electric lock and unlocks the door immediately.
1010.1.9.9 Electromagnetically Door Hardware Release of Electrically Locked Egress doors.

Door hardware release of electric locking systems shall be permitted on doors. Doors in the means of egress with any occupancy except in Group H in buildings with an occupancy in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 shall be permitted to be locked with an electromagnetic locking system where equipped with hardware that incorporates a built-in switch and where installed and operated in accordance with all of the following:

1. The door hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The door hardware is capable of being operated with one hand.
3. Operation of the door hardware directly interrupts the power to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the electric locking system automatically unlocks the door.
5. Where panic or fire exit hardware is required by Section 1010.1.10, operation of the panic or fire exit hardware also releases the electromagnetic electric lock.
6. The locking system units shall be listed in accordance with UL 294.
Section(s): 1010.1.9.9, 1010.1.10; (IFC [BE] 1010.1.9.9, 1010.1.10)

Proponent: Edward Kulik, Chair, representing Building Code Action Committee (bcac@iccsafe.org)

Revise as follows:

1010.1.9.9 Electromagnetically Door hardware release of electrically locked egress doors. Door hardware release of electric locking systems shall be permitted on doors in the means of egress with any occupancy except in Group H in buildings with an occupancy in Group A, B, E, 1, 1, I, 1, M, R.1 or R.2 and doors in tenant spaces in Group A, B, E, 1, 1, I, 1, M, R.1 or R.2 shall be permitted to be locked with an electromagnetic locking system where equipped with hardware that incorporates a built-in switch and where installed and operated in accordance with all of the following:

1. The door hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The door hardware is capable of being operated with one hand and shall comply with Section 1010.1.9.5.
3. Operation of the door hardware directly interrupts the power to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the electric locking system automatically unlocks the door.
5. Where panic or fire exit hardware is required by Section 1010.1.10, operation of the panic or fire exit hardware also releases the electromagnetic lock.
6. The locking system units shall be listed in accordance with UL 294.

1010.1.10 Panic and fire exit hardware. Doors serving a Group H occupancy and doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Exceptions:

1. A main exit of a Group A occupancy shall be permitted to be locking in accordance with Section 1010.1.9.3, Item 2.
2. Doors serving a Group A or E occupancy shall be permitted to be electromagnetically locked in accordance with Section 1010.1.9.9.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or exit access doors, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.

Reason: This public proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 13 open meetings and numerous web-based calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments.

Related documentation and reports are posted on the BCAC website at: http://www.iccsafe.org/codes/BCAC/Pages/default.aspx.

This "special locking arrangement" allows for immediate egress with one-handed operation of the door hardware. Code officials and specifiers have asked why this option is allowed in only these occupancies. No reason is known other than the current allowed occupancies in Section 1010.1.9.9 match those in Section 1010.1.9.9.
Further, revisions clarify this section of the code to address required functions of all types of electrical locking systems which are operated (e.g., unlocked) by operation of the door hardware such as panic hardware, fire exit hardware, or door knobs or levers (where panic or fire exit hardware is not required or not utilized). Electromagnetic locks are the most common type of electrical locks, but not the only type of electric locking hardware which may be selected by the designer, specifier, and/or building owner or occupant.

Regardless of the type of electrical locking system, this section permits and requires the door hardware to be device which causes the electrical lock to unlock immediately, allowing egress.

Cost Impact: Will not increase the cost of construction
No cost impact unless the building owner chooses to install these shall be permitted locking systems.

Committee Action: Approved as
Modified

Modify proposal as follows:

1010.1.9.9 Door hardware release of electrically locked egress doors. Door hardware release of electric locking systems shall be permitted on doors in the means of egress with any occupancy except in Group H where installed and operated in accordance with all of the following:

1. The door hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The door hardware is capable of being operated with one hand and shall comply with Section 1010.1.9.5.
3. Operation of the door hardware directly interrupts the power to the electromagnetic electric lock and unlocks the door immediately.
4. Loss of power to the electric locking system automatically unlocks the door.
5. Where panic or fire exit hardware is required by Section 1010.1.10, operation of the panic or fire exit hardware also releases the electric lock.
6. The locking system units shall be listed in accordance with UL 294.

Committee Reason: The modification to item 3 is for the terminology to be consistent throughout the section and is consistent with the main proposal.

There was no technical justification for not allowing these types of locking systems in occupancies that have a lower risk than those listed. The other changes correct and clarify terminology.

Assembly Action: N

Final Action Results
### Comments

**General Comments**
- No

**Alternate Language**
- Yes

### Related Modifications

- 1010.1.10

### Summary of Modification

Permits and requires the door hardware to be device which causes the electrical lock to unlock immediately, allowing egress.

### Rationale

This "special locking arrangement" allows for immediate egress with one-handed operation of the door hardware. Code officials and specifiers have asked why this option is allowed in only these occupancies. No reason is known other than the current allowed occupancies in Section 1010.1.9.9 match those in Section 1010.1.9.8.

Further, revisions clarify this section of the code to address required functions of all types of electrical locking systems which are operated (i.e. unlocked) by operation of the door hardware, such as panic hardware, fire exit hardware, or door knobs or levers (where panic or fire exit hardware is not required or not utilized). Electromagnetic locks are the most common type of electrical locks, but not the only type of electric locking hardware which may be selected by the designer, specifier, and/or building owner or occupant.

Regardless of the type of electrical locking system, this section permits and requires the door hardware to be device which causes the electrical lock to unlock immediately, allowing egress.

### Fiscal Impact Statement

#### Impact to local entity relative to enforcement of code
- There will be no affect.

#### Impact to building and property owners relative to cost of compliance with code
- No cost impact unless the building owner chooses to install these shall be permitted locking systems

#### Impact to industry relative to the cost of compliance with code
- No cost impact unless the building owner chooses to install these shall be permitted locking systems

#### Impact to small business relative to the cost of compliance with code
- No cost impact unless the building owner chooses to install these shall be permitted locking systems

### Requirements

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - A simple design option with no sacrifice to safety.

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - A simple design option with no sacrifice to safety.

- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - Does not affect materials or methods.

- Does not degrade the effectiveness of the code
  - A simple design option with no sacrifice to safety.
2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>John Woestman</th>
<th>Submitted</th>
<th>5/21/2019</th>
<th>Attachments</th>
<th>Yes</th>
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**Rationale**
Technically, the vast majority of electrical door locks addressed by this section of the code are electromagnetic door locks. BUT, not all are electromagnetic. This same revision was included in the IBC via an approved floor mod during the committee action hearings as it was missed in the original IBC proposal.

**Fiscal Impact Statement**

Impact to building and property owners relative to cost of compliance with code
Allows flexibility to install electric locks other than magnetic locks - provided all provisions of this section are complied with.

Impact to industry relative to the cost of compliance with code
None

Impact to Small Business relative to the cost of compliance with code
None

Cost impact unless the building owner chooses to install these shall be permitted locking systems

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - Yes
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - Improves the code.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - Does not.
- Does not degrade the effectiveness of the code
  - Does not.
Further revise Item 3 of Section 1010.1.9.9 as follows:

3. Operation of the door hardware directly interrupts the power to the electromagnetic electric lock and unlocks the door immediately.
1010.1.9.9 Electromagnetically Door hardware release of electrically locked egress doors. Doors Door hardware release of electric locking systems shall be permitted on doors in the means of egress with any occupancy except in Group H in buildings with an occupancy in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 shall be permitted to be locked with an electromagnetic locking system where equipped with hardware that incorporates a built-in switch and where installed and operated in accordance with all of the following:
1. The door hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The door hardware is capable of being operated with one hand and shall comply with Section 1010.1.9.5.
3. Operation of the door hardware directly interrupts the power to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the electric locking system automatically unlocks the door.
5. Where panic or fire exit hardware is required by Section 1010.1.10, operation of the panic or fire exit hardware also releases the electromagnetic electric lock.
6. The locking system units shall be listed in accordance with UL 294.

1010.1.10 Panic and fire exit hardware. Doors serving a Group H occupancy and doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Exceptions:
1. A main exit of a Group A occupancy shall be permitted to be locking in accordance with Section 1010.1.9.3, Item 2.
2. Doors serving a Group A or E occupancy shall be permitted to be electronically locked in accordance with Section 1010.1.9.9.

3. Outdoor gates from residential and commercial swimming pool decks, except where the pool deck serves as a portion of the means of egress of a building or has an occupant load of 300 or greater.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or exit access doors, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.
**Summary of Modification**
This proposed modification updates the requirement for solar energy systems in the FBC-B.

**Rationale**
This proposed modification deletes the current requirements in Section 3111 and replaces them with the updated rules in 3111 of the 2018 IBC that have been correlated and harmonized with current industry standards and other applicable references. This change is similar to those proposed under Mods 7345, 7347, and 7348 for inclusion into the FBC-R. This change will also coordinate the FBC-B with the FFPC.

**Fiscal Impact Statement**
- **Impact to local entity relative to enforcement of code**
  This proposed modification will not impact the local entity relative to code enforcement.
- **Impact to building and property owners relative to cost of compliance with code**
  This proposed modification will not change the cost of compliance to building and property owners.
- **Impact to industry relative to the cost of compliance with code**
  This proposed modification will not change the cost of compliance or impact industry.
- **Impact to small business relative to the cost of compliance with code**
  This proposed modification will not change the cost of compliance or impact small business.

**Requirements**
- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  This proposed modification is directly connected to the health, safety, and welfare of the general public by coordinating the FBC-B with the FFPC for life, fire, and property safety related to solar energy system installations.
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  This proposed modification improves and strengthens the code by updating the rules for solar energy systems in the FBC-B.
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  This proposed modification does not discriminate against materials, products, methods, or systems of construction.
- **Does not degrade the effectiveness of the code**
  This proposed modification enhances the effectiveness of the code.
### Rationale

This alternative language comment simply corrects a pointer to the applicable section of the FFPC in 3111.3.4 related to access and pathways. "Section 1204" is replaced with "Section 11.12.2.2".

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

This alternative language comment will have no impact on the local entity.

**Impact to building and property owners relative to cost of compliance with code**

This alternative language comment will have no impact on building owners.

**Impact to industry relative to the cost of compliance with code**

This alternative language comment will have no impact on industry.

**Impact to Small Business relative to the cost of compliance with code**

This proposed modification will not change the cost of compliance or impact small business.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This alternative language comment corrects an error in the code which relates directly to the health, safety, and welfare of the public.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

This alternative language comment improves the code by correcting an error.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

This alternative language comment does not discriminate against any materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**

This alternative language comment enhances the effectiveness of the code by correcting an error.

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### Rationale

This alternate language does not alter the text of the modification. It only adds references to appropriate code sections to make the modification applicable to the high velocity hurricane zone.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

This proposed modification will not impact the local entity relative to code enforcement.

**Impact to building and property owners relative to cost of compliance with code**

This proposed modification will not change the cost of compliance to building and property owners.

**Impact to industry relative to the cost of compliance with code**

This proposed modification will not change the cost of compliance or impact industry.

**Impact to Small Business relative to the cost of compliance with code**

This proposed modification will not change the cost of compliance or impact small business.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This proposed modification is directly connected to the health, safety, and welfare of the general public by coordinating the FBC-B with the FFPC for life, fire and property safety related to solar energy system installations throughout Florida including the HVHZ.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

This proposed modification improves and strengthens the code by updating the rules for solar energy systems in the FBC-B throughout Florida including the HVHZ.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

This proposed modification does not discriminate against materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**

This proposed modification enhances the effectiveness of the code.
SECTION 3111

SOLAR ENERGY SYSTEMS

3111.1 General. Solar energy systems shall comply with the requirements of this section.

3111.1.1 Wind resistance. Rooftop-mounted photovoltaic panels and modules and solar thermal collectors shall be designed in accordance with Section 1609.

3111.1.2 Roof live load. Roof structures that provide support for solar energy systems shall be designed in accordance with Section 1607.13.5.

3111.2 Solar thermal systems. Solar thermal systems shall be designed and installed in accordance with the Florida Building Code-Plumbing, the Florida Building Code-Mechanical, and the Florida Fire Prevention Code.

3111.2.1 Equipment. Solar thermal systems and components shall be listed and labeled in accordance with ICC 900/SRCC 300 and ICC 901/SRCC 100.

3111.3 Photovoltaic solar energy systems. Photovoltaic solar energy systems shall be designed and installed in accordance with this section, the Florida Fire Prevention Code, NFPA 70 and the manufacturer’s installation instructions.

3111.3.1 Equipment. Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703. Inverters shall be listed and labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction.

3111.3.2 Fire classification. Rooftop-mounted photovoltaic systems shall have a fire classification in accordance with Section 1505.9. Building-integrated photovoltaic systems shall have a fire classification in accordance with Section 1505.8.

3111.3.3 Building-integrated photovoltaic systems. Building-integrated photovoltaic systems that serve as roof coverings shall be designed and installed in accordance with Section 1507.18.

3111.3.4 Access and pathways. Roof access, pathways and spacing requirements shall be provided in accordance with Section 1204 11.12.2.2 of the Florida Fire Prevention Code.

3111.3.5 Ground-mounted photovoltaic systems. Ground-mounted photovoltaic systems shall be designed and installed in accordance with Chapter 16 and the Florida Fire Prevention Code.

3111.3.5.1 Fire separation distances. Ground-mounted photovoltaic systems shall be subject to the fire separation distance requirements determined by the local jurisdiction.
SECTION 3111
PHOTOVOLTAIC PANELS AND MODULES

3111.1 General. Photovoltaic panels and modules shall comply with the requirements of this code and the Florida Fire Prevention Code.

3111.1.1 Rooftop-mounted photovoltaic panels and modules. Photovoltaic panels and modules installed on a roof or as an integral part of a roof assembly shall comply with the requirements of Chapter 15 and the Florida Fire Prevention Code.

SECTION 3111
SOLAR ENERGY SYSTEMS

3111.1 General. Solar energy systems shall comply with the requirements of this section.

3111.1.1 Wind resistance. Rooftop-mounted photovoltaic panels and modules and solar thermal collectors shall be designed in accordance with Section 1609. For buildings and structures located within the high-velocity hurricane zone refer to Section 1620.

3111.1.2 Roof live load. Roof structures that provide support for solar energy systems shall be designed in accordance with Section 1607.13.5.

3111.2 Solar thermal systems. Solar thermal systems shall be designed and installed in accordance with the Florida Building Code-Plumbing, the Florida Building Code-Mechanical, and the Florida Fire Prevention Code.

3111.2.1 Equipment. Solar thermal systems and components shall be listed and labeled in accordance with ICC 900/SRCC 300 and ICC 901/SRCC 100.

3111.3 Photovoltaic solar energy systems. Photovoltaic solar energy systems shall be designed and installed in accordance with this section, the Florida Fire Prevention Code, NFPA 70 and the manufacturer’s installation instructions.

3111.3.1 Equipment. Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703. Inverters shall be listed and labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction.

3111.3.2 Fire classification. Rooftop-mounted photovoltaic systems shall have a fire classification in accordance with Section 1505.9. Building-integrated photovoltaic systems shall have a fire classification in accordance with Section 1505.8. For buildings and structures located within the high-velocity hurricane zone refer to Section 1516.

3111.3.3 Building-integrated photovoltaic systems. Building-integrated photovoltaic systems that serve as roof coverings shall be designed and installed in accordance with Section 1507.18. For buildings and structures located within the high-velocity hurricane zone refer to Section 1518.11.
3111.3.4 Access and pathways. Roof access, pathways and spacing requirements shall be provided in accordance with Section 1204 of the Florida Fire Prevention Code.

3111.3.5 Ground-mounted photovoltaic systems. Ground-mounted photovoltaic systems shall be designed and installed in accordance with Chapter 16 and the Florida Fire Prevention Code.

3111.3.5.1 Fire separation distances. Ground-mounted photovoltaic systems shall be subject to the fire separation distance requirements determined by the local jurisdiction.
SECTION 3111

PHOTOVOLTAIC PANELS AND MODULES

3111.1 General. Photovoltaic panels and modules shall comply with the requirements of this code and the Florida Fire Prevention Code.

3111.1.1 Rooftop-mounted photovoltaic panels and modules. Photovoltaic panels and modules installed on a roof or as an integral part of a roof assembly shall comply with the requirements of Chapter 15 and the Florida Fire Prevention Code.

SECTION 3111

SOLAR ENERGY SYSTEMS

3111.1 General. Solar energy systems shall comply with the requirements of this section.

3111.1.1 Wind resistance. Rooftop-mounted photovoltaic panels and modules and solar thermal collectors shall be designed in accordance with Section 1609.

3111.1.2 Roof live load. Roof structures that provide support for solar energy systems shall be designed in accordance with Section 1607.13.5.

3111.2 Solar thermal systems. Solar thermal systems shall be designed and installed in accordance with the Florida Building Code-Plumbing, the Florida Building Code-Mechanical, and the Florida Fire Prevention Code.

3111.2.1 Equipment. Solar thermal systems and components shall be listed and labeled in accordance with ICC 900/SRCC 300 and ICC 901/SRCC 100.

3111.3 Photovoltaic solar energy systems. Photovoltaic solar energy systems shall be designed and installed in accordance with this section, the Florida Fire Prevention Code, NFPA 70 and the manufacturer’s installation instructions.

3111.3.1 Equipment. Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703. Inverters shall be listed and labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction.

3111.3.2 Fire classification. Rooftop-mounted photovoltaic systems shall have a fire classification in accordance with Section 1505.9. Building-integrated photovoltaic systems shall have a fire classification in accordance with Section 1505.8.

3111.3.3 Building-integrated photovoltaic systems. Building-integrated photovoltaic systems that serve as roof coverings shall be designed and installed in accordance with Section 1507.18.

3111.3.4 Access and pathways. Roof access, pathways and spacing requirements shall be provided in accordance with Section 1204 of the Florida Fire Prevention Code.

3111.3.5 Ground-mounted photovoltaic systems. Ground-mounted photovoltaic systems shall be designed and installed in accordance with Chapter 16 and the Florida Fire Prevention Code.

3111.3.5.1 Fire separation distances. Ground-mounted photovoltaic systems shall be subject to the fire separation distance requirements determined by the local jurisdiction.
SECTION 3111

PHOTOVOLTAIC PANELS AND MODULES

3111.1 General. Photovoltaic panels and modules shall comply with the requirements of this code and the Florida Fire Prevention Code.

3111.1.1 Rooftop-mounted photovoltaic panels and modules. Photovoltaic panels and modules installed on a roof or as an integral part of a roof assembly shall comply with the requirements of Chapter 15 and the Florida Fire Prevention Code.

SECTION 3111

SOLAR ENERGY SYSTEMS

3111.1 General. Solar energy systems shall comply with the requirements of this section.

3111.1.1 Wind resistance. Rooftop-mounted photovoltaic panels and modules and solar thermal collectors shall be designed in accordance with Section 1609. For buildings and structures located within the high-velocity hurricane zone refer to Section 1620.

3111.1.2 Roof live load. Roof structures that provide support for solar energy systems shall be designed in accordance with Section 1607.13.5.

3111.2 Solar thermal systems. Solar thermal systems shall be designed and installed in accordance with the Florida Building Code-Plumbing, the Florida Building Code-Mechanical, and the Florida Fire Prevention Code.

3111.2.1 Equipment. Solar thermal systems and components shall be listed and labeled in accordance with ICC 900/SRCC 300 and ICC 901/SRCC 100.

3111.3 Photovoltaic solar energy systems. Photovoltaic solar energy systems shall be designed and installed in accordance with this section, the Florida Fire Prevention Code, NFPA 70 and the manufacturer’s installation instructions.

3111.3.1 Equipment. Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703. Inverters shall be listed and
labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction.

3111.3.2 Fire classification. Rooftop-mounted photovoltaic systems shall have a fire classification in accordance with Section 1505.9. Building-integrated photovoltaic systems shall have a fire classification in accordance with Section 1505.8. For buildings and structures located within the high-velocity hurricane zone refer to Section 1516.

3111.3.3 Building-integrated photovoltaic systems. Building-integrated photovoltaic systems that serve as roof coverings shall be designed and installed in accordance with Section 1507.18. For buildings and structures located within the high-velocity hurricane zone refer to Section 1518.11.

3111.3.4 Access and pathways. Roof access, pathways and spacing requirements shall be provided in accordance with Section 1204 of the Florida Fire Prevention Code.

3111.3.5 Ground-mounted photovoltaic systems. Ground-mounted photovoltaic systems shall be designed and installed in accordance with Chapter 16 and the Florida Fire Prevention Code.

3111.3.5.1 Fire separation distances. Ground-mounted photovoltaic systems shall be subject to the fire separation distance requirements determined by the local jurisdiction.
F7810

Date Submitted: 12/9/2018
Section: 302.2
Chapter: 3
Affects HVHZ: Yes
Proponent: Joseph Belcher for FHBA
Attachments: No

TAC Recommendation: Approved as Submitted
Commission Action: Pending Review

Comments
General Comments: No
Alternate Language: Yes

Related Modifications

Summary of Modification
Adds calculated fire resistance section of FBC-R for two-family dwelling separation

Rationale
The section only permits ASTM E119 or UL 263 To determine the fire-resistance rating of assemblies. The FBC-R permits the use of FBC-B Chapter 7 calculated fire resistance provisions in other sections, including for walls requiring a higher fire-resistance rating. (R302.2 Exception and Table R302.1). Chapter 7 of the FBC-B has prescriptive and calculated fire assemblies that have been successfully used for many years to provide fire-resistant rated construction. While jurisdictions may permit the use as an alternate design, there is no reason to have to go through the extra steps when other sections of the code allow this procedure. This proposal clearly states that a user can use the FBC-B to calculate fire-resistive rated assemblies.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
No impact on enforcement of the code. Extends recognized method for providing fire-resistance-rated construction contained in other sections of the FBC-R (R302.2 Exception and Table R302.1).

Impact to building and property owners relative to cost of compliance with code
No impact on property owners. Provides an alternate method for determining the fire-resistance rating. May result in savings passed on by the builder.

Impact to industry relative to the cost of compliance with code
Providing the alternate method permitted in other sections may reduce costs. UF claims a cost reduction of $10,000 per location. (Evaluation of the Cost Impact of 2018 ICC Prescriptive Code Changes, Rinker-CR-2018-103, Final Report 1 June 2018, Rinker School, University of Florida)

Impact to small business relative to the cost of compliance with code
Providing the alternate method permitted in other sections may reduce costs. UF claims a cost reduction of $10,000 per location. (Evaluation of the Cost Impact of 2018 ICC Prescriptive Code Changes, Rinker-CR-2018-103, Final Report 1 June 2018, Rinker School, University of Florida)

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
The change recognizes a long-standing method for determining the fire-resistance rating of an assembly that is permitted in other sections of the FBC-R.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
The change will improve the code by assisting enforcement personnel, property owners, industry, and small businesses in applying long-standing methods for the calculation of fire-resistance ratings for assemblies.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
The change does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities.

Does not degrade the effectiveness of the code
The proposed change upgrades the effectiveness of the code. An equivalent fire resistance rating is yielded by either the calculation or prescriptive method.
Alternate Language

2nd Comment Period

Proponent: Paul Coats
Submitted: 5/26/2019
Attachments: Yes

Rationale
The alternative reference is broader and encompasses all the means of establishing fire resistance that are permitted in the Florida Building Code–Building (including Section 722), rather than just the calculated fire resistance methods in accordance with Section 722 alone. There is no reason why any method of establishing fire resistance in the building code should not be permitted in the residential code. This alternative language is consistent with the 2018 IBC.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code
Will make it easier to permit fire resistance methods in the Building Code.

Impact to building and property owners relative to cost of compliance with code
May reduce cost by adding alternatives for establishing fire resistance.

Impact to industry relative to the cost of compliance with code
May reduce cost by adding alternatives for establishing fire resistance.

Impact to Small Business relative to the cost of compliance with code

Providing the alternate method permitted in other sections may reduce costs. UF claims a cost reduction of $10,000 per location. (Evaluation of the Cost Impact of 2018 ICC Prescriptive Code Changes, Rinker-CR-2018-103, Final Report 1 June 2018, Rinker School, University of Florida)

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Yes.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Yes.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Does not discriminate.

Does not degrade the effectiveness of the code
Does not degrade the effectiveness of the code.
Replace the proposed new reference to Section 722 of the Florida Building Code--Building to Section 703.3 of the Florida Building Code--Building instead, so it reads: "... or in accordance with Section 703.3 of the Florida Building Code--Building." (No other changes.)
R302.3 Two-family dwellings. Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E 119 or UL 263 or in accordance with Section 722 of the Florida Building Code-Building. Fire-resistance-rated floor/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.

Exceptions: No change to existing text.
This proposal updates the NFPA referenced standards to the most recently published documents.

**Rationale**

The utilization of up to date referenced standards is a recognized component of complete system of building and fire safety. These updated references allow for the utilization of newer technologies and safety equipment to protect lives and property.

The NFPA Standards, which are developed in a consensus process by subject matter experts and users, have long been recognized as an important part of the International Codes as well as other construction documents and some have been updated since the publication of the 2018 edition of the IBC.

Updating these standards takes advantage of improvements in formatting of the documents, technology developed since the last edition, and reduces emerging risks in the built environment.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

This will prevent local enforcers from utilizing outdated standards in the review and inspection of construction projects and will ease the burden of utilizing two different editions of these standards should a contractor desire to utilize the more up to date referenced standards.

**Impact to building and property owners relative to cost of compliance with code**

These standards must be complied with in accordance with the existing code provisions. This will allow them to use the most recent and up to date information available in the construct of properties.

**Impact to industry relative to the cost of compliance with code**

None identified

**Impact to small business relative to the cost of compliance with code**

None identified

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

  These are existing standards that have their connections with health, safety, and welfare previously established. There are no new base code provisions proposed with these standards.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

  Many of these NFPA Standards have undergone revisions to be better products through a revision and reformatting process driven by the code enforcement and engineering communities. The updated standards also take advantage of technology improvements since the last editions of the standards.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

  It does not

- **Does not degrade the effectiveness of the code**

  It does not
This updates my original proposed modification. After the March TAC meeting, and after discussions with the State Fire Marshals Office, it was identified that the most direct and less complicated way to deal with differences between these proposals and the referenced standards in the Florida Fire Code would be to revise these proposals to be in conformity with those referenced standards in the proposed Florida Fire Code. This does not reduce the effectiveness of the safety provisions in any of the reference standards, and provides for an easier path to conformity between the Florida Building Code and the Florida Fire Prevention Code. The attached effectively withdraws the original proposed modification to the residential portion of the Florida Building Code.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

None

**Impact to building and property owners relative to cost of compliance with code**

None

**Impact to industry relative to the cost of compliance with code**

None

**Impact to Small Business relative to the cost of compliance with code**

None Identified

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  No impact

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  No impact

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  No impact

- **Does not degrade the effectiveness of the code**
  
  No impact

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**1st Comment Period History**

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<th>Bryan Holland</th>
<th>Submitted</th>
<th>1/10/2019</th>
<th>Attachments</th>
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**F8204-G2**

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<th>Robby Dawson</th>
<th>Submitted</th>
<th>1/18/2019</th>
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NFPA (Standards not listed remain unchanged) – Updated 5/1/19

To provide alternative for conformity with the Florida Fire Prevention Code.

13 --1619: Standard for Installation of Sprinkler Systems Withdraw - Remains the 2016 edition

13D --1619: Standard for Installation of Sprinkler Systems in One-and Two-family Dwellings and Manufactured Homes Withdraw - Remains the 2016 edition


NFPA

13 - 4619: Standard for Installation of Sprinkler Systems

13D - 4619: Standard for Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes

13R- 4619: Standard for Installation of Sprinkler Systems in Low Rise Residential Occupancies

72 - 4619: National Fire Alarm and Signaling Code

211 - 4619: Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances
Florida Building Code Proposal

Supporting Information to Code Changes F8180 and F8204

This document summarizes the changes to the NFPA standards that are proposed to be updated to the newest editions in these two code change proposals. All standards not noted here or in the proposals are not included as the ICC references the most recent standards in the balance of the noted documents.

Each of these summaries is derived from the “Origin and Development” section of each of the individual documents which contains a complete history of all previous revisions of the standard, as well as the significant changes from the most recent editions that are covered in this summary. The link noted in each summary will provide access to the most recent and full document referenced.

If there are any further questions or concerns, please contact:

Robby Dawson
NFPA Southeastern Regional Director
rdawson@nfpa.org
804-401-9063

NFPA 12-18: Standard on Carbon Dioxide Fire Extinguishing Equipment - The 2018 edition introduces a new requirement to conduct testing of integrated fire protection and life safety systems in accordance with NFPA 4. In addition, a new section on pipe hangers and supports and a new annex section on full discharge testing have also been added to more clearly explain the testing process. Finally, the equivalency statement was revised to use the standard text, which specifies that the authority having jurisdiction is responsible for approving an equivalent system, method, or device. www.nfpa.org/12

12A-18: Standard on Halon 1301 Fire Extinguishing Systems – The only change in the 2018 edition is in the annex chapter on nozzle and piping calculations (Annex H). It was revised to correct errors, comply with the Manual of Style for NFPA Technical Committee Documents, and clarify the details of the procedure. www.nfpa.org/12A

13-19: Standard for Installation of Sprinkler Systems - The 2019 edition of NFPA 13 has undergone a complete reorganization to make the document more functional and easier to navigate. It is now fashioned in the order of how one would approach the design of a sprinkler system. Users will now find hazard classifications, water supplies, and underground piping at the beginning of the standard. Chapter 8 has been divided into several new chapters, breaking out general rules for sprinkler locations into one chapter and several other chapters specific to sprinkler technology. The storage chapters have also been reorganized by sprinkler technology and address ceiling-only design. Chapter 25 has been revised and now contains all the requirements for in-rack sprinklers.

Requirements for vertical pipe chases have been clarified as have requirements for equipment rooms where sprinklers can be omitted. Additionally, new beam rules for residential sprinklers have been added and details provided.

Due to the extensive reorganization of the 2019 edition, new features have been added to help users locate requirements and identify sections with technical changes. The 2016-2019 Roadmap comparing the section numbers of the 2016 edition to the 2019 edition has been compiled and is located in the document after the index. It is provided for information only and should be used as a quick-reference locator. Technical changes from the last edition are also indicated and should be used as a guide. Shaded text identifies requirements that have been modified as a result of additions and deletions with the exception of tables and figures. New requirements are marked with the symbol. www.nfpa.org/13

13D-19: Standard for Installation of Sprinkler Systems in One-and Two-family Dwellings and Manufactured Homes - The 2019 edition adds beam rules for sprinklers installed under and adjacent to beams (along with new figures), requirements for closets where ventless clothes dryers are installed, and requirements where pressure-reducing and pressure-regulating valves are installed. A section has been added to Chapter 12 to address inactive systems in structures left vacant for a period of time. Requirements for the use of well pumps as a water supply have been clarified. In addition, images have been added to clarify sprinkler location and clearances needed around fireplaces. www.nfpa.org/13D
13R - 19: Standard for Installation of Sprinkler Systems in Low Rise Residential Occupancies - The 2019 edition adds a new definition for carport, as well as several new requirements that address where pipe and tube listed for light hazard can be used in an ordinary hazard application, beam rules for sprinklers installed under and adjacent to beams (along with new figures), waste and linen systems, installation of fuel-fired equipment, and obstructions in hallways. Chapter 9, Water Supplies, is reorganized, and the domestic demand tables are moved from the annex to the body of the standard, and values updated. In addition, new images clarifying sprinkler location and clearances needed around fireplaces are added. www.florida.org/13R

14 - 19: Standard for the Installation of Standpipe and Hose Systems - In the 2019 edition, the terminology has been made consistent throughout the document by changing the terms outlet(s) and hose outlet(s) to hose connection(s), as this is the more appropriate term. The definitions for the terms hose connection and hose valve also have been revised to clarify what is meant by each term as used in the document. Definitions and requirements for distance monitoring and automated inspection and testing have been added because technology now allows for monitoring of certain conditions as well as inspecting and testing standpipe systems from a remote location.

A definition for open parking garage has been added along with a requirement that permits manual standpipes in open parking garages under a certain height. The signage for pressure requirements is no longer required when the pressure is 150 psi or less, as NFPA 13E requires a standard pressure of 150 psi unless a sign indicates more pressure is required. The maximum pressure permitted at any point in the system has been increased from 350 psi to 400 psi. Subsection 7.8.1 has been revised to clarify that the required pressure is to be calculated at the outlet of the hose valve. The hydraulic calculation procedures have been revised to clarify that additional standpipes should be calculated at the point of connection rather than at the topmost outlet.

Subsection 7.11.2 has been revised to delineate between a standpipe system main drain and individual standpipe drains. Revisions have been made to the required number of fire department connections due to the ease with which a single connection can be compromised. A new Chapter 13 on maritime standpipe and hose systems has been added. www.nfpa.org/14

18 - 19: Standard for the Installation of Foam-water and Foam-water Spray Systems - The 2019 edition of NFPA 16 was reorganized in a fashion consistent with that of the 2019 edition of NFPA 13 - to present information in the order in which it is needed when planning and designing a foam water sprinkler/spray system. Technical changes include the addition of requirements for working drawings using information from both NFPA 11 and NFPA 13 to provide a comprehensive list of information. Information about the type of foam concentrate piping was extracted from NFPA 11 to be consistent with that standard. Information was also extracted from NFPA 30 to address containment, drainage, and spill control. www.nfpa.org/18

20 - 19: Standard for the Installation of Stationary Pumps for Fire Protection - The 2019 edition of NFPA 20 is revised to recognize new technologies, including automated inspection and testing, distance monitoring, automated valves, and self-regulating variable speed fire pump units. Provisions are added to require that a single entity be responsible for acceptable fire pump unit performance. A new definition for lowest permissible suction pressure is added to provide a better understanding of the maximum available flow by connecting it to a suction pressure.

Requirements are added to clarify where mandating of fire pump test piping is permitted, as well as where combining fire pump test piping with relief valve discharge piping is permitted. New definitions are added to differentiate between standby power and alternate power and to ensure proper application of these terms throughout the document. The term very tall building is defined and the requirements pertaining to these buildings are expanded, including those for automatic tank refill valves.

New requirements and annex material are added to help package designers through the evaluation of mass elastic systems. The requirements for hydraulic cranking systems are revised to distinguish between systems used as primary cranking systems and those used as secondary cranking systems.

Annex C is revised significantly to make data formatting more universal. www.nfpa.org/20

40 - 19: Standard for the Storage and Handling of Cellulose Nitrate Film - In the 2019 edition, the terms standard roll and single- and double-roll containers were replaced by terminology used by modern archivists. A new definition for decomposition was added, along with a new requirement for inspection and maintenance of portable fire extinguishers to comply with NFPA 10. Changes were made to the extended term storage vault requirements to allow for flexible storage configurations. Requirements for openings in, and exhaust capacities of, projection booths were
revised to reflect modern practices and equipment, and a new requirement for temperature and humidity control was added. [www.nfpa.org](http://www.nfpa.org)

72 - 19: National Fire Alarm and Signaling Code - The 2019 edition reflects a number of changes. The requirements for fire service access elevators and occupant evacuation elevators (OEE) were completely revised to coordinate with changes made in ASME A17.1/CSA B44. The requirements for occupant evacuation operation (CEO) are revised extensively. Annex text is added for clarification, as is Figure A.21.8, Simplified Occupant Evacuation Operation (CEO) elevator system interface with the building fire alarm system based on ASME A17.1, Section 2.27.11, and NFPA 72, Section 21.6. In addition to the requirements for area of refuge (area of rescue assistance), Chapter 24 is revised to include requirements for stairway communications systems, elevator landing communications systems, and occupant evacuation elevator lobby communications systems.

A review was accomplished and revisions made to ensure alignment of NFPA 72 with the Manual of Style for NFPA Technical Committee Documents. These editorial revisions include the breakout of paragraphs with multiple requirements into individually numbered paragraphs for each requirement and the minimization of use of exceptions. For many years, when codes required visual (or visible) notification in addition to audible notification, strobe lights meeting the requirements of Chapter 18 were used. With newer LED products that can be used for fire alarm, the terms strobe, light, and visible are essentially changed to visual notification appliance. The terms speaker and high power speaker array (HPSA) are changed to loudspeaker and high power loudspeaker array (HPLA) for consistency.

Perhaps the most significant change to the Code pertains to carbon monoxide. In August 2015, the Standards Council voted to relocate material that is in NFPA 720, Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment, to various chapters of NFPA 72. These requirements are essentially incorporated into Chapter 17 for carbon monoxide detectors; Chapter 14 for installation, testing, and maintenance; Chapter 29 for carbon monoxide alarms; and new Annex H. Chapter 29 is greatly expanded, and a significant amount of annex text has been added for explanation. NFPA 720 is to be withdrawn as the requirements are moved to NFPA 72.

Chapter 14, Inspection, Testing, and Maintenance, is greatly modified to incorporate valve-regulated lead-acid (VRLA) batteries. The inspection and testing requirements are revised in Tables 14.3.1 and 14.4.3.2. This also expands the annex language to address use and testing of these batteries. Several new terms are introduced, and these are defined in Chapter 3. [www.nfpa.org](http://www.nfpa.org)

80 - 19: Standard for Fire Doors and Other Opening Protectives - The 2019 edition includes new definitions in Chapter 3 for inspection mark and field label/label to assist in the application of inspection, testing, and maintenance provisions in Chapter 6. Chapter 4 contains updated provisions for job site preparation of fire doors for fire pins. Subsection 4.8.4 has been updated with new provisions for measuring clearances between doors and with a new requirement for addressing bottom clearances with the presence of latching hardware devices. Chapter 5 has been updated to include fire protection curtain assemblies in its application and a new section that addresses inspection marks. New subsection 19.2.2 requires damper manufacturer’s installation and maintenance instructions be maintained on site for new damper installations. The detailed damper installation criteria from Chapter 19 have been deleted and left with reliance on the damper manufacturer’s installation instructions and the damper listing. Chapter 19 also continues to update the requirements for the inspection, testing, and maintenance of fire and smoke dampers with the addition of new 19.5.2.3.3 for a remote inspection method. A new 19.5.1.3 clarifies application of inspection requirements for single inaccessible dampers.

Annex A contains new and revised figures for typical steel door frame installations. Generally, ANSI UL 10B, Fire Tests of Door Assemblies, and ANSI UL 10C, Standard for Positive Pressure Fire Tests of Door Assemblies, have been added as equivalent standards to NFPA 252. Editorial updates have been made to Chapter 4 and Chapter 5 to clean up duplicate language and relocate text to the appropriate sections. Referenced publications and extracted sections have been updated as needed. [www.nfpa.org](http://www.nfpa.org)

92 - 18: Standard for Smoke Control Systems - New to the 2018 edition of NFPA 92 is the addition of requirements for the verification of dedicated smoke control equipment through use of the weekly self-test function. A new annex on tenability was added to provide guidance for designers to assess tenable conditions in spaces protected by smoke control systems, in connected spaces, and of means of egress elements during the operation of a smoke control system. [www.nfpa.org](http://www.nfpa.org)

105 - 19: Standard for Smoke Door Assemblies and Other Opening Protectives - Changes to the 2019 edition of NFPA 105 focus primarily on the provisions for smoke dampers. New 7.3.1.2 requires smoke damper
manufacturer’s installation and maintenance instructions be maintained on site for new smoke damper installations. Chapter 7 also continues to update the requirements for the inspection, testing, and maintenance of smoke dampers with the addition of new 7.6.3.3 on a remote inspection method. A new 7.6.2.3 clarifies application of inspection requirements for single accessible dampers. Section 7.5 contains new requirements to further clarify and update the process for smoke damper acceptance testing. A new opening protective is addressed by new Chapter 9, which applies to smoke-protective curtain assemblies for hoistways. A new definition is added to Chapter 3 to describe a smoke-protective curtain assembly for hoistways. Referenced publications and extracted sections have been updated as needed. www.nfpa.org/105.

110 - 19: Standard for Emergency and Standby Power Systems - For the 2019 edition, several existing requirements have been clarified to assist users with the proper application. Clarifications include the location and access to the remote emergency stop switch, testing of fuel in accordance with the manufacturer's recommendations in lieu of an ASTM standard, and battery charger specifications. www.nfpa.org/110

111 - 19: Standard for Stored Electrical Emergency and Standby Power Systems - In the 2019 edition, Table 4.2.2 has been revised to cover the interruption time without reference to specific SEPS types. www.nfpa.org/111

211 - 19: Standard for Chimneys, Fireplaces, Vents and Solid Fuel-burning Appliances - The 2019 edition includes updated references such as product listings. In addition, installation of decorative shrouds at the termination of a factory-built chimney are permitted per the standard requirements. www.nfpa.org/211

652 - 19: Standard on the Fundamentals of Combustible Dust - The 2019 edition of NFPA 652 contains the following changes: NFPA 652 is intended to be the fundaments document for combustible dust. As such, definitions that are considered fundamental to the topic of combustible dust reside in NFPA 652 and be extracted into the industry and commodity-specific standards. This ensures consistency in documents dealing with dust. Changes to this edition reflect this, and several definitions are added from industry and commodity-specific documents that also are considered fundamental to combustible dust.

Provisions were added to designate the requirements that are meant to be retroactive. Management system requirements, such as housekeeping, personal protective equipment (PPE), and hot work are now in Chapter 8, Management Systems.

Material was added to Chapter 5 that helps the user evaluate the requirements for mixtures of types of combustible dust, such as a mixture containing metal dust and agricultural dust.

Changes were made to the deadlines are included for the completion of dust hazard analysis (DHA) for existing processes and facility components. The deadline for completion of a DHA is now September 7, 2020. This aligns with industry and commodity-specific dust standards. NFPA 652 now also requires that the DHA be reviewed and updated every 5 years.

Chapter 9, Hazard Management: Mitigation and Prevention, was expanded to include requirements on equipment design and operation. This includes air material separators (AMS), air moving devices (AMDs), duct systems, sight glasses, abort gates and dampers, bulk storage enclosures, size reduction equipment, pressure protection systems, material feeding devices, bucket elevators, enclosed conveyors, mixers and blenders, and dryers. Requirements for fans for continuous dust control are also added. Changes are made to the requirements for equipment isolation to remove the exemption for small diameter ductwork. Note that this is consistent with the current requirements in NFPA 654.

The committee modified the material on electrostatic discharges to provide clarity to the user regarding conductive equipment, bonding and grounding, flexible connectors, particulate transport rates, grounding of personnel, flexible intermediate bulk containers (FIBCs), and rigid intermediate bulk containers (RIBCs). www.nfpa.org/652

750 - 19: Standard on Water Mist Fire Protection Systems - The 2019 edition of NFPA 750 contains updates that clarify the definitions of a gridded water mist system and twin-fluid system, which devices can be used as automatic means, which components can be used as provisions for cleaning, and the requirements for pressure-indicating devices used on a common manifold system. Further updates clarify that a listed system requires that any mixed components or systems have been tested together and expand requirements to include configurations allowed in current listed solutions. New sections have been added specifying design, testing, and installation of preaction water mist systems. Another section has been added to prevent debris and contaminants from entering a water mist system.
by requiring a strainer or filter after the fire department connection (FDC). It also clarifies the location of the FDC on a low-pressure water mist system. Throughout the standard, the terms pressure container and pressurized container have been replaced with the newly defined term pressure vessel, and the phrase safety device to release excess pressure has been replaced with pressure relief device. These changes were made to maintain consistency with industry practices and terminology. This edition also incorporates revisions that update referenced documents, extracts, and formatting to comply with the Manual of Style for NFPA Technical Committee Documents.

www.nfpa.org/750

780 – 17: Standard for the Installation of Lightning Protection Systems - For the 2017 edition, new requirements have been added relative to physical on-site inspection of the completed installation and for periodic inspections or testing for compliance to this standard per the authority having jurisdiction. New definitions have been added for the following terms: ground loop conductor, integral lightning protection system, mast-type lightning protection system, rated impulse withstand voltage level (withstand voltage) (UI), smart structure, solar array, and solar panel. Those definitions add clarity to the terms as used in the standard.

Several figures illustrating air terminal protection for lower roof protection have been updated. New requirements have been established for test and connection points for concrete-encased electrodes to enable periodic maintenance and testing of the ground system. Zero property line conditions have been re-evaluated and revised. New bonding requirements have been added for long horizontal metal bodies on roofs. The Committee revised many requirements pertaining to ungrounded metal bodies, removing the term isolated (ungrounded) for consistency. Section 5.3 pertaining to Facilities That Handle or Process Combustible or Explosive Dust has been updated, providing specific reference to NFPA 61, Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities; NFPA 122, Standard for Fire Prevention and Control in Metal/Nomelmetal Mining and Metal Mineral Processing Facilities; and NFPA 664, Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities. Section 5.9 provides new criteria for installations on fabric structures.

Chapter 7, Protection for Structures Containing Flammable Vapors, Flammable Gases, or Liquids That Can Give Off Flammable Vapors was rewritten. Sections in Chapter 6, Protection of Structures Housing Explosive Materials, that pertain to single or multiple mats, railroad tracks, installation of air terminals on earth-covered magazines, wharves, and piers for explosive operations and cranes were revised. Chapter 12, Protection for Solar Arrays, was revised to provide more specific criteria.

Two new annexes, Annex J, Protection of Smart Structures, and Annex K, Guide to International Standards Dealing with the Selection of SPDs for Use on Photovoltaic (PV) Installations, have been added to the 2017 edition. Annex L, Lightning Risk Assessment, has been revised to provide greater clarity and correlation of requirements with other lightning protection standards. www.nfpa.org/780

NOTE: This is the suggested alternative offered by Bryan Holland to the original proposal.

2001 - 18: Standard on Clean Agent Fire Extinguishing Systems - For the 2018 edition, the chapter on inspection, testing, maintenance, and training was completely reorganized to improve usability of the standard and to comply with the Manual of Style for NFPA Technical Committee Documents. As part of this revision, the content was split into two distinct chapters: Chapter 7, Approval of Installations, and Chapter 8, Inspection, Servicing, Testing, Maintenance, and Training. Definitions of inspection, maintenance, and service were added, as well as a requirement for integrated fire protection and life safety systems to be tested in accordance with NFPA 4. In addition, the standard now requires an egress time study for all clean agent systems, not just those where the design concentration is greater than the NOAEL. A definition of abort switch was added, and the definition of clean agent was revised. A requirement to install dirt traps at the end of each pipe run was added. The requirements for pipe and fittings were reviewed and updated in accordance with the latest reference standards. A new section on pipe hangers and supports was added. New requirements regarding releasing panels were added. www.nfpa.org/2001
## TAC: Fire

Total Mods for Fire in No Affirmative Recommendation: 82

Total Mods for report: 90

### Sub Code: Building

**F7521**

<table>
<thead>
<tr>
<th>Date Submitted</th>
<th>Section</th>
<th>Proponent</th>
<th>Affects HVHZ</th>
<th>Attachments</th>
</tr>
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<tbody>
<tr>
<td>11/28/2018</td>
<td>202</td>
<td>Ann Russo5</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**TAC Recommendation** No Affirmative Recommendation

**Commission Action** Pending Review

**Comments**

- **General Comments**: Yes
- **Alternate Language**: No

**Related Modifications**

**Summary of Modification**

Inserts definition for Opening Protective as this term is used extensively in the code, including the title of Section 716, but is not always understood by code users. This definition provides clarity.

**Rationale**

This term is used extensively in the code, including the title of Section 716, but is not always understood by code users. This definition provides clarity and ties this back to the proper section for proper coordination, usage of terms and proper system selection.

**Fiscal Impact Statement**

- **Impact to local entity relative to enforcement of code**: Supplies additional support for enforcement
- **Impact to building and property owners relative to cost of compliance with code**: None
- **Impact to industry relative to the cost of compliance with code**: Provides clarity
- **Impact to small business relative to the cost of compliance with code**: None

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**: By defining term, will improve efficiency and compliance in areas of safety and welfare
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**: Improves definition and assists in focus of proper products and systems for construction
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**: Does not discriminate on compliant products meeting standards referenced in Code
- **Does not degrade the effectiveness of the code**: No

**2nd Comment Period**

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrone Jeanette</td>
<td>5/21/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

**Comment:**

I agree with the proposed revision.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Comment:</th>
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<th>Attachments</th>
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<tbody>
<tr>
<td>Jennifer Privateer</td>
<td>I agree with this inclusion</td>
<td>5/24/2019</td>
<td>No</td>
</tr>
<tr>
<td>Ann Russo5</td>
<td>The addition to the definition was proposed as the clarifications helps to enforce the requirements for fire protective and fire resistance products and systems. In some cases there is clear misunderstanding and misuse when users attempt to mix and match products which are not approved as an assembly. The proposed definition update clearly addresses this and allows for better justification under plan review as well as enforcement enhancing life safety</td>
<td>5/24/2019</td>
<td>No</td>
</tr>
<tr>
<td>Harold Barrineau</td>
<td>I agree with this modification.</td>
<td>5/26/2019</td>
<td>No</td>
</tr>
</tbody>
</table>
Add new definition as follows:

**OPENING PROTECTIVE.** A fire door assembly, fire shutter assembly, fire window assembly or glass-block assembly in a fire-resistance-rated wall or partition.
**Summary of Modification**

The purpose of this code change is to simply formalize these terms and explain their relationship. This will assist code practitioners in properly establishing applicable code requirements and improve uniformity and continuity in the identification of appropriate provisions.

**Rationale**

Properly classifying the purpose of a given building or structure is the very important first step in the design or analysis process. The reason for this is that the various designations account for the inherent hazards and risks typically associated with the intended purpose. Based on those hazards and risks, appropriate limitations and controls are assigned to the building or structure. The Florida Building Code uses several specific terms to identify the purpose of the building or structure. Those are: occupancy classification, use and function. Occupancy classification and use are often confused and function is misunderstood.

This proposal will inform users of the FBC of building classification and assist all concerned in the proper communication of applicable code requirements.

**Fiscal Impact Statement**

- **Impact to local entity relative to enforcement of code**
  - This proposal will provide clarification between the terms of &amp;#39;use&amp;#39; and &amp;#39;occupancy&amp;#39;. Too often they are treated to be the same when they are really distinct terms. The proposal clarifies the difference.

- **Impact to building and property owners relative to cost of compliance with code**
  - Will not increase cost of compliance with code.

- **Impact to industry relative to the cost of compliance with code**
  - Will not increase cost of compliance with code.

- **Impact to small business relative to the cost of compliance with code**
  - Will not increase cost of compliance with code.

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - Proposal simply provide clarification of current requirements.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - Proposal simply provide clarification of current requirements.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - Proposal simply provide clarification of current requirements.

- **Does not degrade the effectiveness of the code**
  - Proposal simply provide clarification of current requirements.

---

### 2nd Comment Period

| Proponent    | Jennifer Privateer | Submitted | 5/23/2019 | Attachments | No |

**Comment:**

I agree.

---

### 2nd Comment Period

| Proponent    | Ann Russo1 | Submitted | 5/13/2019 | Attachments | No |

**Comment:**

I strongly recommend the approval of this code modification. This proposal will certainly add clarity to the application of the occupancy classifications and uses. This will put wordings in correct order and will be consistent with modification F7562 that was already approved as submitted by the Committee. The "$" character was a typo - should be "4"
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/25/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

Comment:

I agree with this modification
Revise as follows:

SECTION 301

GENERAL SCOPE

301.1 Scope. General. The provisions of this chapter shall control the classification of all buildings and structures as to use, occupancy and use. Different classifications of occupancy and use represent varying levels of hazard and risk to building occupants and adjacent properties.

SECTION 302

OCCUPANCY CLASSIFICATION AND USE DESIGNATION

302.1 Occupancy classification. General. Structures or portions of structures shall be classified with respect to occupancy in one or more of the groups listed in this section. Occupancy classification is the formal designation of the primary purpose of the building, structure or portion thereof. Structures shall be classified into one or more of the occupancy groups listed in this section based on the nature of the hazards and risks to building occupants generally associated with the intended purpose of the building or structure. An area, a room or space that is intended to be occupied at different times for different purposes shall comply with all of the applicable requirements that are applicable to each of the purposes for which the room or space will be occupied associated with such potential multi-purpose. Structures containing multiple occupancy groups occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code listed in this section such structure shall be classified in the group that the occupancy most nearly resembles, according to based on the fire safety and relative hazard involved.

2. Business (see Section 304): Group B.
3. Educational (see Section 305): Group E.
7. Mercantile (see Section 309): Group M.
8. Residential (see Section 310): Groups R-1, R-2, R-3 and R-4.
10. Utility and Miscellaneous (see Section 312): Group U.

Add new text as follows:

302.2 Use designation. Occupancy groups contain subordinate uses having similar hazards and risks to building occupants. Uses include, but are not limited to, those functional designations listed within the occupancy group descriptions in this section. Certain uses require specific limitations and controls in accordance with the provisions of Chapter 5 and elsewhere in this code.
Summary of Modification
As roof areas are being used for other activities and functions, addresses these uses and related issues

Rationale
Many buildings are being built or altered to create an occupied roof. The code is not clear as to the requirements for these "spaces". Chapter 10 takes care of the means of egress requirements. But, the rest of the code does not address these issues. Some areas are used as gathering spaces, dining areas, swimming pools, etc. The question has come up as to whether these uses are an "occupancy" Some jurisdictions classify them as occupancies and others do not. However, the fact is that the code is an occupancy driven document. Therefore, we decided to use similar language in Section 302.1 combined with the language in Section 1004.5. An occupied roof would be classified to an occupancy that it most resembles. For example, a roof off of a private office would be classified as a Group B occupancy. However a roof above a restaurant would be classified as a Group A-2 occupancy.

We have also provided language stating that the height and area requirements do not apply to occupied roofs. We conducted a survey of several building departments and code consultants and found that most respondents did not require an occupied roof to comply with the height and area provisions of the code. We are also not aware of any issues with the use of a roof as an occupied space.

This proposal provides users of the code some guidance and clarification on how to apply the provisions to an occupied roof.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
Assists and clarifies requirements tying it back to their use, and clearly illustrating requirements for design, plan review and inspection

Impact to building and property owners relative to cost of compliance with code
Lowers impact due to uncertainty for the use planned and makes it easier for designer to focus on clear requirements

Impact to industry relative to the cost of compliance with code
None expected

Impact to small business relative to the cost of compliance with code
None expected

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Allows for clearer requirements for such uses on roof area making is safer for users of the area

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Strengthens Code due to clear definitions and uses local adopted classifications for design and enforcement

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Does not

Does not degrade the effectiveness of the code
Does not and provides better focus and enforcement criteria

2nd Comment Period
Proponent: Borrone Jeanette
Submitted: 5/21/2019
Attachments: No

Comment:
I agree with the proposed revision.
### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Ann Russo5</th>
<th>Submitted</th>
<th>5/24/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

**Comment:**
The additional scope added to the proposed modification better defines what areas this section is applicable to. Past experiences have shown that arguments have been made to nullify this requirement because it was not clear as to its application to the use, while this modification makes it clear and enforceable thus enhancing life safety considerations.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

**Comment:**
I agree with this modification.
Revise as follows:

302.1 General. Structures or portions of structures shall be classified with respect to occupancy in one or more of the groups listed in this section. A room or space that is intended to be occupied at different times for different purposes shall comply with all of the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved. Yards, patios, courts, occupied roofs and similar outdoor areas accessible to and usable by the building occupants shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.

2. Business (see Section 304): Group B.
3. Educational (see Section 305): Group E.
7. Mercantile (see Section 309): Group M.
8. Residential (see Section 310): Groups R-1, R-2, R-3 and R-4.
10. Utility and Miscellaneous (see Section 312): Group U.
This proposed modification adds electrical classification criteria to the rules for aircraft paint hangers.

This proposed modification provides some needed guidance for classifying the hazardous location within an aircraft paint hanger. These requirements will harmonize the FBC-B with the FFPC and NFPA 70.

**Summary of Modification**
- This proposed modification will not impact the local entity relative to code enforcement.
- This proposed modification will not change the cost of compliance to building and property owners.
- This proposed modification will not change the cost of compliance or impact industry.
- This proposed modification will not change the cost of compliance or impact small business.

**Rationale**
- **Impact to local entity relative to enforcement of code**
  - This proposed modification will not impact the local entity relative to code enforcement.
- **Impact to building and property owners relative to cost of compliance with code**
  - This proposed modification will not change the cost of compliance to building and property owners.
- **Impact to industry relative to the cost of compliance with code**
  - This proposed modification will not change the cost of compliance or impact industry.
- **Impact to small business relative to the cost of compliance with code**
  - This proposed modification will not change the cost of compliance or impact small business.

**Fiscal Impact Statement**

**Requirements**
- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - This proposed modification is directly connected to the health, safety, and welfare of the general public by providing needed guidance on the classification of hazardous location at and around aircraft paint hangers.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - This proposed modification improves and strengthens the code.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - This proposed modification does not discriminate against materials, products, methods, or systems of construction.
- Does not degrade the effectiveness of the code
  - This proposed modification enhances the effectiveness of the code.

**2nd Comment Period**

- **Proponent:** Jennifer Privateer
- **Submitted:** 5/22/2019
- **Attachments:** No

Comment:
- agree as proposed

**2nd Comment Period**

- **Proponent:** Harold Barrineau
- **Submitted:** 5/25/2019
- **Attachments:** No

Comment:
- I agree with this modification
[F] 412.6.7 Electrical. Electrical equipment and devices within the aircraft paint hangar shall comply with NFPA 70.

[F] 412.6.7.1 Class I, Division I hazardous locations. The area within 10 feet (3048 mm) horizontally from aircraft surfaces and from the floor to 10 feet (3048 mm) above the aircraft surface shall be classified as a Class I, Division I location.

[F] 412.6.7.2 Class I, Division 2 hazardous locations. The area horizontally from aircraft surfaces between 10 feet (3048 mm) and 30 feet (9144 mm) and from the floor to 30 feet (9144 mm) above the aircraft surface shall be classified as a Class I, Division 2 location.

Impact to local entity relative to enforcement of code
There may be no impact to local entities relative to the enforcement of the code as this is an update of terminology.

Impact to building and property owners relative to cost of compliance with code
This proposal will not increase the cost of construction as this is an update on terminology.

Impact to industry relative to the cost of compliance with code
This proposal will not increase the cost of construction as this is an update on terminology.

Impact to small business relative to the cost of compliance with code
This proposal will not increase the cost of construction as this is an update on terminology.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This proposal is about standardizing terminology between different codes and their referenced standards. It provides clarity to the code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This proposal does not strengthen the Code, it standardizes terminology between different codes and their referenced standards.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
The proposal does not discriminate against materials, products, methods, or systems of construction.

Does not degrade the effectiveness of the code
This proposal helps the effectiveness of the code by standardizing terminology between different codes and their referenced standards.

I agree with this modification.
[F] 414.1.2.1 Aerosols Aerosol Products. No change to text.
Code Change No: F363-16

Original Proposal

Section: 202, 907.2.16 (IBC [F] 907.2.16), 5102.1, 5104.1.1, 5104.3.1, 5104.3.2, 5106.2.2, 5106.3, 5106.3.2, 5106.3.3, 5106.4, 5106.5, 5106.5.1, 5106.5.2, 5106.5.6, 5106.5.7, IBC [F] 307.1.1, [F] 307.2, 5112, [F] 414.1.2.1

Proponent: Patrick McLaughlin, representing Consumer Specialty Products Association (pmclaugma@aol.com)

Revise as follows:

AEROSOL CONTAINER. A metal can or plastic container up to a maximum size of 33.8 fl oz. (1000 ml) or a glass or plastic bottle up to a maximum size of 4 fl oz. (118 ml), that is designed and intended to dispense an aerosol.

AEROSOL PRODUCT. A product combination of a container, a propellant and a material that is dispensed from an aerosol container by a propellant.

Aerosol products shall be classified by means of the calculation of their chemical heats of combustion and shall be designated Level 1, Level 2 or Level 3.

Level 1 aerosol products. Those with a total chemical heat of combustion that is less than or equal to 8,600 British thermal units per pound (Btu/lb) (20 kJ/g).

Level 2 aerosol products. Those with a total chemical heat of combustion that is greater than 8,600 Btu/lb (20 kJ/g), but less than or equal to 13,000 Btu/lb (30 kJ/g).

Level 3 aerosol products. Those with a total chemical heat of combustion that is greater than 13,000 Btu/lb (30 kJ/g).

AEROSOL PRODUCT WAREHOUSE. No change to text.

5104.1.1 Plastic containers Aerosol 1 Products. Aerosol products in plastic containers larger than 4 fluid ounces (118 ml), but not to exceed 33.8 fluid ounces (1000 ml), shall be allowed only where in accordance with this section. The commodity classification shall be Class III commodities, as defined in NFPA 13 where any of the following conditions are met:

1. Base product has no fire point where tested in accordance with ASTM D 92, and nonflammable propellant.
3. Base product contains up to 20 percent by volume (15.8 percent by weight) of ethanol and/or isopropyl alcohol in an aqueous mix, and nonflammable propellant.
4. Base product contains 4 percent by weight or less of an emulsified flammable liquid and gas propellant within an aqueous base. The propellant shall remain emulsified for the life of the product. Where such propellant is not permanently emulsified, the propellant shall be nonflammable.

5104.3 Storage in general purpose warehouses. Aerosol product storage in general purpose warehouses utilized only for warehousing type operations involving mixed commodities shall comply with Section 5104.3.1 or 5104.3.2.

5104.3.1 Nonsegregated storage. Storage consisting of solid pile, palletized or rack storage of Level 2 and 3 aerosol products not segregated into areas utilized exclusively for the storage of aerosol products shall comply with Table 5104.3.1.

5104.3.2 Segregated storage. Storage of Level 2 and 3 aerosol products segregated into areas utilized exclusively for the storage of aerosol products shall comply with Table 5104.3.2 and Sections 5104.3.2.1 and 5104.3.2.2.

5106.3 Aerosol product display and normal merchandising exceeding 8 feet (2438 mm) high. Aerosol product display and merchandising exceeding 8 feet in height shall be in accordance with Sections 5106.3.1 through 5106.3.3.

5106.3.2 Automatic sprinkler protection. Aerosol product display and merchandising areas shall be protected by an automatic sprinkler system based on the requirements set forth in Tables 5.1.3.7(a) through (d) and 5.1.3.7(a) of NFPA 30B and the following:

1. Protection shall be based on the highest level of aerosol product in the array and the packaging method of the storage located more than 6 feet (1829 mm) above the finished floor.
2. Where using the cartoned aerosol product tables of NFPA 30B, uncartoned or display-cut Level 2 and 3 aerosol products shall be permitted not more than 6 feet (1829 mm) above the finished floor.
3. The design area for Level 2 and 3 aerosol products shall extend not less than 20 feet (6096 mm) beyond the Level 2 and 3 aerosol product display and merchandising areas.
4. Where ordinary and high-temperature ceiling sprinkler systems are adjacent to each other, noncombustible draft curtains shall be installed at the interface.

5106.3.3 Separation of Level 2 and 3 aerosol product areas. Separation of Level 2 and 3 aerosol product areas shall comply with the following:

1. Level 2 and 3 aerosol product display and merchandising areas shall be separated from each other by not less than 25 feet (7620 mm). See Table 5106.2.1.
2. Level 2 and 3 aerosol product display and merchandising areas shall be separated from flammable and combustible liquids storage and display areas by one or a combination of the following:
   1. Segregating areas from each other by horizontal distance of not less than 25 feet (7620 mm).
   2. Isolating areas from each other by a noncombustible partition extending not less than 18 inches (457 mm) above the merchandise.
2.3. In accordance with Section 5106.5.

3. Where item 2.2 is used to separate Level 2 or 3 aerosol aerosol products from flammable or combustible liquids, and the aerosol products are located within 25 feet (7620 mm) of flammable or combustible liquids, the area below the noncombustible partition shall be liquid tight at the floor to prevent spilled liquids from flowing beneath the aerosol products.

4.

**TABLE 5106.4**

MAXIMUM STORAGE QUANTITIES FOR STORAGE AREAS ADJACENT TO RETAIL DISPLAY OF LEVEL 2 AND 3 AEROSOL AEROSOL PRODUCTS

<table>
<thead>
<tr>
<th>Floor</th>
<th>Unseparated*</th>
<th>Separated Storage Cabinets*</th>
<th>1-hour Occupancy Separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement</td>
<td>Not Allowed</td>
<td>Not Allowed</td>
<td>In accordance with Sections 6.3.4.6.4.4.3 and 6.3.4.4.4.4.4 of NFPA 30B</td>
</tr>
<tr>
<td>Ground</td>
<td>2,500</td>
<td>5,000</td>
<td>In accordance with Sections 6.3.4.6.4.4.4.4 of NFPA 30B</td>
</tr>
<tr>
<td>Upper</td>
<td>500</td>
<td>1,000</td>
<td></td>
</tr>
</tbody>
</table>

For SI: 1 pound = 0.454 kg, 1 square foot = 0.0929 m².

a. The aggregate quantity in storage and retail display shall not exceed the quantity limits for retail display.
b. In any 93,000-square-foot area.

5106.5 Special protection design for Level 2 and 3 aerosol aerosol products adjacent to flammable and combustible liquids in double-row racks. The display and merchandising of Level 2 and 3 aerosol aerosol products adjacent to flammable and combustible liquids in double-row racks shall be in accordance with Sections 5106.5.1 through 5106.5.8 or Section 5106.3.3.

5106.5.1 Fire protection. Fire protection for the display and merchandising of Level 2 and 3 aerosol aerosol products in double-row racks shall be in accordance with Table 7.4.4.7.5.1 of NFPA 30B.

5106.5.2 Cartoned aerosol products. Level 2 and 3 aerosol aerosol products displayed or merchandised more than 8 feet (2438 mm) above the finished floor shall be in cartons.

5106.5.6 Horizontal barriers. Horizontal barriers constructed of minimum 3/8-inch-thick (10 mm) plywood or minimum 0.034-inch (0.866 mm) (No. 22 gage) sheet metal shall be provided and located in accordance with Table 7.4.4.7.5.1 and Figure 7.4.4.7.5.1 of NFPA 30B where in-tank sprinklers are installed.

5106.5.7 Class I, II, III, IV and plastic commodities. Class I, II, III, IV and plastic commodities located adjacent to Level 2 and 3 aerosol aerosol products shall be protected in accordance with NFPA 13.

907.2.16 Aerosol storage uses. Aerosol product storage rooms and general-purpose warehouses containing aerosol aerosol products shall be provided with an approved manual fire alarm system where required by this code.

2015 International Building Code

Revise as follows:

[F] 307.1.1 Uses other than Group H. An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.
1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 and the International Fire Code.
2. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to the International Fire Code.
3. Closed piping system containing flammable or combustible liquids or gases utilized for the operation of machinery or equipment.
4. Cleaning establishments that utilize combustible liquid solvents having a flash point of 140°F (60°C) or higher in closed systems employing equipment listed by an approved testing agency, provided that this occupancy is separated from all other areas of the building by 1-hour fire barriers constructed in accordance with Section 707 or 1-hour horizontal assemblies constructed in accordance with Section 711, or both.
5. Cleaning establishments that utilize a liquid solvent having a flash point at or above 200°F (93°C).
7. Refrigeration systems.
8. The storage or utilization of materials for agricultural purposes on the premises.
9. Stationary batteries utilized for facility emergency power, uninterruptable power supply or telecommunication facilities, provided that the batteries are provided with safety venting caps and ventilation is provided in accordance with the International Mechanical Code.
10. Corrosive personal or household products in their original packaging used in retail display.
11. Commonly used corrosive building materials.
12. Buildings and structures occupied for aerosol product storage shall be classified as Group S-1, provided that such buildings conform to the requirements of the International Fire Code.
13. Display and storage of nonflammable solid and nonflammable or noncombustible liquid hazardous materials in quantities not exceeding the maximum allowable quantity per control area in Group M or S occupancies complying with Section 414.2.5.
14. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in the International Fire Code.

[F] 307.2 Definitions. The following terms are defined in Chapter 2:

AEROSOL PRODUCT
Level 1 aerosol products.
Level 2 aerosol products.
Level 3 aerosol products.

AEROSOL CONTAINER.
BALED COTTON.
BALED COTTON, DENSELY PACKED.
BARRICADE.
Artificial barricade.
Natural barricade.
BOILING POINT.
CLOSED SYSTEM.
COMBUSTIBLE DUST.
COMBUSTIBLE FIBERS.
COMBUSTIBLE LIQUID.
Class II.
Class IIIA.
Class IIIB.
COMPRESSED GAS.
CONTROL AREA.
CORROSIVE.
CRYOGENIC FLUID.
DAY BOX.
DEFLAGRATION.
DETONATION.
DISPENSING.
EXPLOSION.
EXPLOSIVE.
High explosive.
Low explosive.
Mass-detonating explosives.
UN/DOT Class 1 explosives.
Division 1.1.
Division 1.2.
Division 1.3.
Division 1.4.
Division 1.5.
Division 1.6.

FIREWORKS.
Fireworks, 1.3G.
Fireworks, 1.4G.

FLAMMABLE GAS.
FLAMMABLE LIQUEFIED GAS.
FLAMMABLE LIQUID.
Class IA.
Class IB.
Class IC.

FLAMMABLE MATERIAL.
FLAMMABLE SOLID.

FLASH POINT.

HANDLING.
HAZARDOUS MATERIALS.
HEALTH HAZARD.
HIGHLY TOXIC.
INCOMPATIBLE MATERIALS.

INERT GAS.

OPEN SYSTEM.

OPERATING BUILDING.

ORGANIC PEROXIDE.
Class I.
Class II.
Class III.
Class IV.
Class V.
Unclassified detonable.

OXIDIZER.
Class 4.
Class 3.
Class 2.
Class 1.

OXIDIZING GAS.

PHYSICAL HAZARD.

PYROPHORIC.

PYROTECHNIC COMPOSITION.

TOXIC.

UNSTABLE (REACTIVE) MATERIAL.
Class 4.
Class 3.
Class 2.
Class 1.

WATER-REACTIVE MATERIAL.
Class 3.
Class 2.
Class 1.

311.2 Moderate-hazard storage, Group S-1. Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:
- Aerosols
- Aircraft hangar (storage and repair)
- Bags: cloth, burlap and paper
- Bamboos and rattan
- Baskets
- Belling: canvas and leather
- Books and paper in rolls or packs
- Boots and shoes
- Buttons, including cloth covered, pearl or bone
- Cardboard and cardboard boxes
- Clothing, woolen wearing apparel
- Cordage
- Dry boat storage (indoor)
- Furniture
- Furs
- Glues, mucilage, pastes and size
- Grains
- Horns and combs, other than celluloid
- Leather
- Linoleum
- Lumber
- Motor vehicle repair garages complying with the maximum allowable quantities of hazardous materials listed in Table 307.1(1) (see Section 406.8)
- Photo engravings
- Resilient flooring
- Silks
- Soaps
- Sugar
- Tires, bulk storage of
- Tobacco, cigars, cigarettes and snuff
- Upholstery and mattresses
- Wax candles

[F] 414.1.2.1 Aerosols. No change to text.

Reason: This proposal brings the FBC/IBC terminology in line with the referenced standard, NFPA 30B Code for the Manufacture and Storage of Aerosol Products, 2015 Edition. Also a code references that were in error are updated.

Cost Impact: Will not increase the cost of construction.
There is no impact on the cost of construction as the proposal only updates terminology and references.

Report of Committee Action
Hearings

Committee Action: Approved as Submitted

Committee Reason: This proposal provides correlation with NFPA 30B.

Assembly Action: None

309
This change provides language outlining how the height and area requirements of the code are applied to an occupied roof. It sets limits on the location of an occupied roof and clarifies the requirements.

The fire service has a concern that if an uncovered occupied roof had walls or screens surrounding it, for all intents and purposes, the occupied roof area functions as a story from a firefighting perspective, even though it technically does not meet the definition of a story. The second paragraph of Section 503.1.4 is intended to reduce the height of any barriers or obstacles around the occupied roof area, so it does not function as a story. The exception is intended to allow abutting penthouses, towers, domes, spires, and cupolas that comply with Section 1510 to exceed the 48" height limit. Note that other rooftop structures in Section 1510 such as mechanical equipment screens and "bulkheads" are intentionally not included in the exception, since they were the source of the concern. The specified rooftop structures are generally limited in extent as related to the occupied roof, so their walls were not judged to be a major obstacle.

Impact to local entity relative to enforcement of code
No impact. This is just a clarification of the code requirements to assist the local entity.

Impact to building and property owners relative to cost of compliance with code
No impact. This is just a clarification that will actually assist the owner by knowing how to address occupied roofs.

Impact to industry relative to the cost of compliance with code
No impact. This is just a clarification.

Impact to small business relative to the cost of compliance with code
There is no impact to small business. This language just clarifies whether an occupied roof is a story or part of the building area. Small businesses are already doing this type of work and this will provide consistent language on how to handle occupied roofs.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
By regulating the location of an occupied roof, the health, safety and welfare provisions of the code can be applied equally. Right now there is no language to clarify how to evaluate an occupied roof. Therefore, code officials are forced to make things up.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
The proposal strengthens the code by providing language on how occupied roofs are evaluated from a height and area standpoint so the code can be applied equally.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
This has no impact on materials, etc. This just a clarification of the code.

Does not degrade the effectiveness of the code
This helps with the effectiveness of the code by clarifying how an occupied roof is evaluated.

Comment:
I agree with the submitted code modification as written.
503.1.4 Occupied roofs.
A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506. An occupied roof shall not be included in the building height or number of stories as regulated by Section 504 provided the penthouses and other enclosed roof structures comply with Section 1510.

Exceptions:

1. The occupancy located on an occupied roof shall not be limited to the occupancies allowed on the story immediately below the roof where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification where required by Section 907.2 is provided in the area of the occupied roof.

2. Assembly occupancies shall be permitted on roofs of open parking spaces of Type I or Type II construction, in accordance with the exception to Section 903.2.1.6.

503.1.4.1 Enclosures over occupied roof areas.
Elements or structures enclosing the occupied roof areas shall not extend more than 48 inches (1220 mm) above the surface of the occupied roof.

Exception: Elevator lobbies, stairway enclosures, penthouses constructed in accordance with Section 1510.2, and towers, domes, spires and cupolas constructed in accordance with Section 1510.5.
**Summary of Modification**

The provisions for electrical rooms found in the National Electrical Code (NEC) can be an unwelcome surprise if not found early in the design process. Construction aspects to the NEC requirements should be located in the Code to eliminate this issue.

**Rationale**

By adding this under Chapter 5, the requirements under the NEC are properly included in the Building Code thus giving guidance to the design professionals as well as construction professionals on those requirements eliminating issues between the two.

**Fiscal Impact Statement**

- **Impact to local entity relative to enforcement of code**
  - None as clarifies requirements

- **Impact to building and property owners relative to cost of compliance with code**
  - None as clarifies requirements

- **Impact to industry relative to the cost of compliance with code**
  - None

- **Impact to small business relative to the cost of compliance with code**
  - None

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - Increases recognition of safety and better coordinates requirements

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - Increases recognition of safety and better coordinates requirements making compliance easier

- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - No

- Does not degrade the effectiveness of the code
  - No, it improves coordination
### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bryan Holland</td>
<td>5/21/2019</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Rationale**

This corrects the original intent of the proposed modification by adding the new criteria for stationary storage battery systems and for electrical installations and transformers to Table 509, Incident Uses in lieu of text in the section. This will harmonize the FBC-B with the same requirements in the IBC and NEC.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code
  - This alternative language comment will have no impact on the local entity.
- Impact to building and property owners relative to cost of compliance with code
  - This alternative language comment will have no impact on building owners.
- Impact to industry relative to the cost of compliance with code
  - This alternative language comment will have no impact on industry.
- Impact to Small Business relative to the cost of compliance with code
  - None

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - This alternative language comment improves the health, safety, and welfare of the general public by aligning the FBC-B with the FFPC and NEC.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - This alternative language comment improves the code by adding clarifying language to the incident uses table for electrical installations currently absent from the code.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - This alternative language comment does not discriminate against materials, products, methods, or systems of construction.
- Does not degrade the effectiveness of the code
  - This alternative language comment enhances the effectiveness of the code.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrone Jeanette</td>
<td>5/21/2019</td>
<td>No</td>
</tr>
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</table>

**Comment:**

I agree with the proposed revision.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jennifer Privateer</td>
<td>5/24/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

**Comment:**

good idea; I agree with mod

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harold Barrineau</td>
<td>5/25/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

**Comment:**

I agree with the alternate language
Delete all text of the original proposed modification:

509.5 Electrical room construction. Rooms containing transformers shall be in accordance with Section 1010.1.10 and with this section:
1. Where Table 509 only specifies separation without protection for rooms containing electrical transformers, the room shall be in accordance with the following:
   1.1. Ventilation openings in surrounding building exterior walls or roof/ceiling construction shall be provided with an open area of not less than 3 square inches for each kVA of transformer capacity or not less than 1 square foot, whichever is greater. Ventilation openings shall be in accordance with Sections 705.8 and 716.5 and protected with screens, grating or louveres. The ventilation openings shall be located in accordance with one of the following:
      1.1.1. Provide 100 percent of ventilation openings near the ceiling of the electrical room; or
      1.1.2. Provide half of the ventilation openings at the floor and the balance of the openings near the ceiling of the electrical room.
   1.2. Electrical rooms shall be provided at the exterior of the building to allow natural ventilation in accordance with Item 1, or shall be provided with mechanical ventilation located and sized to effectively control the transformer full load losses and limit the temperature rise in accordance with the transformer rating.
   1.3. Where the room is located at slab-on-grade condition, a concrete slab not less than 4 inches thick shall be provided.
   1.4. Doors from the electrical room shall swing in the direction of egress travel away from the electrical room. Doors shall be self-closing to a latched and locked position and shall be provided with panic hardware.
   1.5. Pipes and ducts, other than those that service the electrical room, shall not pass through an electrical room.
2. Where Table 509 specifies both separation and protection for rooms containing electrical transformers, the room shall be in accordance with Item 1 and the following:
   2.1. The room shall be separated by an enclosure constructed of concrete or similar materials providing not less than one-hour fire resistance rated construction and protected as specified in Table 509, or without protection the enclosure shall be increased to 3-hour fire resistance rated construction. In either case, opening protectives shall be provided in accordance with Sections 705.8 and 716.5.

Revise Table 509 as follows:

**TABLE 509**

**INCIDENTAL USES**

<table>
<thead>
<tr>
<th>ROOM OR AREA</th>
<th>SEPARATION AND/OR PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furnace room where any piece of equipment is over 400,000 Btu per hour input</td>
<td>1 hour or provide automatic sprinkler system</td>
</tr>
<tr>
<td>Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower</td>
<td>1 hour or provide automatic sprinkler system</td>
</tr>
<tr>
<td>Refrigerant machinery room</td>
<td>1 hour or provide automatic sprinkler system</td>
</tr>
<tr>
<td>Hydrogen fuel gas rooms, not classified as Group H</td>
<td>1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.</td>
</tr>
<tr>
<td>Incinerator rooms</td>
<td>2 hours and provide automatic sprinkler system</td>
</tr>
<tr>
<td>Description</td>
<td>Requirement</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Paint shops, not classified as Group H, located in occupancies other than Group F</td>
<td>2 hours; or 1 hour and provide automatic sprinkler system</td>
</tr>
<tr>
<td>In Group E occupancies, laboratories and vocational shops not classified as Group H</td>
<td>1 hour or provide automatic sprinkler system</td>
</tr>
<tr>
<td>In Group I-2 occupancies, laboratories not classified as Group H</td>
<td>1 hour and provide automatic sprinkler system</td>
</tr>
<tr>
<td>In ambulatory care facilities, laboratories not classified as Group H</td>
<td>1 hour or provide automatic sprinkler system</td>
</tr>
<tr>
<td>Laundry rooms over 100 square feet</td>
<td>1 hour or provide automatic sprinkler system</td>
</tr>
<tr>
<td>In Group I-2, laundry rooms over 100 square feet</td>
<td>1 hour</td>
</tr>
<tr>
<td>Group I-3 cells and Group I-2 patient rooms equipped with padded surfaces</td>
<td>1 hour</td>
</tr>
<tr>
<td>In Group I-2, physical plant maintenance shops</td>
<td>1 hour</td>
</tr>
<tr>
<td>In ambulatory care facilities or Group I-2 occupancies, waste and linen collection rooms with containers that have an aggregate volume of 10 cubic feet or greater</td>
<td>1 hour</td>
</tr>
<tr>
<td>In other than ambulatory care facilities and Group I-2 occupancies, waste and linen collection rooms over 100 square feet</td>
<td>1 hour or provide automatic sprinkler system</td>
</tr>
<tr>
<td>In ambulatory care facilities or Group I-2 occupancies, storage rooms greater than 100 square feet</td>
<td>1 hour</td>
</tr>
<tr>
<td>Stationary storage battery systems having an energy capacity greater than the threshold quantity specified in the Florida Fire Prevention Code a liquid electrolyte capacity of more than 50 gallons for flooded lead–acid, nickel cadmium or VRLA, or more than 1,000 pounds for lithium ion and lithium metal polymer used for facility standby power, emergency power or uninterruptable power supplies</td>
<td>1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.</td>
</tr>
<tr>
<td>Electrical installations and transformers</td>
<td>See Sections 110.26 through 110.34 and Sections 450.8 through 450.48 of NFPA 70 for protection and separation requirements.</td>
</tr>
</tbody>
</table>
ADD Following

509.5 Electrical room construction. Rooms containing transformers shall be in accordance with Section 1010.110 and with this section.

1. Where Table 509 only specifies separation without protection for rooms containing electrical transformers, the room shall be in accordance with the following:

   1.1. Ventilation openings in surrounding building exterior walls or roof/ceiling construction shall be provided with an open area of not less than 3 square inches for each kVA of transformer capacity or not less than 1 square foot, whichever is greater. Ventilation openings shall be in accordance with Sections 705.8 and 716.5 and protected with screens, grating or louvers. The ventilation openings shall be located in accordance with one of the following:

   1.1.1. Provide 100 percent of ventilation openings near the ceiling of the electrical room.

   1.1.2. Provide half of the ventilation openings at the floor and the balance of the openings near the ceiling of the electrical room.

   1.2. Electrical rooms shall be provided at the exterior of the building to allow natural ventilation in accordance with Item 1, or shall be provided with mechanical ventilation located and sized to effectively control the transformer full load losses and limit the temperature rise in accordance with the transformer rating.

   1.3. Where the room is located at slab on grade condition, a concrete slab not less than 4 inches thick shall be provided.

   1.4. Doors from the electrical room shall swing in the direction of egress travel away from the electrical room. Doors shall be self-closing to a latched and locked position and shall be provided with panic hardware.

   1.5. Pipes and ducts, other than those that service the electrical room, shall not pass through an electrical room.

2. Where Table 509 specifies both separation and protection for rooms containing electrical transformers, the room shall be in accordance with Item 1 and the following:

   2.1. The room shall be separated by an enclosure constructed of concrete or similar materials providing not less than one-hour fire-resistance-rated construction and protected as specified in Table 509, or without protection the enclosure shall be increased to three-hour fire-resistance-rated construction. In either case, opening protective shall be provided in accordance with Sections 705.8 and 716.5.
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</thead>
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<tr>
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<td>1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.</td>
</tr>
<tr>
<td>Electrical installations and transformers</td>
<td>See Sections 110.26 through 110.34 and Sections 450.8 through 450.48 of NFPA 70 for protection and separation requirements.</td>
</tr>
</tbody>
</table>
As roof areas are being used for other activities and functions, addresses these uses and related issues

Many buildings are being built or altered to create an occupied roof. The code is not clear as to the requirements for these "spaces" Chapter 10 takes care of the means of egress requirements. But, the rest of the code does not address these issues. Some areas are used as gathering spaces, dining areas, swimming pools, etc. The question has come up as to whether these uses are an "occupancy". Some jurisdictions classify them as occupancies and others do not. However, the fact is that the code is an occupancy driven document. Therefore, we decided to use similar language in Section 302.1 combined with the language in Section 1004.5. An occupied roof would be classified to an occupancy that it most resembles. For example, a roof off of a private office would be classified as a Group B occupancy. However a roof above a restaurant would be classified as a Group A-2 occupancy.

We have also provided language stating that the height and area requirements do not apply to occupied roofs. We conducted a survey of several building departments and code consultants and found that most respondents did not require an occupied roof to comply with the height and area provisions of the code. We are also not aware of any issues with the use of a roof as an occupied space.

This proposal provides users of the code some guidance and clarification on how to apply the provisions to an occupied roof.

Fiscal Impact Statement

- Impact to local entity relative to enforcement of code
  Assists and clarifies requirements tying it back to their use, and clearly illustrating requirements for design, plan review and inspection. Addresses issue of height restriction

- Impact to building and property owners relative to cost of compliance with code
  Lowers impact due to uncertainty for the use planned and makes it easier for designer to focus on clear requirements. Does not penalize for height issues

- Impact to industry relative to the cost of compliance with code
  None expected

- Impact to small business relative to the cost of compliance with code
  None expected

Requirements

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  Allows for clearer requirements for such uses on roof area making is safer for users of the area, and does not penalize for impact on height issues

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  Strengthens Code due to clear definitions and uses local adopted classifications for design and enforcement

- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  Does not and clarifies that height element has no effect on roof use

- Does not degrade the effectiveness of the code
  Does not and provides better focus and enforcement criteria

2nd Comment Period

Proponent: Josean Duprey Rodrig
Submitted: 5/1/2019
Attachments: No

Comment:

This change clarify the allowable use of this spaces, give better guidelines to the enforcement organizations and give consistency for designers and owners on the use of these spaces state wide. Please support this proposal.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ann Russo5</td>
<td>5/24/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

Comment:
The modification was made as a result of confusion as to allowing use of noted spaces due to the citing of conflicts under other sections. This eliminates such confusion.

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harold Barrineau</td>
<td>5/26/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

Comment:
I agree with this modification.
Add new text as follows:

503.4 Occupied roofs Occupied roofs are not subject to the building height, number of stories and building area limitations of Sections 504 and 506.
This proposal has been submitted to address multiple interpretations of Table 601 Footnote "b." We have found that although the code membership has supported the exemption for fire protection of structural members 20 feet or more above any floor immediately below that framing, we have found that other entities are interpreting that the primary structural frame is not included in this exemption. This proposal is designed to address that impact by modifying two aspects of Table 601. The first; to add the reference to footnote "b" to the primary structural frame row of fire resistance requirements, and two; to modify Footnote "b" by adding the phrases "in roof construction" and "primary structural frame members" to the current list of items now shown. Multiple attempts have been made in the past to restrict the original intent, however they have all been disapproved. The most recent was code change G139-12. The code development committee's response stated: "The proposal was disapproved as it is the intent of the footnote to allow all structural members to be unprotected. This proposal would only exempt the secondary members."The committee's disapproval of G139-12 was further upheld by the ICC membership during the Final Action Hearings in Portland, OR, October 2012. The public comment to G139-12 challenging the committee's decision was also disapproved by ICC membership. Further, the reference of structural members applying to all structural members is further reinforced by the definition of "Primary Structural Frame" in Section 202, where it states in the charging sentence the following: "Primary structural frame. The primary structural frame shall include all of the following structural members...."

Proposal G167-15 was approved for inclusion as submitted in the 2018 IBC.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code
  - No change in cost is anticipated.

- Impact to building and property owners relative to cost of compliance with code
  - No change in cost is anticipated.

- Impact to industry relative to the cost of compliance with code
  - No change in cost is anticipated.

- Impact to small business relative to the cost of compliance with code
  - No change in cost is anticipated.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - Yes, it does.

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - Yes, it does.

- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - No, it does not.

- Does not degrade the effectiveness of the code
  - No, it does not.

**2nd Comment Period**

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Bonnie Manley</th>
<th>Submitted</th>
<th>5/16/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

Comment:

To remain consistent with the 2018 IBC, I recommend that the TAC reconsider taking an action of "approve as submitted" on this proposal.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

**Comment:**
I agree with this modification.
### TABLE 601

**FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)**

<table>
<thead>
<tr>
<th>BUILDING ELEMENT</th>
<th>TYPE I</th>
<th>TYPE II</th>
<th>TYPE III</th>
<th>TYPE IV</th>
<th>TYPE V</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>A</td>
<td>B</td>
<td>HT</td>
</tr>
<tr>
<td>Primary structural frame (see Section 202)</td>
<td>3ₜₐ</td>
<td>2ₜₐ</td>
<td>1ₜ</td>
<td>0</td>
<td>1ₜₐ</td>
</tr>
<tr>
<td>Bearing walls Exterior, Interior</td>
<td>3ₚₐ</td>
<td>2₂ₚₐ</td>
<td>1₁</td>
<td>0</td>
<td>2₁</td>
</tr>
<tr>
<td>Nonbearing walls and partitions Exterior</td>
<td></td>
<td>See Table 602</td>
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</tbody>
</table>

For SI: 1 foot = 304.8 mm.

1. a. Roof supports: Fire-resistance ratings of primary structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.
2. b. Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members in roof construction shall not be required, including protection of primary structural frame members, roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-resistant-treated wood members shall be allowed to be used for such unprotected members.
3. c. In all occupancies, heavy timber shall be allowed where a 1-hour or less fire-resistance rating is required.
4. d. Not less than the fire-resistance rating required by other sections of this code.
5. e. Not less than the fire-resistance rating based on fire separation distance (see Table 602).
6. f. Not less than the fire-resistance rating as referenced in Section 704.10.
### Comments

**General Comments** Yes

**Alternate Language** No

#### Related Modifications

#### Summary of Modification
To make the Fire Prevention Code and Building Code consistent with each other.

#### Rationale
To allow for consistent interpretation between the Fire Prevention and Building Codes.

#### Fiscal Impact Statement
- **Impact to local entity relative to enforcement of code**
  - No cost.
- **Impact to building and property owners relative to cost of compliance with code**
  - No cost.
- **Impact to industry relative to the cost of compliance with code**
  - No cost.
- **Impact to small business relative to the cost of compliance with code**
  - No cost.

#### Requirements
- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - It will make the two codes consistent, reducing varying interpretations.
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - Will reduce differing interpretations.
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - Does not affect these items.
- **Does not degrade the effectiveness of the code**
  - Doesn’t change what is already allowed by the code.

### 2nd Comment Period

**Proponent** Michael Phegley  **Submitted** 4/12/2019  **Attachments** No

#### Comment:
The Florida Fire Prevention Code, Sixth Edition, Chapter 8, Section 8.3, paragraph 8.3.1.2(2) states “The fire barriers are continuous from outside wall to outside wall or from one fire barrier to another, and from the floor to the bottom of the interstitial space, provided that the construction assembly forming the bottom of the interstitial space has a fire resistance rating not less than that of the fire barrier. This proposed code change only adds similar language to the current Florida Building Code, thus making the two codes consistent with each other.
707.5 Continuity

Fire barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Such fire barriers shall be continuous through concealed space, such as the space above a suspended ceiling. Joints and voids at intersections shall comply with Sections 707.8 and 707.9

Exceptions:

1. Shaft enclosures shall be permitted to terminate at a top enclosure complying with Section 713.12.

2. Interior exit stairway and ramp enclosures required by Section 1023 and exit access stairway and ramp enclosures required by Section 1019 shall be permitted to terminate at a top enclosure complying with Section 713.12.

3. Fire barriers shall be permitted to terminate at the underside of an interstitial space, provided that the construction assembly forming the bottom of the interstitial space has a fire resistance rating not less than that of the fire barrier.
Clarifies that the fire resistance of light frame columns in fire resistance rated walls can be accomplished with the membrane protection of the fire resistance rated walls, with conditions.

Rationale
This modification was approved by the ICC Fire Safety Committee and the ICC membership and appears in the 2018 IBC. The committee modified the original proposal in its approval, with the following statements: "The committee agreed that built-up solid structural elements, such as 2 or more vertical framing members, within fire-resistance rated walls of light-frame construction that meet the limitations of Section 704.4.1 can be a part of a fire-resistance rated wall assembly without requiring the individual eacacement protection of Section 704.2. The modification eliminates redundant language by referencing Section 704.4.1 for limitations. Further, the modification appropriately recognizes steel framing members for the same allowable use." This proposal is to provide further clarification to a code change proposal that was approved last cycle and is included in the 2015 IBC in Section 704.4. Elements within fire-resistance rated walls of light-frame construction are addressed directly in Section 704.4.1 (Light-frame construction) and can be a part of a fire-resistance rated wall assembly without additional fire protection. Many buildings are built out of typical light frame construction; the concentrated loads from trusses or beams must have a continuous load path to the foundation. Some jurisdictions are interpreting that those construction boundary elements, such as, built-up and solid structural elements, are columns and are requiring them to be provided with individual fire protection. It is the intent of this provision, which has been verified by ICC staff, that it was never the intent to require individual fire protection of these elements, as they are not considered a portion of the primary structural frame.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
Will have no adverse impact, if reflects the current interpretation of the code for most code officials.

Impact to building and property owners relative to cost of compliance with code
No impact.

Impact to industry relative to the cost of compliance with code
No impact but may reduce the cost in some cases.

Impact to small business relative to the cost of compliance with code
No impact.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Has a reasonable connection to safety and welfare by clarifying correct code application for fire resistance.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Improves the code in regard to ease of interpretation, does not change the technical requirements.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Does not discriminate.

Does not degrade the effectiveness of the code
Does not degrade the effectiveness of the code.

Comment:
We would ask for reconsideration, based on the original rationale and for additional discussion before the TAC.
704.2 Column protection. Where columns are required to have protection to achieve a fire-resistance rating, the entire column shall be provided individual encasement protection by protecting it on all sides for the full column height, including connections to other structural members, with materials having the required fire-resistance rating. Where the column extends through a ceiling, the encasement protection shall be continuous from the top of the foundation or floor/ceiling assembly below through the ceiling space to the top of the column.

Exception: Columns that meet the limitations of Section 704.4.1.

704.4.1 Light-frame construction. Studs, columns, and boundary elements that are integral elements in load-bearing walls of light-frame construction, and are located entirely between the top and bottom plates or tracks, shall be permitted to have required fire-resistance ratings provided by the membrane protection provided for the load-bearing wall.
FS7-15
704.2, 704.4.1

Proposed Change as Submitted

Proponent: David Tyree, American Wood Council, representing American Wood Council (dtyree@awc.org)

2015 International Building Code
Revise as follows:

704.2 Column protection. Where columns are required to have protection to achieve a fire-resistance rating, the entire column shall be provided individual encasement protection by protecting it on all sides for the full column height, including connections to other structural members, with materials having the required fire-resistance rating. Where the column extends through a ceiling, the encasement protection shall be continuous from the top of the foundation or floor/ceiling assembly below through the ceiling space to the top of the column.

Exception: Columns located in a wall of light frame construction and located entirely between the top and bottom plates shall be permitted to have the fire resistance ratings provided by the membrane protection provided by the fire-resistance rated wall.

704.4.1 Light-frame construction. Studs, columns, and boundary elements that are integral elements in load-bearing walls of light-frame construction, and are located entirely between the top and bottom plates shall be permitted to have required fire-resistance ratings provided by the membrane protection provided for the load-bearing wall.

Reason: This proposal is to provide further clarification to a code change proposal that was approved last cycle and is included in the 2015 IBC in Section 704.4. Elements within fire-resistance rated walls of light-frame construction are addressed directly in Section 704.4.1 (Light-frame construction) and can be a part of a fire-resistance rated wall assembly without additional fire protection. Many buildings are built out of typical light frame construction; the concentrated loads from trusses or beams must have a continuous load path to the foundation. Some jurisdictions are interpreting that those construction boundary elements, such as, built-up and solid structural elements, are columns and are requiring them to be provided with individual fire protection. It is the intent of this provision, which has been verified by ICC staff, that it was never the intent to require individual fire protection of these elements, as they are not considered a portion of the primary structural frame.

This proposal was discussed and revised based on comments from the Colorado Chapter ICC Code Changes Committee and clarifies this provision is not intended to address continuous columns, does not have any connections to any elements of a structural frame, and is within a rated wall assembly.


Cost Impact: Will not increase the cost of construction

By revising this section, there is no additional cost as it clarifies the intent of this code provision. If anything, this proposal will actually save money as some building officials and designers have interpreted this section to require stud packs or built-up columns within a rated wall assembly to be individually fire protected which...
increases construction cost.

Public Hearing Results

Committee Action: Approved as Modified

Modification:

704.2 Column protection. Where columns are required to have protection to achieve a fire-resistance rating, the entire column shall be provided individual encasement protection by protecting it on all sides for the full column height, including connections to other structural members, with materials having the required fire-resistance rating. Where the column extends through a ceiling, the encasement protection shall be continuous from the top of the foundation or floor/ceiling assembly below through the ceiling space to the top of the column.

Exception: Columns located in a wall that meet the limitations of light-frame construction and located entirely between the top and bottom plates shall be permitted to have the fire-resistance ratings provided by the membrane protection provided by the fire-resistance rated wall—Section 704.4.1.

704.4.1 Light-frame construction. Studs, columns, and boundary elements that are integral elements in walls of light-frame construction, and are located entirely between the top and bottom plates or tracks, shall be permitted to have required fire-resistance ratings provided by the membrane protection provided for the wall.

Committee Reason: The committee agreed that built-up solid structural elements, such as 2 or more vertical framing members, within fire-resistance rated walls of light-frame construction that meet the limitations of Section 704.4.1 can be a part of a fire-resistance rated wall assembly without requiring the individual encasement protection of Section 704.2. The modification eliminates redundant language by referencing Section 704.4.1 for limitations. Further, the modification appropriately recognizes steel framing members for the same allowable use.

Assembly Motion: Disapprove

Online Vote Results: Failed
Support: 34.86% (114) Oppose: 65.14% (213)

Assembly Action: None
Comments

General Comments: Yes
Alternate Language: No

Related Modifications

Summary of Modification
Revises section 713.13.3 “Chute access rooms” to ensure the intent of the code that the room and door provide a minimum level of protection to the shaft enclosing the chute and the chute access doors.

Rationale
The proposed would ensure the intent of the code that the room and door provide a minimum level of protection to the shaft enclosing the chute and the chute access doors. This intended protection is made clear in Section 713.13.1. If the room design does not allow the door to close upon failure of the self-closing requirement of the chute access door the intent of the section is defeated. This proposal brings clarity to the implied intent of the code.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
The chute access room compartment and door provide a minimum level of protection to the shaft enclosing the chute and the chute access doors. The room should be designed to allow the room access door to close upon failure of the self-closing requirement of the chute access door. Increases protection

Impact to building and property owners relative to cost of compliance with code
Will increase the cost of construction
This proposal will increase construction costs by requiring that chute access rooms be configured to address an added performance feature contained within this proposal.

Impact to industry relative to the cost of compliance with code
Will increase the cost of construction
This proposal will increase construction costs by requiring that chute access rooms be configured to address an added performance feature contained within this proposal.

Impact to small business relative to the cost of compliance with code
Will increase the cost of construction
This proposal will increase construction costs by requiring that chute access rooms be configured to address an added performance feature contained within this proposal.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This will ensure the intent of the code that the room and door provide a minimum level of protection to the shaft enclosing the chute and the chute access doors. This intended protection is made clear in Section 713.13.1.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This intended protection is made clear in Section 713.13.1. If the room design does not allow the door to close upon failure of the self-closing requirement of the chute access door the intent of the section is defeated. This proposal brings clarity to the implied intent of the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
This proposal does not mention materials as they already exist in the industry

Does not degrade the effectiveness of the code
This proposal increases the effectiveness of the code

2nd Comment Period

Proponent: Borrone Jeanette
Submitted: 5/21/2019
Attachments: No

Comment:
I agree with the proposed revision.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
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</thead>
</table>

Comment:
I agree with this modification.
713.13.3 Chute access rooms. Access openings for waste or linen chutes shall be located in rooms or compartments enclosed by not less than 1-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both. Openings into the access rooms shall be protected by opening protectives having a fire protection rating of not less than ½ hour. Doors shall be self- or automatic-closing upon the detection of smoke in accordance with Section 716.5.9.3. The room or compartment shall be configured to allow the access door to the room or compartment to close and latch with the access panel to the refuse or laundry chute in any position.
## Comments

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<tr>
<th>General Comments</th>
<th>Yes</th>
<th>Alternate Language</th>
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### Related Modifications

### Summary of Modification

This modification clarifies the requirements of party walls located on lot lines between adjacent buildings and provides exceptions as to when firewalls are not required.

### Rationale

This modification will eliminate unnecessary alternate method applications and better clarify when a fire wall is not required.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

Cost Impact: Will not increase the cost of construction.

There will be a decrease in cost by providing for a more clear wording, which will reduce time for plan review and inspection.

**Impact to building and property owners relative to cost of compliance with code**

Cost Impact: Will not increase the cost of construction.

This modification will eliminate unnecessary alternative method applications, appeal processes and/or construction of walls not necessary for fire or life safety.

**Impact to industry relative to the cost of compliance with code**

Cost Impact: Will not increase the cost of construction.

This modification will eliminate unnecessary alternative method applications, appeal processes and/or construction of walls not necessary for fire or life safety.

**Impact to small business relative to the cost of compliance with code**

Cost Impact: Will not increase the cost of construction.

This modification will eliminate unnecessary alternative method applications, appeal processes and/or construction of walls not necessary for fire or life safety.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

The proposed revision gives the designer clear options while maintaining safety.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

This modification strengthens and improves the code with clarity, which should result in less misunderstandings.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Cost Impact: Will not increase the cost of construction.

There is no known discrimination in determining the products, materials, methods, or construction systems to be used.

**Does not degrade the effectiveness of the code**

The proposed modification increases the effectiveness with clarity.

### 2nd Comment Period

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<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
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**Comment:**

I agree with this modification.
706.1.1 Party Walls. Any wall located on a line between adjacent buildings, which is used for joint service between the two buildings, shall be constructed as a fire wall in accordance with Section 706. Party walls shall be constructed without openings and shall create separate buildings.

Exceptions:

1. Openings in a party wall separating an anchor building and a mall shall be in accordance with Section 402.4.2.2.1.
2. Fire walls are not required on lot lines dividing a building for ownership purposes where the aggregate height and area of the portions of the building located on both sides of the lot line do not exceed the maximum height and area requirements of this code. The code official shall be provided with copies of dedicated access easements and contractual agreements that permit the owner of the portion of the building located on either side of the lot line access to the other side for purposes of maintaining fire and life safety systems necessary for the operation of the building for review and approval.
Changes exception for horizontal separation distance for wall joint testing requirements according to minimum separation distance.

Section 705.5 of the Building Code states the required fire-resistance rating of exterior walls with a fire separation distance of greater than 10 feet shall be required to be rated for exposure to fire from the inside only. This proposed change to the exception of Section 715.3 is intended to bring consistency between the requirements for exterior walls and fire-resistant joint systems installed within exterior walls.

Impact to local entity relative to enforcement of code
This provides consistency which makes code enforcement easier.

Impact to building and property owners relative to cost of compliance with code
Any tested system previously acceptable will still be acceptable. This may provide a negligible increase cost.

Impact to industry relative to the cost of compliance with code
Since walls are already required to meet this distance this should be relatively low impact to industry.

Impact to small business relative to the cost of compliance with code
Since walls are already required to meet this distance this should be relatively low impact to small business.

Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This allows the same requirements for joints as for wall assemblies that house those joints so it will increase the safety and welfare by ensuring proper fire resistance of the wall assembly and the joints.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This will increase the safety and welfare by ensuring proper fire resistance of the wall assembly and the joints and provides a better fire resistance rating overall for the entire wall and joint.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
There is no discrimination against materials as any tested system previously acceptable will still be acceptable.

Does not degrade the effectiveness of the code
There is no degradation as any tested system previously acceptable will still be acceptable.

I agree with this modification.
715.3 Fire test criteria. Fire-resistant joint systems shall be tested in accordance with the requirements of either ASTM E1966 or UL 2079. Nonsymmetrical wall joint systems shall be tested with both faces exposed to the furnace, and the assigned fire-resistance rating shall be the shortest duration obtained from the two tests. Where evidence is furnished to show that the wall was tested with the least fire-resistant side exposed to the furnace, subject to acceptance of the building official, the wall need not be subjected to tests from the opposite side.

Exception: For exterior walls with a horizontal fire separation distance greater than 5 10 feet (1524 3048 mm), the joint system shall be required to be tested for interior fire exposure only.
Summary of Modification
This proposal relocates the reference to testing of ceiling radiation dampers. It moves the requirement found elsewhere in the code to 717.3.1 which deals with damper testing.

Rationale
The phrase "and ceiling radiation dampers" was added to Section 717.3.1, Provision 1 during the previous code cycle to differentiate ceiling radiation dampers labeled for use in dynamic systems. However, Provision 1 deals with fire dampers so the reference to ceiling radiation dampers is inappropriate. This proposal relocates the reference to ceiling radiation dampers labeled for use in dynamic systems to Provision 4 addressing ceiling radiation dampers appropriately.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
This makes enforcement easier by adding additional clarification information pertaining to ceiling radiation dampers and putting language in the appropriate section within the code pertaining to these dampers.

Impact to building and property owners relative to cost of compliance with code
Will not increase the cost of construction. This code change simply clarifies the current requirements.

Impact to industry relative to the cost of compliance with code
Will not increase the cost. This code change simply clarifies the current requirements.

Impact to small business relative to the cost of compliance with code
Will not increase the cost. This code change simply clarifies the current requirements.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This code change simply clarifies the current requirements and helps to ensure safety through proper application of dynamic ceiling radiation dampers.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This improves the code by putting all the testing requirements for dampers in the appropriate place within one section.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
This does not discriminate against any methods or materials as it only simplifies the current code requirements.

Does not degrade the effectiveness of the code
This actually increases the effectiveness of the code by adding further clarity.

2nd Comment Period
Proponent: Harold Barrineau
Submitted: 5/26/2019
Attachments: No

Comment:
I agree with this modification.
717.3.1 Damper testing. Dampers shall be listed and labeled in accordance with the standards in this section.

1. Fire dampers shall comply with the requirements of UL 555. Only fire dampers and ceiling radiation dampers labeled for use in dynamic systems shall be installed in heating, ventilation and air-conditioning systems designed to operate with fans on during a fire.
2. Smoke dampers shall comply with the requirements of UL 555S.
3. Combination fire/smoke dampers shall comply with the requirements of both UL 555 and UL 555S.
4. Ceiling radiation dampers shall comply with the requirements of UL 555C or shall be tested as part of a fire-resistance-rated floor/ceiling or roof/ceiling assembly in accordance with ASTM E119 or UL 263. Only ceiling radiation dampers labeled for use in dynamic systems shall be installed in heating, ventilation and air-conditioning systems designed to operate with fans on during a fire.
5. Corridor dampers shall comply with requirements of both UL 555 and UL 555S. Corridor dampers shall demonstrate acceptable closure performance when subjected to 150 feet per minute (0.76 m/s) velocity across the face of the damper during the UL 555 fire exposure test.
### Comments

**General Comments**
- Yes

**Alternate Language**
- No

**Related Modifications**
- IMC 607.3.2.1, IMC 607.3.2.3

### Summary of Modification

The proposal removes the term "fire-protection rating" and changes it to "rating" because fire dampers carry an hourly "rating", not a "fire-protection rating". It also removes unnecessary language.

### Rationale

This proposal is intended to clarify the requirements in this section. The term "fire-protection rating" is being changed to "rating" because fire dampers carry an hourly rating, not a "fire-protection rating". The term "for the type of penetration" was deleted because it is not needed.

### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  - This will provide clarity during enforcement.

- **Impact to building and property owners relative to cost of compliance with code**
  - Will not increase the cost of construction. This simply clarifies the existing requirements.

- **Impact to industry relative to the cost of compliance with code**
  - Will not increase the cost of construction. This simply clarifies the existing requirements.

- **Impact to small business relative to the cost of compliance with code**
  - Will not increase the cost of construction. This simply clarifies the existing requirements.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - Will not increase the cost of construction. This simply clarifies the existing requirements.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - This will strengthen the code because it clarifies the existing requirements.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - Will not discriminate in any way. This simply clarifies the existing requirements.

- **Does not degrade the effectiveness of the code**
  - Will not degrade the effectiveness of the code. This simply clarifies the existing requirements.

### 2nd Comment Period

**Proponent** Harrold Barrineau  
**Submitted** 5/26/2019  
**Attachments** No

**Comment:** I agree with this modification.
717.3.2.1 Fire damper ratings.
Fire dampers shall have the minimum fire protection rating specified in Table 717.3.2.1 for the type of penetration.

717.3.2.3 Combination fire/smoke damper ratings.
Combination fire/smoke dampers shall have the minimum fire protection rating specified for fire dampers in Table 717.3.2.1 for the type of penetration and shall have a minimum smoke damper rating as specified in Section 717.3.2.2.
This code change adds an additional exception to the membrane penetration compliance section and aligns with a proposal related to section 302.4.2 of the residential building code.

The proposal adds an additional exception which recognizes the listings of recessed incandescent and fluorescent can lights, or enclosure materials which protect recessed can lights or troffer light fixtures, that have been tested as a ceiling membrane penetration of fire-resistance-rated horizontal assemblies. There are currently twenty six UL listed can lights which incorporate integral fire protection which have been evaluated for use in fire-resistance-rated horizontal assemblies. Similarly there are eleven UL listed enclosure materials which have been evaluated for their ability to protect penetrations in ceiling membranes by non fire rated can lights or troffer light fixtures.

This allows another option to meet the requirements of rate membrane penetrations. This flexibility makes enforcement of the code easier by allowing an exception that still meets the intent of the code.

The impact is that it provides additional options so it will not increase cost.

The impact is that it provides additional options so it will not increase cost.

These products are already in use within the construction industry so it will allow the continuation of this use and improve the safety overall.

These products are already in use within the construction industry so adding this into the code as an option will strengthen the code.

These products are already in use within the construction industry.

These products are already in use within the construction industry so it will allow the continuation of this use and improve the code overall.

I agree with this modification.
714.4.2 - Add exception 8 as follows:

8. Ceiling membrane penetrations by listed luminaires (light fixtures) or by luminaires protected with listed materials, which have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing.
The proposed addition of exception #7 to Section 708.4 will make provisions of this section consistent with the exceptions in Section 718.3 and 718.4. Sections 718.3.2 exception #1, 718.3.3 exception, 718.4.2 exception #2, and 718.4.3 exception allow elimination of draft stops in concealed combustible floor or attic spaces when the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 (NFPA 13). Section 708.4 exception 6 allows elimination of draftstopping when a NFPA 13 sprinkler system is installed and the combustible floor and attic spaces are sprinkler protected, Exceptions in section 718.3 and 718.4 do not require sprinkler protection of combustible floor of attic spaces to allow elimination of draft stops when building is protected by a NFPA 13 automatic sprinkler system. NFPA 13 has specific provisions that would allow elimination of sprinkler protection in combustible concealed spaces (such as filling the combustible concealed spaces with non-combustible insulation). Either exceptions to section 718.3 and 718.4 have to be revised to indicate that draftstopping can only be eliminated when concealed combustible spaces are sprinkler protected or another exception would be required in Section 708.4 to coordinate the noted exceptions with each other. The proposed exception creates this consistency. The reason exception #6 of Section 708.4 remains unchanged is because this exception allows elimination of "fire blocking"; as well as draftstopping while the proposed exception #7 only addresses draftstopping.

This modification increases the effectiveness of the code by making this section consistent with other sections of the code. Furthermore, it would make construction less expensive.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

Comment:
I agree with this modification.
708.4 Continuity.

Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. In combustible construction where the fire partitions are not required to be continuous to the sheathing, deck or slab, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with Sections 718.2 and 718.3 at the partition line. The supporting construction shall be protected to afford the required fire-resistance rating of the wall supported, except for walls separating tenant spaces in covered and open mall buildings, walls separating dwelling units, walls separating sleeping units and corridor walls, in buildings of Type IIB, IIB and VB construction.

Exceptions:
1. The wall need not be extended into the crawl space below where the floor above the crawl space has a minimum 1-hour fire-resistance rating.
2. Where the room-side fire-resistance-rated membrane of the corridor is carried through to the underside of the floor or roof sheathing, deck or slab of a fire-resistance-rated floor or roof above, the ceiling of the corridor shall be permitted to be protected by the use of ceiling materials as required for a 1-hour fire-resistance-rated floor or roof system.
3. Where the corridor ceiling is constructed as required for the corridor walls, the walls shall be permitted to terminate at the upper membrane of such ceiling assembly.
4. The fire partitions separating tenant spaces in a covered or open mall building, complying with Section 402.4.2.1, are not required to extend beyond the underside of a ceiling that is not part of a fire-resistance-rated assembly. A wall is not required in attic or ceiling spaces above tenant separation walls.
5. Attic fireblocking or draftstopping is not required at the partition line in Group R-2 buildings that do not exceed four stories above grade plane, provided the attic space is subdivided by draftstopping into areas not exceeding 3,000 square feet (279 m²) or above every two dwelling units, whichever is smaller.
6. Fireblocking or draftstopping is not required at the partition line in buildings equipped with an automatic sprinkler system installed throughout in accordance with Section 903.3.1.1 or 903.3.1.2, provided that automatic sprinklers are installed in combustible floor/ceiling and roof/ceiling spaces.
7. Draftstopping is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
Code Change No: FS40-15

Original Proposal

Section: 708.4

Proponent: Masoud Sabounchi, Representing Colorado Chapter of ICC, representing masoud sabounchi (masoud@acecode.com)

Revise as follows:

708.4 Continuity. Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. In combustible construction where the fire partitions are not required to be continuous to the sheathing, deck or slab, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or drafted stopped in accordance with Sections 718.2 and 718.3 at the partition line. The supporting construction shall be protected to afford the required fire-resistance rating of the wall supported, except for walls separating tenant spaces in covered and open mall buildings, walls separating dwelling units, walls separating sleeping units and corridor walls, in buildings of Type II B, III B and VB construction.

Exceptions:

1. The wall need not be extended into the crawl space below where the floor above the crawl space has a minimum 1-hour fire-resistance rating.
2. Where the room-side fire-resistance-rated membrane of the corridor is carried through to the underside of the floor or roof sheathing, slab or deck of a fire-resistance-rated floor or roof above, the ceiling of the corridor shall be permitted to be protected by the use of ceiling materials as required for a 1-hour fire-resistance-rated floor or roof system.
3. Where the corridor ceiling is constructed as required for the corridor walls, the walls shall be permitted to terminate at the upper membrane of such ceiling assembly.
4. The fire partitions separating tenant spaces in a covered or open mall building, complying with Section 402.4.2.1, are not required to extend beyond the underside of a ceiling that is not a part of a fire-resistance-rated assembly. A wall is not required in attic or ceiling spaces above tenant separation walls.
5. Attic fireblocking or drafted stopping is not required at the partition line in Group R-2 buildings that do not exceed four stories above grade plane, provided the attic space is subdivided by fire blocking into areas not exceeding 3,000 square feet (276 m²) or above every two dwelling units, whichever is smaller.
6. Fireblocking or drafted stopping is not required at the partition line in buildings equipped with an automatic sprinkler system installed throughout in accordance with Section 903.3.1.1 or 903.3.1.2, provided that automatic sprinklers are installed in combustible floor/ceiling and roof/ceiling spaces.
7. Draft stopping is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Reason: Sections 718.3.2 exception #1, 718.3.3 exception, 718.4.2 exception #2, and 718.4.3 exception allow elimination of draft stops in concealed combustible floor or attic spaces when the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 (NFPA 13). Section 708.4 exception 6 allows elimination of drafted stopping when a NFPA 13 sprinkler system is installed and the combustible floor and attic spaces are sprinkler protected. Exceptions in sections 718.3 and 718.4 do not require sprinkler protection of combustible floor or attic spaces to allow elimination of draft stops when building is protected by a NFPA 13 automatic sprinkler system. NFPA 13 has specific provisions that would allow elimination of sprinkler protection in combustible concealed spaces (such as filling the combustible concealed spaces with non-combustible insulation). Either exceptions to sections 718.3 and 718.4 have to be revised to indicate that drafted stopping can only be eliminated when

INTERNATIONAL CODE COUNCIL

2020 Triennial

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concealed combustible spaces are sprinkler protected or another exception would be required in Section 708.4 to coordinate the noted exceptions with each other. The proposed exception creates this consistency. The reason exception #6 of Section 708.4 remains unchanged is because this exception allows elimination of “fire blocking” as well as drafting splicing while the proposed exception #7 only addresses drafting splicing.

Cost Impact: Will not increase the cost of construction
The proposed addition of exception #7 to Section 708.4 will make provisions of this section consistent with the exceptions in Section 710.3 and 710.4 and will not increase the construction cost.

<table>
<thead>
<tr>
<th>Report of Committee Action</th>
<th>Hearings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Committee Action:</td>
<td>Approved as Submitted</td>
</tr>
<tr>
<td>Committee Reason:</td>
<td>The committee agreed that the exception eliminating the requirement for drafting splicing in buildings throughout with an automatic sprinkler system in accordance with Section 803.3.1.1 was appropriate taking into account similar provisions in other sections of the code.</td>
</tr>
<tr>
<td>Assembly Action:</td>
<td>None</td>
</tr>
<tr>
<td>Final Hearing Results</td>
<td>FS40-15 AS</td>
</tr>
</tbody>
</table>
### Summary of Modification

Revise the section to indicate that the fire-resistance rating of exterior walls with a fire separation distance of greater than 10 feet, not 5 feet, shall be rated for exposure to fire from the inside only. This distance was increased from 5 feet to 10 feet with the 2009 edition of the IBC.

### Rationale

Section 705.5 of the 2015 International Building Code (IBC) states the required fire-resistance rating of exterior walls with a fire separation distance of greater than 10 feet shall be rated for exposure to fire from the inside only. This distance was increased from 5 feet to 10 feet with the 2009 edition of the IBC. This proposed change to the Section 716.6.2 brings consistency between the requirements for exterior walls and glazing systems installed within exterior walls.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

This modification is a correction of this section to correlate to existing code requirements and has no impact to local entity relative to enforcement of code.

**Impact to building and property owners relative to cost of compliance with code**

This modification is a correction of this section to correlate to existing code requirements and has no impact to building and property owners relative to cost of compliance with code. Will not increase the cost of construction.

**Impact to industry relative to the cost of compliance with code**

This modification is a correction of this section to correlate to existing code requirements and has no impact to industry relative to the cost of compliance with code. Will not increase the cost of construction.

**Impact to small business relative to the cost of compliance with code**

This modification is a correction of this section to correlate to existing code requirements and has no impact to small business relative to the cost of compliance with code. Will not increase the cost of construction.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This modification is a correction of this section to correlate to existing code requirements and has a reasonable and substantial connection with the health, safety, and welfare of the general public.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

This modification is a correction of this section to correlate to existing code requirements and strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

This modification is a correction of this section to correlate to existing code requirements and does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities.

**Does not degrade the effectiveness of the code**

This modification is a correction of this section to correlate to existing code requirements and improves the effectiveness of the code.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Richard Logan</th>
<th>Submitted</th>
<th>5/25/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

**Comment:**

Without this Modification we would have a situation where a glazed opening would not meet the same exterior fire protection as the wall.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

Comment:
I agree with this modification.
716.6.2 Nonsymmetrical glazing systems.

Nonsymmetrical fire-protection-rated glazing systems in fire partitions, fire barriers or in exterior walls with a fire separation distance of 5 10 feet (1524 3048 mm) or less pursuant to Section 705 shall be tested with both faces exposed to the furnace, and the assigned fire protection rating shall be the shortest duration obtained from the two tests conducted in compliance with NFPA 257 or UL 9.
Code Change No: **FS98-15**

### Original Proposal

**Section:** 716.5.9.3

**Proponent:** Michael O’Brien, representing Fire Code Action Committee (fcac@iccsafe.org)

**Revise as follows:**

716.6.2 Nonsymmetrical glazing systems. Nonsymmetrical fire-protection-rated glazing systems in fire partitions, fire barriers or in exterior walls with a fire separation distance of 6 to 10 feet (1829 to 3048 mm) or less pursuant to Section 705 shall be tested with both faces exposed to the furnace, and the assigned fire protection rating shall be the shortest duration obtained from the two tests conducted in compliance with NFPA 257 or UL 9.

**Reason:** This proposal is submitted by the ICC Fire Code Action Committee (FCAC). This ICC committee was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. The FCAC has held ten open meetings and numerous Regional Work Group and Task Group meetings and conference calls for the current code development cycle which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the FAC website at: http://www.iccsafe.org/icc/FCAC/Pages/default.aspx?SeniorToken=053bc03e-4ccc

Section 706.5 of the 2015 International Building Code (IBC) states the required fire-resistance rating of exterior walls with a fire separation distance of greater than 10 feet shall be rated for exposure to fire from the inside only. This distance was increased from 5 feet to 10 feet with the 2009 edition of the IBC. This proposed change to the Section 716.6.2 brings consistency between the requirements for exterior walls and glazing systems installed within exterior walls.

The FCAC opened protective work group included interested industry and testing lab representatives working together to make this section more user-friendly. The work group unanimously agreed on a number of proposed changes to IBC Section 716, including this one.

**Cost Impact:** Will not increase the cost of construction

This code change proposal provides better correlation to existing code requirements.

### Report of Committee Action Hearings

**Committee Action:** Approved as Submitted

**Committee Reason:** The committee agreed that the proposed change to the Section 716.6.2 brings consistency between the requirements for exterior walls and glazing systems installed within exterior walls.

**Assembly Action:** None

### Final Hearing Results

**FS98-15**

**AS**
### Related Modifications

- **Summary of Modification**
  This proposed modification revises the requirements for fire alarm shop drawings.

- **Rationale**
  This proposal deletes the laundry list of items that are required on to be provided on fire alarm shop drawings and provides a pointer to the NFPA 72 instead. The NFPA 72 has a comprehensive and complete list of requirements for shop drawings. This places the rules in one place instead of constantly trying to harmonize the FBC-B with the industry standard for fire alarm systems.

- **Fiscal Impact Statement**
  - **Impact to local entity relative to enforcement of code**
    This proposed modification will not impact the local entity relative to code enforcement.
  - **Impact to building and property owners relative to cost of compliance with code**
    This proposed modification will not change the cost of compliance to building and property owners.
  - **Impact to industry relative to the cost of compliance with code**
    This proposed modification will not change the cost of compliance or impact industry.
  - **Impact to small business relative to the cost of compliance with code**
    This proposed modification will not change the cost of compliance or impact small business.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  This proposed modification is directly connected to the health, safety, and welfare of the general public by providing a pointer to the industry standard for fire alarm systems in lieu of an incomplete and inaccurate list in the FBC-B.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  This proposed modification improves and strengthens the code by removing an incomplete and inaccurate list from the code.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  This proposed modification does not discriminate against materials, products, methods, or systems of construction.

- **Does not degrade the effectiveness of the code**
  This proposed modification enhances the effectiveness of the code.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Bryan Holland</th>
<th>Submitted</th>
<th>5/21/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment:</td>
<td>Please reconsider this proposed modification for approval. The current rule has only 14 generic show drawing requirements. This falls well short of the 40+ detailed requirements outlined in Section 7.4 (7.4.1-7.4.10) of the NFPA 72. Why would we want to keep an incomplete list of show drawing requirements in the code when the applicable referenced standard provides the more complete and accurate list of requirements? A simple pointer to the NFPA 72 removes this conflict and enhances the usability and enforcement of the code.</td>
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</table>

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Jennifer Privateer</th>
<th>Submitted</th>
<th>5/22/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment:</td>
<td>agree</td>
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<tr>
<td>Proponent</td>
<td>Harold Barrineau</td>
<td>Submitted</td>
<td>5/25/2019</td>
<td>Attachments</td>
<td>No</td>
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<tr>
<td>Comment:</td>
<td>I agree with this modification</td>
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</tbody>
</table>
[F] 907.1.2 Fire alarm shop drawings. Shop drawings for fire alarm systems shall be prepared in accordance with NFPA 72 and submitted for review and approval prior to system installation.

[F] 907.1.2 Fire alarm shop drawings. Shop drawings for fire alarm systems shall be submitted for review and approval prior to system installation, and shall include, but not be limited to, all of the following where applicable to the system being installed:

1. A floor plan that indicates the use of all rooms.
2. Locations of alarm initiating devices.
3. Locations of alarm notification appliances, including candela ratings for visible alarm notification appliances.
4. Design minimum audibility level for occupant notification.
5. Location of fire alarm control unit, transponders and notification power supplies.
6. Annunciators.
7. Power connection.
8. Battery calculations.
9. Conductor type and sizes.
10. Voltage drop calculations.
11. Manufacturers’ data sheets indicating model numbers and listing information for equipment, devices and materials.
12. Details of ceiling height and construction.
13. The interface of fire safety control functions.
Summary of Modification
This proposed modification adds multiple-channel voice evacuation requirements for certain high-rise buildings.

Rationale
It's common policy within jurisdictions for high-rise buildings to evacuate the floor of alarm, the floor above and the floor or floors below the alarm floor. A fire alarm system that has multiple channels allows one area of the building to receive an evacuation message, while other areas of the building can be given other instructions. This proposal will harmonize the FBC-B with the FFPC (NFPA 1, NFPA 101).

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
This proposed modification will not impact the local entity relative to code enforcement.

Impact to building and property owners relative to cost of compliance with code
This proposed modification will increase the cost of construction for those fire alarm notification systems that previously would have been allowed to be installed in high-rise buildings as a single-channel system.

Impact to industry relative to the cost of compliance with code
This proposed modification will increase the cost of construction for those fire alarm notification systems that previously would have been allowed to be installed in high-rise buildings as a single-channel system.

Impact to small business relative to the cost of compliance with code
This proposed modification will increase the cost of construction for those fire alarm notification systems that previously would have been allowed to be installed in high-rise buildings as a single-channel system.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This proposed modification is directly connected to the health, safety, and welfare of the general public by proving first responders and building owners the ability to proposer communicate emergency orders to occupants in certain high-rise buildings.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This proposed modification improves and strengthens the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
This proposed modification does not discriminate against materials, products, methods, or systems of construction.

Does not degrade the effectiveness of the code
This proposed modification enhances the effectiveness of the code.

2nd Comment Period

Comment:
Please reconsider this proposed modification for approval. A multi-channel system allows the emergency responders to deliver different live messages to various areas of the building at one time, which can lead to more detailed and more efficient emergency communications to the occupants. These same capabilities are currently being introduced to occupant evacuation elevators and area of refuge emergency communication systems. The 120 foot threshold is aligned with FBC-B, Section 403.6.1 for fire service access elevators. This will also keep the FBC-B aligned with the IBC.

Comment:
This proposed modification puts safety first; I agree with this proposed modification.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/25/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

Comment:
I like the multiple channel modification and think it's good for FBC
F 907.2.13.3 Multiple-channel voice evacuation. In buildings with an occupied floor more than 120 feet (36576 mm) above the lowest level of fire department vehicle access, voice evacuation systems for high-rise buildings shall be multiple-channel systems.
## Comments

### General Comments
- **Yes**

### Alternate Language
- **No**

## Related Modifications

## Summary of Modification
This proposed modification consolidates "emergency voice/alarm communication captions" requirements into this Section.

## Rationale
This modification is proposing to add existing language from IBC Section 1108.2.7.3 to this section. This proposal correlates the access provisions with Chapter 9 by adding the scoping language. This proposal further affords the fire official, building official and other users of the code to design and enforce in accordance with Chapter 9 where both fire alarm and emergency voice alarm communication systems provisions are found. Additionally, the provisions that are contained in IBC 1108.2.7.3 have not been found in the US DOJ access guidelines. Since Florida does not adopt IBC Chapter 11 and rely on the US DOJ access guidelines for accessibility, we are missing these provisions.

## Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**
- This proposed modification will not impact the local entity relative to code enforcement.

**Impact to building and property owners relative to cost of compliance with code**
- This proposed modification will not change the cost of compliance to building and property owners.

**Impact to industry relative to the cost of compliance with code**
- This proposed modification will not change the cost of compliance or impact industry.

**Impact to small business relative to the cost of compliance with code**
- This proposed modification will not change the cost of compliance or impact small business.

## Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
- This proposed modification is directly connected to the health, safety, and welfare of the general public.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
- This proposed modification improves and strengthens the code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
- This proposed modification does not discriminate against materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**
- This proposed modification enhances the effectiveness of the code.

## 2nd Comment Period

### Proponent
- **Bryan Holland**

### Submitted
- **5/21/2019**

### Attachments
- **No**

#### Comment:
Please reconsider this proposed modification for approval. The current language in the FBC is broken. There are no requirements to caption audible public announcements in accordance with the FBC, Accessibility. This section is intended to provide a pointer to the Section 1108.2.7.3 of the IBC, but Florida does not adopt that Chapter. So, this modification simply takes the exact language from 1108.2.7.3 and places it in 907.5.2.2.4. A pointer is no longer needed to the FBC, Accessibility as this rule is related to fire safety, not accessibility.

### 2nd Comment Period

### Proponent
- **Jennifer Privateer**

### Submitted
- **5/22/2019**

### Attachments
- **No**

#### Comment:
I agree with modification as proposed.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/25/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment:</td>
<td>I agree with modification</td>
<td></td>
<td></td>
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</tbody>
</table>
Emergency voice/alarm communication captions. Where stadiums, arenas and grandstands are required to caption audible public announcements in accordance with the Florida Building Code, Accessibility, the emergency/voice-alarm communication system shall be captioned. Prerecorded or live emergency captions shall be from an approved location constantly attended by personnel trained to respond to an emergency.

Emergency voice/alarm communication captions. Where stadiums, arenas and grandstands have 15,000 fixed seats or more and provide audible public announcements, the emergency/voice alarm communication system shall provide prerecorded or real-time captions. Prerecorded or live emergency captions shall be from an approved location constantly attended by personnel trained to respond to an emergency.
This proposed modification deletes all the CO alarm requirements in Section 908.8 and adds all the current CO alarm requirements of the 2018 IBC into an expanded Section 915.

This proposed modification aligns the FBC-B with the 2018 IBC/IRC, NFPA 72/720, FBC-R, and manufacturer’s installation instructions with regard to CO alarm requirements. The proposed language is much more complete, comprehensive, and includes all prescriptive details needed to properly locate CO alarms. The Section also includes criteria for CO detection systems as an alternative compliance method.

This proposed modification will not impact the local entity relative to code enforcement.

This proposed modification simply clarifies and outlines the rules for CO alarms and detection systems that are already required by industry standards and other related codes and should not result in a change in cost of compliance.

This proposed modification simply clarifies and outlines the rules for CO alarms and detection systems that are already required by industry standards and other related codes and should not result in a change in cost of compliance.

This proposed modification simply clarifies and outlines the rules for CO alarms and detection systems that are already required by industry standards and other related codes and should not result in a change in cost of compliance.

This proposed modification is directly connected to the health, safety, and welfare of the general public by proving the most comprehensive and complete list of CO alarm and detection system requirements to the code to help mitigate the serious hazard associated with CO poisoning.

This proposed modification improves and strengthens the code by adding all the prescriptive requirements for CO alarms and detection systems into one place in FBC-B.

This proposed modification does not discriminate against materials, products, methods, or systems of construction.

This proposed modification enhances the effectiveness of the code.
Alternate Language

2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Bryan Holland</th>
<th>Submitted</th>
<th>5/21/2019</th>
<th>Attachments</th>
<th>Yes</th>
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</thead>
</table>

**Rationale**
This alternative language comment simply moves the CO protection requirements from 908.8 of the FBC-B to its own section in 915 but does not change any of the language or requirements of the section to remain fully harmonized with F.S. 553.885

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**
This alternative language comment has no impact on the local entity.

**Impact to building and property owners relative to cost of compliance with code**
This alternative language comment has no impact on the building owner.

**Impact to industry relative to the cost of compliance with code**
This alternative language comment has no impact on industry.

**Impact to Small Business relative to the cost of compliance with code**
This proposed modification simply clarifies and outlines the rules for CO alarms and detection systems that are already required by industry standards and other related codes and should not result in a change in cost of compliance.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
This alternative language comment is connected to the health, safety, and welfare of the general public by placing CO protection requirements in a more suitable location within the code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
This alternative language comment improves the code by placing CO protection requirements in a more suitable location within the code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
This alternative language comment does not discriminate against any materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**
This alternative language comment enhances the usability, enforcement, and effectiveness of the code.

Alternate Language

1st Comment Period History

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Bryan Holland</th>
<th>Submitted</th>
<th>2/1/2019</th>
<th>Attachments</th>
<th>Yes</th>
</tr>
</thead>
</table>

**Rationale**
This alternative language comment includes minor editorial revisions to the proposed modification to add clarity. This comment also adds a definition for "carbon monoxide source" and CO detection requirements into certain Group A, B and M occupancies with attached private garages.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**
This comment will not have a fiscal impact on the local code enforcement entity.

**Impact to building and property owners relative to cost of compliance with code**
This comment could increase the cost of compliance where the Group A, B, or M occupancy has an attached private garage and would now require CO detection.

**Impact to industry relative to the cost of compliance with code**
This comment adds cost to certain Group A, B, or M occupancies with an attached private garage.

**Impact to Small Business relative to the cost of compliance with code**
This proposed modification simply clarifies and outlines the rules for CO alarms and detection systems that are already required by industry standards and other related codes and should not result in a change in cost of compliance.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
This comment will enhance the health, safety, and welfare of the general public by protecting occupants from the hazards of CO poisoning where a CO source exists.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
This comment improves the code with more concise information and expanded requirements for CO detection where a CO hazard could exist.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
This comment does not discriminate against materials, products, methods, or systems.

**Does not degrade the effectiveness of the code**
This comment enhances the code.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jennifer Privateer</td>
<td>5/22/2019</td>
<td>No</td>
</tr>
<tr>
<td>Harold Barrineau</td>
<td>5/25/2019</td>
<td>No</td>
</tr>
<tr>
<td>Mo Madani</td>
<td>1/27/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

**Comment:**
- Jennifer Privateer: I agree with modification proposed
- Harold Barrineau: I agree with the alternate language
- Mo Madani: Carbon monoxide provisions of the 2017 FBC are consistent with section 553.885 FS.
908.8 Carbon monoxide protection. Every separate building or an addition to an existing building for which a permit for new construction is issued and having a fossil-fuel-burning heater or appliance, a fireplace, an attached garage, or other feature, fixture, or element that emits carbon monoxide as a byproduct of combustion shall have an operational carbon monoxide alarm installed within 10 feet (3050 mm) of each room used for sleeping purposes in the new building or addition, or at such other locations as required by this code.

Exceptions:

1. An approved operational carbon monoxide detector shall only be required to be installed inside or directly outside of each room or area where a fossil-fuel-burning heater, engine or appliance is located within a hospital, inpatient hospice facility or skilled nursing home facility licensed by the Agency for Health Care Administration, or a new state correctional institution. The carbon monoxide detector shall be connected to the fire-alarm system of the hospital, inpatient hospice facility or nursing home facility as a supervisory signal.

2. This section shall not apply to existing buildings that are undergoing alterations or repairs unless the alteration is an addition as defined in Section 908.7.3.

908.8.1 Carbon monoxide alarm. The requirements of Section 908.8 shall be satisfied by providing for one of the following alarm installations:

1. A hard-wired carbon monoxide alarm.
2. A battery-powered carbon monoxide alarm.
4. A battery-powered combination carbon monoxide and smoke alarm.

908.8.2 Combination alarms. Combination smoke/carbon monoxide alarms shall be listed and labeled by a nationally recognized testing laboratory.

908.8.3 Addition shall mean an extension or increase in floor area, number of stories or height of a building or structure.

SECTION 915

CARBON MONOXIDE DETECTION

RESERVED

SECTION 915

CARBON MONOXIDE PROTECTION

915.1 Carbon monoxide protection.

Every separate building or an addition to an existing building for which a permit for new construction is issued and having a fossil-fuel-burning heater or appliance, a fireplace, an attached garage, or other feature, fixture, or element that emits carbon monoxide as a byproduct of combustion shall have an operational carbon monoxide alarm installed within 10 feet (3050 mm) of each room used for sleeping purposes in the new building or addition, or at such other locations as required by this code.
Exceptions:

1. An approved operational carbon monoxide detector shall only be required to be installed inside or directly outside of each room or area where a fossil fuel burning heater, engine or appliance is located within a hospital, inpatient hospice facility or skilled nursing home facility licensed by the Agency for Health Care Administration, or a new state correctional institution. The carbon monoxide detector shall be connected to the fire-alarm system of the hospital, inpatient hospice facility or nursing home facility as a supervisory signal.

2. This section shall not apply to existing buildings that are undergoing alterations or repairs unless the alteration is an addition as defined in Section 908.7.3.

915.1.1 Carbon monoxide alarm.

The requirements of Section 908.8 shall be satisfied by providing for one of the following alarm installations:

1. A hard-wired carbon monoxide alarm.
2. A battery-powered carbon monoxide alarm.
4. A battery-powered combination carbon monoxide and smoke alarm.

915.1.2 Combination alarms.

Combination smoke/carbon monoxide alarms shall be listed and labeled by a nationally recognized testing laboratory.

915.1.3

Addition shall mean an extension or increase in floor area, number of stories or height of a building or structure.
SECTION 915

CARBON MONOXIDE DETECTION

[F] 915.1 General. Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6. Carbon monoxide detection shall be installed in existing buildings in accordance with the Florida Fire Prevention Code.

[F] 915.1.1 Where required. Carbon monoxide detection shall be provided in Group I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2 through 915.1.6 exist. Carbon monoxide detection shall be provided in Group A, B and M occupancies as required by Section 915.2.4 in locations specified in Section 915.2.4.1.

[F] 915.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

[F] 915.1.3 Forced-air furnaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms served by a fuel-burning, forced-air furnace.

Exception: Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms if carbon monoxide detection is provided in the first room or area served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location.

[F] 915.1.4 Fuel-burning appliances outside of dwelling units, sleeping units and classrooms. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms located in buildings that contain fuel-burning appliances or fuel-burning fireplaces.

Exceptions:

1. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms where there are no communicating openings between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

2. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms where carbon monoxide detection is provided in one of the following locations:

2.1. In an approved location between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

2.2. On the ceiling of the room containing the fuel-burning appliance or fuel-burning fireplace.

[F] 915.1.5 Private garages. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms in buildings with attached private garages.

Exceptions:

1. Carbon monoxide detection shall not be required where there are no communicating openings between the private garage and the dwelling unit, sleeping unit or classroom.

2. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms located more than one story above or below a private garage.

3. Carbon monoxide detection shall not be required where the private garage connects to the building through an open-ended corridor.
4. Where carbon monoxide detection is provided in an approved location between openings to a private garage and dwelling units, sleeping units or classrooms, carbon monoxide detection shall not be required in the dwelling units, sleeping units or classrooms.

[F] 915.1.6 Exempt garages. For determining compliance with Section 915.1.5, an open parking garage complying with Section 406.5 or an enclosed parking garage complying with Section 406.6 shall not be considered a private garage.

[F] 915.2 Locations. Where required by Section 915.1.1, carbon monoxide detection shall be installed in the locations specified in Sections 915.2.1 through 915.2.3.

[F] 915.2.1 Dwelling units. Carbon monoxide detection shall be installed in dwelling units outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, carbon monoxide detection shall be installed within the bedroom.

[F] 915.2.2 Sleeping units. Carbon monoxide detection shall be installed in sleeping units.

Exception: Carbon monoxide detection shall be allowed to be installed outside of each separate sleeping area in the immediate vicinity of the sleeping unit where the sleeping unit or its attached bathroom does not contain a fuel-burning appliance and is not served by a forced air furnace.

[F] 915.2.3 Group E occupancies. Carbon monoxide detection shall be installed in classrooms in Group E occupancies. Carbon monoxide alarm signals shall be automatically transmitted to an on-site location that is staffed by school personnel.

Exception: Carbon monoxide alarm signals shall not be required to be automatically transmitted to an on-site location that is staffed by school personnel in Group E occupancies with an occupant load of 30 or less.

[F] 915.2.4 Group A, B and M occupancies. Carbon monoxide detectors shall be installed in Group A, Group B and Group M occupancies that contain a carbon monoxide source.

Exceptions:

1. Carbon monoxide detection is not required in Group A occupancies with an occupant load of less than 300.

2. Carbon monoxide detection is not required in Group B occupancies with an occupant load of less than 500.

3. Carbon monoxide detection is not required in Group M occupancies with an occupant load of less than 500.

[F] 915.2.4.1 Installation Location.

915.2.4.1.1 Carbon monoxide detectors shall be installed on the ceiling in the same room as a permanently installed carbon monoxide source or in an approved location adjacent to the fuel-burning appliance.

915.2.4.1.2 Carbon monoxide detectors shall be installed in each room or area served by a forced-air furnace that relies on the combustion of a fossil fuel and re-circulates air.

Exception: Carbon monoxide detectors shall not be required in each room or area provided that a detector is installed in the first room or area served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location.

915.2.4.1.3 Carbon monoxide detectors shall be provided in buildings classified as Group A, B or M occupancies with attached private garages.

Exceptions:
1. Carbon monoxide detectors shall not be required where there are no communicating openings between the public parking garage and the building.

2. Carbon monoxide detectors shall not be required in the building located more than one story above or below a public parking garage.

3. Carbon monoxide detectors shall not be required where the public parking garage connects to the building through an open-ended corridor.

4. Where carbon monoxide detectors are provided in an approved location between openings to a public parking garage and the building, carbon monoxide detection shall not be required in the building.

915.2.4.1.4 Exempt garages. For determining compliance with Section 915.1.5, an open parking garage complying with Section 406.5 of the Florida Building Code, Building or an enclosed parking garage complying with Section 406.6 of the Florida Building Code, Building shall not be considered a private garage.

[F] 915.3 Detection equipment. Carbon monoxide detection required by Sections 915.1 through 915.2.3 shall be provided by carbon monoxide alarms complying with Section 915.4 or carbon monoxide detection systems complying with Section 915.5. Carbon monoxide detection required by Section 915.2.4 shall be provided by carbon monoxide detectors or combination detectors complying with Section 915.5.

[F] 915.4 Carbon monoxide alarms. Carbon monoxide alarms shall comply with Sections 915.4.1 through 915.4.3.

[F] 915.4.1 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exception: Where installed in buildings without commercial power, battery-powered carbon monoxide alarms shall be an acceptable alternative.

[F] 915.4.2 Listings. Carbon monoxide alarms shall be listed in accordance with ANSI/UL 2034.

[F] 915.4.3 Combination alarms. Combination carbon monoxide/smoke alarms shall be an acceptable alternative to carbon monoxide alarms. Combination carbon monoxide/smoke alarms shall be listed in accordance with ANSI/UL 2034 and ANSI/UL 217.

[F] 915.5 Carbon monoxide detection systems. Carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide alarms and shall comply with Sections 915.5.1 through 915.5.3.

[F] 915.5.1 General. Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with ANSI/UL 2075.

[F] 915.5.2 Locations. Carbon monoxide detectors shall be installed in the locations specified in Section 915.2. These locations supersede the locations specified in NFPA 720.

[F] 915.5.3 Combination detectors. Combination carbon monoxide/smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors, provided they are listed in accordance with ANSI/UL 2075 and ANSI/UL 268.

[F] 915.4 Control Unit. Where carbon monoxide detectors are installed in accordance with the Code, they shall be connected to a control unit in accordance with NFPA 720 and NFPA 72.

[F] 915.5 Power Source. Combination smoke/carbon monoxide detectors shall receive their power source in accordance with NFPA 72.
[F] 915.6 Maintenance. Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with the Florida Fire Prevention Code.

SECTION 202 DEFINITIONS

CARBON MONOXIDE SOURCE. Carbon monoxide source means any machine or equipment that operates through the combustion of fossil fuel, a fireplace or an attached, enclosed garage.
908.8 Carbon monoxide protection. Every separate building or an addition to an existing building for which a permit for new construction is issued and having a fossil-fuel burning heater or appliance, a fireplace, an attached garage, or other feature, fixture, or element that emits carbon monoxide as a byproduct of combustion shall have an operational carbon monoxide alarm installed within 10 feet (3050 mm) of each room used for sleeping purposes in the new building or addition, or at such other locations as required by this code.

Exceptions:

1. An approved operational carbon monoxide detector shall only be required to be installed inside or directly outside of each room or area where a fossil-fuel burning heater, engine or appliance is located within a hospital, inpatient hospice facility or skilled nursing home facility licensed by the Agency for Health Care Administration, or a new state correctional institution. The carbon monoxide detector shall be connected to the fire alarm system of the hospital, inpatient hospice facility or nursing home facility as a supervisory signal.

2. This section shall not apply to existing buildings that are undergoing alterations or repairs unless the alteration is an addition as defined in Section 908.7.3.

908.8.1 Carbon monoxide alarm. The requirements of Section 908.8 shall be satisfied by providing for one of the following alarm installations:

1. A hard-wired carbon monoxide alarm.

2. A battery-powered carbon monoxide alarm.


4. A battery-powered combination carbon monoxide and smoke alarm.

908.8.2 Combination alarms. Combination smoke/carbon monoxide alarms shall be listed and labeled by a nationally recognized testing laboratory.

908.8.3 Addition shall mean an extension or increase in floor area, number of stories or height of a building or structure. SECTION 915

CARBON MONOXIDE DETECTION

RESERVED

SECTION 915

CARBON MONOXIDE DETECTION

[F] 915.1 General. Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6. Carbon monoxide detection shall be installed in existing buildings in accordance with The Florida Fire Prevention Code.

[F] 915.1.1 Where required. Carbon monoxide detection shall be provided in Group I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2 through 915.1.6 exist.

[F] 915.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

[F] 915.1.3 Fuel burning, forced-air furnaces. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms served by a fuel-burning, forced-air furnace.
Exception: Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms if a carbon monoxide detector is provided in the first room or area served by each main duct leaving the furnace, and the carbon monoxide alarm signals are automatically transmitted to an approved location.

[F] 915.1.4 Fuel-burning appliances outside of dwelling units, sleeping units and classrooms. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms located in buildings that contain fuel-burning appliances or fuel-burning fireplaces.

Exceptions:

1. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms without communicating openings between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

2. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms where a carbon monoxide detector is provided in one of the following locations:

   2.1. In an approved location between the fuel-burning appliance or fuel-burning fireplace and the dwelling unit, sleeping unit or classroom.

   2.2. On the ceiling of the room containing the fuel-burning appliance or fuel-burning fireplace.

[F] 915.1.5 Private garages. Carbon monoxide detection shall be provided in dwelling units, sleeping units and classrooms in buildings with attached private garages.

Exceptions:

1. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms without communicating openings between the private garage and the dwelling unit, sleeping unit or classroom.

2. Carbon monoxide detection shall not be required in dwelling units, sleeping units and classrooms located more than one story above or below a private garage.

3. Carbon monoxide detection shall not be required where the private garage connects to the building through an open-ended corridor.

4. Where a carbon monoxide detector is provided in an approved location between openings to a private garage and dwelling units, sleeping units or classrooms.

[F] 915.1.6 Exempt garages. For determining compliance with Section 915.1.5, an open parking garage complying with Section 406.5 or an enclosed parking garage complying with Section 406.6 shall not be considered a private garage.

[F] 915.2 Locations. Where required by Section 915.1.1, carbon monoxide detection shall be installed in the locations specified in Sections 915.2.1 through 915.2.3.

[F] 915.2.1 Dwelling units. Carbon monoxide detection shall be installed in dwelling units outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, carbon monoxide detection shall be installed within the bedroom.

[F] 915.2.2 Sleeping units. Carbon monoxide detection shall be installed in sleeping units.

Exception: Carbon monoxide detection shall be allowed to be installed outside of each separate sleeping area in the immediate vicinity of the sleeping unit where the sleeping unit or its attached bathroom does not contain a fuel-burning appliance and is not served by a forced air furnace.
[F] 915.2.3 Group E occupancies. Carbon monoxide detectors shall be installed in classrooms in Group E occupancies. Carbon monoxide alarm signals shall be automatically transmitted to an on-site location that is staffed by school personnel.

   Exception: Carbon monoxide alarm signals shall not be required to be automatically transmitted to an on-site location that is staffed by school personnel in Group E occupancies with an occupant load of 30 or less.

[F] 915.3 Carbon monoxide detection. Carbon monoxide detection required by Sections 915.1 through 915.2.3 shall be provided by carbon monoxide alarms complying with Section 915.4 or carbon monoxide detection systems complying with Section 915.5.

[F] 915.4 Carbon monoxide alarms. Carbon monoxide alarms shall comply with Sections 915.4.1 through 915.4.4.

[F] 915.4.1 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

   Exception: Where installed in buildings without commercial power, battery-powered carbon monoxide alarms shall be an acceptable alternative.

[F] 915.4.2 Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034.

[F] 915.4.3 Locations. Carbon monoxide alarms shall only be installed in dwelling units and in sleeping units. They shall not be installed in locations where the code requires carbon monoxide detectors to be used.

[F] 915.4.4 Combination alarms. Combination carbon monoxide/smoke alarms shall be an acceptable alternative to carbon monoxide alarms. Combination carbon monoxide/smoke alarms shall be listed in accordance with UL 2034 and UL 217.

[F] 915.5 Carbon monoxide detection systems. Carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide alarms and shall comply with Sections 915.5.1 through 915.5.3.

[F] 915.5.1 General. Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.

[F] 915.5.2 Locations. Carbon monoxide detectors shall be installed in the locations specified in Section 915.2. These locations supersede the locations specified in NFPA 720.

[F] 915.5.3 Combination detectors. Combination carbon monoxide/smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors, provided that they are listed in accordance with UL 2075 and UL 268.

[F] 915.6 Maintenance. Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with the Florida Fire Prevention Code.
This proposed modification adds a new Section on "Mass Notification Systems" to the code.

**Rationale**

The need for real-time effective emergency communications in the United States came into sharp focus in the 20th century in response to threats to homeland security and our educational occupancies. We have learned from the recent incidents that occurred in our college/university campuses and other buildings, and have created installation guidelines to be followed for Life Safety. When a mass disaster event occurs, the need for real time information communicated in a clear and concise method via various paths is very critical to Life Safety. The Risk Analysis and the Emergency Response Plan have been shown to be the needed steps to take in this complicated life safety concern today and in the future. This action will NOT require a mass notification system to be installed; it requires the Risk Analysis which is outlined in detail within NFPA 72. That analysis prepared by a registered design professional along with stakeholders of the college and AHJ that will outline what is needed for this location and application. This code change proposal provides a requirement that a Risk Analysis be created for every new building of size that requires a fire alarm system in college's campuses. NFPA 72 has a chapter dedicated to Emergency Communication Systems-Mass Notification. The requirements for Risk Analysis and qualifications for those performing these services are within NFPA 72; they are matured and are in the 3rd cycle of revisions. Mass Notification can cover One Way, Two Way, Wide Area (outside) In-Building Mass Notification and Distributed Recipient (Cell phone, laptop) forms of communication. All of this is covered in detail in NFPA 72. Mass Notification is a subset of ECS for all hazards concerns. Another is EVACS which is the Em Voice Alarm Communication System which is defined for FIRE incidents, and now can be utilized for mass notification.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

This proposed modification will not impact the local entity relative to code enforcement other than verifying the risk analysis has been completed and acted upon accordingly.

**Impact to building and property owners relative to cost of compliance with code**

This proposed modification will not change the cost of compliance to building and property owners unless the mass notification system is recommended by risk analysis and the cost of the system is absorbed by the building and property owners.

**Impact to industry relative to the cost of compliance with code**

This proposed modification will increase the cost of compliance with the code as a risk analysis will be required for qualifying occupancy types and the outcome may result in a required mass notification system to be installed.

**Impact to small business relative to the cost of compliance with code**

This proposed modification will not change the cost of compliance or impact small business.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This proposed modification is directly connected to the health, safety, and welfare of the general public by addressing a growing need for mass notification in certain occupancies to warn the public of a hazard or danger.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

This proposed modification improves and strengthens the code by giving the user of the code a pointer to the applicable industry standard (NFPA 72) to perform a risk analysis.

**Does not discriminate against materials, products, methods, or systems of construction**

This proposed modification does not discriminate against materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**

This proposed modification enhances the effectiveness of the code.

**2nd Comment Period**

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Bryan Holland</th>
<th>Submitted</th>
<th>5/21/2019</th>
<th>Attachments</th>
<th>No</th>
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**Comment:**

Please reconsider this proposed modification for approval. The rule only applies to college and university campuses where the life-saving benefits of a mass notification system have been proven by case study. The rule does not mandate the installation of a mass notification system but rather mandates an industry recognized risk assessment outlined in the NFPA 72 be performed. Only those campuses where it is shown that a mass notification system will enhance the evacuation, rescue, and other life-saving communications will be required to install one.
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<th>Proponent</th>
<th>Jennifer Privateer</th>
<th>Submitted</th>
<th>5/22/2019</th>
<th>Attachments</th>
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<td>Comment:</td>
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<th>Submitted</th>
<th>5/25/2019</th>
<th>Attachments</th>
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SECTION 917

MASS NOTIFICATION SYSTEMS

[F] 917.1 College and university campuses. Prior to construction of a new building requiring a fire alarm system on a multiple-building college or university campus having a cumulative building occupant load of 1,000 or more, a mass notification risk analysis shall be conducted in accordance with NFPA 72. Where the risk analysis determines a need for mass notification, an approved mass notification system shall be provided in accordance with the findings of the risk analysis.
Provides clarification for the section related to stories without openings.

This code change is intended to provide language that clarifies the intended requirements by removing the double negative that was found in the current code section.

This provides clarity making enforcement easier.

This has no impact to property owners relative to cost as it only provides clarity on a requirement found in the code.

This has no impact relative to cost as it only provides clarity on a requirement found in the code.

This has no impact relative to cost as it only provides clarity on a requirement found in the code.

This provides clarity on a requirement found in the code by removing unnecessary language thereby making code enforcement easier and ensuring safety and welfare.

This strengthens the code by providing a better method for understanding the requirements

This does not discriminate in anyway.

This does not degrade the code, but in fact makes it easier to understand and enforce.

I agree with this modification.
903.2.11.1 Stories without openings.

An automatic sprinkler system shall be installed throughout all stories, including basements, of all buildings where the floor area exceeds 1,500 square feet (139.4 m²) and where there is the story does not provide comply with the following criteria for exterior wall openings:

1. Openings below grade that lead directly to ground level by an exterior stairway complying with Section 1011 or an outside ramp complying with Section 1012. Openings shall be located in each 50 linear feet (15 240 mm), or fraction thereof, of exterior wall in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15 240 mm).

2. Openings entirely above the adjoining ground level totaling not less than 20 square feet (1.86 m²) in each 50 linear feet (15 240 mm), or fraction thereof, of exterior wall in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15 240 mm). The height of the following types bottom of exterior wall openings:

2.1. Openings below grade that lead directly to ground level by an exterior stairway complying with Section 1011 or an outside ramp complying with Section 1012. Openings shall be located in each 50 linear feet (15 240 mm), or fraction thereof, of exterior wall in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15 240 mm).

2.2. Openings entirely above the adjoining ground level totaling not less than 20 square feet (1.86 m²) in each 50 linear feet (15 240 mm), or fraction thereof, of exterior wall in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15 240 mm). The height of the bottom of the clear opening shall not exceed 44 inches (1118 mm) measured from the floor.
### Summary of Modification
This removes the language pertaining to portable fire extinguishers from section 904 which is related to Alternative Automatic Fire-Extinguishing Systems and relocates that language to section 906 which pertains to portable extinguishers.

### Rationale
The portable fire extinguishers requirements are not in the correct section, which is section 906 entitled Portable Fire Extinguishers. This proposal corrects the problem by moving the requirements in 904.13.2 to 906.1 and deleting section 904.13.2. In addition it details the type of portable extinguisher that is required while still maintaining the required direction to code users over to the fire code for all other requirements such as sizing installation and requirements.

### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  This will aid the inspector when dealing with cooking installations, but does not provide any new requirements, it only puts the requirements in the proper section.

- **Impact to building and property owners relative to cost of compliance with code**
  This will not have an impact on cost as this is clarification only and is not adding new requirements.

- **Impact to industry relative to the cost of compliance with code**
  This will not have an impact on cost as this is clarification only and is not adding new requirements.

- **Impact to small business relative to the cost of compliance with code**
  This will not have an impact on cost as this is clarification only and is not adding new requirements.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  This will ensure safety by placing the requirements for extinguishers in the proper section.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  This improves the code by placing the requirements for extinguishers in the proper section.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  This does not discriminate in anyway as it only moves requirements from one section to another.

- **Does not degrade the effectiveness of the code**
  This does not degrade the code in anyway as it only moves requirements from one section to another.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
</tr>
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</table>

**Comment:**
I agree with this modification.
904.13.2 Portable fire extinguishers for domestic cooking equipment in Group I-2 Condition 1.

A portable fire extinguisher complying with Section 906 shall be installed within a 30-foot (9144 mm) distance of travel from domestic cooking appliances.

906.1 Where required.

Portable fire extinguishers shall be installed in all of the following locations:

1. In new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies. Exception: In Group R-2 occupancies, portable fire extinguishers shall be required only in locations specified in Items 2 through 6 where each dwelling unit is provided with a portable fire extinguisher having a minimum rating of 1- A:10-B:C.

2. Within 30 feet (9144 mm) distance of travel from commercial cooking equipment, and from domestic cooking equipment in Group I-2 Condition 1.

3. In areas where flammable or combustible liquids are stored, used or dispensed.

4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3315.1.

5. Where required by the sections indicated in Table 906.1.

6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.

906.4 Cooking grease equipment fires.

Fire extinguishers provided for the protection of cooking grease fires equipment shall be of an approved type compatible with the automatic fire extinguishing system agent. Cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K rated portable extinguisher and in accordance with the Florida Fire Prevention Code.
This modification is intended to enhance the functionality of these requirements by placing them in context with the applicable means of egress design requirements. For example, Section 1004.1.1.1 states, "Design of egress path capacity shall be based on the cumulative portion of the occupant loads of all rooms, areas or spaces to that point along the path of egress travel." This proposal places the same requirement at Section 1006.2.1 in the context of using capacity to determine the required number of exits or access to exits.

A new Exception 1 to Section 1006.2.1 has been added. It is a logical concern. Literally interpreted, a building with an occupant load of 4,000 and having four required exits with one of those exits having a foyer, lobby, vestibule or similar space would require four exits from such space based on the cumulative occupant load of 1,000. The number of exits from such space would be based on the occupant load of the space; however, the capacity of that exit(s) would be based on the cumulative occupant load served. Perhaps the most important feature of the 6th Edition code change was that it clarified that cumulative occupant loads are not considered when calculating the required number of exits or access to exits serving an adjacent story. An exception clarifies that occupant loads from isolated mezzanines will be considered in determining the number of required exits from the adjacent story.

Impact to local entity relative to enforcement of code
Approval of this proposal will improve the consistency in the determination and application of fundamental FBC means of egress provisions.

Impact to building and property owners relative to cost of compliance with code
Will not increase cost.

Impact to industry relative to the cost of compliance with code
Will not increase cost.

Impact to small business relative to the cost of compliance with code
Will not increase cost.

This modification will simply provide clarification of current requirements and will help designers and code officials in the consistent enforcement of the code.

This modification will simply provide clarification of current requirements and will not weaken the current provisions of the code.

This modification will simply provide clarification of current requirements and will not discriminate against materials, product, methods, or systems of construction.

This modification will simply provide clarification of current requirements and will improve the effectiveness of code enforcement.

Comment:
In R-2 and R-3 Occupancies both the Florida Building Code and Florida Fire Prevention Code allow a single Exit or Exit access Doorway if the Common Path of Travel within the space is not exceeded.

When we changed base Code for the 2004 Florida Building Code an additional requirement for maximum occupant load was added. Based on a legislative action this was set at 50.

Changing this to 20 would cause harm to projects with vested development rights and be a hardship to existing design practices.
<table>
<thead>
<tr>
<th>2nd Comment Period</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proponent</strong></td>
</tr>
<tr>
<td><strong>Comment:</strong></td>
</tr>
<tr>
<td>I agree with the proposed revision.</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>2nd Comment Period</th>
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<tbody>
<tr>
<td><strong>Proponent</strong></td>
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<tr>
<td><strong>Comment:</strong></td>
</tr>
<tr>
<td>I agree with this revision</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2nd Comment Period</th>
</tr>
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<tbody>
<tr>
<td><strong>Proponent</strong></td>
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<tr>
<td><strong>Comment:</strong></td>
</tr>
<tr>
<td>I agree with this modification</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>2nd Comment Period</th>
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<tbody>
<tr>
<td><strong>Proponent</strong></td>
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<td><strong>Comment:</strong></td>
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<td>I agree with this modification.</td>
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</table>

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<th>1st Comment Period History</th>
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<tbody>
<tr>
<td><strong>Proponent</strong></td>
</tr>
<tr>
<td><strong>Comment:</strong></td>
</tr>
<tr>
<td>Proposed changes to the maximum occupant load of space for R2 and R3 are not consistent with Florida Law.</td>
</tr>
</tbody>
</table>
Revise as follows:

1006.2.1 Egress based on occupant load and common path of egress travel distance.

Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1. The cumulative occupant load from adjacent rooms, areas or spaces shall be determined in accordance with Section 1004.2.

Exceptions:

1. Reserved. The number of exits from foyers, lobbies, vestibules or similar spaces need not be based on cumulative occupant loads for areas discharging through such spaces, but the capacity of the exits from such spaces shall be based on applicable cumulative occupant loads.
2. Care suites in Group I-2 occupancies complying with Section 407.4.

TABLE 1006.2.1

SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD OF SPACE</th>
<th>MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Sprinkler System (feet)</td>
<td>With Sprinkler System (feet)</td>
</tr>
<tr>
<td></td>
<td>Occupant Load (feet)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OL = 30</td>
<td>OL = 30</td>
</tr>
<tr>
<td>A², E, M</td>
<td>49</td>
<td>75</td>
</tr>
<tr>
<td>B</td>
<td>49</td>
<td>100</td>
</tr>
<tr>
<td>F</td>
<td>49</td>
<td>75</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>3</td>
<td>NP</td>
</tr>
<tr>
<td>H-4, H-5</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
<td>I-1, I-2⁵, I-4</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
<td>I-3</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
<td>R-1</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
<td>R-2</td>
<td>49</td>
<td>NP</td>
</tr>
<tr>
<td>R-3⁵</td>
<td>49</td>
<td>NP</td>
</tr>
<tr>
<td>R-4⁴</td>
<td>49</td>
<td>NP</td>
</tr>
<tr>
<td>Sr</td>
<td>29</td>
<td>100</td>
</tr>
<tr>
<td>U</td>
<td>49</td>
<td>100</td>
</tr>
</tbody>
</table>
For SI: 1 foot = 304.8 mm.

NP - Not permitted

a. Buildings equipped through with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.

b. Group H occupancies equipped throughout with an automatic sprinkler system in accordance with Section 903.3.2.5.

c. For a room or space used for assembly purposes having fixed seating, see Section 1029.8.

d. For the ravel distance limitations in Group I-2. see Section 407.4.

e. The length of common path of egress travel distance shall only apply in a Group R-3 occupancy located in a mixed occupancy building or within a Group R-3 or R-4 congregate living facility.

f. The length of common path of egress travel distance in a Group S-2 open parking garage shall be not be more than 100 feet.
## Comments

### General Comments

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
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</tbody>
</table>

### Alternate Language

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Related Modifications

**Summary of Modification**
Clarification and coordination of current requirements.

**Rationale**
The proposal will improve consistency in language throughout the code.

### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  - The proposal will improve consistency in language throughout the code.

- **Impact to building and property owners relative to cost of compliance with code**
  - Will not increase cost.

- **Impact to industry relative to the cost of compliance with code**
  - Will not increase cost.

- **Impact to small business relative to the cost of compliance with code**
  - Will not increase cost.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - This proposal will help clarify and coordinate the current code requirements.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - This proposal will improve the application of the code and will provide clarity to the current code requirements.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - This proposal will not discriminate against materials, products, methods, or systems of construction.

- **Does not degrade the effectiveness of the code**
  - This proposal will improve the application of the code and will provide clarity to the current code requirements.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doug Harvey</td>
<td>5/1/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

**Comment:**
This modification clarifies the intent of the code to have clearance above the finished floor. When headroom is close to the limit, the measurement from finished floor becomes important. Tile installation can decrease the headroom and it is important to maintain the clearance, especially along the egress. Please support this.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ann Russo1</td>
<td>5/13/2019</td>
<td>No</td>
</tr>
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</table>

**Comment:**
Please support this change. Ceiling height is one of the fundamentals in the means of egress requirements in Chapter 10. It is critical that measurements shall be based from "finished" floor.
<table>
<thead>
<tr>
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<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
<th>Comment</th>
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<td>Borrone Jeanette</td>
<td>5/21/2019</td>
<td>No</td>
<td>I agree with the proposed revision.</td>
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<td>2nd</td>
<td>Michael Savage</td>
<td>5/22/2019</td>
<td>No</td>
<td>I agree with the proposed revision.</td>
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<td>2nd</td>
<td>Jennifer Private</td>
<td>5/23/2019</td>
<td>No</td>
<td>I agree with this clarification</td>
</tr>
<tr>
<td>2nd</td>
<td>Harold Barrineau</td>
<td>5/25/2019</td>
<td>No</td>
<td>I agree with this modification</td>
</tr>
<tr>
<td>2nd</td>
<td>Harold Barrineau</td>
<td>5/26/2019</td>
<td>No</td>
<td>I agree with this modification.</td>
</tr>
</tbody>
</table>
Revise as follows:

1003.2 Ceiling height. The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) above the finished floor.

Exceptions:

1. Sloped ceilings in accordance with Section 1208.2.
2. Ceilings of dwelling units and sleeping units within residential occupancies in accordance with Section 1208.2.
3. Allowable projections in accordance with Section 1003.3.
4. Stair headroom in accordance with Section 1011.3.
5. Door height in accordance with Section 1010.1.1.
6. Ramp headroom in accordance with Section 1012.5.2.
7. The clear height of floor levels in vehicular and pedestrian traffic areas of public and private parking garages in accordance with Section 406.4.1.
8. Areas above and below mezzanine floors in accordance with Section 505.2.

1003.3.1 Headroom. Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 where a minimum headroom of 80 inches (2032 mm) is provided over any walking surface circulation paths, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.

Exception: Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).

A barrier shall be provided where the vertical clearance above a circulation path is less than 80 inches (2032 mm) high above the finished floor. The leading edge of such a barrier shall be located 27 inches (686 mm) maximum above the finished floor.

1003.3.2 Post-mounted objects. A free standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the walking surface finished floor. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (686 mm) maximum or 80 inches (2032 mm) minimum above the finished floor or ground.

Exception: These requirements shall not apply to sloping portions of handrails between the top and bottom riser of stairs and above the ramp run.

1003.3.3 Horizontal projections. Objects with leading edges more than 27 inches (685 mm) and not more than 80 inches (2030 mm) above the finish floor shall not project horizontally more than 4 inches (102 mm) the circulation path.

Exception: Handrails are permitted to protrude 4/2 inches (114 mm) from the wall or guard.
**Summary of Modification**

Corrects a conflict between the provisions in Section 1006.3.2 Item 4 and Table 1006.3.2(2).

**Rationale**

The proposal corrects a conflict between the provisions in Section 1006.3.2 Item 4 and Table 1006.3.2(2).

**Fiscal Impact Statement**

- **Impact to local entity relative to enforcement of code**
  
  This is for clarification, therefore, there will be no additional requirements.

- **Impact to building and property owners relative to cost of compliance with code**
  
  Will not increase the cost of construction.

- **Impact to industry relative to the cost of compliance with code**
  
  Will not increase the cost of construction.

- **Impact to small business relative to the cost of compliance with code**
  
  Will not increase the cost of construction.

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  This proposal provides consistency with the provisions found in Section 1006.3.2 Item 4 and Table 1006.3.2(2).

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  This proposal will improve the enforcement of the code.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  This proposal will not discriminate against materials, products, methods or systems of construction.

- **Does not degrade the effectiveness of the code**
  
  This proposal will improve the enforcement of the code.

---

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Doug Harvey</th>
<th>Submitted</th>
<th>5/1/2019</th>
<th>Attachments</th>
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<tr>
<td>As stated in the rationale for the submission, this changes removes a conflict and makes the enforcement of the codes much cleaner and more efficient. Please support this modification.</td>
<td></td>
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### 2nd Comment Period

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<th>Michael Savage</th>
<th>Submitted</th>
<th>5/22/2019</th>
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<tr>
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<td>I agree with the proposed revision.</td>
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<td>Jennifer Privateer</td>
<td>5/23/2019</td>
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<td>Comment:</td>
<td>I agree with this proposed clarification</td>
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<td>2nd Comment Period</td>
<td>Harold Barrineau</td>
<td>5/25/2019</td>
<td>No</td>
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<tr>
<td>Comment:</td>
<td>I agree with this modification</td>
<td></td>
<td></td>
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</table>
Revised as follows:
1006.3.2 (no change in the text)
TABLE 1006.3.2(2)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

<table>
<thead>
<tr>
<th>STORY</th>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD PER STORY</th>
<th>MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A, B, E, F, M, U</td>
<td>49</td>
<td>75</td>
</tr>
<tr>
<td>First story above or below grade plane</td>
<td>H-2, H-3</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>H-4, H-5, I, R-1, R-2&lt;sup&gt;a,b&lt;/sup&gt;</td>
<td>10</td>
<td>75</td>
</tr>
</tbody>
</table>

(no change in the remainder of the table)

1030.1 General.

In addition to the means of egress required by this chapter, provisions shall be made for emergency escape and rescue openings in Group R-2 occupancies in accordance with Tables 1006.3.2(1) and 1006.3.2(2), and Group R-3 and R-4 occupancies. (no change in the remaining of the text)
### Summary of Modification

The proposal will correlate the provisions for day care facilities under occupancy Group I-4.

### Rationale

This is coordination and correlation of requirements in the 6th Edition of FBC. Day care facilities can be found in two occupancy classification - Groups E and I-4. The proposal will provide guidance to design professional and code officials on the applicability of this code section for day care facilities under Group I-4.

### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  This proposal will provide guidance to design professionals and code officials for the applicability of the code section.

- **Impact to building and property owners relative to cost of compliance with code**
  Will not increase cost.

- **Impact to industry relative to the cost of compliance with code**
  Will not increase cost.

- **Impact to small business relative to the cost of compliance with code**
  Will not increase cost.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  This purpose of this proposal is only to clarify the application of the code.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  This proposal will improve the application of the code.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  This proposal will not discriminate against materials, products, methods, or systems of construction.

- **Does not degrade the effectiveness of the code**
  This proposal will improve the effectiveness of the code.

### 2nd Comment Period

**Comment:**

If the proposed modification for S-1 will be in conflict with FFPC then I recommend no change to this occupancy classification.

However, please support the modification for day care and I-4 per the rationale.

---

**Comment:**

I agree with the general comment submitted.
<table>
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<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jennifer Privateer</td>
<td>5/23/2019</td>
<td>No</td>
<td>I agree</td>
</tr>
<tr>
<td>Harold Barrineau</td>
<td>5/25/2019</td>
<td>No</td>
<td>I agree with this modification.</td>
</tr>
<tr>
<td>Harold Barrineau</td>
<td>5/26/2019</td>
<td>No</td>
<td>I agree with this modification.</td>
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</table>
Revise as follows:

TABLE 1017.2

EXIT ACCESS TRAVEL DISTANCE

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>WITHOUT SPRINKLER SYSTEM (feet)</th>
<th>WITH SPRINKLER SYSTEM (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, E, F-1, M, R, S-1</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>I-1</td>
<td>Not Permitted</td>
<td>250</td>
</tr>
<tr>
<td>B</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>F-2, S-2, U</td>
<td>300</td>
<td>400</td>
</tr>
<tr>
<td>H-1</td>
<td>Not Permitted</td>
<td>75</td>
</tr>
<tr>
<td>H-2</td>
<td>Not Permitted</td>
<td>100</td>
</tr>
<tr>
<td>H-3</td>
<td>Not Permitted</td>
<td>150</td>
</tr>
<tr>
<td>H-4</td>
<td>Not Permitted</td>
<td>175</td>
</tr>
<tr>
<td>H-5</td>
<td>Not Permitted</td>
<td>200</td>
</tr>
<tr>
<td>I-2, I-3, I-4</td>
<td>Not Permitted</td>
<td>200</td>
</tr>
<tr>
<td>S-1</td>
<td>200</td>
<td>400</td>
</tr>
</tbody>
</table>

(no change below the table)

TABLE 1020.1

CORRIDOR FIRE-RESISTANCE RATING

(no change to the rest of the table)

<table>
<thead>
<tr>
<th>I-2*, I-4</th>
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<tr>
<td>I-4</td>
<td>All</td>
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</table>

(no change to the rest of the table)
## F7679

<table>
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<th>Date Submitted</th>
<th>Section</th>
<th>Affects HVHZ</th>
<th>Proponent</th>
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<td>12/4/2018</td>
<td>1004</td>
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<td>Ann Russo1</td>
<td>No</td>
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</tbody>
</table>

## TAC Recommendation
- No Affirmative Recommendation

## Commission Action
- Pending Review

### Comments

#### General Comments
- Yes

#### Alternate Language
- No

### Related Modifications

#### Summary of Modification
Change to clarify application of the occupant load when facilities include both gross and net areas.

#### Rationale
This proposal is mainly to reorganize Section 1004 and regrouping the functionality of work spaces. There should be little impact as this is simply clarifying how to determine the occupant load for a floor with varying functions.

#### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**
This proposal will provide clear guidance to design professionals and code officials as to how occupant load will be determined based on varying functions of the rooms or spaces.

**Impact to building and property owners relative to cost of compliance with code**
Will not increase the cost of compliance with code.

**Impact to industry relative to the cost of compliance with code**
Will not increase the cost of compliance with code.

**Impact to small business relative to the cost of compliance with code**
Will not increase the cost of compliance with code.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
Proper assignment and/or determination of occupant load will improve the overall safety of the building and the application of the code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
Proper assignment and/or determination of occupant load will improve the overall safety of the building and the application of the code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
This proposal will not discriminate against materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**
This proposal will improve the effectiveness of the code.

### 2nd Comment Period

#### Proponent
- Doug Harvey

#### Submitted
- 5/1/2019

#### Attachments
- No

#### Comment:
This clarifies the application of the code. This modification can be used by all practitioners of the code and ensures the areas are calculated for the intended use. Please support this modification.

### 2nd Comment Period

#### Proponent
- Ann Russo1

#### Submitted
- 5/13/2019

#### Attachments
- No

#### Comment:
Please support this modification. Adding new language and sections for clarity is a positive change. This will help design professionals and code officials.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Savage</td>
<td>5/22/2019</td>
<td>No</td>
</tr>
<tr>
<td>Jennifer Privateer</td>
<td>5/23/2019</td>
<td>No</td>
</tr>
<tr>
<td>Harold Barrineau</td>
<td>5/25/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

Comment:
- I agree with the proposed revision.
- I agree with this clean up
- I agree with this modification
Revise as follows:

1004.1.1 1004.2 Cumulative occupant loads. (no change to the text)
1004.1.1.1 1004.2.1 Intervening spaces or accessory areas. (no change to the text)
1004.1.2.1 1004.2.2 Adjacent levels for mezzanines. (no change to the text)
1004.1.3 1004.2.3 Adjacent stories. (no change to the text)

Add new text as follows:

1004.3 Multiple function occupant load.

Where an area under consideration contains multiple functions having different occupant load factors, the design occupant load for such area shall be based on the floor area of each function calculated independently.

Revise as follows:

1004.6 1004.4 Multiple occupancies. (no change to the text)

1004.1.2 1004.5 Areas without fixed seating.

The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.1 21004.5. For areas without fixed seating, the occupant load shall be not less than that number determined by dividing the floor area under consideration by the occupant load factor assigned to the function of the space as set forth in Table 1004.1.1 21004.5. Where an intended function is not listed in Table 1004.1.1 21004.5, the building official shall establish a function based on a listed function that most nearly resembles the intended function.

(no change to the Exception)

TABLE 1004.1.2 1004.5

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

(no change to table or footnotes)

1004.2 1004.5.1 Increased occupant load.

The occupant load permitted in any building, or portion thereof, is permitted to be increased from that number established for the occupancies in Table 1004.1.1 21004.5, provided that all other requirements of the code are met based on such modified number and the occupant load does not exceed one occupant per 7 square feet (0.65 m²) of occupiable floor space. Where required by the building official, an approved aisle, seating or fixed equipment diagram substantiating any increase in occupant load shall be submitted. Where required by the building official, such diagram shall be posted.

1004.4 1004.6 Fixed seating.

For areas having fixed seats and aisles, the occupant load shall be determined by the number of fixed seats installed therein. The occupant load for areas in which fixed seating is not installed, such as waiting spaces, shall be determined in accordance with Section 1004.1.1 21004.5 and added to the number of fixed seats. (no change to the remaining of the text)

1004.5 1004.7 Outdoor areas. (no change to the text)

1004.8 1004.8 Posting of occupant load. (no change to the text)
<table>
<thead>
<tr>
<th>Comments</th>
<th></th>
<th>Alternate Language</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Related Modifiers</strong></td>
<td></td>
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</tr>
<tr>
<td>Table 1006.2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Summary of Modification</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The proposal moves the exception for Group R-2, R-3 and R-4 into the table, where it is easier to find. In addition, this improves flexibility for Group R-2, R-3 and R-4 units in a mixed use building.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The proposal moves the exception for Group R-2, R-3 and R-4 into the table, where it is easier to find. In addition, this improves flexibility for Group R-2, R-3 and R-4 units in a mixed use building. Changing the maximum occupant load from 10 to 20 in the table for R-2, R-3 and R-4 is appropriate since all Group R occupancies require sprinkler protection per Section 903.2.8 (NFPA 13 and NFPA 13-R system). The occupant load limit for R-4 in the table is also proposed to be modified from 10 to 20. Section 310.6 limits R-4 occupancies to 16 residents but does not include &quot;staff&quot; so it is likely that the occupant load will be 17 or more. The change in footnote e is intended to clarify the intent and make it easier to understand.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fiscal Impact Statement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact to local entity relative to enforcement of code</td>
<td>None. This code change eliminates a redundant provision and will not affect the cost of construction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact to building and property owners relative to cost of compliance with code</td>
<td>None. This code change eliminates a redundant provision and will not affect the cost of construction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact to industry relative to the cost of compliance with code</td>
<td>None. This code change eliminates a redundant provision and will not affect the cost of construction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact to small business relative to the cost of compliance with code</td>
<td>None. This code change eliminates a redundant provision and will not affect the cost of construction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Requirements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has a reasonable and substantial connection with the health, safety, and welfare of the general public</td>
<td>This proposed modification changes the maximum occupant load for R-2, R-3, and R-4. This improves flexibility for Group R-2, R-3 and R-4 units in a mixed use building.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction</td>
<td>The proposal moves the exception for Group R-2, R-3 and R-4 into the table, where it is easier to find. In addition, this improves flexibility for Group R-2, R-3 and R-4 units in a mixed use building.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities</td>
<td>No, it does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not degrade the effectiveness of the code</td>
<td>No, it does not degrade the effectiveness of the code.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This alternate language proposal removes the previously submitted modifications to the R-2 and R-3 Maximum Occupant Load of Space to maintain the current Florida requirement of 49 for each. The proposal moves the exception for Group R-2, R-3 and R-4 into the table, where it is easier to find. In addition, this improves flexibility for Group R-4 units in a mixed use building. Changing the maximum occupant load from 10 to 20 in the table for R-4 is appropriate since all Group R occupancies require sprinkler protection per Section 903.2.8 (NFPA 13 and NFPA 13-R system). Section 310.6 limits R-4 occupancies to 16 residents but does not include “staff” so it is likely that the occupant load will be 17 or more. The change in footnote e is intended to clarify the intent and make it easier to understand.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

None. This code change will not increase the cost of enforcement or construction.

**Impact to building and property owners relative to cost of compliance with code**

None. This code change will not increase the cost of compliance or construction.

**Impact to industry relative to the cost of compliance with code**

None. This code change will not increase the cost of compliance or construction.

**Impact to Small Business relative to the cost of compliance with code**

None. This code change eliminates a redundant provision and will not affect the cost of construction.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This proposed modification changes the maximum occupant load for R-4. This improves flexibility for Group R-4 units in a mixed use building.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

The proposal moves the exception for Group R-2, R-3 and R-4 into the table, where it is easier to find. In addition, this improves flexibility for Group R-4 units in a mixed use building.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

No, it does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities.

**Does not degrade the effectiveness of the code**

No, it does not degrade the effectiveness of the code.

---

**Comment:**

The proponent submitted rationale for this modification that makes sense. Please support this modification for the next edition of the Florida code.

---

In R-2 and R-3 Occupancies both the Florida Building Code and Florida Fire Prevention Code allow a single Exit or Exit access Doorway if the Common Path of Travel within the space is not exceeded.

When we changed base Code for the 2004 Florida Building Code an additional requirement for maximum occupant load was added. Based on a legislative action this was set at 50.

Changing this to 20 would cause harm to projects with vested development rights and be a hardship to existing design practices.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jennifer Privateer</td>
<td>5/24/2019</td>
<td>No</td>
<td>I agree</td>
</tr>
<tr>
<td>Harold Barrineau</td>
<td>5/25/2019</td>
<td>No</td>
<td>I agree with this modification</td>
</tr>
</tbody>
</table>
1006.2.1 Egress based on occupant load and common path of egress travel distance.

Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1.

Exceptions:

1. 1. Reserved.
2. Care suites in Group I-2 occupancies complying with Section 407.4.

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD OF SPACE</th>
<th>MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Without Sprinkler System (feet)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Occupant Load OL = 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OL &gt; 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>With Sprinkler System (feet)</td>
</tr>
<tr>
<td>Ac, E, M</td>
<td>49</td>
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</tr>
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<tr>
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<td>75a</td>
</tr>
<tr>
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<td>100a</td>
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<td>100a</td>
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<tr>
<td>H-4, H-5</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
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<td></td>
<td>75b</td>
</tr>
<tr>
<td>I-1, I-2d, I-4</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
<td>I-3</td>
<td>10</td>
<td>NP</td>
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<td></td>
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<td></td>
<td></td>
<td>125a</td>
</tr>
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</table>
F7718-A1 Text Modification

Sf  29  100  75  100a

U  49  100  75  75a

For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

1. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
2. Group H occupancies equipped throughout with an automatic sprinkler system in accordance with Section 903.2.5.
3. For a room or space used for assembly purposes having fixed seating, see Section 1029.8.
4. For the travel distance limitations in Group I-2; see Section 407.4.
5. The length of common path of egress travel distance shall only apply in a Group R-3 occupancy located in a mixed occupancy building or within a Group R-3 or R-4 congregate living facility.
6. The length of common path of egress travel distance in a Group S-2 open parking garage shall be not more than 100 feet.
1006.2.1 Egress based on occupant load and common path of egress travel distance.

Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1.

Exceptions:
1. 1. Reserved.
2. 2. Care suites in Group I-2 occupancies complying with Section 407.4.

**TABLE 1006.2.1**

**SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY**

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD OF SPACE</th>
<th>MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Sprinkler System(feet)</td>
<td>With Sprinkler System(feet)</td>
</tr>
<tr>
<td></td>
<td>Occupant Load OL = 30</td>
<td>OL &gt; 30</td>
</tr>
<tr>
<td>Ac, E, M</td>
<td>49</td>
<td>75 75 75a</td>
</tr>
<tr>
<td>B</td>
<td>49</td>
<td>100 75 100a</td>
</tr>
<tr>
<td>F</td>
<td>49</td>
<td>75 75 100a</td>
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<td>H-4, H-5</td>
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<td>10</td>
<td>NP NP 100a</td>
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<td>NP NP 75a</td>
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<td>R-3e</td>
<td>49 20</td>
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<tr>
<td>R-4e</td>
<td>40 20</td>
<td>75 75 125a</td>
</tr>
<tr>
<td>Sf</td>
<td>29</td>
<td>100 75 100a</td>
</tr>
</tbody>
</table>
For SI: 1 foot = 304.8 mm.

NP = Not Permitted.

1. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
2. Group H occupancies equipped throughout with an automatic sprinkler system in accordance with Section 903.2.5.
3. For a room or space used for assembly purposes having fixed seating, see Section 1026.8.
4. For the travel distance limitations in Group I-2, see Section 407.4.
5. The length of common path of egress travel distance shall only apply in a Group R-3 occupancy located in a mixed occupancy building or within a Group R-3 or R-4 congregate living facility.
6. The length of common path of egress travel distance in a Group S-2 open parking garage shall be not more than 100 feet.
Code Change No: **E17-15**

**Original Proposal**

Section: 1006.2.1, TABLE 1006.2.1; ([IFC][BE] 1006.2.1, TABLE 1006.2.1)

**Proponent:** Lee Kranz, City of Bellevue, Washington, representing Washington Association of Building Officials Technical Code Development Committee

**Revise as follows:**

1006.2.1 Egress based on occupant load and common path of egress travel distance. Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1.

**Exceptions:**

1. In Group R-2 and R-3 occupancies, one means of egress is permitted within and from individual dwelling units with a maximum occupant load of 20 where the dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and the common path of egress travel does not exceed 125 feet (38.100 mm).

**TABLE 1006.2.1**

<table>
<thead>
<tr>
<th>OCCUPANCY</th>
<th>MAXIMUM OCCUPANT LOAD OF SPACE</th>
<th>MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Sprinkler System (feet)</td>
<td>With Sprinkler System (feet)</td>
</tr>
<tr>
<td></td>
<td>Occupant Load</td>
<td>OL ≤ 30</td>
</tr>
<tr>
<td>A&lt;sup&gt;c&lt;/sup&gt;, E, M</td>
<td>49</td>
<td>75</td>
</tr>
<tr>
<td>B</td>
<td>49</td>
<td>75</td>
</tr>
<tr>
<td>F</td>
<td>49</td>
<td>100</td>
</tr>
<tr>
<td>H-1, H-2, H-3</td>
<td>3</td>
<td>NP</td>
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<tr>
<td>H-4, H-5</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
<td>I-1, I-2&lt;sup&gt;d&lt;/sup&gt;, I-4</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
<td>I-3</td>
<td>10</td>
<td>NP</td>
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<tr>
<td>R-1</td>
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<td>NP</td>
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<tr>
<td>R-2</td>
<td>10</td>
<td>NP</td>
</tr>
<tr>
<td>R-3&lt;sup&gt;e&lt;/sup&gt;</td>
<td>40-20</td>
<td>NP</td>
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<tr>
<td>U</td>
<td>49</td>
<td>100</td>
</tr>
</tbody>
</table>

For S1: 1 foot = 304.8 mm.

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*Copyright © 2017 ICC. ALL RIGHTS RESERVED. Accessed by Muhammad Abdul on Dec 15, 2017 02:34 AM pursuant to License Agreement with ICC. No further reproduction authorized. Distribution is a violation of the NCCER copyright act and subject to civil and criminal penalties thereunder.*
NP = Not Permitted
a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 803 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
b. Group H occupancies equipped throughout with an automatic sprinkler system in accordance with Section 803.3.2.5.
c. For a room or space used for assembly purposes having fixed seating, see Section 1002.8.
d. For the travel distance limitations in Group I-2, see Section 407.4.
e. The length of common path of egress travel distance shall only apply in a Group R-3 occupancy located in a mixed occupancy building or within a Group R-3 or R-4 congregated living facility.
f. The length of common path of egress travel distance in a Group S-2 open parking garage shall be not more than 100 feet.

Reason: Exception #1 of Section 1006.2.1 is essentially an exception to the maximum occupant load limits of 10 in Table 1006.2.1 for R-2 and R-3. Increasing the maximum occupant load from 10 to 20 in the table for R-2, R-3 and R-4 and deleting exception #1 is appropriate since all Group R occupancies require sprinkler protection per Section 903.2.8 (NFPA 13 and NFPA 13R system) and the 125' common path limit in the exception is consistent with the table so the exception is no longer needed.

The occupant load limit for R-4 in the table is also proposed to be modified from 10 to 20. Section 310.6 limits R-4 occupancies to 18 residents but does not include "staff" so it is likely that the occupant load will be 17 or more.

The change in footnote 1 is intended to clarify the intent and make it easier to understand.

Cost Impact: Will not increase the cost of construction.

This code change eliminates a redundant provision and will not affect the cost of construction.

Committee Action:

Approved as Submitted

Committee Reason: The proposal moves the exception for Group R-2, R-3 and R-4 into the table, where it is easier to find. In addition, this improves flexibility for Group R-2, R-3 and R-4 units in a mixed use building.

Assembly Action: None

Final Action Results

E17-15  AS
The intent of this proposal is to delete Group I-2 from the facilities that require luminous egress path markings. Hospitals and nursing homes have trained staff that operate with a defend-in-place strategy for fires. The emergency generators are continually monitored and maintained, so the change of the emergency egress lighting required in the means of egress (Section 1008) failing is extremely minimal. Requiring egress path marking is the stairways in high-rise hospitals and nursing homes is a redundant feature that is costly and unnecessary.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code
None expected

Impact to building and property owners relative to cost of compliance with code
None, but may lower costs on initial construction

Impact to industry relative to the cost of compliance with code
None

Impact to small business relative to the cost of compliance with code
None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Does not impact safety aspects as other Code sections provide the protection

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Does not have impact

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Does not

Does not degrade the effectiveness of the code
Does not

2nd Comment Period

Proponent: Jennifer Privateer  Submitted: 5/24/2019  Attachments: No

Comment:
I agree with this mod as proposed..

2nd Comment Period


Comment:
The modification addresses a costly requirement which is not required for the noted occupancies and which does not improve life safety for the occupants. As such the modification addresses this.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comment:</td>
<td>I agree with this modification.</td>
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</table>
Revise as follows:

1025.1 General. Approved luminous egress path markings delineating the exit path shall be provided in high-rise buildings of Group A, B, E, I-1, I-3, I-4, M, and R-1 occupancies in accordance with Sections 1025.1 through 1025.5.

Exception: Luminous egress path markings shall not be required on the level of exit discharge in lobbies that serve as part of the exit path in accordance with Section 1028.1, Exception 1.
Delete Group I-4 from requirements

The intent of this proposal is to delete Group I-4 from the facilities that require luminous egress path markings. The current provisions appear to have been written for single occupancy buildings in mind. While there could be a day care in a high rise building, there is no justification for the presence of a small Group I-4 in a building to require photo luminescent stripes throughout.

Impact to local entity relative to enforcement of code
None expected

Impact to building and property owners relative to cost of compliance with code
None expected

Impact to industry relative to the cost of compliance with code
None

Impact to small business relative to the cost of compliance with code
None

The intent of the modification is to effectively promote life safety requirements where needed, and as this is already addressed the inclusion of the I-4 classification is redundant and would lead to some confusion as well as increased costs while making no contribution to increased life safety for the occupants.

I agree with this modification.
Revise as follows:

1025.1 General.
Approved luminous egress path markings delineating the exit path shall be provided in high-rise buildings of Group A, B, E, I, I-1, I-2, I-3, M, and R-1 occupancies in accordance with Sections 1025.1 through 1025.5.

Exception: Luminous egress path markings shall not be required on the level of exit discharge in lobbies that serve as part of the exit path in accordance with Section 1028.1, Exception 1.
Delete Group I-3 from requirements

The intent of this proposal is to delete Group I-3 from the facilities that require luminous egress path markings. Jails have trained staff that operate with a defend-in-place strategy for fires. The emergency generators are continually monitored and maintained, so the change of the emergency egress lighting required in the means of egress (Section 1008) failing is extremely minimal. Requiring egress path marking is the stairways in high-rise jails is a redundant feature that is costly and unnecessary.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code
None expected

Impact to building and property owners relative to cost of compliance with code
None expected

Impact to industry relative to the cost of compliance with code
None

Impact to small business relative to the cost of compliance with code
None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Does not impact

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Does not impact

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
No

Does not degrade the effectiveness of the code
No

2nd Comment Period

Similar to modification 7757, the inclusion of certain groups, in this case I-3, is redundant to the requirements under the section. It has caused confusion and added costs while not contributing to increased life safety to the occupants.

Comment:
I agree with this modification.
Revise as follows:

1025.1 General.
Approved luminous egress path markings delineating the exit path shall be provided in high-rise buildings of Group A, B, E, I, I-1, I-2, I-4, M, and R-1 occupancies in accordance with Sections 1025.1 through 1025.5.

Exception: Luminous egress path markings shall not be required on the level of exit discharge in lobbies that serve as part of the exit path in accordance with Section 1028.1, Exception 1.
### Comments

| General Comments | Yes | Alternate Language | No |

### Related Modifications

| Summary of Modification | Updates standard for capacity of refuge area |

### Rationale

If the total occupant load of the compartment egressing through the horizontal exit is less than the capacity of the horizontal exit door, the maximum capacity of the refuge area should not be more than the legal capacity of the compartment egressing.

For example, a standard 36-inch-wide door has a clear width of 33 inches. At 0.20" per occupant, the capacity of the door is 165 occupants. For sprinklered buildings at 0.15" per occupant, the load is even greater at 220 occupants. So, if the total occupant load on one side of the horizontal exit door is less than 165 for a non-sprinklered building, or less than 220 occupants for a sprinklered building, then the refuge area on the other side should only be required to accommodate the design occupant load and not the capacity of the door in the horizontal exit.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**
None expected

**Impact to building and property owners relative to cost of compliance with code**
None expected

**Impact to industry relative to the cost of compliance with code**
None expected

**Impact to small business relative to the cost of compliance with code**
None expected

### Requirements

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - Clarifies refuge area capacity more clearly thus improving enforcement and safety

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - Improves Code enforcement

- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - No

- Does not degrade the effectiveness of the code
  - No

### 2nd Comment Period

| Proponent | Jennifer Privateer | Submitted | 5/24/2019 | Attachments | No |

**Comment:**
I agree

### 2nd Comment Period

| Proponent | Ann Russo5 | Submitted | 5/24/2019 | Attachments | No |

**Comment:**
Submitted modification 7334 is the same as this submission, which has been approved as submitted. This modification is withdrawn and we support adoption by the Commission of 7334
<table>
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<tr>
<th>Proponent</th>
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<th>Attachments</th>
<th>No</th>
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</table>

**Comment:**

I agree with this modification.
Revise as follows:

1026.4 Refuge area.

The refuge area of a horizontal exit shall be a space occupied by the same tenant or a public area and each such refuge area shall be adequate to accommodate the original occupant load of the refuge area plus the occupant load anticipated from the adjoining compartment. The anticipated occupant load from the adjoining compartment shall be based on the capacity of the horizontal exit doors entering the refuge area but no more than the total occupant load of the adjoining compartment.
## Summary of Modification

Add the exception that minimum width of 1 inch (25 mm) shall not apply to markings listed in accordance with UL 1994.

## Rationale

This exception will simply provide an equivalent method of compliance similar to what is already provided for in 1025.1, 1025.2.3, and 1025.2.4.

## Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**: None
- **Impact to building and property owners relative to cost of compliance with code**: No
- **Impact to industry relative to the cost of compliance with code**: No
- **Impact to small business relative to the cost of compliance with code**: No

## Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**: Yes
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  Provides an equivalent method of compliance similar to what is provided in 1025.2.1, 1025.2.3, and 1025.2.4.
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**: No
- **Does not degrade the effectiveness of the code**: No

## 2nd Comment Period

- **Proponent**: Harold Barrineau
- **Submitted**: 5/26/2019
- **Comment**: I agree with this modification.
1025.2.5 Obstacles

Obstacles at or below 6 feet 6 inches (1981 mm) in height and projecting more than 4 inches (102 mm) into the egress path shall be outlined with markings not less than 1 inch (25 mm) in width comprised of a pattern of alternating equal bands, of luminous material and black, with the alternating bands not more than 2 inches (51 mm) thick and angled at 45 degrees (0.79 rad). Obstacles shall include, but are not limited to, standpipes, hose cabinets, wall projections and restricted height areas. However, such markings shall not conceal any required information or indicators including but not limited to instructions to occupants for the use of standpipes.

Exception: Minimum width of 1 inch (25 mm) shall not apply to marking listed in accordance with UL 1994.
<table>
<thead>
<tr>
<th>Date Submitted</th>
<th>Section</th>
<th>Proponent</th>
<th>Affects HVHZ</th>
<th>Attachments</th>
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</thead>
<tbody>
<tr>
<td>12/10/2018</td>
<td>1028.4.1</td>
<td>Miguel Botello</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Commission Action**
Pending Review

**TAC Recommendation**
No Affirmative Recommendation

### Comments

<table>
<thead>
<tr>
<th>General Comments</th>
<th>Alternate Language</th>
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<tbody>
<tr>
<td>Yes</td>
<td>No</td>
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</table>

#### Summary of Modification
Revise section 1028.4.1 "Width or capacity" to delete an outdated and unused code requirement for egress courts.

#### Rationale
Deletes an outdated and unused code requirement.

#### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  - None

- **Impact to building and property owners relative to cost of compliance with code**
  - Will not increase the cost of construction. This will save money by reducing the need to install a useless guardrail in over sized egress courts.

- **Impact to industry relative to the cost of compliance with code**
  - Will provide for most cost effective designs.

- **Impact to small business relative to the cost of compliance with code**
  - Will not increase the cost of construction. This will save money by reducing the need to install a useless guardrail in over sized egress courts.

#### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - Yes

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - Yes, updates the code to be in line with industry standards

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - No

- **Does not degrade the effectiveness of the code**
  - No

### 2nd Comment Period

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<tbody>
<tr>
<td>Harold Barrineau</td>
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<td>No</td>
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</table>

**Comment:**
I agree with this modification.
1028.4.1 Width or capacity.

The required capacity of egress courts shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm), except as specified herein. Egress courts serving Group R-3 and U occupancies shall be not less than 36 inches (914 mm) in width. The required capacity and width of egress courts shall be unobstructed to a height of 7 feet (2134 mm).

Exception: Encroachments complying with Section 1005.7.

Where an egress court exceeds the minimum required width and the width of such egress court is then reduced along the path of exit travel, the reduction in width shall be gradual. The transition in width shall be affected by a guard not less than 36 inches (914 mm) in height and shall not create an angle of more than 30 degrees (0.52 rad) with respect to the axis of the egress court along the path of egress travel. The width of the egress court shall not be less than the required capacity.
### Comments

<table>
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<th>General Comments</th>
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<tr>
<th>Summary of Modification</th>
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<tbody>
<tr>
<td>Revises 1026.4 &quot;Capacity&quot; to clarify the capacity requirements for horizontal exit refuge areas for defends in place occupancies.</td>
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<table>
<thead>
<tr>
<th>Rationale</th>
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<tr>
<td>Provides clarification and aligns code with industry standards.</td>
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<table>
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<tr>
<th>Fiscal Impact Statement</th>
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<tbody>
<tr>
<td>Impact to local entity relative to enforcement of code</td>
</tr>
<tr>
<td>Provides clarification for capacity requirements.</td>
</tr>
<tr>
<td>Impact to building and property owners relative to cost of compliance with code</td>
</tr>
<tr>
<td>Will not increase the cost of construction. This is a reference to more specific requirements already in the code.</td>
</tr>
<tr>
<td>Impact to industry relative to the cost of compliance with code</td>
</tr>
<tr>
<td>Will not increase the cost of construction. This is a reference to more specific requirements already in the code.</td>
</tr>
<tr>
<td>Impact to small business relative to the cost of compliance with code</td>
</tr>
<tr>
<td>Will not increase the cost of construction. This is a reference to more specific requirements already in the code.</td>
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### Requirements

| Has a reasonable and substantial connection with the health, safety, and welfare of the general public |
| Yes |
| Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction |
| Yes, provides clarification. |
| Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities |
| No |
| Does not degrade the effectiveness of the code |
| No, provides clarification. |

### 2nd Comment Period

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**Comment:**

I agree with this modification.
1026.4.1 Capacity.

The capacity of the refuge area shall be computed based on a net floor area allowance of 3 square feet (0.2787 m²) for each occupant to be accommodated therein. Where the horizontal exit also forms a smoke compartment, the capacity of the refuge for Group I-1, I-2, and I-3 occupancies and Group B ambulatory care facilities shall comply with Sections 407.5.1, 408.6.2, 420.4.1 and 422.3.2 as applicable.

Exceptions: The net floor area allowable per occupant shall be as follows for the indicated occupancies:

1. Six square feet (0.6 m²) per occupant for occupancies in Group I-3.
2. Fifteen square feet (1.4 m²) per occupant for ambulatory occupancies in Group I-2.
3. Thirty square feet (2.8 m²) per occupant for nonambulatory occupancies in Group I-2.
### Comments

<table>
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<tr>
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### Related Modifications

<table>
<thead>
<tr>
<th>Modification</th>
<th>1015.7, FBC-M 304.11</th>
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### Summary of Modification

clarify language in the code by deleting conflicting language regarding installation of permanent fall arrest/restraint anchorage connector devices.

### Rationale

Section 306.5.1 of the IMC requires work platforms with guards for equipment and appliances installed on roofs with a slope 3 in 12 and greater, thus, the exception to Section 304.11 appears to apply only to roofs that are flat and up to 2 in 12 slope. The problem derives from the language referring to placement of anchors along hip or ridge lines and along roof edges. This language is not necessary for the application of the exception. Each building roof system and the equipment upon that roof system that might require access will be different and the anchors needed along with their locations will differ as well. As presently worded there has been some confusion on application and the location requirements spaced every ten feet require unnecessary expense. This proposal eliminates confusion by deleting the unnecessary language leaving the application of the referenced standard to be applied on a case by case basis to fit the specific activities that may occur on the individual roof.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

none

**Impact to building and property owners relative to cost of compliance with code**

This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

**Impact to industry relative to the cost of compliance with code**

This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

**Impact to small business relative to the cost of compliance with code**

This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

yes

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

yes

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

does not

**Does not degrade the effectiveness of the code**

does not

### 2nd Comment Period

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**Comment:**

I agree with this modification.
1015.6 Mechanical equipment, systems and devices. Guards shall be provided where various components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface.

Exception: Guards are not required where fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.
Section(s): 1015.6 (IFC[BE] 1015.6), 1015.7 (IFC[BE] 1015.6), IMC [BE] 304.11

Proponent: Edward Kulik, Chair, representing Building Code Action Committee (bcac@icesafe.org)

Revise as follows:

1015.6 Mechanical equipment, systems and devices. Guards shall be provided where various components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are affixed for use during the entire roof covering lifetime. The device shall be reevaluated for possible replacement when the entire roof covering is replaced. The device shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface.

**Exception:** Guards are not required where fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are installed.

1015.7 Roof access. Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are affixed for use during the entire roof covering lifetime. The device shall be reevaluated for possible replacement when the entire roof covering is replaced. The device shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface.

**Exception:** Guards are not required where fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are installed.

2015 International Mechanical Code

Revise as follows:

[BE] 304.11 Guards. Guards shall be provided where various components that require service and roof hatch openings are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof, or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of components that require service. The top of the guard shall be located not less than 42 inches (1067 mm) above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-
diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the International Building Code.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.

Reason: Section 306.5.1 of the IMC requires work platforms with guards for equipment and appliances installed on roofs with a slope 3 in 12 or greater. Thus, the exception to Section 304.11 appears to apply only to roofs that are flat and up to 2 in 12 slope. The problem derives from the language referring to placement of anchors along hip or ridge lines and along roof edges. This language is not necessary for the application of the exception. Each building roof system and the equipment upon that roof system that might require access will be different and the anchors needed along with their locations will differ as well. As presently worded there has been some confusion on application and the location requirements spaced every ten feet require unnecessary expense. This proposal eliminates confusion by defining the necessary language leaving the application of the referenced standard to be applied on a case by case basis to fit the specific activities that may occur on the individual roof.

There is another change from this committee to split IMC 304.11 to make it consistent with the IRC that copies this exception. This is the intent of this committee for these changes to be coordinated.

This public proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the code as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 13 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments. Related documentation and reports are posted on the BCAC website at: http://www.iccsafe.org/asp/BCAC/Pages/default.aspx.

Cost Impact: Will not increase the cost of construction
This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed in stead of guards by providing increased flexibility in locating the anchors.

**Report of Committee Action**

**Hearings**

**Committee Action:** Approved as Modified

**Modify proposal as follows:**

1015.5 Mechanical equipment, systems and devices. Guards shall be provided where various components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 50 inches (1270 mm) beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.

1015.7 Roof access. Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.

[BE] 304.11 Guards. Guards shall be provided where various components that require service and roof hatch openings are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof, or grade below. The guard shall extend not less than 50 inches (1270 mm) beyond each end of components that require service. The top of the guard shall be located not less than 42 inches (1057 mm) above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the International Building Code.
Exception: Guards are not required where permanent fall arrest/restraint anchorages are connected to devices that comply with ANSI/ASSE Z 359.1. (ANSI/ASSE Z 359.1 standard does allow for non-permanent anchorages.

Committee Reason: The modification was to delete the requirement for 'permanent' for the anchors. The proposal was a whole, with the deletion, will allow for anchor systems to be designed based on what would best serve the particular project.

Final Action Results

| E96-15 | AM |

Assembly Action: N
clarify language in the code by deleting conflicting language regarding installation of permanent fall arrest/restraint anchorage connector devices.

Section 306.5.1 of the IMC requires work platforms with guards for equipment and appliances installed on roofs with a slope 3 in 12 and greater, thus, the exception to Section 304.11 appears to apply only to roofs that are flat and up to 2 in 12 slope. The problem derives from the language referring to placement of anchors along hip or ridge lines and along roof edges. This language is not necessary for the application of the exception. Each building roof system and the equipment upon that roof system that might require access will be different and the anchors needed along with their locations will differ as well. As presently worded there has been some confusion on application and the location requirements spaced every ten feet require unnecessary expense. This proposal eliminates confusion by deleting the unnecessary language leaving the application of the referenced standard to be applied on a case by case basis to fit the specific activities that may occur on the individual roof.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code
none

Impact to building and property owners relative to cost of compliance with code
This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

Impact to industry relative to the cost of compliance with code
This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

Impact to small business relative to the cost of compliance with code
This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
does not

Does not degrade the effectiveness of the code
does not

2nd Comment Period

Proponent Harold Barrineau
Submitted 5/26/2019
Attachments No

Comment:
I agree with this modification.
1015.7 Roof access. Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface.

**Exception:** Guards are not required where fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.
Code Change No: E96-15

Section(s): 1015.6 (IFC [BE] 1015.6), 1015.7 (IFC [BE] 1015.6), IMC [BE] 304.11

Proponent: Edward Kulik, Chair, representing Building Code Action Committee (bcac@iccsafe.org)

Revise as follows:

1015.6 Mechanical equipment, systems and devices. Guards shall be provided where various components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface.

Exception: Guards are not required where fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are installed.

1015.7 Roof access. Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface.

Exception: Guards are not required where fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are installed.

2015 International Mechanical Code

Revise as follows:

[BE] 304.11 Guards. Guards shall be provided where various components that require service and roof hatch openings are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof, or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of components that require service. The top of the guard shall be located not less than 42 inches (1067 mm) above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-
diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the International Building Code.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are installed.

**Reason:** Section 306.5.1 of the IMC requires work platforms with guards for equipment and appliances installed on roofs with a slope 3 in 12 and greater, thus, the exception to Section 304.11 appears to apply only to roofs that are flat and up to 2 in 12 slope. The problem derives from the language referring to placement of anchors along hip or ridge lines and along roof edges. This language is not necessary for the application of the exception. Each building roof system and the equipment upon that roof system that might require access will be different and the anchors needed along with the locations will differ as well. As presently worded there has been some confusion on application and the locations requirements spaced every ten feet require unnecessary expense. This proposal eliminates confusion by deleting the unnecessary language leaving the application of the referenced standard to be applied on a case by case basis to fit the specific activities that may occur on the individual roof.

There is another change from this committee to split IMC 304.11 to make it consistent with the IRC that copies this exception.

It is the intent of this committee for these changes to be coordinated.

This public proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 13 open meetings and numerous workshop calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments. Related documentation and reports are posted on the BCAC website at: http://www.iccsafe.org/BCAC/Pages/default.aspx.

**Cost Impact:** Will not increase the cost of construction

This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

### Committee Action:

**Modify proposal as follows:**

1015.6 Mechanical equipment, systems and devices. Guards shall be provided where various components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are installed.

1015.7 Roof access. Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

**Exception:** Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are installed.

[BE] 304.11 Guards. Guards shall be provided where various components that require service and roof hatch openings are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof, or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of components that require service. The top of the guard shall be located not less than 42 inches (1067 mm) above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the International Building Code.
Exception: Guards are not required where permanent fall arrest/restraint anchor systems are installed. The proposal as a whole, with the deletion, will allow for anchor systems to be designed based on what would best serve the particular project.

Committee Reason: The modification was to delete the requirement for 'permanent' for the anchors. The ANSI/ASSE Z359.1 standard docs allow for non-permanent anchors.

Assembly Action: N

<table>
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<tr>
<th>Final Action Results</th>
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<td>E96-15 AM</td>
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### Comments

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<th>Alternate Language</th>
<th>No</th>
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#### Related Modifications

- **Summary of Modification**
  clarifies when exit access stairways and ramps must be enclosed.

- **Rationale**
  This exception previously read as follows. "Stairways are permitted to be open between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums and sports facilities." The revision last cycle had an unintended consequence. The current text can be read differently without "between". It could be read to allow open stairways serving the main assembly floor to be open exit access stairways.

- **Fiscal Impact Statement**
  - **Impact to local entity relative to enforcement of code**
    - none, its a clarification
  - **Impact to building and property owners relative to cost of compliance with code**
    - none
  - **Impact to industry relative to the cost of compliance with code**
    - none
  - **Impact to small business relative to the cost of compliance with code**
    - none

- **Requirements**
  - Has a reasonable and substantial connection with the health, safety, and welfare of the general public
    - yes
  - Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
    - yes, clarifies intent of code
  - Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
    - does not
  - Does not degrade the effectiveness of the code
    - does not

#### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
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</table>

**Comment:**
I agree with this modification.
1019.3 Occupancies other than Groups I-2 and I-3.

In other than Group I-2 and I-3 occupancies, floor openings containing exit access stairways or ramps that do not comply with one of the conditions listed in this section shall be enclosed with a shaft enclosure constructed in accordance with Section 713.

1. Exit access stairways and ramps that serve or atmospherically communicate between only two stories. Such interconnected stories shall not be open to other stories.
2. In Group R-1, R-2 or R-3 occupancies, exit access stairways and ramps connecting four stories or less serving and contained within an individual dwelling unit or sleeping unit or live/work unit.
3. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.
4. Exit access stairways and ramps in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the stairway or ramp and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.
5. Exit access stairways and ramps within an atrium complying with the provisions of Section 404.
6. Exit access stairways and ramps in open parking garages that serve only the parking garage.
7. Exit access stairways and ramps serving open-air seating complying with the exit access travel distance requirements of Section 1029.7.
8. Exit access stairways and ramps serving between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums and sports facilities.
Section: 1019.3 (IFC [BE] 1019.3)

Proponent: Edward Kulik, Chair, representing Building Code Action Committee (bcac@iccsafe.org)

Revise as follows:

1019.3 Occupancies other than Groups I-2 and I-3. In other than Group I-2 and I-3 occupancies, floor openings containing exit access stairways or ramps that do not comply with one of the conditions listed in this section shall be enclosed with a shaft enclosure constructed in accordance with Section 713.

1. Exit access stairways and ramps that serve or atmospherically communicate between only two stories. Such interconnected stories shall not be open to other stories.

2. In Group R-1, R-2 or R-3 occupancies, exit access stairways and ramps connecting four stories or less serving and contained within an individual dwelling unit or sleeping unit or live/work unit.

3. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility are not required to be enclosed.

4. Exit access stairways and ramps in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the stairway or ramp and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 72. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.

5. Exit access stairways and ramps within an atrium complying with the provisions of Section 404.

6. Exit access stairways and ramps in open parking garages that serve only the parking garage.

7. Exit access stairways and ramps serving open-air seating complying with the exit access travel distance requirements of Section 1029.7.

8. Exit access stairways and ramps serving between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums and sports facilities.

Reason: This exception previously read as follows, "Stairways are permitted to be open between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums and sports facilities." The revision test cycle had an unintended consequence. The current text can be read differently without 'between'. It could be read to allow open stairways serving the main assembly floor to be open access stairways.

In July 2014 the ICC Board decided to sunset the activities of the Code Technology Committee (CTC). This is being accomplished by re-assigning many of the CTC Areas of Study to the applicable Code Action Committee (CAC). This proposal falls under the CTC Area of Study entitled Unenclosed Exit Stairs. Information on the CTC, including: the sunset plan; meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the CTC website: http://www.iccsafe.org/cc/CTC/Pages/default.aspx.

This public proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 13 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested parties to discuss and debate the proposed changes and the public comments. Related documentation and reports are posted on the BCAC website at: http://www.iccsafe.org/BCAC/Pages/default.aspx.

Cost Impact: Will not increase the cost of construction. This proposal is a clarification of provisions. There is no change in requirements.
Report of Committee Action
Hearings

Committee Action: Approved as Submitted

Committee Reason: This proposal fixes a glitch that ended up in the code last cycle. The change will fix the misinterpretation that the exit access stairway serving the main floor are exit access stairways.

Assembly Action: Non

Final Action Results
E104-15 AS
## Comments

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<tr>
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### Related Modifications

### Summary of Modification

Coordinate table 1020.2 with defined term for ambulatory care facilities.

### Rationale

The intent of this proposal is coordination of this table with the defined term for ambulatory care facilities.

### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  - none
- **Impact to building and property owners relative to cost of compliance with code**
  - none
- **Impact to industry relative to the cost of compliance with code**
  - none
- **Impact to small business relative to the cost of compliance with code**
  - none

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - yes
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - yes, coordinates language in the code
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - does not
- **Does not degrade the effectiveness of the code**
  - does not

### 2nd Comment Period

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<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
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**Comment:**

I agree with this modification.
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<thead>
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<th>OCCUPANCY</th>
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<td>Any facilities not listed below</td>
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<td>Access to and utilization of mechanical, plumbing or electrical systems</td>
<td>24</td>
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<tr>
<td>With an occupant load of less than 50</td>
<td>36</td>
</tr>
<tr>
<td>Within a dwelling unit</td>
<td>36</td>
</tr>
<tr>
<td>In Group E with a corridor having an occupant load of 100 or more</td>
<td>72</td>
</tr>
<tr>
<td>In corridors and areas serving stretcher traffic in ambulatory care</td>
<td>72</td>
</tr>
<tr>
<td>Facilities where patients receive outpatient medical care that causes</td>
<td></td>
</tr>
<tr>
<td>the patient to be incapable of self-preservation</td>
<td></td>
</tr>
<tr>
<td>Group I-2 in areas where required for bed movement</td>
<td>96</td>
</tr>
</tbody>
</table>
Code Change E106-15

Section: Table 1020.2; (IFC[BE] Table 1020.2)

Proponent: John Williams, CBO, Chair, representing Adhoc Health Care Committee (AHC@iccsafe.org)

Revise as follows:

<table>
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<tr>
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<tr>
<td>Access to and utilization of mechanical, plumbing or electrical systems or equipment</td>
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<td>With an occupant load of less than 50</td>
<td>36</td>
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<td>Within a dwelling unit</td>
<td>36</td>
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<tr>
<td>In Group E with a corridor having an occupant load of 100 or more</td>
<td>72</td>
</tr>
<tr>
<td>In corridors and areas serving stretcher traffic in occupancies where patients receive inpatient medical care, that causes the patient to be incapable of self-preservation ambulatory care facilities</td>
<td>72</td>
</tr>
<tr>
<td>Group 1-2 in areas where required for bed movement</td>
<td>96</td>
</tr>
</tbody>
</table>

For SI: 1 inch = 25.4 mm.

Reason: The intent of this proposal is coordination of this table with the defined term for ambulatory care facilities.

The ICC Ad Hoc Committee on Healthcare (AHC) has just completed its 4th year. The AHC was established by the ICC Board to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation, information on the AHC, including: meeting agendas, meeting reports, resource documents; presentations; and all other materials developed in conjunction with the AHC effort can be downloaded from the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

Cost Impact: Will not increase the cost of construction. This is a classification; therefore, there is no change in cost.

Staff note: There is a published error to Table 1020.2. The error has been incorporated into the table as existing text.

Committee Action: Submitted

Committee Reason: This proposal fixes a glitch that ended up in the code last cycle. The change will fix the misinterpretation that the exit access stairway serving the main floor are exit access stairways.

Report of Committee Action

Hearings

Approved as
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<td>Section</td>
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<td>Affects HVHZ</td>
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<td>Proponent</td>
<td>Lawrence Cohan</td>
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<td>Harold Barrineau</td>
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<td>Fiscal Impact Statement</td>
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<tr>
<td>Impact to local entity relative to enforcement of code</td>
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<td>Impact to building and property owners relative to cost of compliance with code</td>
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<td>Impact to industry relative to the cost of compliance with code</td>
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<td>Impact to small business relative to the cost of compliance with code</td>
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<td>Requirements</td>
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<td>Has a reasonable and substantial connection with the health, safety, and welfare of the general public</td>
<td>yes - clarifies the code.</td>
</tr>
<tr>
<td>Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction</td>
<td>yes</td>
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<tr>
<td>Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities</td>
<td>does not</td>
</tr>
<tr>
<td>Does not degrade the effectiveness of the code</td>
<td>does not</td>
</tr>
</tbody>
</table>

**Rationale**

Single exit building do not have dead end corridors, therefore this should be removed. Group R-4 are permitted to have single exits per Section 1006.3.2 Item 4.

**Summary of Modification**

Remove Single Exit, R-4 occupancies from the dead-end exceptions.

**Comment:**

I agree with this modification.
1020.4 Dead ends.

Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.

Exceptions:

1. In occupancies in Group I-3 of Condition 2, 3 or 4, the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, R-4, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15 240 mm).
3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.
Code Change E107-15

Section: 1020.4 (IFC[BE] 1020.4)

Proponent: Carl Baldassarre, P.E., FSFPA, P.E., FSFPE, Chair, ICC Code Technology Committee, representing Code Technology Committee (CTC@iccsafe.org)

Revise as follows:

1020.4 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.

Exceptions:

1. In occupancies in Group I-3 of Condition 2, 3 or 4, the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, R-4, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridor shall not exceed 50 feet (15 240 mm).
3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 5.5 times the least width of the dead-end corridor.

Reason: None

The ICC Code Technology Committee (CTC) has just completed its 10th year. The ICC Board has decided to sunset the CTC. The sunset plan includes reassigning many of the CTC Areas of Study to the applicable Code Action Committee (CAC). The two remaining CTC Areas of Study are Care Facilities and Elevator Lobbies/WTC Elevator issues. This proposal falls under the Care Facilities Area of Study.

Information on the CTC, including: the sunset plan; meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the CTC website at: http://www.iccsafe.org/cs/CTC/Pages/default.aspx.

Cost Impact: Will not increase the cost of construction. This is eliminating an erroneous requirement.

Committee Action: Approved as Submitted

Committee Reason: Group R-4 should be removed from the list for dead ends. Group R-4 facilities are permitted to be single exit buildings, so the dead end provisions would never be practical.

Assembly Action: Non

Final Action Results
### Summary of Modification
Remove the separation requirement between an interior exit stairway or ramp and an exit passageway extension when they are both pressurized in accordance with Section 909.20.5

### Rationale
Pressurized stairs often discharge through an exit passageway. The exit passageway is also typically required to be pressurized since it is a continuation of the pressurized stair enclosure. The system providing pressurization of the stair and passageway is typically the same system. Technical compliance would require separate systems if a separation is required to be maintained. The introduction of a door and fire barrier between the exit passageway and the stair creates an obstruction to airflow which inhibits the pressurization of the stair and passageway. The provision of a separation does not provide any added safety and could also impede egress.

### Fiscal Impact Statement
- **Impact to local entity relative to enforcement of code**: none
- **Impact to building and property owners relative to cost of compliance with code**: This code change will reduce the cost of construction where pressurized stairs discharge through an exit passageway extension. The door and fire barrier between the exit passageway extension and the stair would not be required.
- **Impact to industry relative to the cost of compliance with code**: This code change will reduce the cost of construction where pressurized stairs discharge through an exit passageway extension. The door and fire barrier between the exit passageway extension and the stair would not be required.
- **Impact to small business relative to the cost of compliance with code**: This code change will reduce the cost of construction where pressurized stairs discharge through an exit passageway extension. The door and fire barrier between the exit passageway extension and the stair would not be required.

### Requirements
- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**: yes
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**: yes
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**: does not
- **Does not degrade the effectiveness of the code**: does not

### 2nd Comment Period

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<thead>
<tr>
<th>Proponent</th>
<th>Submitted</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harold Barrineau</td>
<td>5/26/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

**Comment:**
I agree with this modification.
1023.3.1 Extension.

Where interior exit stairways and ramps are extended to an exit discharge or a public way by an exit passageway, the interior exit stairway and ramp shall be separated from the exit passageway by a fire barrier constructed in accordance with Section 707 or a horizontal assembly constructed in accordance with Section 711, or both. The fire-resistance rating shall be not less than that required for the interior exit stairway and ramp. A fire door assembly complying with Section 716.5 shall be installed in the fire barrier to provide a means of egress from the interior exit stairway and ramp to the exit passageway. Openings in the fire barrier other than the fire door assembly are prohibited. Penetrations of the fire barrier are prohibited.

Exceptions

1. Penetrations of the fire barrier in accordance with Section 1023.5 shall be permitted.

2. Separation between an interior exit stairway or ramp and the exit passageway extension shall not be required where there are no openings into the exit passageway extension.

3. Separation between an interior exit stairway or ramp and the exit passageway extension shall not be required when the interior exit stair and the exit passageway extension are pressurized in accordance with Section 909.20.5
Code Change E110-15

Section: 1023.3.1; (IFC[B]E 1023.3.1)

Proponent: Raymond Grill, Arup, representing Arup (ray.grill@arup.com)

Revise as follows:

1023.3.1 Extension. Where interior exit stairways and ramps are extended to an exit discharge or a public way by an exit passageway, the interior exit stairway and ramp shall be separated from the exit passageway by a fire barrier constructed in accordance with Section 707 or a horizontal assembly constructed in accordance with Section 711, or both. The fire-resistance rating shall be not less than that required for the interior exit stairway and ramp. A fire door assembly complying with Section 716.5 shall be installed in the fire barrier to provide a means of egress from the interior exit stairway and ramp to the exit passageway. Openings in the fire barrier other than the fire door assembly are prohibited. Penetrations of the fire barrier are prohibited.

Exceptions:

1. Penetrations of the fire barrier in accordance with Section 1623.5 shall be permitted.
2. Separation between an interior exit stairway or ramp and the exit passageway extension shall not be required where there are no openings into the exit passageway extension.
3. Separation between an interior exit stairway or ramp and the exit passageway extension shall not be required when the interior exit stair and the exit passageway extension are pressurized in accordance with Section 909.20.5.

Reason: Pressurized stairs often discharge through an exit passageway. The exit passageway is also typically required to be pressurized since it is a continuation of the pressurized stair enclosure. The system providing pressurization of the stair and passageway is typically the same system. Technical compliance would require separate systems if a separation is required to be maintained. The introduction of a door and fire barrier between the exit passageway and the stair creates an obstruction to airflow which inhibits the pressurization of the stair and passageway. The provision of a separation does not provide any added safety and could also impede egress.

Cost Impact: Will not increase the cost of construction
This code change will reduce the cost of construction where pressurized stairs discharge through an exit passageway extension. The door and fire barrier between the exit passageway extension and the stair would not be required.

Committee Reason: Group R-4 should be removed from the list for dead ends. Group R-4 facilities are permitted to be single exit buildings, so the dead end provisions would never be practical.

Committee Action: Approved as Submitted

Assembly Reason: None

Final Action Results

E110-15 AS
Code Change No: E110-15
### Comments

#### General Comments
- Yes

#### Alternate Language
- No

### Related Modifications
- Allow security system equipment to penetrate into or through interior exit stairs and ramps.

### Rationale
- This allowance for security systems to penetrate a stairway enclosure is appropriate. Security systems are needed for occupant safety. These systems can also be used for remote assessment of a stairway during an emergency. This is coordinated with NFPA 101.

### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  - None

- **Impact to building and property owners relative to cost of compliance with code**
  - Will not increase the cost of construction
  - The proposed language addressed a limitation in the code regarding security systems being able to penetrate exit enclosures. If anything, the cost of construction will be decreased by allowing an acceptable way for installing such systems.

- **Impact to industry relative to the cost of compliance with code**
  - Will not increase the cost of construction
  - The proposed language addressed a limitation in the code regarding security systems being able to penetrate exit enclosures. If anything, the cost of construction will be decreased by allowing an acceptable way for installing such systems.

- **Impact to small business relative to the cost of compliance with code**
  - Will not increase the cost of construction
  - The proposed language addressed a limitation in the code regarding security systems being able to penetrate exit enclosures. If anything, the cost of construction will be decreased by allowing an acceptable way for installing such systems.

### Requirements
- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - Yes

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - Building security systems, including cameras in stairways, are becoming more prevalent. If properly protected, a limited number of penetrations for security systems will not result in an unacceptable level of safety.

- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - Does not

- Does not degrade the effectiveness of the code
  - Does not

### 2nd Comment Period

- **Proponent**: Harold Barrineau
- **Submitted**: 5/26/2019
- **Attachments**: No

**Comment:**
- I agree with this modification.
1023.5 Penetrations. Penetrations into or through interior exit stairways and ramps are prohibited except for equipment and ductwork necessary for independent ventilation or pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication and security systems and electrical raceway serving the interior exit stairway and ramp and terminating at a steel box not exceeding 16 square inches (0.010 m²). Such penetrations shall be protected in accordance with Section 714. There shall not be penetrations or communication openings, whether protected or not, between adjacent interior exit stairways and ramps.

Exception: Membrane penetrations shall be permitted on the outside of the interior exit stairway and ramp. Such penetrations shall be protected in accordance with Section 714.3.2.
F8023 Requirements

Back

Code Change No: E112-15

Section: 1023.5; (IFC[BE] 1023.5)

Proponent: William Koffel, representing Firestop Contractors International Association (wkoffel@koffel.com)

Revise as follows:

1023.5 Penetrations. Penetrations into or through interior exit stairways and ramps are prohibited except for equipment and ductwork necessary for independent ventilation or pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication and security systems and electrical raceway serving the interior exit stairway and ramp and terminating at a steel box not exceeding 16 square inches (0.010 m²). Such penetrations shall be protected in accordance with Section 714. There shall not be penetrations or communication openings, whether protected or not, between adjacent interior exit stairways and ramps.

Exception: Membrane penetrations shall be permitted on the outside of the interior exit stairway and ramp. Such penetrations shall be protected in accordance with Section 714.3.2.

Reason: Building security systems, including cameras in stairwells, are becoming more prevalent. If properly protected, a limited number of penetrations for security systems will not result in an unacceptable level of safety. NFPA 101-2015 requires stairway video monitoring in high-rise buildings having an occupant load of 4,000 or more persons.

Cost Impact: Will not increase the cost of construction

The proposed language addresses a limitation in the code regarding security systems being able to penetrate exit enclosures. If anything, the cost of construction will be decreased by allowing an acceptable way for installing such systems.

Report of Committee Action

Hearings

Committee Action: Approved as Submitted

Committee Reason: This allowance for security systems to penetrate a stairway enclosure is appropriate. Security systems are needed for occupant safety. These systems can also be used for remote assessment of a stairway during an emergency. This is coordinated with NFPA 101.

Assembly: e

Final Hearing Results

E112-15 AS
### General Comments

**Yes**

**Alternate Language**

**No**

### Summary of Modification

In Group F occupancies the tip of the guard can be 34" to 38" and eliminates the 42" guard if, the exit access stairways serve three stories or less, and such stairs are not open to the public, and the top of the guard also serves as handrail.

### Rationale

Federal OSHA requirements restrict industrial stairway guard to a maximum of 34"; it also intends that the top rail will be used as a handrail. FBC requires a guard at 42". This proposal attempts to find a reasonable middle ground making at least one solution to the FBC and OSHA requirements for non-egress stairways in factory settings. Gives factory workers the ability to work, carry tools in tight spaces they are familiar with, to maneuver less awkwardly. It is already used in the FBC Group r-3 and in individual dwelling units of R-2.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

No impact to local entity as this is already a code requirement.

**Impact to building and property owners relative to cost of compliance with code**

It will be a decrease in cost to building and property owners as current code requirements adds additional rail and cost.

**Impact to industry relative to the cost of compliance with code**

It will be a decrease in cost to industry as current code requirements adds additional rail and cost.

**Impact to small business relative to the cost of compliance with code**

It will be a decrease in cost to small business as current code requirements adds additional rail and cost.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Improves the health, safety, and welfare of the general public by allowing workers to work more efficiently while still being safe in tight areas.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Improves the code by providing a better method by finding a reasonable middle ground making at least one solution to the FBC and OSHA requirements for non-egress stairways in factory settings.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities as this is already a current code requirement that does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities.

**Does not degrade the effectiveness of the code**

Increases the effectiveness of the code by finding a reasonable middle ground making at least one solution to the FBC and OSHA requirements for non-egress stairways in factory settings.

### 2nd Comment Period

**Proponent**

Michael Savage

**Submitted**

5/22/2019

**Attachments**

No

**Comment:**

I agree with the proposed revision.
Revise as follows:

1015.3 Height.

Required guards shall be not less than 42 inches (1067 mm) high, measured vertically as follows:
1. From the adjacent walking surfaces.
2. On stairways and stepped aisles, from the line connecting the leading edges of the tread nosings.
3. On ramps and ramped aisles, from the ramp surface at the guard.

Exceptions:
1. For occupancies in Group R-3 not more than three stories above grade in height and within individual dwelling units in occupancies in Group R-2 not more than three stories above grade in height with separate means of egress, required guards shall be not less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or adjacent fixed seating.
2. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
3. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
4. The guard height in assembly seating areas shall comply with Section 1029.16 as applicable.
5. Along alternating tread devices and ships ladders, guards where the top rail also serves as a handrail shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.
6. In Group F occupancies, where exit access stairways serve three stories or less and such stairs are not open to the public, where the top of the guard also serves as a handrail, the top of the guard shall be not less than the 34 inches (864 mm) and not more than 38 inches (9965 mm) measured from a line connecting the leading edges of the treads.
In Group F occupancies the top of the guard can be 34" to 38" and eliminates the 42" guard if the exit access stairways serve three stories or less and such stairs are not open to the public, and the top of the guard also serves as a handrail.

Federal OSHA requirements restrict industrial stairway guard to a maximum of 34"; it also intends that the top rail will be used as a handrail. FBC requires a guard at 42". This proposal attempts to find a reasonable middle ground making at least one solution to the FBC and OSHA requirements for non-egress stairways in factory settings. Gives factory workers the ability to work, carry tools in tight spaces they are familiar with, to maneuver less awkwardly. It is already used in the FBC Group R-3 and in individual dwelling units of R-2.

Impact to local entity relative to enforcement of code
No impact to local entity as this is already a code requirement

Impact to building and property owners relative to cost of compliance with code
It will be a decrease in cost to building and property owners as current code requirements adds additional rail and cost.

Impact to industry relative to the cost of compliance with code
It will be a decrease in cost to industry as current code requirements adds additional rail and cost.

Impact to small business relative to the cost of compliance with code
It will be a decrease in cost to small business as current code requirements adds additional rail and cost.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Improves the health, safety, and welfare of the general public by allowing workers to work more efficiently while still being safe in tight areas and does not effect the public

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Improves the code by providing a better method of working with the FBC and OSHA rules

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities, this is a current code requirement that does not limit materials, products, methods, or systems of construction

Does not degrade the effectiveness of the code
It increases the effectiveness of the code by being a fair middle ground with OSHA requirements

Comment: I agree with the proposed revision.

Comment: I agree with this modification.
1015.3 Height. Required guards shall be not less than 42 inches (1067 mm) high, measured vertically as follows:

1. From the adjacent walking surfaces.
2. On stairways and stepped aisles, from the line connecting the leading edges of the tread nosings.
3. On ramps and ramped aisles, from the ramp surface at the guard.

Exceptions:
1. For occupancies in Group R-3 not more than three stories above grade in height and within individual dwelling units in occupancies in Group R-2 not more than three stories above grade in height with separate means of egress, required guards shall be not less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or adjacent fixed seating.
2. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
3. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
4. The guard height in assembly seating areas shall comply with Section 1029.16 as applicable.
5. Along alternating tread devices and ships ladders, guards where the top rail also serves as a handrail shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.
6. In Group F occupancies, where exit access stairways serve three stories or less and such stairs are not open to the public, where the top of the guard also serves as a handrail, the top of the guard shall be not less than 34 inches (864 mm) and not more than 38 inches (865 mm) measured vertically from a line connecting the leading edges of the treads.
The intent of this proposal is to allow doors to roofs not intended to be occupied to be locked preventing access into the building from the roof, especially for security reasons.

This proposal does not address locking of doors preventing access to the roof. Also, egress from occupied roofs is addressed in Section 1006.3.

**Fiscal Impact Statement**
- **Impact to local entity relative to enforcement of code**: Proposal addresses an unanswered question. Should help with code enforcement.
- **Impact to building and property owners relative to cost of compliance with code**: Should be no required cost of compliance as the provision is "shall be permitted".
- **Impact to industry relative to the cost of compliance with code**: Should be no required cost of compliance as the provision is "shall be permitted".
- **Impact to small business relative to the cost of compliance with code**: Should be no required cost of compliance as the provision is "shall be permitted".

**Requirements**
- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**: May be important to some building owners to prevent unauthorized access into their building from a roof, where that roof is not intended to be occupied.
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**: Improves the code by addressing this unanswered question.
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**: Does not discriminate.
- **Does not degrade the effectiveness of the code**: Improves effectiveness of the code.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comment</strong>:</td>
<td>I agree with this modification.</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Revise as follows:

**1010.1.9.3 Locks and latches.** Locks and latches shall be permitted to prevent operation of doors where any of the following exist:

1. Places of detention or restraint.

2. In buildings in occupancy Group A having an occupant load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:

   *load of 300 or less, Groups B, F, M and S, and in places of religious worship, the main door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:*

   2.1. The locking device is readily distinguishable as locked.

   2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background.

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

3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts does not have a doorknob or surface-mounted hardware.

4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.

5. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

6. Doors serving roofs not intended to be occupied shall be permitted to be locked preventing entry to the building from the roof.
One proposal which incorporates proposed revisions to this section re: delayed egress locking systems approved for the 2018 IBC in proposals E66-15, E68-15, & E69-15.

Rationale

This proposal combines approved revisions to the 2018 IBC by proposals E66-15, E68-15, and E69-15. Both E66-15 and E68-15 were approved “As Modified by Public Comment 1” during the Public Comment Hearing and received final approval by the Online Governmental Consensus Vote following the Public Comment Hearing. Proposal E69-15 was approved “As Submitted” by the ICC Means of Egress Code Committee and received final approval via the consent agenda during the Public Comment Hearing.

E66-15 allows delayed egress locking systems in courtrooms subject to specific limitations and requirements.

E68-15 allows delayed egress locking systems in Group E classrooms with an occupant load of less than 50.

E66-15 allows not more than two delayed egress locking systems in Group I-1 and I-4 occupancies.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Adds occupancies and several exceptions where delayed egress locking systems are permitted (and desired) to be installed. Additional installations would increase the number of installations where compliance should be evaluated by the code official.

Impact to building and property owners relative to cost of compliance with code

Delayed egress locking systems are "shall be permitted" locking systems. As such, there would be no required increase in code compliance. This proposal provides for additional delayed egress locking systems which is desirable by building owners.

Impact to industry relative to the cost of compliance with code

Delayed egress locking systems are "shall be permitted" locking systems. As such, there would be no required increase in code compliance. This proposal provides for additional delayed egress locking systems which is desirable by building owners.

Impact to small business relative to the cost of compliance with code

Delayed egress locking systems are "shall be permitted" locking systems. As such, there would be no required increase in code compliance. This proposal provides for additional delayed egress locking systems which is desirable by building owners.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provides explicit and appropriate code requirements for delayed egress locking systems to help ensure egress is available at all times.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves the code and brings code up to date with these locking systems.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate.

Does not degrade the effectiveness of the code

Improves the effectiveness of the code.

2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
</tr>
</thead>
</table>

Comment:

I agree with this modification.
Revise as follows:

1010.1.9.78 Delayed egress. Delayed egress locking systems shall be permitted to be installed on doors serving any occupancy except Group A, E and H the following occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907.


2. Group E classrooms with an occupant load of less than 50.

Exception: Delayed egress locking systems shall be permitted to be installed on exit or exit access doors, other than the main exit or exit access door, serving a courtroom in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

1010.1.9.8.1 Delayed egress locking system. The delayed egress locking system shall be installed and operated in accordance with all of the following:

1. The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate, free egress.

2. The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.

3. The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.

4. An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. The egress path from any point shall not pass through more than one delayed egress locking system.

Exception: Exceptions:

1. In Group I-2 or I-3 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided that the combined delay does not exceed 30 seconds.

2. In Group I-1 or I-4 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided the combined delay does not exceed 30 seconds and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

6. A sign shall be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware:

6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.3. The sign shall comply with the visual character requirements in ICC A117.1.

Exception: Where approved, in Group I occupancies, the installation of a sign is not required where care recipients who because of clinical needs require restraint or containment as part of the function of the treatment area.

7. Emergency lighting shall be provided on the egress side of the door.

8. The delayed egress locking system units shall be listed in accordance with UL 294.

1010.1.9.78 Delayed egress. Delayed egress locking systems shall be permitted to be installed on doors serving any occupancy except Group A, E and F. The following occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907—The

2. Group E classrooms with an occupant load of less than 50.

Exception: Delayed egress locking systems shall be permitted to be installed on exit or exit access doors, other than the main exit or exit access door, serving a courtroom in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

1010.1.9.8.1 Delayed egress locking system. The delayed egress locking system shall be installed and operated in accordance with all of the following:

1. The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate, free egress.
2. The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.
3. The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.
4. An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. The egress path from any point shall not pass through more than one delayed egress locking system.

Exception: Exceptions:

1. In Group I-2 or I-3 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided that the combined delay does not exceed 30 seconds.
2. In Group I-1 or I-4 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided the combined delay does not exceed 30 seconds and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

6. A sign shall be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware:

6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6.3. The sign shall comply with the visual character requirements in ICC A117.1.

Exception: Where approved, in Group I occupancies, the installation of a sign is not required where care recipients who because of clinical needs require restraint or containment as part of the function of the treatment area.

7. Emergency lighting shall be provided on the egress side of the door.
8. The delayed egress locking system units shall be listed in accordance with UL 294.
This proposal combines approved revisions to the 2018 IBC by proposals E66-15, E68-15, and E69-15. Both E66-15 and E68-15 were approved “As Modified by Public Comment 1” during the Public Comment Hearing and received final approval by the Online Governmental Consensus Vote following the Public Comment Hearing. Proposal E69-15 was approved “As Submitted” by the IGC Means of Egress Code Committee and received final approval via the consent agenda during the Public Comment Hearing.

E66-15 Info and reasons:
Proponent (original proposal): James Peterkin (j peterki@heery.com)

Proponent (public comment 1): Dave Frable, representing US General Services Administration; James Peterkin, representing Self (j peterki@heery.com)

Commenter’s Reason (from Public Comment 1, minimal edits): The intent of this code change proposal is to permit the use of delayed egress system on door(s) other than the main entrance/exit door(s) from a courtroom. According to Chapter 3 in the IBC, courtrooms are considered Assembly occupancies. Therefore, delayed egress locking systems would not be permitted to be installed on any doors from a courtroom. However, courtrooms are located within courthouses which are a unique building type that is designed with three separate and distinct circulation systems – one for the public, one for the judiciary/secure staff, and one for in-custody inmates. The three circulation systems are segregated and they only meet in a single location, the courtrooms. The public enter the courtroom from the public corridor, the judges and court staff enter from the secure corridor and the prisoners enter from the secure detainee area that is typically adjacent to the courtroom. Because each of these groups must be kept separate for security reasons, it is necessary to lock the doors where these groups interface to prevent intermixing.

A standard courtroom design provides free egress for the public from the main entrance/exit door(s) (the same entrance the public entered the courtroom) to the public circulation area. The door serving the detainee area (prisoner interface) is locked and fail secure, which is permitted by code. As stated above, since the courtrooms are considered an “assembly occupancy” and have an occupant load of 50 or more persons, they require a second means of egress. Industry practice has been to utilize the exit(s) in the front of the courtroom as the secondary means of egress. These egress door(s) also serve as the entrance/egress for the judge and court staff. To maintain the security separation of occupants, it is industry practice to equip these second means of egress door(s) with a delayed egress locking system which prevents any unauthorized person from gaining access to the secure corridor areas. A courtroom, unlike many other assembly occupancies, is a controlled environment.

A bailiff is located within the courtroom when occupied by the public and/or prisoners. The bailiff, along with other court personnel, is equipped with a security access card that can override the delay. Permitting the use of a delayed egress system on door(s) other than the main entrance/exit door(s) from a courtroom will not adversely impact occupant safety and has been permitted and recognized by the National Fire Protection Association, Life Safety Code, for several code cycles. In addition, the U.S. General Services Administration also permits the use of delayed egress systems on door(s) other than the main entrance/exit door(s) from a courtroom.

E68-15 Info and reasons:
Proponent (original proposal): Proponent: Edward Kulik, Chair, representing Building Code Action Committee (bcac@iccsafe.org)

Reason (original proposal): This proposal is in response to several requests to address the needs of small educational occupancies to help prevent wandering / elopement, especially for the very young, and for special needs students. This public proposal is submitted by the ICC Building Code Action Committee (BCAC).

Proponent (public comment 1): Jonathan Siu, City of Seattle Department of Planning & Development, representing Washington Association of Building Officials Technical Code Development Committee
Reason (public comment 1): This limits the use of delayed egress devices in E occupancies to classrooms with an occupant load less than 50, as opposed to assembly spaces in E occupancies. The code says that assembly areas in schools get classified as E occupancies (Section 303.1.3). This means that multi-purpose rooms, auditoriums, gymnasiums, and similar spaces associated with a school are E occupancies.

This code change proposal, as modified by the committee, allows delayed egress hardware on every door in an E occupancy, which would include these assembly-type spaces. However, the committee reason statement only talks about classrooms, where there are fewer occupants. We agree it would be appropriate to allow delayed egress hardware on classroom doors, but we do not think it is appropriate to have delayed egress hardware in assembly areas. The proposed change (as modified by the committee) also conflicts with the requirements in Section 1010.1.10 for panic hardware.

The modification proposed in this public comment would take care of both issues by limiting the delayed egress hardware to classroom doors (as appears to have been the intent of the proponents of the original code change), but adds an additional limitation that the classrooms with this hardware must also have an occupant load of less than 50, in order to eliminate the conflict with the panic hardware requirements.

The editorial modification to move the list of occupancies from the main paragraph to a bullet list was necessitated when the E occupancies were separated from the list, in order to eliminate any confusion over whether the sprinklers and alarm systems are required for all the listed occupancies.

**E69-15 info, reasons, and committee action:**

**Proponent**: Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee, representing Code Technology Committee (CTC@iccsafe.org)

**Reason**: In Item 5, the new exception is proposed to be revised to include Group I-1 occupancies to allow up to two delayed egress systems. As in Group I-2, Group I-1 occupancies may need more than one delayed egress system. For example, if the Group I-1 occupancy is on the 2nd floor, or higher, in a building, a delayed egress system may be needed on the door to the exit stairway on that floor. And a second delayed egress system may be needed at the door to the exterior on the ground floor. In Group I-1 and I-4 an additional delayed egress locking system may be highly desirable to help reduce wandering or elopement by occupants.

**Committee Action**: Approved as Submitted

**Committee Reason**: The addition of Group I-1 and I-4 to the Exceptions in Item 5 provides for consistency in all Group I occupancies where there are concerns for wandering. With the total time limit staying at 30 seconds maximum, security concerns can be addressed without an increase in the level of risk for residents.
### Summary of Modification

This proposal combines approved revisions to the 2018 IBC by proposals E70-15 and E71-15. Both E70-15 and E71-15 were approved "As Submitted" by the ICC Means of Egress Code Committee, and received final approval via the consent agenda during the Public Comment Hearing.

### Rationale

**E70-15 info, reasons, and committee action:**

Proponent (original proposal): John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA), (jwoestman@kellencompany.com)

Reason: This proposal revises the occupancy groups to allow this locking arrangement to be used in all occupancies except occupancy Group H. Code officials and specifiers have asked why this door locking option is allowed in only the currently listed occupancy groups. No reason is known other than the current allowed occupancies in Section 1010.1.9.8 are consistent with those in Section 1010.1.9.9, which a separate proposal revises.

**E71-15 info, reasons, and committee action:**

Proponent (original proposal): Edward Kulik, Chair, representing Building Code Action Committee (bcac@iccsafe.org)

Reason: Update 1010.1.9.8 to improve clarity and consistency in the language. The charging language is proposed to eliminate redundancy in this section. With revisions to the first sentence, text late in that sentence is redundant as entrance doors to tenant spaces are commonly in the means of egress. It is uncommon that tenant doors are not in the means of egress.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

This proposal clarifies the requirements for these locking systems, which should help the code to be quicker and easier to interpret and enforce.

**Impact to building and property owners relative to cost of compliance with code**

These locking systems are "shall be permitted" and not required in buildings. As such, the revisions should result in no required cost increase in code compliance.

**Impact to industry relative to the cost of compliance with code**

These locking systems are "shall be permitted" and not required in buildings. As such, the revisions should result in no required cost increase in code compliance.

**Impact to small business relative to the cost of compliance with code**

These locking systems are "shall be permitted" and not required in buildings. As such, the revisions should result in no required cost increase in code compliance.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  Proposal helps ensure these locking systems are installed and operate in a manner which facilitates immediate egress.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  Strengthens the code by clarifying how these door locking systems are required to operate.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  Does not discriminate.

- **Does not degrade the effectiveness of the code**
  
  Improves the effectiveness of the code.

### 2nd Comment Period

| Proponent | Harold Barrineau | Submitted | 5/26/2019 | Attachments | No |

**Comment:**

I agree with this modification.
Revise as follows:

1010.1.9.89 Sensor release of electrically locked egress doors. The sensor release of electric locking systems shall be permitted on sensor-released doors located in the means of egress in buildings with any occupancy except Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 and shall be permitted where installed and operated in accordance with all of the following criteria:

1. The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors. The doors shall cause the electric locking system to unlock.

2. The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

34. Loss of power to the lock or locking system shall automatically unlock the electric locks.

34. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads “PUSH TO EXIT.” When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—indeed, independent of other electronics—and the electriclock shall remain unlocked for not less than 30 seconds.

45. Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.

56. Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.

67. The door locking system units shall be listed in accordance with UL 294.
2020 FBC Proposal Based on 2018 IBC Proposals E70-15 & E71-15

1010.1.9.88 Sensor release of electrically locked egress doors. The sensor release of electric lock mechanism shall be permitted on sensor released doors located in any means of egress in buildings with any occupancy except Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 are permitted where installed and operated in accordance with all of the following criteria:

1. The sensor shall be installed on the egress side, arranged to detect an occupant approaching the door. The doors shall cause the electric locking system to unlock.

2. The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.

3. Loss of power to the lock or locking system shall automatically unlock the electric locks.

4. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the electric lock—indepedent of other electronics—and the doors/electric lock shall remain unlocked for not less than 30 seconds.

5. Activation of the building fire alarm system, where provided, shall automatically unlock the doors/electric lock, and the doors/electric lock shall remain unlocked until the fire alarm system has been reset.

6. Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the doors/electric lock. The doors/electric lock shall remain unlocked until the fire alarm system has been reset.

7. The door locking system units shall be listed in accordance with UL 294.

This proposal combines approved revisions to the 2018 IBC by proposals E70-15 and E71-15. Both E70-15 and E71-15 were approved "As Submitted" by the ICC Means of Egress Code Committee, and received final approval via the consent agenda during the Public Comment Hearing.

E70-15 Info, reasons, and committee action:

Proponent: (original proposal) John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA), (jwoestman@kellencompany.com)

Reason: This proposal revises the occupancy groups to allow this locking arrangement to be used in all occupancies except occupancy Group H. Code officials and specifiers have asked why this door locking option is allowed in only the currently listed occupancy groups. No reason is known other than the current allowed occupancies in Section 1010.1.9.8 are consistent with those in Section 1010.1.9.9, which a separate proposal revises. Just a reminder, this locking arrangement facilitates immediate egress by sensing the approaching occupant and unlocking the electric lock on the door. In many applications, the occupant is unaware the door is electrically locked as the electrical locks unlock prior to the occupant reaching the door.

Committee Action: Approved as Submitted

Committee Reason: There was not technical justification for not allowing groups that were not currently listed to use the sensor release locking systems when this system is permitted for occupancies with higher occupant loads.

E71-15 Info, reasons, and committee action:

Proponent: (original proposal) Edward Kulik, Chair, representing Building Code Action Committee (beau@iccsafe.org)
Reason: Update 1010.1.9.8 to improve clarity and consistency in the language. The charging language is proposed to eliminate redundancy in this section. With revisions to the first sentence, text late in that sentence is redundant as entrance doors to tenant spaces are commonly in the means of egress. It is uncommon that tenant doors are not in the means of egress.

The revisions to the numbered items is to clarify the required functions of the electric locking system. In Item 1, the added text describes what the sensor is required to do upon detecting an approaching occupant. The revisions in the other items clarify requirements for this electrical locking system.

This public proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 13 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments.

Committee Action: Approved as Submitted
Committee Reason: The proposal improves consistency of the terms used for this type of locking system.
Proposal for the 2020 FBC which incorporates revisions to the 2018 IBC from proposal E72-15.

Rationale

Proponent (original proposal): Building Code Action Committee
Reason (from original proposal): This "special locking arrangement" allows for immediate egress with one-handed operation of the door hardware. Code officials and specifiers have asked why this option is allowed in only the identified occupancies. No reason is known other than the current allowed occupancies in Section 1010.1.9.9 match those in Section 1010.1.9.8. Further, revisions clarify this section of the code to address required functions of all types of electrical locking systems which are operated (i.e. unlocked) by operation of the door hardware such as panic hardware, fire exit hardware, or door knobs or levers (where panic or fire exit hardware is not required or not utilized). Electromagnetic locks are the most common type of electrical locks, but not the only type of electric locking hardware which may be selected by the designer, specifier, and / or building owner or occupant. Regardless of the type of electrical locking system, this section permits and requires the door hardware to be a device which causes the electrical lock to unlock immediately, allowing egress.

Cost Impact: Will not increase the cost of construction No cost impact unless the building owner chooses to install these shall be permitted locking systems.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code
Revised description and clarified requirements for these door locking systems should make the code easier to interpret and enforce.

Impact to building and property owners relative to cost of compliance with code
Will not increase the cost of code compliance. No cost impact unless the building owner chooses to install these shall be permitted locking systems.

Impact to industry relative to the cost of compliance with code
Will not increase the cost of code compliance. No cost impact unless the building owner chooses to install these shall be permitted locking systems.

Impact to small business relative to the cost of compliance with code
Will not increase the cost of code compliance. No cost impact unless the building owner chooses to install these shall be permitted locking systems.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This proposal helps ensure these door locking system function to provide immediate egress.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Strengthens the code with less ambiguous requirements.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Does not discriminate.

Does not degrade the effectiveness of the code
Improves the effectiveness of the code.

2nd Comment Period

Proponent: Harold Barrineau, Submitted: 5/26/2019, Attachments: No

Comment: I agree with this modification.
Revise as follows:

1010.1.9.910 ElectromagneticallyDoor hardware release of electrically locked egress doors. Doors hardware release of electric locking systems shall be permitted on doors in the means of egress in buildings with any occupancy except Group H in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, I-1, I-2, I-4, M, R-1 or R-2 shall be permitted to be locked with an electromagnetic locking system where equipped with hardware that incorporates a built-in switch and where installed and operated in accordance with all of the following:

1. The door hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.

2. The door hardware is capable of being operated with one hand and shall comply with Section 1010.1.9.6.

3. Operation of the door hardware directly interrupts the power to the electromagnetic lock and unlocks the door immediately.

4. Loss of power to the electromagnetic locking system automatically unlocks the door.

5. Where panic or fire exit hardware is required by Section 1010.1.10, operation of the panic or fire exit hardware also releases the electromagnetic lock.

6. The locking system units shall be listed in accordance with UL 294.
The proposed revisions are intended to improve clarity and consistency of the language of these sections of the code, and appear to be essentially editorial. The maximum width of power-operated doors which comply with FBC Section 1010.1.4.2 should not be limited as these doors are either fully automatic or power-assisted, and must comply with all the requirements of Section 1010.1.4.2 including the safety requirements incorporated in the BHMA standards referenced in 1010.1.4.2. This revision addresses a potential conflict between the FBC and the relatively few power-operated swinging doors currently being installed which exceed 48 inches in width.

Comment:
this change, while it may appear to be editorial in nature, clarifies the allowable width limit of egress doors and removes a restriction from revolving and horizontal sliding doors that is not needed. Please support this modification.

Comment:
I agree with the proposed revision.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
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Comment:

I agree with this modification.
1010.1.1 Size of doors. The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear width of 32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. Means of egress doors in a Group I-2 occupancy used for the movement of beds shall provide a clear width not less than 41-1/2 inches (1054 mm). The height of door openings shall be not less than 80 inches (2032 mm).

Exceptions:
1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies.
2. Door openings to resident sleeping units in Group I-3 occupancies shall have a clear width of not less than 28 inches (711 mm).
3. Door openings to storage closets less than 10 square feet (0.93 m²) in area shall not be limited by the minimum width.
4. The width of door leaves in revolving doors that comply with Section 1010.1.4.1 shall not be limited.
5. The width of door leaves in bi-parting power-operated doors that comply with Section 1010.1.4.2 shall not be limited.
6. Door openings within a dwelling unit or sleeping unit shall be not less than 78 inches (1981 mm) in height.
7. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall be not less than 76 inches (1930 mm) in height.

8. In other than Group R-1 occupancies, the minimum widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be an Accessible unit.
9. Buildings that are 400 square feet (37 m²) or less and that are intended for use in conjunction with one- and two-family residences are not subject to the door height and width requirements of this code.
10. Doors to walk-in freezers and coolers less than 1,000 square feet (93 m²) in area shall have a maximum width of 60 inches (1524 mm).
11. In Group R-1 dwelling units or sleeping units not required to be Accessible units, the minimum width shall not apply to doors for showers or saunas.
Summary of Modification
Allows for stair doors on the fifth and sixth stories to be locked from the non-egress side, consistent with doors on all other floors.

Rationale
As currently written, the code allows stairway doors to be locked from the side opposite egress on stories one through four in Exception 3 of Section 1010.1.9.11 and in high rise buildings (typically seven stories and higher) in Section 403.5.3. By deleting the limitation on the the number of stories in this section, stair doors on the fifth and sixth stories would be allowed to be locked from the non-egress side consistent with doors on all other floors.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
Will have no affect.

Impact to building and property owners relative to cost of compliance with code
There is no increase in cost of construction

Impact to industry relative to the cost of compliance with code
There is no increase in cost of construction

Impact to small business relative to the cost of compliance with code
There is no increase in cost of construction

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Allows for consistency along the means of egress, regardless of building height.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Allows for consistency along the means of egress, regardless of building height.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Has no affect on materials or methods.

Does not degrade the effectiveness of the code
Allows for consistency along the means of egress, regardless of building height.

2nd Comment Period
Proponent: Michael Savage  Submitted: 5/22/2019  Attachments: No

Comment: I agree with the proposed revision.

2nd Comment Period
Proponent: Harold Barrineau  Submitted: 5/26/2019  Attachments: No

Comment: I agree with this modification.
1010.1.9.11 Stairway doors. Interior stairway means of egress doors shall be openable from both sides without the use of a key or special knowledge or effort.

Exceptions:
1. Stairway discharge doors shall be openable from the egress side and shall only be locked from the opposite side.
2. This section shall not apply to doors arranged in accordance with Section 403.5.3.
3. In stairways serving not more than four stories, Stairway exit doors are permitted to be locked from the side opposite the egress side, provided they are openable from the egress side and capable of being unlocked simultaneously without unlatching upon a signal from the fire command center, if present, or a signal by emergency personnel from a single location inside the main entrance to the building.
4. Stairway exit doors shall be openable from the egress side and shall only be locked from the opposite side in Group B, F, M and S occupancies where the only interior access to the tenant space is from a single exit stairway where permitted in Section 1006.3.2.
5. Stairway exit doors shall be openable from the egress side and shall only be locked from the opposite side in Group R-2 occupancies where the only interior access to the dwelling unit is from a single exit stairway where permitted in Section 1006.3.2.
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<td>Ann Russo2</td>
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**Summary of Modification**
Clarifies text clarifying that panic and fire exit hardware is required for pivoted or side-hinged swinging doors, but not all door types.

**Rationale**
UL 305 is the standard by which panic and fire exit hardware is typically listed. UL 305 applies to outward-opening doors and as such does not apply to the special doors addressed in Section 1010.1.4. However, some have interpreted the current text in 1010.1.10 to require panic hardware or fire exit hardware on special doors, such as special purpose horizontal sliding, accordion or folding doors.

The proposed text clarifies that panic and fire exit hardware is required for pivoted or side-hinged swinging doors.

**Fiscal Impact Statement**
- **Impact to local entity relative to enforcement of code**
  Will have no affect on enforcement of the code.
- **Impact to building and property owners relative to cost of compliance with code**
  Will not increase the cost of construction.
- **Impact to industry relative to the cost of compliance with code**
  Will not increase the cost of construction.
- **Impact to small business relative to the cost of compliance with code**
  Will not increase the cost of construction.

**Requirements**
- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  Simply a clarification of existing code text.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  Simply a clarification of existing code text.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  Simply a clarification of existing code text.
- Does not degrade the effectiveness of the code
  Simply a clarification of existing code text.

**2nd Comment Period**

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<tr>
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<th>Michael Savage</th>
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**Comment:**
I agree with the proposed revision.
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<th>Proponent</th>
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</table>

Comment:

I agree with this modification.
1010.1.10 Panic and fire exit hardware. Doors swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Exceptions:
1. A main exit of a Group A occupancy shall be permitted to be locking in accordance with Section 1010.1.9.3, Item 2.
2. Doors serving a Group A or E occupancy shall be permitted to be electromagnetically locked in accordance with Section 1010.1.9.9.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or exit access doors, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.
Establishes a minimum length of a stair landing.

**Rationale**

The current code language does not establish a minimum depth/run for a landing due to the permissive language. This proposal will stipulate the minimum depth/run.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

Will have no effect.

**Impact to building and property owners relative to cost of compliance with code**

Will not increase the cost of construction.

There could be a very slight increase in construction costs if the current language isn’t interpreted as establishing a minimum landing depth/run.

**Impact to industry relative to the cost of compliance with code**

Will not increase the cost of construction.

There could be a very slight increase in construction costs if the current language isn’t interpreted as establishing a minimum landing depth/run.

**Impact to small business relative to the cost of compliance with code**

Will not increase the cost of construction.

There could be a very slight increase in construction costs if the current language isn’t interpreted as establishing a minimum landing depth/run.

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  Establishes minimum criteria that is currently up for interpretation.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  Establishes minimum criteria that is currently up for interpretation.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  Has no effect on materials or methods

- **Does not degrade the effectiveness of the code**
  
  Establishes minimum criteria that is currently up for interpretation.

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**2nd Comment Period**

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Comment:

I agree with the proposed revision.

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**2nd Comment Period**

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Comment:

I agree with this modification.
1011.6 Stairway landings. There shall be a floor or landing at the top and bottom of each stairway. The width of landings shall be not less than the width of stairways served. Every landing shall have a minimum width measured perpendicular to the direction of travel equal to the width of the stairway. Where the stairway has a straight run the depth need not exceed shall be a minimum of 48 inches (1219 mm). Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches (178 mm) into a landing. Where wheelchair spaces are required on the stairway landing in accordance with Section 1009.6.3, the wheelchair space shall not be located in the required width of the landing and doors shall not swing over the wheelchair spaces.

Exception: Where stairways connect stepped aisles to cross aisles or concourses, stairway landings are not required at the transition between stairways and stepped aisles constructed in accordance with Section 1029.
Comments
General Comments: Yes
Alternate Language: No

Summary of Modification
Slightly increases the allowable height of an exit sign, coordinating this section with the Life Safety Code.

Rationale
The base code provides just a 2-inch tolerance for where the bottom of required low-energy exit signs must be located, which is often challenging for designers and property owners due to field conditions or desired interior finish and trim. The proposed amendment is to allow the bottom of the required low-level exit signs to be located between 10 and 18 inches off the floor level. The additional 6 inches provides sufficient wiggle room for designers and owners. Further, there is no impact on the level of life safety of the occupants of the Group R-1 occupancies since the low-level exit signs will still be visible below a smoke layer from a fire (in the zone in which the occupants would presumably be crawling.)

NFPA 101 (Life Safety Code), Section 7.10.1.6 permits the bottom of low-level exit signs to be installed between 6- and 18-inches above the floor level. Therefore, there is another code standard that allows the bottom of the low-level exit signs to be installed up to 18 inches above the floor level. Although NFPA 101, Section 7.10.1.6 permits the bottom of the low-level exit signs to be as low as 6-inches above the floor level, this proposal does not change the base requirement that the bottom of the low-level exit signs be within 10-inches above the floor level because the accessibility code requires door surfaces within 10 inches of the floor to be a smooth surface for the full width of the door. There is no reason to have the low-level exit sign installed on the door must be at least 10 inches above the floor level in order to comply.

This proposal addresses unique designs or systems not anticipated in the code. Further, this proposal is consistent with the upper bounds permitted by another national code (NFPA 101 Life Safety Code).

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
Will not increase time or expense in its enforcement.

Impact to building and property owners relative to cost of compliance with code
Will not increase the cost of construction.

Impact to industry relative to the cost of compliance with code
Will not increase the cost of construction.

Impact to small business relative to the cost of compliance with code
Will not increase the cost of construction.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
The proposal provides for more flexibility in how to meet the requirements for floor level exit signs, and provides consistency with the NFPA 101, Life Safety Code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
The proposal provides for more flexibility in how to meet the requirements for floor level exit signs, and provides consistency with the NFPA 101, Life Safety Code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
The proposal provides for more flexibility in how to meet the requirements for floor level exit signs, and provides consistency with the NFPA 101, Life Safety Code.

Does not degrade the effectiveness of the code
The proposal provides for more flexibility in how to meet the requirements for floor level exit signs, and provides consistency with the NFPA 101, Life Safety Code.

2nd Comment Period
Proponent: Michael Savage
Submitted: 5/22/2019
Attachments: No

Comment:
I agree with the proposed revision.
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
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</table>

**Comment:**

I agree with this modification.
1013.2 **Floor-level exit signs in Group R-1.** Where exit signs are required in Group R-1 occupancies by Section 1013.1, additional low-level exit signs shall be provided in all areas serving guest rooms in Group R-1 occupancies and shall comply with Section 1013.5.

The bottom of the sign shall be not less than 10 inches (254 mm) nor more than 42 18 inches (305455 mm) above the floor level. The sign shall be flush mounted to the door or wall. Where mounted on the wall, the edge of the sign shall be within 4 inches (102 mm) of the door frame on the latch side.
Meant to coordinate with recent revisions to accessibility requirements.

The intent is coordination with the accessibility standards for tactile exit signage. The point of the tactile exit signage is to let a visually impaired person know what door they should enter to exit the building. When a stairway is accessed through an area of refuge, this signage is appropriate. Where the area of refuge is at the front of an elevator with standby power, this is not appropriate. Many lobbies have double doors with hold open devices, so there is also the question about where would be the correct location for this signage. This change in language will effectively not require the tactile exit signage at an elevator lobby.

Impact to local entity relative to enforcement of code
- There will be no impact.

Impact to building and property owners relative to cost of compliance with code
- Will not increase the cost of construction.
- This is a possible reduction in signage.

Impact to industry relative to the cost of compliance with code
- Will not increase the cost of construction.
- This is a possible reduction in signage.

Impact to small business relative to the cost of compliance with code
- Will not increase the cost of construction.
- This is a possible reduction in signage.

Has a reasonable and substantial connection with the health, safety, and welfare of the general public
- Will possibly reduce the amount of required signage.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
- Will possibly reduce the amount of required signage.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
- Will possibly reduce the amount of required signage.

Does not degrade the effectiveness of the code
- Will possibly reduce the amount of required signage, but will not degrade the effectiveness of the code.

Comment:
I agree with this modification.
1013.4 Raised character and braille exit signs. A sign stating EXIT in visual characters, raised characters and braille and complying with the *Florida Building Code, Accessibility* shall be provided adjacent to each door to an area of refuge providing direct access to a stairway, an exterior area for assisted rescue, an exit stairway or ramp, an exit passageway and the exit discharge.
## Comments

### General Comments

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Michael Savage</th>
<th>Submitted</th>
<th>5/22/2019</th>
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### Alternate Language

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<th>Proponent</th>
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</table>
1015.3 Height.

Required guards shall be not less than 42 inches (1067 mm) high, measured vertically as follows:
1. From the adjacent walking surfaces.
2. On stairways and stepped aisles, from the line connecting the leading edges of the tread nosings.
3. On ramps and ramped aisles, from the ramp surface at the guard.

Exceptions:
1. For occupancies in Group R-3 not more than three stories above grade in height and within individual dwelling units in occupancies in Group R-2 not more than three stories above grade in height with separate means of egress, required guards shall be not less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or adjacent fixed seating.
2. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
3. For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.
4. The guard height in assembly seating areas shall comply with Section 1029.16 as applicable.
5. Along alternating tread devices and ships ladders, guards where the top rail also serves as a handrail shall have height not less than 30 inches (762 mm) and not more than 34 inches (864 mm), measured vertically from the leading edge of the device tread nosing.
**F8347**

**Section:** 1015.6  
**Chapter:** 10  
**Proponent:** Ann Russo  
**Affects HVHZ:** No  
**TAC Recommendation:** No Affirmative Recommendation  
**Commission Action:** Pending Review

### Comments

**General Comments:** Yes  
**Alternate Language:** No

**Related Modifications:**  
FBC Section 1015.7 and FMC Section 304.11

**Summary of Modification:**  
Modifies requirements for fall arrest anchorage for steep roofs.

**Rationale:**  
Section 306.5.1 of the FMC requires work platforms with guards for equipment and appliances installed on roofs with a slope 3 in 12 and greater, thus, the exception to Section 304.11 appears to apply only to roofs that are flat and up to 2 in 12 slope. The problem derives from the language referring to placement of anchors along hip or ridge lines and along roof edges. This language is not necessary for the application of the exception. Each building roof system and the equipment upon that roof system that might require access will be different and the anchors needed along with their locations will differ as well. As presently worded there has been some confusion on application and the location requirements spaced every ten feet require unnecessary expense. This proposal eliminates confusion by deleting the unnecessary language leaving the application of the referenced standard to be applied on a case by case basis to fit the specific activities that may occur on the individual roof.

There is another change from this committee to split FMC 304.11 to make it consistent with the FRC that copies this exception. It is the intent of this committee for these changes to be coordinated.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**  
Will not affect code enforcement.

**Impact to building and property owners relative to cost of compliance with code**  
Will not increase the cost of construction.  
This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

**Impact to industry relative to the cost of compliance with code**  
Will not increase the cost of construction.  
This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

**Impact to small business relative to the cost of compliance with code**  
Will not increase the cost of construction.  
This proposal will decrease the cost of construction in those cases where fall arrest anchorage devices would be installed instead of guards by providing increased flexibility in locating the anchors.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public  
  Coordinates and clarifies guarding/fall arrest anchorage requirements.

- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction  
  Coordinates and clarifies guarding/fall arrest anchorage requirements.

- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities  
  Will have no effect on materials or methods.

- Does not degrade the effectiveness of the code  
  Coordinates and clarifies guarding/fall arrest anchorage requirements.

### 2nd Comment Period

**Proponent:** Michael Savage  
**Submitted:** 5/22/2019  
**Attachments:** No

**Comment:**  
I agree with the proposed revision.
<table>
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<tr>
<th>Proponent</th>
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<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

**Comment:**
I agree with this modification.
1015.6 Mechanical equipment, systems and devices. Guards shall be provided where various components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface installed.

1015.7 Roof access. Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface installed.

Florida Mechanical Code
304.11 Guards. Guards shall be provided where various components that require service and roof hatch openings are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof, or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of components that require service. The top of the guard shall be located not less than 42 inches (1067 mm) above the elevated surface adjacent to the guard. The guard shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the Florida Building Code, Building.

Exception: Guards are not required where permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z359.1 are affixed for use during the entire lifetime of the roof covering. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048 mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from roof edges and the open sides of walking surfaces installed.
The definition of "common path of egress travel" was recently modified. The intent of the change was to clarify the common path of egress travel and exit access travel distance are measured in the same way. The terminus of each is different, but the route is the same.

If applied literally, it could be interpreted such that the common path of egress travel need be considered from only one point (the most remote) on a given story. Obviously, all potential paths of egress travel need to be considered when establishing occupant remoteness for the purposes of determining multiple exit or exit access doorway requirements. Clarifying that the path of travel originating from any room, area or space should be evaluated when determining common paths of egress travel will eliminate literal interpretations of the current definition. Additionally, the reference to a single story has been eliminated. Section 1006.3 allows for access to exits at an adjacent level. Common path of egress travel requirements could potentially apply to a multi-level design condition. For purposes of consistency, Section 1017.3 has been modified to indicate that exit access travel distance is measured from all remote points within the means of egress system. The "story" approach is a little simplistic and does not represent the level of detail necessary to properly design or analyze a means of egress system. Additionally, when accessing an exit at an adjacent level, the exit access travel distance at both stories, to include the exit access stairways, is calculated. The single story reference could be misleading. Approval of this modification will clarify the definition of common path of egress travel for the benefit of all users.

Impact to local entity relative to enforcement of code
Will have no effect. A simple clarification of current requirements.

Impact to building and property owners relative to cost of compliance with code
Will not increase the cost of construction.
Provisions simply provide clarification of current requirements.

Impact to industry relative to the cost of compliance with code
Will not increase the cost of construction.
Provisions simply provide clarification of current requirements.

Impact to small business relative to the cost of compliance with code
Will not increase the cost of construction.
Provisions simply provide clarification of current requirements.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
A simple clarification of current requirements.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
A simple clarification of current requirements.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
A simple clarification of current requirements.

Does not degrade the effectiveness of the code
A simple clarification of current requirements.

I agree with the proposed revision.
<table>
<thead>
<tr>
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<th>Harold Barrineau</th>
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<th>5/26/2019</th>
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</tr>
</thead>
</table>

Comment: I agree with this modification.
SECTION 202 DEFINITIONS

COMMON PATH OF EGRESS TRAVEL. That portion of the exit access travel distance measured from the most remote point within a story of each room, area or space to that point where the occupants have separate and distinct access to two exits or exit access doorways.

1017.3 Measurement. Exit access travel distance shall be measured from the most remote point within a story of each room, area or space along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit. Exception: In open parking garages, exit access travel distance is permitted to be measured to the closest riser of an exit access stairway or the closest slope of an exit access ramp.
This proposal, in 1406.3, seeks to allow plastic composites meeting the specified criteria to be used in the same applications where untreated wood may be used in balcony construction. Similar in 2612.5.

Rationale

In Section 1406.3, plastic composites which comply with ASTM D7032 and Section 2612.3 are required to be tested to ASTM E84 and achieve a flame spread index of not more than 200. While most untreated wood has an ASTM E84 flame spread index below 200, a few species of untreated wood has a FSI of potentially over 200 (Ponderosa Pine, Northern White Pine), and a few species have FSI approaching 200 (Southern Pine, Poplar). Source: http://www.fpl.fs.fed.us/documnts/fplgtr/fplgtr190/chapter_18.pdf. This proposal, in 1406.3, seeks to allow plastic composites meeting the specified criteria to be used in the same applications where untreated wood may be used in balcony construction.

Regarding Section 2612.5: In the IBC, there are several specific exterior applications where combustible construction is allowed, or where noncombustible construction is not required, with buildings of other than Type VB. This proposal seeks to allow plastic composites which comply with the requirements of Section 2612 in those applications. IBC Section 1403.6 Balconies, is one of those applications. IBC 3104.3 Pedestrian walkways, is another.

Cost impact: Will not increase the cost of construction. No mandatory cost increase. This proposal would allow additional materials (plastic composites) to be used in several specific applications. It may be noted plastic composites generally cost more than wood but the use of plastic composites is at the discretion of the building owner.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code
Provides clear requirements for use of plastic composites where other combustible materials are allowed in Type III, IV, and V construction. Should be no difficulties with enforcement of the code.

Impact to building and property owners relative to cost of compliance with code
Will not increase the cost of construction or code compliance. This proposal allows additional materials (plastic composites) to be used in several specific applications. Plastic composites generally cost more than wood but the use of plastic composites is at the discretion of the building owner.

Impact to industry relative to the cost of compliance with code
Will not increase the cost of construction or code compliance. This proposal allows additional materials (plastic composites) to be used in several specific applications. Plastic composites generally cost more than wood but the use of plastic composites is at the discretion of the building owner.

Impact to small business relative to the cost of compliance with code
Will not increase the cost of construction or code compliance. This proposal allows additional materials (plastic composites) to be used in several specific applications. Plastic composites generally cost more than wood but the use of plastic composites is at the discretion of the building owner.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Does not weaken code requirements regarding use of combustible materials.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Improves the code by including appropriate requirements for material desired to be used.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Does not discriminate. Requires compliance to an industry standard currently referenced in the code.

Does not degrade the effectiveness of the code
Improves the effectiveness of the code.
We ask the TAC to reconsider this proposal for these reasons: 1. This proposal would permit plastic composite guard components (which comply with ASTM D7032) only where untreated wood guard components are currently permitted. Untreated wood and plastic composite guard components (which comply with ASTM D7032) have similar combustibility characteristics per ASTM E84 testing. 2. The proposed revised language in 2612.5 fixes a formatting error with the original proposal (the word "guard" in the original proposal should not have been shown as stricken / deleted). 3. Consistency with the 2018 IBC facilitates broader options for Florida builders and building owners, and similar construction methods with other states. 4. Regarding requiring plastic composite guard components to comply with ASTM D7032, currently the FBC requires plastic composite guards to comply with ASTM D7032 per Section 2612, and requires a flame spread index not exceeding 200 when tested in accordance with ASTM E84. Untreated wood is not required to undergo an ASTM E84 test.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

Should be minimal, if any.

**Impact to building and property owners relative to cost of compliance with code**

No required cost increase. Proposal would allow more choices for building and property owners regarding guard components on exterior decks and balconies.

**Impact to industry relative to the cost of compliance with code**

No impact. This proposal is consistent with nationwide practices, per the 2018 IBC.

**Impact to Small Business relative to the cost of compliance with code**

Will not increase the cost of construction or code compliance. This proposal allows additional materials (plastic composites) to be used in several specific applications. Plastic composites generally cost more than wood but the use of plastic composites is at the discretion of the building owner.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

No negative implications identified.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Allows wider choice of equivalently combustible products for guards on exterior decks and balconies.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Allows a wider choice of material options.

**Does not degrade the effectiveness of the code**

Does not.
No revisions to the original proposed modification in Section 1406.3:

1406.3 Balconies and similar projections.

Balconies and similar projections of combustible construction other than fire-retardant-treated wood shall be fire-resistance rated where required by Table 601 for floor construction or shall be of Type IV construction in accordance with Section 602.4. The aggregate length of the projections shall not exceed 50 percent of the building's perimeter on each floor.

Exceptions:

1. On buildings of Type I and II construction, three stories or less above grade plane, fire-retardant-treated wood shall be permitted for balconies, porches, decks and exterior stairways not used as required exits.

2. Untreated wood, and plastic composites which comply with ASTM D7032 and Section 2612, is are permitted for pickets and rails or similar guardrail devices that are limited to 42 inches (1067 mm) in height.

3. Balconies and similar projections on buildings of Type III, IV and V construction shall be permitted to be of Type V construction, and shall not be required to have a fire resistance rating where sprinkler protection is extended to these areas.

4. Where sprinkler protection is extended to the balcony areas, the aggregate length of the balcony on each floor shall not be limited.

Replace the proposed modification to Section 2612.5 with the following:

2612.5 Construction requirements.

Plastic composites meeting the requirements of Section 2612 shall be permitted to be used as exterior deck boards, stair treads, handrails and guards in buildings of Type VB where combustible construction is permitted.
Revise as follows:

1406.3 Balconies and similar projections.

1406.3 Balconies and similar projections. Balconies and similar projections of combustible construction other than fire-retardant-treated wood shall be fire-resistance rated where required by Table 601 for floor construction or shall be of Type IV construction in accordance with Section 602.4. The aggregate length of the projections shall not exceed 50 percent of the building’s perimeter on each floor.

Exceptions:

1. On buildings of Type I and II construction, three stories or less above grade plane, fire-retardant-treated wood shall be permitted for balconies, porches, decks and exterior stairways not used as required exits.

2. Untreated wood, and plastic composites which comply with ASTM D7032 and Section 2612, are is permitted for pickets and rails or similar guardrail devices that are limited to 42 inches (1067 mm) in height.

3. Balconies and similar projections on buildings of Type III, IV and V construction shall be permitted to be of Type V construction, and shall not be required to have a fire-resistance rating where sprinkler protection is extended to these areas.

4. Where sprinkler protection is extended to the balcony areas, the aggregate length of the balcony on each floor shall not be limited.

SECTION 2612

PLASTIC COMPOSITES

2612.5 Construction requirements. Plastic composites meeting the requirements of Section 2612 shall be permitted to be used as exterior deck boards, stair treads, handrails and guards in buildings of Type VB where combustible construction is permitted.
### Comments

#### General Comments
- Yes

#### Alternate Language
- No

#### Related Modifications
- FEBC Chapter 4- 403.13 Carbon monoxide alarms
- FEBC Chapter 8-804.4.4 Carbon monoxide alarms.
- FEBC Chapter 11 - 1105.1 Carbon monoxide alarms in existing portions of a building

#### Summary of Modification
- FBC Section 908.8 requires Carbon Monoxide Alarms in Additions, this will place the proper reference in the FEBC.

#### Rationale
- FBC Section 908.8 requires Carbon Monoxide Alarms in Additions, this will place the proper reference in the FEBC.

#### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  - No impact to local entity as this is already a code requirement

- **Impact to building and property owners relative to cost of compliance with code**
  - No impact to building and property owners as this is already a code requirement

- **Impact to industry relative to the cost of compliance with code**
  - No impact to industry as this is already a code requirement

- **Impact to small business relative to the cost of compliance with code**
  - No impact to small business as this is already a code requirement

#### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - Improves the health, safety, and welfare of the general public by adding a missing reference to Carbon Monoxide Alarms in FEBC.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - Improves the code by adding a missing reference to Carbon Monoxide Alarms in FEBC.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - Does not discriminate against materials, products, methods, or systems of construction, this is a current code requirement that does not limit materials, products, methods, or systems of construction that comply with this requirement.

- **Does not degrade the effectiveness of the code**
  - Increases the effectiveness of code by addition a missing reference to providing Carbon Monoxide Alarms in FEBC

### 2nd Comment Period

#### Proponent
- ashley ong

#### Submitted
- 5/13/2019

#### Attachments
- No

#### Comment:
- If this is in the Statute then it should be in the code. The provisions for carbon monoxide alarms in existing buildings should be found in FBC Existing Building. Please support this proposal.
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<tr>
<th>Proponent</th>
<th>Borrone Jeanette</th>
<th>Submitted</th>
<th>5/21/2019</th>
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New section 402.6

402.6 Carbon monoxide alarms in existing portions of a building. Where an addition is made to a building or structure of a Group I-1, I-2, I-4 or R occupancy, the existing building shall be provided with carbon monoxide alarms in accordance with Section 908.8 of the Florida Building Code or Section R315 of the Florida Residential Code, as applicable.
This proposed modification adds CO alarm requirement to the prescriptive compliance method on the FBC-Existing Building.

**Rationale**
This proposed modification adds requirements for CO alarms in the Florida Existing Building Code to match those already required in the FBC-R and FFPC. This will harmonize the FEBC with the 2018 IEBC.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**
This proposed modification will not impact the local entity relative to code enforcement.

**Impact to building and property owners relative to cost of compliance with code**
This proposed modification will not change the cost of compliance to building and property owners.

**Impact to industry relative to the cost of compliance with code**
This proposed modification will not change the cost of compliance or impact industry.

**Impact to small business relative to the cost of compliance with code**
This proposed modification will not change the cost of compliance or impact small business.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
This proposed modification is directly connected to the health, safety, and welfare of the general public by ensuring CO alarms get installed when dealing with exiting building alterations.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
This proposed modification improves and strengthens the code.

**Does not discriminate against materials, products, methods, or systems of construction**
This proposed modification does not discriminate against materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**
This proposed modification enhances the effectiveness of the code.
Alternate Language

2nd Comment Period

**7355-A1**

Proponent: Bryan Holland  
Submitted: 5/21/2019  
Attachments: Yes

**Rationale**

This alternative language comment corrects the original proposed modification that is in conflict with the F.S. 553.885. This new language is only located in the "additions" sections of the FBC-Existing and simply adds a pointer to the applicable sections of the FBC-B, FBC-R, or FFPC, as applicable. This does not add any new requirements above what is currently required by F.S 553.885, FBC-B, or FBC-R.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

This alternative language comment will have no impact on the local entity as this requirement is already in F.S. and in the FBC-B and FBC-R, as applicable.

**Impact to building and property owners relative to cost of compliance with code**

This alternative language comment has no impact on the building owner as this requirement is already in F.S. and in the FBC-B and FBC-R, as applicable.

**Impact to industry relative to the cost of compliance with code**

This alternative language comment has no impact on industry as this requirement is already in F.S. and in the FBC-B and FBC-R, as applicable.

**Impact to Small Business relative to the cost of compliance with code**

This proposed modification will not change the cost of compliance or impact small business.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This alternative language comment ensures the health, safety, and welfare of the public by correctly placing CO protection rules in the applicable sections of the FBC-Existing.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

This alternative language comment improves the by correctly placing CO protection rules in the applicable sections of the FBC-Existing.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

This alternative language comment does not discriminate against any materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**

This alternative language comment enhances the effectiveness of the code.

---

2nd Comment Period

**F7355-G2**

Proponent: Jennifer Privateer  
Submitted: 5/22/2019  
Attachments: No

**Comment:**

I agree

---

2nd Comment Period

**F7355-G3**

Proponent: Harold Barrineau  
Submitted: 5/25/2019  
Attachments: No

**Comment:**

I agree with the alternate language
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<th>Mo Madani</th>
<th>Submitted</th>
<th>1/27/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

**Comment:**

Carbon monoxide provisions of the 2017 FBC are consistent with section 553.885 FS.
402.6 Carbon monoxide alarms in existing portions of a building. Where an addition is made to a building or structure of Group I-1, I-2, I-4 or R occupancy, the existing building shall be provided with carbon monoxide alarms in accordance with the Florida Fire Prevention Code or Section R315 of the Florida Building Code-Residential, as applicable.

Exceptions:

1. Work involving the exterior surfaces of buildings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of porches or decks.

2. Installation, alteration or repairs of plumbing or mechanical systems, other than fuel-burning appliances.

402.6 Carbon monoxide protection. An addition to an existing building shall be equipped with carbon monoxide alarms in accordance with the Florida Fire Prevention Code, Section 908.8 of the Florida Building Code-Building, or Section R315 of the Florida Building Code-Residential, as applicable.

SECTION 1108
CARBON MONOXIDE PROTECTION

1108.1 Carbon monoxide protection. An addition to an existing building shall be equipped with carbon monoxide alarms in accordance with the Florida Fire Prevention Code, Section 908.8 of the Florida Building Code-Building, or Section R315 of the Florida Building Code-Residential, as applicable.
402.6 Carbon monoxide alarms in existing portions of a building. Where an addition is made to a building or structure of Group I-1, I-2, I-4 or R occupancy, the existing building shall be provided with carbon monoxide alarms in accordance with the Florida Fire Prevention Code or Section R315 of the Florida Building Code-Residential, as applicable.

Exceptions:

1. Work involving the exterior surfaces of buildings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of porches or decks.

2. Installation, alteration or repairs of plumbing or mechanical systems, other than fuel-burning appliances.
This proposed modification adds CO alarm requirement to the prescriptive compliance method on the FBC-Existing Building.

Rationale
This proposed modification adds requirements for CO alarms in the Florida Existing Building Code to match those already required in the FBC-R and FFPC. This will harmonize the FEBC with the 2018 IEBC.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
This proposed modification will not impact the local entity relative to code enforcement.
Impact to building and property owners relative to cost of compliance with code
This proposed modification will not change the cost of compliance to building and property owners.
Impact to industry relative to the cost of compliance with code
This proposed modification will not change the cost of compliance or impact industry.
Impact to small business relative to the cost of compliance with code
This proposed modification will not change the cost of compliance or impact small business.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This proposed modification is directly connected to the health, safety, and welfare of the general public.
Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This proposed modification improves and strengthens the code.
Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
This proposed modification does not discriminate against materials, products, methods, or systems of construction.
Does not degrade the effectiveness of the code
This proposed modification enhances the effectiveness of the code.

2nd Comment Period
Proponent: Jennifer Privateer
Submitted: 5/22/2019
Attachments: No

Comment:
agree

2nd Comment Period
Proponent: Harold Barrineau
Submitted: 5/25/2019
Attachments: No

Comment:
I agree with this modification
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Mo Madani</th>
<th>Submitted</th>
<th>1/27/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

**Comment:**
Carbon monoxide provisions of the 2017 FBC are consistent with section 553.885 FS.
403.13 Carbon monoxide alarms. Carbon monoxide alarms shall be provided to protect sleeping units and dwelling units in Group I-1, I-2, I-4 and R occupancies in accordance with the Florida Fire Prevention Code or Section R315 of the Florida Building Code-Residential, as applicable.

Exceptions:

1. Work involving the exterior surfaces of buildings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of porches or decks.

2. Installation, alteration or repairs of plumbing or mechanical systems, other than fuel-burning appliances.
**Comments**

**General Comments** | Yes
---|---
**Alternate Language** | No

**Related Modifications**
- FEBC Ch 4-403.13 Carbon monoxide alarms
- FEBC Ch 8-804.4.4 Carbon monoxide alarms
- FEBC Ch 11-1105.1 Carbon monoxide alarms in existing portions of a building

**Summary of Modification**
FBC Section 908.8 requires Carbon monoxide alarms in Additions, this will place the proper reference in the FEBC

**Rationale**
Section 908.8 contains requirements for installing carbon monoxide alarms in existing occupancies; however, those requirements are currently not reflected in the FEBC.
This proposal corrects this oversight with the new proposed code sections.
This proposal will provide consistency between the FBC, FRC and the FEBC with regard to the installation and requirements of carbon monoxide alarms.

**Fiscal Impact Statement**
- Impact to local entity relative to enforcement of code
  - no impact to local entity as this is already a code requirement.
- Impact to building and property owners relative to cost of compliance with code
  - no impact to building and property as this is already a code requirement.
- Impact to industry relative to the cost of compliance with code
  - no impact to industry as this is already a code requirement.
- Impact to small business relative to the cost of compliance with code
  - no impact to small business as this is already a code requirement.

**Requirements**
- Has a reasonable and substantial connection with the health, safety, and welfare of the general public
  - Improves the health, safety, and welfare of the general public by adding a missing reference to carbon monoxide alarms in the FEBC.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
  - Improves the code by adding a missing reference to carbon monoxide alarms in the FEBC.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
  - Does not discriminate against materials, products, methods, or systems of construction, this is a current code requirement that does not limit the materials, products, methods, or systems of construction that comply with this requirement.
- Does not degrade the effectiveness of the code
  - Increases the effectiveness of the code by adding a missing reference to carbon monoxide alarms in the FEBC.

---

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Borrone Jeanette</th>
<th>Submitted</th>
<th>5/21/2019</th>
<th>Attachments</th>
<th>No</th>
</tr>
</thead>
</table>

**Comment:**
I agree with the proposed revision.

---

### 1st Comment Period History

**Proponent** | Mo Madani | Submitted | 1/27/2019 | Attachments | No |

**Comment:**
Carbon monoxide provisions of the 2017 FBC are consistent with section 553.885 FS.
402.6 Carbon monoxide alarms in existing portions of a building. Where an addition is made to a building or structure of a Group I-1, I-2, I-4 or R occupancy, the existing building shall be provided with carbon monoxide alarms in accordance with Section 908.8 of the Florida Building Code or Section R315 of the Florida Residential Code, as applicable.
## Comments

<table>
<thead>
<tr>
<th>General Comments</th>
<th>Alternate Language</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
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</table>

### Related Modifications

Sections 406.3, 702.4, 702.5

### Summary of Modification

406.2 Replacement window opening control devices. 406.3 Replacement window emergency escape and rescue openings. 702.4 Window opening control devices on replacement windows. 702.5 Replacement window emergency escape and rescue openings.

### Rationale

The intent of this proposal is for consistent terminology in the FBC Existing between Chapter 4 and 7 when dealing with replacement windows. The added language also clarifies that this applies to windows in FBC, Residential dwellings.

### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  - No impact to local entity relative to enforcement.
- **Impact to building and property owners relative to cost of compliance with code**
  - Will not increase the cost of construction.
  - This proposal will not increase the cost of construction because it is simply coordinating current options in the IEBC.
- **Impact to industry relative to the cost of compliance with code**
  - Will not increase the cost of construction.
  - This proposal will not increase the cost of construction because it is simply coordinating current options in the IEBC.
- **Impact to small business relative to the cost of compliance with code**
  - Will not increase the cost of construction.
  - This proposal will not increase the cost of construction because it is simply coordinating current options in the IEBC.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - Improves the health, safety and welfare of the general public with clarification of current options.
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - Strengthens or improves the code by coordinating current options in the FBC, Existing.
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - This proposal does not discriminate against materials, products, methods or systems of construction of demonstrated capabilities.
- **Does not degrade the effectiveness of the code**
  - This proposal does not degrade the effectiveness of the code.

### 2nd Comment Period

**F8043-G1**

<table>
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<tr>
<th>Proponent</th>
<th>Robert Couch</th>
<th>Submitted</th>
<th>5/13/2019</th>
<th>Attachments</th>
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<tbody>
<tr>
<td>Comment:</td>
<td>I believe this modification will improve the FBC</td>
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**F8043-G2**

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<th>Robert Couch</th>
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<th>5/13/2019</th>
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<tbody>
<tr>
<td>Comment:</td>
<td>This modification is good</td>
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<td></td>
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<tr>
<td>Proponent</td>
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<tr>
<td>Michael Savage</td>
<td>5/14/2019</td>
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<td>Jennifer Privateer</td>
<td>5/20/2019</td>
<td>No</td>
<td></td>
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</tr>
</tbody>
</table>

Comment:
- I agree with the proposed modification.
- I agree with this.
Revise as follows:

**406.2 Replacement window opening control devices.**

In Group R-2 or R-3 buildings containing dwelling units, and one-and two-family dwellings and townhouses regulated by the Florida Building Code, Residential, 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. One of the following applies:

   3.1 In Group R-2 or R-3 building containing dwelling units, the top of the sill of the window opening is at a height less than 36 inches (915 mm) above the finished floor; or

   3.2 In one-and two-family dwellings and townhouses regulated by the Florida Building Code, Residential, the top sill of the window opening is at a height less than 24 inches (610 mm) above the finished floor;

4. The window will permit openings that will allow passage of a 4-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 1029.2 of the International Building Code.

Exceptions:

1. Operable windows where the top of the sill of the window opening is located more than 75 feet (22860 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 2090.

2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F 2090.

**406.3 Replacement window emergency escape and rescue openings.**

Where windows are required to provide emergency escape and rescue openings in Group R-2 and R-3 occupancies and one-and two-family dwellings and townhouses regulated by the Florida Building Code, Residential, replacement windows shall be exempt from the requirements of Sections 1030.2, 1030.3 and 1030.5 of the Florida Building Code, Building and Sections R310.2.1 and R310.2.3 of the Florida Building Code, Residential 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.
Window opening control devices complying with ASTM F 2090 shall be permitted for use on windows required to provide emergency escape and rescue openings.

702.4 Window opening control devices on replacement windows.

In Group R-2 or R-3 buildings containing dwelling units and one-and two-family dwellings and townhouses regulated by the Florida Building Code, Residential, 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. One of the following applies:
   3.1 In Group R-2 or R-3 buildings containing dwelling units, the top of the sill of the window opening is at a height less than 36 inches (915 mm) above the finished floor; or
   3.2 In one-and two-family dwellings and town-houses regulated by the Florida Building Code, Residential, the top sill of the window opening is at a height less than 24 inches (610 mm) above the finished floor;

4. The window will permit openings that will allow passage of a 4-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 1030.2 of the Florida Building Code, Building.

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.

702.5 Emergency Replacement window emergency escape and rescue openings.

Where windows are required to provide emergency escape and rescue openings in Group R-2 and R-3 occupancies and one-and two-family dwellings and townhouses regulated by the Florida Building Code, Residential, replacement windows shall be exempt from the requirements of Sections 1030.2, 1030.3 and 1030.5 of the Florida Building Code, Building and Sections R310.21 and R310.2.3 of the Florida Building Code, Residential accordingly, 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.
Window opening control devices complying with ASTM F 2090 shall be permitted for use on windows required to provide emergency escape and rescue openings.
The modification removes provisions that were already moved to Chapter 3 in the last cycle. When they were moved, however, the remaining duplicate provisions addressed by this proposal could not be deleted because of Group assignments. Sections 401.2.1, 401.2.2, 602.1, and 602.2 are now in Sections 302.3 and 302.4. Section 401.2.3 is now in Sections 301.1.4.1 and 301.1.4.2.

If 401.2.1 - 401.2.3 are deleted as proposed, the balance of 401.2 can be deleted as well. Section 403.1 is revised accordingly to cite the existing sections that cover new and existing materials. If any existing material is moved, no impact to small business relative to the cost of compliance with code.

In Section 404.1, the two references to Section 401.2 are removed and not replaced because they are actually erroneous references that should have been removed in a previous cycle. Their removal here is at most editorial, but could even be construed as errata. The reference to 401.2 used to match a provision in FBC Chapter 34 that referred to Section 3401.2 Maintenance, but that section no longer exists in the FEBC in any of its compliance methods. The first instance could be revised to refer instead to 302.4, but it is frankly not needed, as 302.4 applies even without a direct reference. The second instance is clearly a mistaken reference to the old maintenance provision, not a reference to the current provisions about new and existing materials.

**Fiscal Impact Statement**
- **Impact to local entity relative to enforcement of code**: No impact to local entity as this is already a code requirement
- **Impact to building and property owners relative to cost of compliance with code**: No impact to building and property owners as this is already a code requirement
- **Impact to industry relative to the cost of compliance with code**: No impact to building and property owners as this is already a code requirement
- **Impact to small business relative to the cost of compliance with code**: No impact to small businesses as this is already a code requirement

**Requirements**
- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**: Improves the health, safety, and welfare of the general public by cleaning up duplicate language
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**: Improves the code by cleaning up duplicate language
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**: Does not discriminate against material, products, methods, or systems of construction of demonstrated capabilities, this is a current code requirement that does not limit material, products, methods, or systems of construction
- **Does not degrade the effectiveness of the code**: Increases the effectiveness of the code by cleaning up duplicate language

2nd Comment Period
- **Proponent**: Borrone Jeanette
- **Submitted**: 5/21/2019
- **Attachments**: No

Comment:
- I agree with the proposed revision to clean up the code
<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
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<tbody>
<tr>
<td>Comment:</td>
<td>I agree with this modification.</td>
<td></td>
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</tr>
</tbody>
</table>
Delete without substitution:

401.2 Building materials and systems. Building materials and systems shall comply with the requirements of this section.

401.2.1 Existing materials. Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the building official to be unsafe per Section 115.

401.2.2 New and replacement materials. Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for repairs and alterations, provided no hazard to life, health or property is created. Hazardous materials shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.

401.2.3 Existing seismic force resisting systems. Where the existing seismic force resisting system is a type that can be designated ordinary, values of R, 0 and C for the existing seismic force resisting system shall be those specified by the International Building Code 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.

Revise as follows:

403.1 General. Except as provided by Section 401.2, Sections 302.3, 302.4, or this section, alterations to any building or structure shall comply with the requirements of the Florida Building Code for new construction. Alterations shall be such that the existing building or structure is no less conforming to the provisions of the Florida Building Code than the existing building or structure was prior to the alteration.

Exceptions:

1. An existing stairway shall not be required to comply with the requirements of Section 1011 of the Florida Building Code 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 Florida Building Code shall not be required to comply with the requirements of Section 1014.6 of the Florida Building Code regarding full extension of the handrails where such extensions would be hazardous due to plan configuration.

404.1 General. Buildings and structures, and parts thereof, shall be repaired in compliance with Sections 401.2 and 404 this section. 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 requirements for alterations in this chapter. Routine maintenance required by Section 401.2 Maintenance, ordinary repairs exempt from permit in accordance with Section 105.2, and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs in this section.

Delete without substitution:

602.1 Existing building materials. Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the code official to render the building or structure unsafe or dangerous as defined in Chapter 2. 602.2 New and replacement materials. Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for repairs and alterations, provided no dangerous or unsafe condition, as defined in Chapter 2, is created. 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.
Summary of Modification
Deletes the "Existing [Building] Materials" and "New and Replacement Materials" sections from Chapters 4 and 6 because they are already inserted in chapter 3.

Rationale
This Modification deletes the "Existing [Building] Materials" and "New and Replacement Materials" sections from Chapters 4 and 6 because they are already inserted in chapter 3. The content in Chapter 3 applies to all methods in the FEBC so deleting these sections in the other method chapters reduces redundancy.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code
No impact to local entity as this is already a code requirement

Impact to building and property owners relative to cost of compliance with code
No impact to building and property owners as this is already a code requirement

Impact to industry relative to the cost of compliance with code
No impact to industry as this is already a code requirement

Impact to small business relative to the cost of compliance with code
No impact to small businesses as this is already a code requirement

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public
Improves the health, safety, and welfare of the general public by removing wording that already is in Chapter 3

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Improves the code by removing wording that already is in Chapter 3

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
Improves the health, safety, and welfare of the general public by removing wording that already is in Chapter 3

Does not degrade the effectiveness of the code
Improves the effectiveness of the code by removing wording that already is in Chapter 3

2nd Comment Period

F8232-G1
Proponent Borrone Jeanette Submitted 5/21/2019
Comment: I agree with the proposed revision.

F8232-G2
Proponent Harold Barrineau Submitted 5/26/2019
Comment: I agree with this modification.
2015 International Existing Building Code

Delete without substitution:

401.2.1 Existing materials. Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the building official to be unsafe per Section 115.

401.2.2 New and replacement materials. Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for repairs and alterations, provided no hazard to life, health or property is created. Hazardous materials shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.
### Summary of Modification

This proposed modification adds CO alarm requirement to the “Level 2 Alteration” requirements of the FBC-Existing Building.

### Rationale

This proposed modification adds requirements for CO alarms in the Florida Existing Building Code to match those already required in the FBC-R and FFPC. This will harmonize the FEBC with the 2018 IEBC.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

This proposed modification will not impact the local entity relative to code enforcement.

**Impact to building and property owners relative to cost of compliance with code**

This proposed modification will not change the cost of compliance to building and property owners.

**Impact to industry relative to the cost of compliance with code**

This proposed modification will not change the cost of compliance or impact industry.

**Impact to small business relative to the cost of compliance with code**

This proposed modification will not change the cost of compliance or impact small business.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  This proposed modification is directly connected to the health, safety, and welfare of the general public.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  This proposed modification improves and strengthens the code.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  This proposed modification does not discriminate against materials, products, methods, or systems of construction.

- **Does not degrade the effectiveness of the code**
  
  This proposed modification enhances the effectiveness of the code.

### Alternate Language

**1st Comment Period History**

<table>
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<tr>
<th>Proponent</th>
<th>Bryan Holland</th>
<th>Submitted</th>
<th>1/8/2019</th>
<th>Attachments</th>
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</table>

**Rationale**

This comment adds requirements for CO alarms into Chapter 11 of the Florida Existing Building Code to match those already required in the FBC-R and FFPC. This will harmonize the FEBC with the 2018 IEBC. This proposed language was originally included in Mod F7359 which was lost in a system glitch.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

This comment will not impact the local entity relative to code enforcement.

**Impact to building and property owners relative to cost of compliance with code**

This comment will not change the cost of compliance to building and property owners.

**Impact to industry relative to the cost of compliance with code**

This comment will not change the cost of compliance or impact industry.

**Impact to Small Business relative to the cost of compliance with code**

This proposed modification will not change the cost of compliance or impact small business.

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  This comment is directly connected to the health, safety, and welfare of the general public.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  This comment improves and strengthens the code.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  This comment does not discriminate against materials, products, methods, or systems of construction.

- **Does not degrade the effectiveness of the code**
  
  This comment enhances the effectiveness of the code.
### 2nd Comment Period

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<td>Gregory Young</td>
<td>5/15/2019</td>
<td>No</td>
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Comment:
I support the alternative language for the proposed modification.

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<td>Jennifer Privateer</td>
<td>5/22/2019</td>
<td>No</td>
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Comment:
I agree

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<tr>
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<th>Submitted</th>
<th>Attachments</th>
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<tr>
<td>Harold Barrineau</td>
<td>5/25/2019</td>
<td>No</td>
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Comment:
I think this is a good modification.

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<th>Attachments</th>
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<tbody>
<tr>
<td>Robert Couch</td>
<td>5/26/2019</td>
<td>No</td>
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Comment:
This modification will improve safety

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### 1st Comment Period History

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<th>Proponent</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Mo Madani</td>
<td>1/27/2019</td>
<td>No</td>
</tr>
</tbody>
</table>

Comment:
Carbon monoxide provisions of the 2017 FBC are consistent with section 553.885 FS.
804.4.4 Carbon monoxide alarms. Any work area in Group I-1, I-2, I-4 and R occupancies shall be equipped with carbon monoxide alarms in accordance with the Florida Fire Prevention Code or Section R315 of the Florida Building Code-Residential, as applicable.

Exceptions:

1. Work involving the exterior surfaces of buildings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of porches or decks.

2. Installation, alteration or repairs of plumbing or mechanical systems, other than fuel-burning appliances.

SECTION 1108

CARBON MONOXIDE ALARMS IN GROUPS I-1, I-2, I-4 AND R

1108.1 Carbon monoxide alarms in existing portions of a building. Where an addition is made to a building or structure of a Group I-1, I-2, I-4 or R occupancy, the existing building shall be equipped with carbon monoxide alarms in accordance with the Florida Fire Prevention Code or Section R315 of the Florida Building Code-Residential, as applicable.
804.4.4 Carbon monoxide alarms. Any work area in Group I-1, I-2, I-4 and R occupancies shall be equipped with carbon monoxide alarms in accordance with the Florida Fire Prevention Code or Section R315 of the Florida Building Code-Residential, as applicable.

Exceptions:

1. Work involving the exterior surfaces of buildings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of porches or decks.

2. Installation, alteration or repairs of plumbing or mechanical systems, other than fuel-burning appliances.
### F8307 - 805.3 Number of exits.

**Rationale**

This proposal aligns the allowance of single exit buildings with the FBC Building. It would be inappropriate for the FBC Existing to be more restrictive than the FBC Building. The modification simply makes an editorial revision to Item 2.2 to be consistent with the terminology used in Item 2.1. The revision revises “shall not exceeds” to “does not exceed.”

**Fiscal Impact Statement**

- **Impact to local entity relative to enforcement of code**
  - This proposal does not impact local entity relative to enforcement.

- **Impact to building and property owners relative to cost of compliance with code**
  - Will not increase the cost of construction.
  - The code change proposal will not increase the cost of construction. The intent of the proposal is coordination and an update to new terminology. It is not intended to increase requirements.

- **Impact to industry relative to the cost of compliance with code**
  - Will not increase the cost of construction.
  - The code change proposal will not increase the cost of construction. The intent of the proposal is coordination and an update to new terminology. It is not intended to increase requirements.

- **Impact to small business relative to the cost of compliance with code**
  - Will not increase the cost of construction.
  - The code change proposal will not increase the cost of construction. The intent of the proposal is coordination and an update to new terminology. It is not intended to increase requirements.

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - This proposal improves the health, safety, and welfare of the general public.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - This proposal strengthens or improves the code.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - This proposal does not discriminate against materials, products, methods or systems of construction of demonstrated capabilities.

- **Does not degrade the effectiveness of the code**
  - This proposal does not degrade the effectiveness of the code.

## 2nd Comment Period

<table>
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<tr>
<th>Proponent</th>
<th>Robert Couch</th>
<th>Submitted</th>
<th>5/13/2019</th>
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<th>Michael Savage</th>
<th>Submitted</th>
<th>5/14/2019</th>
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<td><strong>Comment:</strong></td>
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<td>Jennifer Privateer</td>
<td>Submitted</td>
<td>5/20/2019</td>
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**Comment:**
I agree with this proposed mod.
Modify as follows:

805.3.1.1 **Single-exit buildings.** Only one exit is required from buildings and spaces of the following occupancies: A single exit or access to a single exit shall be permitted from spaces, any story or any occupied roof where one of the following exist:

1. In Group A, B, E, F, M, U and S occupancies, a single exit is permitted in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet (22,860 mm). The occupant load, number of dwelling units and exit access travel distance do not exceed the values in the Florida Building Code, Building Table 1006.3.2(1) or 1006.3.2(2).

2. Group B-, F-, and S-2 occupancies not more than two stories in height that are not greater than 3,500 square feet per floor (326 m²), when the exit access travel distance does not exceed 75 feet (22,860 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1-hour. In Group R-1 or R-2, non-sprinklered buildings, individual single-story or multistory dwelling or sleeping units shall be permitted to have a single exit or access to a single exit from the dwelling or sleeping unit provided one of the following criteria are met:
   2.1 The occupant load is not greater than 10 and the exit access travel distance within the unit does not exceed 75 feet (22,860 mm).
   2.2 The building is not more than three stories in height; all 3rd story space is part of a dwelling with an exit access doorway on the 2nd story; and the portion of the exit access travel distance from the door to any habitable room with any such unit to the unit entrance doors shall does not exceed 50 feet (15240 mm).

3. Open parking structures where vehicles are mechanically-parked. In buildings of Group R-2 occupancy of any number of stories and with not more than four dwelling units per floor; served by an interior exit stairway with a smokeproof enclosure in accordance with Sections 909.20 and 1023.11 of the International Building Code or an exterior exit stairway where the portion of the exit access travel distance from the dwelling unit entrance door to the exit is a maximum of 20 feet (6096 mm).
805.3.1.1 Single-exit buildings.

Rationale
The terminology is old and many in the list are addressed by new construction.
IEBC Section 805.3.1. already says any single exits scenarios in IBC are permitted here.
• Item 4–Group R-4 is already addressed in new, so this is not needed. In addition, Group R-4 is based on the number of care recipients, not the occupant load, so the terminology is incorrect. If it is kept it should match the text in new construction–IBC Section 1006.3.2, Item 4. "Group R-3 and R-4 occupancies shall be permitted to have one exit or access to a single exit." However, to keep consistency over time, it is preferred that this be deleted.

• Item 7–In new provisions this limit is for Group R-2 with sleeping units. This could be read to be all Group R-2. Child care centers could be read to be both Group E and I-4.
In new construction this occupant load and travel distance is Group I-4.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code
This proposal does not impact local entity relative to enforcement.

Impact to building and property owners relative to cost of compliance with code
Will not increase the cost of construction.
This correlates IEBC with IBC for this extent of an alteration.

Impact to industry relative to the cost of compliance with code
Will not increase the cost of construction.
This correlates IEBC with IBC for this extent of an alteration.

Impact to small business relative to the cost of compliance with code
Will not increase the cost of construction.
This correlates IEBC with IBC for this extent of an alteration.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This proposal improves the health, safety, and welfare of the general public.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This proposal strengthens or improves the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
This proposal does not discriminate against materials, products, methods or systems of construction of demonstrated capabilities.

Does not degrade the effectiveness of the code
This proposal does not degrade the effectiveness of the code.

2nd Comment Period

Proponent: Robert Couch
Submitted: 5/13/2019
Attachments: No

Comment:
This modification will improve the code
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<th>Proponent</th>
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<td>Michael Savage</td>
<td>5/14/2019</td>
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Comment:

I agree with the proposed modification.

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<tr>
<td>Jennifer Privateer</td>
<td>5/20/2019</td>
<td>No</td>
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</tbody>
</table>

Comment:

I agree
Revise as follows:

805.3.1.1 Single-exit buildings. Only one exit is required from buildings and spaces of the following occupancies:

1. In Group A, B, E, F, M, U and S occupancies, a single exit is permitted in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet (22,860 mm).

2. Group B, F-2, and S-2 occupancies not more than two stories in height that are not greater than 3,500 square feet per floor (326 m²), when the exit access travel distance does not exceed 75 feet (22,860 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour.

3. Open parking structures where vehicles are mechanically parked.

4. In Group R-1 occupancies, the maximum resident load excluding staff is 16.

5. 4. Groups R-1 and R-2 not more than two stories in height, when there are not more than four dwelling units per floor and the exit access travel distance does not exceed 50 feet (15,240 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour.

6. 5. In multilevel dwelling units in buildings of occupancy Group R-1 or R-2, an exit shall not be required from every level of the dwelling unit provided that one of the following conditions is met:

   6-1 5.1 The travel distance within the dwelling unit does not exceed 75 feet (22,860 mm); or

   6-2 5.2 The building is not more than three stories in height and all third-floor space is part of one or more dwelling units located in part on the second floor; and no habitable room within any such dwelling unit shall have a travel distance that exceeds 50 feet (15,240 mm) from the outside of the habitable room entrance door to the inside of the entrance door to the dwelling unit.

7. 6. In Group R-2 occupancies consisting of sleeping units, H-4, H-5 and I occupancies and in rooming houses and child care centers, a single exit is permitted in a one-story building with a maximum occupant load of 10 and the exit access travel distance does not exceed 75 feet (22,860 mm).

8-7. In buildings of Group R-2 occupancy that are equipped throughout with an automatic fire sprinkler system, a single exit shall be permitted from a basement or story below grade if every dwelling unit on that floor is equipped with an approved window providing a clear opening of at least 5 square feet (0.47 m²) in area, a minimum net clear opening of 24 inches (610 mm) in height and 20 inches (508 mm) in width, and a sill height of not more than 44 inches (1118 mm) above the finished floor.

9. 8. In buildings of Group R-2 occupancy of any height with not more than four dwelling units per floor; with a smokeproof enclosure or outside stairway as an exit; and with such exit located within 20 feet (6096 mm) of travel to the entrance doors to all dwelling units served thereby.

10. 9. In buildings of Group R-3 occupancy equipped throughout with an automatic fire sprinkler system, only one exit shall be required from basements or stories below grade.
This proposal is a clarification with the addition of the term “manual.” Section 907.2.10.1 of the FBC, Building only requires a manual fire alarm system. Smoke alarms are dealt with separately in Section 804.4.3.

Rationale
This proposal is a clarification of requirements and correlation of requirements. Smoke alarms are addressed in Section 804.3.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
None. The proposed modification does not change the requirement. It is only a clarification.

Impact to building and property owners relative to cost of compliance with code
None. The proposed modification does not change the requirement. It is only a clarification.

Impact to industry relative to the cost of compliance with code
None. The proposed modification does not change the requirement. It is only a clarification.

Impact to small business relative to the cost of compliance with code
None. The proposed modification does not change the requirement. It is only a clarification.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
No, the proposed modification does not change the requirement. It is only a clarification.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Yes, the proposed modification provides for a better coordinated code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
No, it does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities.

Does not degrade the effectiveness of the code
No, it improves the effectiveness of the code with better clarity and coordination.

2nd Comment Period
Comment:
I agree with this modification.
804.4.1.7 Group R-4.
A manual fire alarm system shall be installed in work areas of Group R-4 residential care/assisted living facilities as required by the Florida Fire Prevention Code for existing Group R-4 occupancies.
Section: 804.4.1.7

Proponent: Carl Baldassarra, P.E., FSFP, P.E., FSFPE, Chair, Code Technology Committee, representing Code Technology Committee (CTC@iccsafe.org)

Revise as follows:

804.4.1.7 Group R-4, A manual fire alarm system shall be installed in work areas of Group R-4 residential care assisted living facilities as required by Section 1103.7.7 of the International Fire Code for existing Group R-4 occupancies.

Reason: This proposal is a clarification of requirements and correlation of requirements. Smoke alarms are addressed in Section 804.3.

There is a Group B proposal to remove this requirement from new Group R-4s to have fire alarm systems in ISC/IFC Section 907.2.10 and from mandatory retrofit from IFC 1103.7.7. If this is successful, this section will also be deleted. If that is not approved, this clarification is needed.

The ICC Code Technology Committee (CTC) has just completed its 10th year. The ICC Board has decided to sunset the CTC. The sunset plan includes real-margining many of the CTC Areas of Study to the applicable Code Action Committee (CAC). The two remaining CTC Areas of Study are Care Facilities and Elevator Lobbies/Exit Elevator Issues. This proposal falls under the Care Facilities Area of Study. Information on the CTC, including the sunset plan, meeting agendas, minutes, reports, resource documents, presentations, and all other materials developed in conjunction with the CTC effort can be downloaded from the CTC website at: http://www.iccsafe.org/ics/CTC/Pages/default.aspx.

Cost Impact: Will not increase the cost of construction.

This proposal is a clarification only.

Committee Action: Approved as Submitted

Committee Reason: This proposal is simply a clarification with the addition of the term "manual." Section 1103.7.7 of the IFC only requires a manual fire alarm system. Smoke alarms are dealt with separately in Section 804.4.3.

Assembly Action: None

Final Action Results: EB62-15 AS
The terminology is old and many in the list are addressed by new construction. Item 4 – Group R-4 is already addressed in new, so this is not needed. In addition, Group R-4 is based on the number of care recipients, not the occupant load, so the terminology is incorrect. If it is kept it should match the text in new construction – FBC, Building Section 1006.3.2, Item 4. “Group R-3 and R-4 occupancies shall be permitted to have one exit or access to a single exit.” However, to keep consistency over time, it is preferred that this be deleted. Item 7 – In new provisions this limit is for Group R-2 with sleeping units. This could be read to be all Group R-2. Child care centers could be read to be both Group E and I-4. In new construction this occupant load and travel distance is Group I-4.

Impact to local entity relative to enforcement of code
None. This proposed modification does not change the requirements. It simply correlates FBC, Existing Building with FBC, Building for this extent of an alteration.

Impact to building and property owners relative to cost of compliance with code
None. This proposed modification does not change the requirements. It simply correlates FBC, Existing Building with FBC, Building for this extent of an alteration.

Impact to small business relative to the cost of compliance with code
None. This proposed modification does not change the requirements. It simply correlates FBC, Existing Building with FBC, Building for this extent of an alteration.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
No, this proposed modification does not change the requirements. It simply correlates FBC, Existing Building with FBC, Building for this extent of an alteration.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
Yes, this proposed modification better correlates FBC, Existing Building with FBC, Building.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
No, it does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities.

Does not degrade the effectiveness of the code
No, it does not degrade the effectiveness of the code.

2nd Comment Period

Comment:
I agree with this modification.
805.3.1.1 Single-exit buildings.

Only one exit is required from buildings and spaces of the following occupancies:

1. In Group A, B, E, F, M, U and S occupancies, a single exit is permitted in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet (22,860 mm).

2. Group B, F-2, and S-2 occupancies not more than two stories in height that are not greater than 3,500 square feet per floor (326 m²), when the exit access travel distance does not exceed 75 feet (22,860 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour.

3. Open parking structures where vehicles are mechanically parked.

4. In Group R-4 occupancies, the maximum occupant load excluding staff is 16.

5-4. Groups R-1 and R-2 not more than two stories in height, when there are not more than four dwelling units per floor and the exit access travel distance does not exceed 50 feet (15,240 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour.

6. In multilevel dwelling units in buildings of occupancy Group R-1 or R-2, an exit shall not be required from every level of the dwelling unit provided that one of the following conditions is met:

   6.15.1 The travel distance within the dwelling unit does not exceed 75 feet (22,860 mm); or

   6.25.2 The building is not more than three stories in height and all third-floor space is part of one or more dwelling units located in part on the second floor; and no habitable room within any such dwelling unit shall have a travel distance that exceeds 50 feet (15,240 mm) from the outside of the habitable room entrance door to the inside of the entrance door to the dwelling unit.

7-6. In Group R-2 occupancies consisting of sleeping units, H-4, H-5 and I occupancies and in rooming houses and child care centers, a single exit is permitted in a one-story building with a maximum occupant load of 10 and the exit access travel distance does not exceed 75 feet (22,860 mm).

8-7. In buildings of Group R-2 occupancy that are equipped throughout with an automatic fire sprinkler system, a single exit shall be permitted from a basement or story below grade if every dwelling unit on that floor is equipped with an approved window providing a clear opening of at least 5 square feet (0.47 m²) in area, a minimum net clear opening of 24 inches (610 mm) in height and 20 inches (508 mm) in width, and a sill height of not more than 44 inches (1118 mm) above the finished floor.

9-8. In buildings of Group R-2 occupancy of any height with not more than four dwelling units per floor; with a smokeproof enclosure or outside stairway as an exit; and with such exit located within 20 feet (6096 mm) of travel to the entrance doors to all dwelling units served thereby.

10-9. In buildings of Group R-3 occupancy equipped throughout with an automatic fire sprinkler system, only one exit shall be required from basements or stories below grade.
Code Change No: EB64-15

Original Proposal

Section: 805.3.1.1

Proponent: Carl Baldassarra, P.E., FSFPA, P.E., FSPFE, Chair, Code Technology Committee, representing Code Technology Committee (CTC@iccSAFE.org)

Revise as follows:

805.3.1.1 Single-exit buildings. Only one exit is required from buildings and spaces of the following occupancies:

1. In Group A, B, E, F, M, U and S occupancies, a single exit is permitted in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet (22 860 mm).
2. Group B, F-2, and S-2 occupancies not more than two stories in height that are not greater than 3,500 square feet per floor (326 m²), when the exit access travel distance does not exceed 75 feet (22 860 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour.
3. Open parking structures where vehicles are mechanically parked.
4. In Group R-4 occupancies, the maximum occupant load excluding staff is 16.
5. Groups R-1 and R-2 not more than two stories in height, when there are not more than four dwelling units per floor and the exit access travel distance does not exceed 50 feet (15 240 mm). The minimum fire-resistance rating of the exit enclosure and of the opening protection shall be 1 hour.
6. In multilevel dwelling units in buildings of occupancy Group R-1 or R-2, an exit shall not be required from every level of the dwelling unit provided that one of the following conditions is met:
   5.1. The travel distance within the dwelling unit does not exceed 75 feet (22 860 mm); or
   5.2. The building is not more than three stories in height and all third-floor space is part of one or more dwelling units located in part on the second floor; and no habitable room within any such dwelling unit shall have a travel distance that exceeds 50 feet (15 240 mm) from the outside of the habitable room entrance door to the inside of the entrance door to the dwelling unit.
7. In Group R-2 occupancies consisting of sleeping units, H-4, H-5 and I occupancies and in hotel, motel, and guest rooms, a single exit is permitted in a one-story building with a maximum occupant load of 10 and the exit access travel distance does not exceed 75 feet (22 860 mm).
8. In buildings of Group R-2 occupancy that are equipped throughout with an automatic fire sprinkler system, a single exit shall be permitted from a basement or story below grade if every dwelling unit on that floor is equipped with an approved window providing a clear opening of at least 5 square feet (0.47 m²) in area, a minimum net clear opening of 24 inches (610 mm) in height and 20 inches (508 mm) in width, and a sill height of not more than 44 inches (1118 mm) above the finished floor.
9. In buildings of Group R-2 occupancy of any height with not more than four dwelling units per floor; with a smokeproof enclosure or outside stairway as an exit; and with such exit located within 20 feet (6096 mm) of travel to the entrance doors to all dwelling units served thereby.

Reason: The terminology is old and many in the list are addressed by new construction. IEBC Section 805.3.1. already says any single exits scenarios in IBC are permitted here. The CTC Committee scope limits them to Items 4 and 7.
• Item 4 – Group R-4 is already addressed in new, so this is not needed. In addition, Group R-4 is based on the number of care recipients, not the occupant load, so the terminology is incorrect. If it is kept it should match the text in new construction — IBC Section 1006.3.2, Item 4. “Group R-3 and R-4 occupancies shall be permitted to have one exit or access to a single exit.” However, to keep consistency over time, it is preferred that this be deleted.
• Item 7 – In new provisions this limit is for Group R-2 with sleeping units. This could be read to be all Group R-2. Child care centers could be read to be both Group E and I-4. In new construction this occupant load and travel distance is Group I-4.

The ICC Code Technology Committee (CTC) has just completed its 10th year. The ICC Board has decided to sunset the CTC. The sunset plan includes re-assigning many of the CTC Areas of Study to the applicable Code Action Committee (CAC). The two remaining CTC Areas of Study are Care Facilities and Elevator Lobbies/WTC Elevator issues. This proposal falls under the Care Facilities Area of Study. Information on the CTC, including: the sunset plan, meeting agendas, minutes, reports, resource documents, presentations, and all other materials developed in conjunction with the CTC effort can be downloaded from the CTC website at: http://www.iccsafe.org/cc/CTC/Pages/default.aspx.

Cost Impact: Will not increase the cost of construction.
This correlates IEBC with IBC for this extent of an alteration.

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<th>Report of Committee Action</th>
<th>Approved as Submitted</th>
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<tbody>
<tr>
<td><strong>Committee Action:</strong></td>
<td><strong>Final Action Results</strong></td>
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<tr>
<td>Committee Reason: This proposal is consistent with EB83-15 but focuses only on care occupancies. The committee approved the proposal or consistency with the action taken on EB83-15 and as a precaution so that minimally these issues are addressed. The committee also agreed with the proponent’s reason.</td>
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**Related Modifications**

The documentation for this proposal exceeds the 300 character limit.

**Rationale**

This proposal adds "other codes" because other codes, such as the Florida Building Code, Building are referenced in Chapter 14.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

There will be no impact to local entities relative to the enforcement of the code. This revision is only a clarification of the current provision.

**Impact to building and property owners relative to cost of compliance with code**

This will not increase the cost of construction. This revision is only a clarification of the current provision.

**Impact to industry relative to the cost of compliance with code**

This will not increase the cost of compliance. This revision is only a clarification of the current provision.

**Impact to small business relative to the cost of compliance with code**

This will not increase the cost of compliance. This revision is only a clarification of the current provision.

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  The purpose of this section is to describe the evaluation process for existing structures. The proposed change is to add "other codes" to the language to make sure the minimum provisions are met from other codes for safety.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  This proposal does not strengthen the Code, it provides clarity of an existing rule that will assist in a better understanding for enforcement.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  The proposal makes no mention of specific materials, products, methods, or systems of construction.

- **Does not degrade the effectiveness of the code**
  
  This proposal helps the effectiveness of the code by providing clarity of the requirements.

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### 2nd Comment Period

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<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
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### 1st Comment Period History

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<tr>
<th>Proponent</th>
<th>Richard Schauland</th>
<th>Submitted</th>
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1401.6 Evaluation process. The evaluation process specified herein shall be followed in its entirety to evaluate existing buildings in Groups A, B, E, F, M, R, S and U. For existing buildings in Group I-2, the evaluation process specified herein shall be followed and applied to each and every individual smoke compartment. Table 1401.7 shall be utilized for tabulating the results of the evaluation. References to other sections of this code or other codes indicate that compliance with those sections is required in order to gain credit in the evaluation herein outlined. In applying this section to a building with mixed occupancies, where the separation between the mixed occupancies does not qualify for any category indicated in Section 1401.6.16, the score for each occupancy shall be determined, and the lower score determined for each section of the evaluation process shall apply to the entire building, or to each smoke compartment for Group I-2 occupancies.
Code Change No: EB77-15

Original Proposal

Section: 1401.6

Proponent: Jeff Hugo, National Fire Sprinkler Association, representing National Fire Sprinkler Association (hugo@nfssa.org)

Revise as follows:

1401.6 Evaluation process. The evaluation process specified herein shall be followed in its entirety to evaluate existing buildings in Groups A, B, E, F, M, R, S and U. For existing buildings in Group I-2, the evaluation process specified herein shall be followed and applied to each and every individual smoke compartment. Table 1401.7 shall be utilized for tabulating the results of the evaluation. References to other sections of this code or other codes indicate that compliance with those sections is required in order to gain credit in the evaluation herein outlined. In applying this section to a building with mixed occupancies, where the separation between the mixed occupancies does not qualify for any category indicated in Section 1401.6.16, the score for each occupancy shall be determined, and the lower score determined for each section of the evaluation process shall apply to the entire building, or to each smoke compartment for Group I-2 occupancies.

Where the separation between the mixed occupancies qualifies for any category indicated in Section 1401.6.16, the score for each occupancy shall apply to each portion, or smoke compartment of the building based on the occupancy of the space.

Reason: This proposal adds “other codes” because other codes, such as the International Building Code besides the IBC are referenced in Chapter 14.

Cost Impact: Will not increase the cost of construction

Editorial

Report of Committee Action

Hearings

Approved as Submitted

Committee Action:

Committee Reason: The reference to “other codes” is necessary as there are minimum provisions that must be met from other I-Codes.

Assembly Action:

Final Action Results

EB77-15 AS
This proposed modification revises the current definition of Carbon Monoxide Alarm and adds a definition for Carbon Monoxide Detector.

This proposed modification will harmonize the FBC-R with the IRC, NFPA 72/720, and other applicable standards related to CO alarms.

This proposed modification will not impact the local entity relative to code enforcement.

This proposed modification will not change the cost of compliance to building and property owners.

This proposed modification will not change the cost of compliance or impact industry.

This proposed modification will not change the cost of compliance or impact small business.

This proposed modification is directly connected to the health, safety, and welfare of the general public.

This proposed modification improves and strengthens the code.

This proposed modification does not discriminate against materials, products, methods, or systems of construction.

This proposed modification enhances the effectiveness of the code.

Agreed
## 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/25/2019</th>
<th>Attachments</th>
<th>No</th>
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<tr>
<td>Comment:</td>
<td>I like the definition addition and clarity</td>
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## 1st Comment Period History

<table>
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<tr>
<th>Proponent</th>
<th>Mo Madani</th>
<th>Submitted</th>
<th>1/27/2019</th>
<th>Attachments</th>
<th>No</th>
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<tbody>
<tr>
<td>Comment:</td>
<td>Carbon monoxide provisions of the 2017 FBC are consistent with section 553.885 FS.</td>
<td></td>
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</tr>
</tbody>
</table>
CARBON MONOXIDE ALARM. A device for the purpose of detecting carbon monoxide, that produces a distinct audible alarm, and is listed or labeled with the appropriate standard, either ANSI/UL 2034 Standard for Single and Multiple Station CO Alarms, or UL 2075, Gas and Vapor Detector Sensor, in accordance with its application.

CARBON MONOXIDE ALARM. A single- or multiple-station alarm intended to detect carbon monoxide gas and alert occupants by a distinct audible signal. It incorporates a sensor, control components and an alarm notification appliance in a single unit.

CARBON MONOXIDE DETECTOR. A device with an integral sensor to detect carbon monoxide gas and transmit an alarm signal to a connected alarm control unit.
This proposed modification deletes an obsolete and unnecessary exception for smoke alarm interconnection requirements.

Rationale
This proposed modification deletes the exception to the smoke alarm interconnection rule based on previous limitations of wired-only technology. With the wide availability of wireless interconnected smoke alarms, the exception is no longer needed and only serves to reduce life and fire safety in existing buildings that will most benefit from the installation and interconnection of smoke alarms.

Fiscal Impact Statement
Impact to local entity relative to enforcement of code
This proposed modification will not impact the local entity relative to code enforcement.

Impact to building and property owners relative to cost of compliance with code
This proposed modification will not change the cost of compliance to building and property owners unless the cost of wireless alarms are passed on to the consumer.

Impact to industry relative to the cost of compliance with code
This proposed modification will increase the cost of compliance where the exception may have been applicable previously. Wireless interconnect smoke alarms are becoming common-place products that are readily available on the market today and have comparable costs to traditional hard-wired alarms.

Impact to small business relative to the cost of compliance with code
This proposed modification will not change the cost of compliance or impact small business.

Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public
This proposed modification is directly connected to the health, safety, and welfare of the general public by removing an exception to smoke alarm interconnection rules that reduce life and property safety.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction
This proposed modification improves and strengthens the code by removing an obsolete and unnecessary exception in existing buildings only. Smoke alarm interconnection is essential for effective occupant notification of fire.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities
This proposed modification does not discriminate against materials, products, methods, or systems of construction.

Does not degrade the effectiveness of the code
This proposed modification enhances the effectiveness of the code.

2nd Comment Period
Comment:
Please reconsider this proposed modification for approval. This exception was necessary based on the limitation of legacy-type smoke alarm products incapable of wireless interconnection. This is no longer an issue, therefore, this exception is no longer included in the IRC or NFPA 72. The interconnection of smoke alarms is essential for the effective notification and evacuation of persons in a home as early in the fire/smoke event as possible. This exception significantly reduces life-safety in existing homes undergoing alteration.
R314.4 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Exception: Interconnection of smoke alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes.
### Summary of Modification

This proposed modification completely replaces the current R315 in the FBC-R related to carbon monoxide alarm requirements with R315 of the 2018 IRC.

### Rationale

This proposed modification completely replaces R315 with the most current requirements for CO alarms as found in the 2018 IRC, which has been correlated and harmonized with the NFPA 72, NFPA 720, applicable UL product safety standards, and industry practices. The arrangement and format of the revised section is similar to R314 for smoke alarms.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**
This proposed modification will not impact the local entity relative to code enforcement.

**Impact to building and property owners relative to cost of compliance with code**
This proposed modification will not change the cost of compliance to building and property owners.

**Impact to industry relative to the cost of compliance with code**
This proposed modification will not change the cost of compliance or impact industry.

**Impact to small business relative to the cost of compliance with code**
This proposed modification will not change the cost of compliance or impact small business.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
This proposed modification is directly connected to the health, safety, and welfare of the general public by updating the rules for CO alarm installations to the most current industry and product safety standards.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
This proposed modification improves and strengthens the code by harmonizing the rules for CO alarms with those found in related industry standards and manufacturers installation instructions.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
This proposed modification does not discriminate against materials, products, methods, or systems of construction.

**Does not degrade the effectiveness of the code**
This proposed modification enhances the effectiveness of the code.

### 2nd Comment Period

**Comment:**
agree

---

### 2nd Comment Period

**Comment:**
I agree with this proposed modification
<table>
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<tr>
<th>Proponent</th>
<th>Mo Madani</th>
<th>Submitted</th>
<th>1/27/2019</th>
<th>Attachments</th>
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Comment:
CO Provisions of the 2017 FBC, Residential is consistent with section 553.885 FS.
SECTION R315

CARBON MONOXIDE ALARMS

R315.1 Carbon monoxide protection. Every separate building or an addition to an existing building for which a permit for new construction is issued and having a fossil-fuel-burning heater or appliance, a fireplace, an attached garage, or other feature, fixture, or element that emits carbon monoxide as byproduct of combustion shall have an operational carbon monoxide alarm installed within 10 feet of each room used for sleeping purposes.

Exception: This section shall not apply to existing buildings that are undergoing alterations or repair unless the alteration is an addition as defined in Section R315.1.3.

R315.1.1 Carbon monoxide alarm. The requirements of Section R315.1 shall be satisfied by providing for one of the following alarm installations:

1. A hard-wired carbon monoxide alarm.
2. A battery-powered carbon monoxide alarm.
4. A battery-powered combination carbon monoxide and smoke alarm.

R315.1.2 Combination alarms. Combination smoke/carbon monoxide alarms shall be listed and labeled by a nationally recognized testing laboratory.

R315.1.3 Addition shall mean an extension or increase in floor area, number of stories or height of a building or structure.

SECTION R315

CARBON MONOXIDE ALARMS

R315.1 General. Carbon monoxide alarms shall comply with Section R315.

R315.1.1 Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.

R315.2 Where required. Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2.

R315.2.1 New construction. For new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.

1. The dwelling unit contains a fuel-fired appliance.

2. The dwelling unit has an attached garage with an opening that communicates with the dwelling unit.

R315.2.2 Alterations, repairs and additions. Where alterations, repairs or additions requiring a permit occur, the individual dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings.

Exceptions:

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of a porch or deck.

2. Installation, alteration or repairs of plumbing or mechanical systems.
R315.3 Location. Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

R315.4 Combination alarms. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

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

Exception: Interconnection of carbon monoxide alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes.

R315.6 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

Exceptions:

1. Carbon monoxide alarms shall be permitted to be battery operated where installed in buildings without commercial power.

2. Carbon monoxide alarms installed in accordance with Section R315.2.2 shall be permitted to be battery powered.

R315.7 Carbon monoxide detection systems. Carbon monoxide detection systems shall be permitted to be used in lieu of carbon monoxide alarms and shall comply with Sections R315.7.1 through R315.7.4.

R315.7.1 General. Household carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.

R315.7.2 Location. Carbon monoxide detectors shall be installed in the locations specified in Section R315.3. These locations supersede the locations specified in NFPA 720.

R315.7.3 Permanent fixture. Where a household carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy and owned by the homeowner.

R315.7.4 Combination detectors. Combination carbon monoxide and smoke detectors installed in carbon monoxide detection systems in lieu of carbon monoxide detectors shall be listed in accordance with UL 2075 and UL 268.
### Related Modifications

RB89-16 Mod E145-15 proposed for the FBC, Building Volume section 1030 adding exception for R-2 and R-3 and R-4 occupancies

### Summary of Modification

Add an exception for sprinkled building

### Rationale

Approval by the IBC Means of Egress Committee was by a margin of 13-1, and the proposal survived 3 public comments from industry groups seeking disapproval. It is inconceivable that the IRC would not want to accept the same proposal, given that rejection of this proposal would make the IRC more restrictive on means of escape from dwelling units than the IBC.

### Fiscal Impact Statement

- **Impact to local entity relative to enforcement of code**
  
  adds additional options for compliance, not a mandate

- **Impact to building and property owners relative to cost of compliance with code**
  
  adds additional options for compliance, not a mandate, no cost, may even save money if structure already to be sprinkled

- **Impact to industry relative to the cost of compliance with code**
  
  adds additional options for compliance, not a mandate

- **Impact to small business relative to the cost of compliance with code**
  
  adds additional options for compliance, not a mandate

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  adds additional options for compliance, not a mandate, addresses life safety

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  adds additional options for compliance, not a mandate, addresses life safety

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  adds additional options for compliance, not a mandate, addresses life safety

- **Does not degrade the effectiveness of the code**
  
  adds additional options for compliance, not a mandate, addresses life safety

### 2nd Comment Period

- **Proponent**: Gregory Young
  
  **Submitted**: 5/15/2019
  
  **Attachments**: No

  **Comment**: I support the proposed modification.

- **Proponent**: Jennifer Privateer
  
  **Submitted**: 5/23/2019
  
  **Attachments**: No

  **Comment**: I agree with this proposal.
<table>
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<tr>
<th>F7662-G3</th>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/25/2019</th>
<th>Attachments</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Comment:</td>
<td>I agree with this modification</td>
<td></td>
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</tbody>
</table>
R310.1 Emergency escape and rescue opening required.

Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape 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 that opens to a public way.

Exceptions:

1. Storm shelters and basements used only to house mechanical equipment not exceeding a total floor area of 200 square feet (18.58 m²).
2. The emergency escape and rescue opening shall be permitted to open into a screen enclosure, open to the atmosphere, where a screen door is provided leading away from the residence.
   - Where the dwelling or townhouse is equipped with an automatic sprinkler system installed in accordance with Section P2904, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:
     1.1. One means of egress complying with Section R311 and one emergency escape and rescue opening.
     1.2. Two means of egress complying with Section R311.
### Comments

**General Comments**
- Yes

**Alternate Language**
- No

**Related Modifications**
- RB105-16

**Summary of Modification**
- clarification of nosing

**Rationale**
This change clearly describes and emphasizes the intent of the requirement to provide consistent nosings and nosing projections at every walking surface throughout the stairway. It combines the maximum rounding and beveling requirements in one sentence and eliminates unnecessary text that is currently redundant.

**Fiscal Impact Statement**
- **Impact to local entity relative to enforcement of code**
  - helps with enforcement

- **Impact to building and property owners relative to cost of compliance with code**
  - no impact on cost of construction

- **Impact to industry relative to the cost of compliance with code**
  - no impact on cost of construction

- **Impact to small business relative to the cost of compliance with code**
  - no impact on cost of construction

**Requirements**
- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - address nosing clarification helping with safety

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - strengthens the code

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - address nosing clarification

- **Does not degrade the effectiveness of the code**
  - address nosing clarification

### 2nd Comment Period

**F7688-G1**

<table>
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<tr>
<th>Proponent</th>
<th>Scott McAdam</th>
<th>Submitted</th>
<th>5/23/2019</th>
<th>Attachments</th>
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**Comment:**
This modification is needed to clearly describe and emphasize the intent of the requirement to provide consistent nosings and nosing projections at every walking surface throughout the stairway. It combines the maximum rounding and beveling requirements in one sentence and eliminates unnecessary text that is currently redundant.

**F7688-G2**

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<th>Proponent</th>
<th>Jennifer Privateer</th>
<th>Submitted</th>
<th>5/23/2019</th>
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**Comment:**
I agree with this
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<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/25/2019</th>
<th>Attachments</th>
<th>No</th>
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</table>

Comment:
I agree with this modification
Revise as follows:

**R311.7.5.3 Nosings.**

The Nosings at treads, landings and floors of stairways shall have a radius of curvature at the nosing shall be not greater than 9/16 inch (14 mm) or a bevel not exceeding 1/2 inch (12.7 mm). A nosing projection not less than 3/4 inch (19 mm) and not more than 11/4 inches (32 mm) shall be provided on stairways with solid-risers. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 inch (9.5 mm) between two stories, including the nosing at the level of floors and landings within a stairway. Beveling of nosings shall not exceed 1/2 inch (12.7 mm).

**Exception:** A nosing projection is not required where the tread depth is not less than 11 inches (279 mm).
### Summary of Modification
This code change is an editorial change intended to help understand the code section by adding separation into the sentence structure.

### Rationale
This proposal is editorial in nature and is intended to clarify that foam plastic used in applications other than as a component in manufactured assemblies does require a flame spread index of not more than 75 and a smoke-developed index of not more than 450 when tested in the maximum thickness and density intended for use in accordance with ASTM E84 or UL 723. As written, Section R316.3 is being interpreted by some that it applies only to foamed plastic used as a component in manufactured assemblies.

### Fiscal Impact Statement
- **Impact to local entity relative to enforcement of code**: This proposal is editorial in nature and is intended to clarify the code related to foam plastics.
- **Impact to building and property owners relative to cost of compliance with code**: This proposal is editorial in nature and is intended to clarify the code there is no cost impact.
- **Impact to industry relative to the cost of compliance with code**: This proposal is editorial in nature and is intended to clarify the code there is no cost impact.
- **Impact to small business relative to the cost of compliance with code**: This proposal is editorial in nature and is intended to clarify the code there is no cost impact.

### Requirements
- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**: This proposal is editorial in nature and is intended to clarify the code so that it is more easily understood and enforced thereby ensuring proper enforcement and added safety.
- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**: This proposal is editorial in nature and is intended to clarify and improve the code.
- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**: This proposal is editorial in nature only and does not discriminate in any way.
- **Does not degrade the effectiveness of the code**: This proposal is editorial in nature and is intended to clarify the code there is no degradation as a result.

### 2nd Comment Period

<table>
<thead>
<tr>
<th>Proponent</th>
<th>Harold Barrineau</th>
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</thead>
<tbody>
<tr>
<td>Submitted</td>
<td>5/26/2019</td>
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</table>

**Comment:**
I agree with this modification.
R316.3 Surface burning characteristics.

Unless otherwise allowed in Section R316.5, foam plastic or foam plastic cores used as a component in manufactured assemblies used in building construction shall have a flame spread index of not more than 75 and shall have a smoke developed index of not more than 450 when tested in the maximum thickness and density intended for use in accordance with ASTM E 84 or UL 723. Loose-fill-type foam plastic insulation shall be tested as board stock for the flame spread index and smoke-developed index.
### Summary of Modification

This code change adds an additional exception to the membrane penetration compliance section and aligns with a proposal related to section 714.4.2 of the building code.

### Rationale

The proposal adds an additional exception which recognizes the listings of recessed incandescent and fluorescent can lights, or enclosure materials which protect recessed can lights or troffer light fixtures, that have been tested as a ceiling membrane penetration of fire-resistance-rated horizontal assemblies. There are currently twenty six UL listed can lights which incorporate integral fire protection which have been evaluated for use in fire-resistance-rated horizontal assemblies. Similarly there are eleven UL listed enclosure materials which have been evaluated for their ability to protect penetrations in ceiling membranes by non fire rated can lights or troffer light fixtures.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

This allows another option to meet the requirements of rate membrane penetrations. This flexibility makes enforcement of the code easier by allowing an exception that still meets the intent of the code.

**Impact to building and property owners relative to cost of compliance with code**

The impact is that it provides additional options so it will not increase cost.

**Impact to industry relative to the cost of compliance with code**

The impact is that it provides additional options so it will not increase cost.

**Impact to small business relative to the cost of compliance with code**

The impact is that it provides additional options so it will not increase cost.

### Requirements

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  
  These products are already in use within the construction industry so it will allow the continuation of this use and improve the safety overall.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  
  These products are already in use within the construction industry so adding this into the code as an option will strengthen the code.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  
  This does not discriminate and these products are already in use within the construction industry.

- **Does not degrade the effectiveness of the code**
  
  These products are already in use within the construction industry so it will allow the continuation of this use and improve the code overall.

### 2nd Comment Period

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<th>Harold Barrineau</th>
<th>Submitted</th>
<th>5/26/2019</th>
<th>Attachments</th>
<th>No</th>
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</table>

**Comment:**

I agree with this modification.
R302.4 - Add exception 4 as follows:

4. Ceiling membrane penetrations by listed luminaires or by luminaires protected with listed materials, that have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing.
**TAC: Fire**

Total Mods for Fire in Withdrawn: 1

Total Mods for report: 90

**Sub Code: Existing Building**

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**F8312**

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<th>Proponent</th>
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<th>Commission Action</th>
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<td>12/15/2018</td>
<td>10</td>
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<td>Withdrawn</td>
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**Comments**

- **General Comments**: Yes
- **Alternate Language**: No

**Related Modifications**

- 1012.5

**Summary of Modification**

- TABLE 1012.4 (1012.4) MEANS OF EGRESS HAZARD CATEGORIES
- TABLE 1012.5 (1012.5) HEIGHTS AND AREAS HAZARD CATEGORIES

**Rationale**

The change in the table is consistent with the identification of different levels of hazards for the residents in a Group R-4. The conditions are based on the egress capability of the residents. Group R-4 Condition 1 is more consistent with Group R-3. Group R-2 Condition 2 is closer to a Group I-1.

**Fiscal Impact Statement**

- **Impact to local entity relative to enforcement of code**
  - This proposal does not impact local entity relative to enforcement.

- **Impact to building and property owners relative to cost of compliance with code**
  - Will not increase the cost of construction.
  - This is a reduction in requirements for Group R-4 Condition 1.

- **Impact to industry relative to the cost of compliance with code**
  - Will not increase the cost of construction.
  - This is a reduction in requirements for Group R-4 Condition 1.

- **Impact to small business relative to the cost of compliance with code**
  - Will not increase the cost of construction.
  - This is a reduction in requirements for Group R-4 Condition 1.

**Requirements**

- **Has a reasonable and substantial connection with the health, safety, and welfare of the general public**
  - This proposal improves the health, safety, and welfare of the general public.

- **Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**
  - This proposal strengthens or improves the code.

- **Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**
  - This proposal does not discriminate against materials, products, methods or systems of construction of demonstrated capabilities.

- **Does not degrade the effectiveness of the code**
  - This proposal does not degrade the effectiveness of the code.
I agree with the proposed modification.
Revise as follows:

### TABLE 1012.4 (1012.4)
MEANS OF EGRESS HAZARD CATEGORIES

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<th>RELATIVE HAZARD</th>
<th>OCCUPANCY CLASSIFICATIONS</th>
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<td>4</td>
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<tr>
<td>5 (Lowest Hazard)</td>
<td>F-2, S-2, U</td>
</tr>
</tbody>
</table>

### TABLE 1012.5 (1012.5)
HEIGHTS AND AREAS HAZARD CATEGORIES

<table>
<thead>
<tr>
<th>RELATIVE HAZARD</th>
<th>OCCUPANCY CLASSIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Highest Hazard)</td>
<td>H</td>
</tr>
<tr>
<td>2</td>
<td>A-1, A-2, A-3, A-4, I, R-1, R-2, R-4 Condition 2</td>
</tr>
<tr>
<td>3</td>
<td>E, F-1, S-1, M</td>
</tr>
<tr>
<td>4 (Lowest Hazard)</td>
<td>B, F-2, S-2, A-5, R-3, R-4 Condition 1, U</td>
</tr>
</tbody>
</table>