Code Change No: F2-07/08

Original Proposal

Section: 101.2

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

101.2 Scope. This code establishes regulations affecting or relating to structures, processes, premises and safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
3. Fire hazards in the structure or on the premises from occupancy or operation;
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems~~.~~;
5. Conditions affecting the safety of firefighters and emergency responders during emergency operations.

Reason: Section 101.3 “Intent” currently states that the intent of the code is to provide minimum requirements for firefighter safety during emergency operations. However, this intent of the code is not communicated in the current scope language found in Section 101.2. Inclusion of this language will clarify that the scope of the code does cover issues related to firefighter safety during emergency operations.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that considering the safety of firefighters and other emergency responders is appropriate for the scope of the code.

Assembly Action: **None**

Final Hearing Results

F2-07/08 **AS**

Code Change No: F3-07/08

Original Proposal

Sections: 102.1, 202 (New)

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

1. Revise as follows:

102.1 Construction and design provisions. The construction and design provisions of this code shall apply to:

1. Structures, facilities and conditions arising after the adoption of this code.

Exception: The construction features within the building area of one-and two-family dwellings and townhomes, constructed in accordance with the *International Residential Code,* shall not be regulated by this code. This code shall regulate the site fire protection features outside of the building area of such buildings including, but not limited to, fire apparatus access roads in accordance with Section 503 and fire protection water supplies in accordance with Section 508.

2. Existing structures, facilities and conditions not legally in existence at the time of adoption of this code.
3. Existing structures, facilities and conditions when identified in specific sections of this code.
4. Existing structures, facilities and conditions which, in the opinion of the fire code official, constitute a distinct hazard to life or property.

2. Add new definition to read as shown:

SECTION 202
GENERAL DEFINITIONS

[B] AREA, BUILDING. The area within surrounding exterior walls (or exterior walls and fire walls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building areas if such areas are included within the horizontal projection of the roof or floor above.

Reason: This proposal clarifies the scope issues between the IFC and the IRC regarding the regulation of the building proper and the fire protection features that are required to serve the buildings. The committee interpretation on 903.2.7, issued 3/21/04, indicates that the IFC is not applicable to IRC buildings. One item this interpretation did not address was the issue of applicability of fire protection site issue requirements contained in the IFC to the placement of IRC structures. The unwritten understating, staff interpretation and practical application has been that the IFC does apply to areas outside of the IRC building footprint. Therefore, a local jurisdiction can utilize the IFC to regulate the Fire Apparatus Access Roads in Section 503 and Fire Protection Water Supplies in Section 508 servicing IRC buildings. However, none of these concepts of scope are explicitly addressed within the code document. This code change will clarify this area for the designer, code official and end user.

The definition of "Building Area" is from the IBC and is included as specific direction to the user that the scope of the IFC only extends outside of the "Building Area" for IRC structures.

It is important to note that this code proposal only codifies current ICC interpretations and user practice.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: While the maintenance of the technical content of the definition rests with the IBC-General Code Development Committee, the appropriateness of adding that text to Section 202 rests with the IFC Code Development Committee.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The committee felt that the intent needs to be more clearly expressed. The definition of Building Area does not include the exterior walls, which could cloud the issue. The committee observed that one- and two-family dwellings are not always used for residential purposes. The storage of hazardous materials in these buildings could be a problem if they are excluded from the applicability of the code. The committee expressed its opinion that the interpretation cited in the proponent's reason statement may be wrong and that the current text is preferred.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Michael E. Dell'Orfano, South Metro Fire Rescue, representing Fire Marshal's Association of Colorado, requests Approval as Modified by this public comment.

Replace proposal as follows:

102.5 Application of residential code. Where structures are designed and constructed in accordance with the *International Residential Code*, the provisions of this code shall apply as follows:

1. Construction and design provisions: Provisions of this code pertaining to the exterior of the structure shall apply including, but not limited to, premises identification, fire apparatus access, and water supplies. Where interior or exterior systems or devices are installed, construction permits required by Section 105.7 of this code shall also apply.
2. Administrative, operational, and maintenance provisions: All such provisions of this code shall apply.

(Renumber subsequent sections)

Commenter's Reason: F3-07/08 was disapproved during the code development hearings in Palm Springs for the primary reasons of unclear/incomplete intent and due to disagreement on the applicability of the IFC to buildings constructed under the IRC. The purpose of this public comment is to address those two main concerns. First, the language in the original code change proposal is relocated and revised so that its intent is clearer and more complete (to address construction as well as operational issues). The newly proposed wording in this public comment intends to better communicate that the IRC tells a builder how to build a one- and two-family dwelling and townhome (including whether or not it has fire sprinklers), but the IFC tells the builder what kind of water supply, roads, addresses, etc. to provide for that home or subdivision. Also, if a fire protection system, LP-gas cylinder, large tent, fuel tank, etc. is installed in or around that home, then the IFC would be used to issue that permit as well. The wording recommended by this public comment also makes it clear that on-going enforcement authority, operational permits, and maintenance requirements of the IFC still apply to those homes or subdivisions, which is necessary for fire suppression & investigation, open burning enforcement, addressing illegal use of homes, etc.

The second issue this public comment attempts to address is applicability. Whether or not you agree with the ICC interpretation on the applicability of the IFC to IRC structures, it is still necessary to insert these provisions in order to show how the two codes are intended to interact (as is done in IFC Section 102.4 for the IBC) and to avoid conflicting provisions (like whether or not the house needs to be protected by sprinklers). And whether or not you agree with that ICC interpretation, the fact is that some jurisdictions have taken it literally and have prevented fire code officials from performing their duties. All of this appears to stem from a fear that the fire code official will use the IFC as a back-door way of getting sprinklers in all houses. This proposal addresses all of those concerns and lets home construction and on-going enforcement occur as it always has before the IRC was ever created.

Final Hearing Results

F3-07/08 AMPC

Code Change No: F7-07/08

Original Proposal

Sections: 104.9.1 (New), 104.9.2 (New)

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Add new text as follows:

104.9.1 Research reports. Supporting data, when necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

104.9.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the fire code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the fire code official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the fire code official for the period required for retention of public records.

Reason: This language is identical to the current "Research Reports" and "Tests" language in the IBC Sections 104.11.1 and 104.11.2 under alternative materials Section 104.11. These sections are proposed to be included in the IFC as they are important components of the underlying Section 104.9 "Alternative materials and methods." The fire code official needs to have the authority to require research reports and tests in order to determine if a proposed alternative materials and methods is supported by valid technical substantiation.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide needed correlation between the IFC and the IBC.

Assembly Action: **None**

Final Hearing Results

F7-07/08 **AS**

Code Change No: F11-07/08

Original Proposal

Section: 105.2.3

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Revise as follows:

105.2.3 Time limitation of application. An application for a permit for any proposed work or operation shall be deemed to have been abandoned ~~six months~~ 180 days after the date of filing, unless such application has been diligently prosecuted or a permit shall have been issued; except that the fire code official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each ~~if there is reasonable cause~~. The extension shall be requested in writing and justifiable cause demonstrated.

Reason: This proposed change matches the language in Section 105.3.2 of the IBC which covers the same topic of "Time limitations of application." This will provide consistency between the two codes. In addition, extensions should be requested in writing to memorialize the request and action on the request.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide clarity and correlation between the IFC and the IBC on the subject of permit applications and extensions.

Assembly Action: **None**

Final Hearing Results

F11-07/08 **AS**

Code Change No: F12-07/08

Original Proposal

Section: 105.3.2

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Revise as follows:

105.3.2 Extensions. A permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within

the time required by this section for good and satisfactory reasons. The fire code official is authorized to grant, in writing, one or more extensions of the time period of a permit for periods of not more than ~~90~~ 180 days each. Such extensions shall be requested by the permit holder in writing and justifiable cause demonstrated.

Reason: This proposal modifies the maximum permit extension time from 90 to 180 days. This is consistent with Section 105.5 of the IBC which allows for a maximum 180 day extension. The extension dates between the IFC and IBC should be the same in order to provide consistency to the owner, developer, fire official and building official.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide internal consistency based on the action on code change F11-07/08 and correlation between the IFC and the IBC.

Assembly Action: **None**

Final Hearing Results

F12-07/08 **AS**

Code Change No: F13-07/08

Original Proposal

Section: 105.3.3

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Revise as follows:

105.3.3 Occupancy prohibited before approval. The building or structure shall not be occupied prior to the fire code official issuing a permit ~~that indicates that~~ and conducting associated inspections indicating the applicable provisions of this code have been met.

Reason: A straight reading of the current language in Section 105.3.3, appears to only require the issuance of a permit prior to the occupancy of a building or structure. The current language also infers that the issuance of a permit is the mechanism to ensure that the applicable provisions of the code have been met. This is clearly not the case. Approval of inspections associated with the permit is the method to ensure the permitting conditions have actually been met in the field application and the requirement that the “applicable provisions of this code have been met.” The proposed code change would ensure that inspection associated with permit occur prior to occupancy of a building or structure.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change.

Assembly Action: **None**

Final Hearing Results

F13-07/08 **AS**

Code Change No: F14-07/08

Original Proposal

Section: 105.3.8 (New)

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Add new text as follows:

105.3.8 Validity of permit. The issuance or granting of a permits shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinances of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents, operational documents and other data shall not prevent the fire code official from requiring correction of errors in the documents or other data.

Reason: This proposed language is identical to the language in Section 105.4 of the IBC with the exceptions that the title of the official has changes, operational permits are included and the last sentence of Section 105.4 was not carried over as it is more germane to the role of the building official. The need for covering the "validity of permit" topic in the IFC is similar to the need for this language in the IBC. The fire code official needs to be able to rely on the information provided in the permit and the permit is not authorization to violate the code.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide needed correlation between the IFC and the IBC.

Assembly Action: **None**

Final Hearing Results

F14-07/08 **AS**

Code Change No: F15-07/08

Original Proposal

Section: 105.4.1

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Revise as follows:

105.4.1 Submittals. Construction documents and other data shall be submitted in ~~one~~ two or more sets with each application for a permit and in such form and detail as required by the fire code official. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

Exception: The fire code official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this code.

Reason: Consistency and coordination among the I-Codes are cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established, for the 2006/2007 cycle, and extended, for the 2007/2008 cycle, the ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in the International Codes family and improve the correlation among the I-Codes through the code development process.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes. The intent of this correlation effort is not necessarily to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes.

This proposal focuses on construction document submittal and is being submitted by the AHC-Admin to provide improved correlation of the IFC with Section 106.1 of the *International Building Code, International Existing Building Code* and *International Wildland-Urban Interface Code,* Section R106.1 of the *International Residential Code,* and Section 106.3.1 of the *International Fuel Gas Code, International Mechanical Code, International Plumbing Code.*

Changing the number of sets of documents to be submitted from one to two will provide correlation with Section 105.4.6. The added exception provides the fire code official with flexibility in determining the need for detailed documents when the services of a registered design professional are not required.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

105.4.1 Submittals. Construction documents and ~~other~~ supporting data shall be submitted in two or more sets with each application for a permit and in such form and detail as required by the fire code official. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

Exception: The fire code official is authorized to waive the submission of construction documents and ~~other~~ supporting data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this code.

Committee Reason: The proposal was approved because the committee felt that it will provide improved correlation of the IFC with the IBC, IEBC, IRC, IWUIC, IFGC, IMC and IPC. Internal correlation with the number of document sets required by Section 105.4.6 will also be achieved. The modification removes the ambiguous phrase "other data" and focuses on the specific type of data required.

Assembly Action: **None**

Final Hearing Results

F15-07/08 **AM**

Code Change No: F17-07/08

Original Proposal

Section: 105.4.1.1 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

105.4.1.1 Examination of documents. The fire code official shall examine or cause to be examined the accompanying construction documents and shall ascertain by such examinations whether the work indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

Reason: Consistency and coordination among the I-Codes are cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established, for the 2006/2007 cycle, and extended, for the 2007/2008 cycle, the ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in the International Codes family and improve the correlation among the I-Codes through the code development process.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes. The intent of this correlation effort is not necessarily to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes.

This proposal focuses on the review of construction documents as part of the permit process and is being submitted by the AHC-Admin to correlate the IFC with current Section 106.3 of the *International Building Code* and *International Existing Building Code,* Section R106.3 of the *International Residential Code* and the code changes that were approved in the 2006/2007 cycle creating new Section 106.9 of the *International Wildland-Urban Interface Code* and new Section 104.3 of the *International Energy Conservation Code* (see *Supplement to the International Codes/2007).*

This proposed section provides for examination of the construction documents by the fire code official or someone assigned by the fire code official to determine code compliance prior to issuance of a permit.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

105.4.1.1 Examination of documents. The fire code official shall examine or cause to be examined the accompanying construction documents and shall ascertain by such examinations whether the work indicated and described is in accordance with the requirements of this code ~~and other pertinent laws or ordinances~~.

Committee Reason: The proposal was disapproved because the committee felt that it will provide improved correlation of the IFC with the IBC, IEBC, IRC, IWUIC and IECC. The modification removes language that is more appropriate for the IBC because the fire code official could not know all "…other pertinent laws or ordinances." that might apply.

Assembly Action: **None**

Final Hearing Results

F17-07/08 **AM**

Code Change No: F19-07/08

Original Proposal

Section: 105.4.2.1 (New)

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Add new text as follows:

105.4.2.1 Fire protection system shop drawings. Shop drawings for the fire protections system(s) shall be submitted to indicate conformance with this code and the construction documents and shall be approved prior to the start of installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9.

Reason: This proposed language is identical to the current language in the IBC section 106.1.1.1. The current IFC 105.4.2, which this proposed language would be a subsection of, is the same as 106.1.1 in the IBC. However, the fire protection shop drawing clarification language in 106.1.1.1 was not included under the IFC section 105.4.2. This proposal corrects this omission as the language is needed in the IFC as the fire protection systems are likely to be permitted under the IFC document.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that, while the subject matter is already covered in Sections 901.2 and 907.1.1, the proposal will be useful in specifically targeting "shop drawings", which is a generally understood term in the plan review profession.

Assembly Action: **None**

Final Hearing Results

F19-07/08 **AS**

Code Change No: F20-07/08

Original Proposal

Section: 105.4.4.1 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new text as follows:

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

Reason: Consistency and coordination among the I-Codes are cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established, for the 2006/2007 cycle, and extended, for the 2007/2008 cycle, the ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in the International Codes family and improve the correlation among the I-Codes through the code development process.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes. The intent of this correlation effort is not necessarily to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes.

This proposal focuses on the administration of the permit process and is being submitted by the AHC-Admin to correlate the IFC with current Section 106.3.3 of the *International Building Code* and *International Existing Building Code,* Section R106.3.3 of the *International Residential Code,* and the code changes that were approved in the 2006/2007 cycle creating new Section 106.12 of the *International Wildland-Urban Interface Code* and new Section 104.3.3 of the *International Energy Conservation Code* (see *Supplement to the International Codes/2007).*

This provision would provide the code official with a useful administrative tool by providing the authority to issue a partial permit to allow for the practice of "fast tracking" a job. The section makes it clear that any construction under a partial permit is "at the holder's own risk" and "without assurance that a permit for the entire structure will be granted." The code official is under no obligation to accept work or issue a complete permit in violation of the code, ordinances or statutes simply because a partial permit had been issued. The purpose is to proceed with construction while the design continues for other aspects of the work. The section has been slightly modified from the source texts by adding "systems and operations" to make it more relevant to the IFC.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide correlation with the IBC, IEBC, IRC, IWUIC and IECC and facilitate "fast-track" projects.

Assembly Action: **None**

Final Hearing Results

F20-07/08 **AS**

Code Change No: F23-07/08

Original Proposal

Section: 105.6.16

Proponent: Lynne M. Kilpatrick, Fire Department, Seattle, WA, representing Washington State Association of Fire Marshals

Revise as follows:

105.6.16 Flammable and combustible liquids. An operational permit is required:

1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOTn) nor does it apply to piping systems.
2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:
   2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the code official, would cause an unsafe condition.
   2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.
3. To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.
4. To store, handle or use Class IIIB liquids in tanks or portable tanks for fueling motor vehicles at motor fuel-dispensing facilities or where connected to fuel-burning equipment.

~~4.~~5. To remove Class I or Class II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes.

~~5.~~6. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.

~~6 .~~7. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or combustible liquid tank.

~~7.~~8. To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than that for which the tank was designed and constructed.

~~8.~~ 9. To manufacture, process, blend or refine flammable or combustible liquids.

~~9.~~10. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles from tank vehicles at commercial, industrial, governmental or manufacturing establishments.

~~10.~~11. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.

Reason: Currently there is no requirement to obtain a permit for the storage or use of Class IIIB liquids either inside or outside of a building. In light of the increasing trend to use Class IIIB liquids inside and outside of buildings in connection with fuel-burning equipment and for fueling of motor vehicles this proposal adds a new item 4 that will allow a jurisdiction to require a permit conditioned appropriately for the storage and use of such tank systems. A similar change is not required in Section 105.7.6 for the installation of the tank because the existing text requires an installation permit for all combustible liquid tanks.

The proposed change to item 9 simply clarifies that a permit is required for dispensing fuels into motor vehicles directly from tank vehicles. As written this item can be interpreted to apply to motor vehicle fuel-dispensing stations but Item 5 already requires a permit for motor vehicle fuel-dispensing stations.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Errata: Revise new item 10 to read as follows:

~~9.~~10. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles from tank vehicles at commercial, industrial, governmental or manufacturing establishments.

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides improved regulation of Class IIIB liquids used as motor fuels.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Lynne M. Kilpatrick, City of Seattle Fire Department, representing Washington State Association of Fire Marshals, requests Approval as Modified by this public comment.

Modify proposal as follows:

105.6.16 Flammable and combustible liquids. An operational permit is required:

1. through 3. (No change to current text)

4. To store, handle or use Class IIIB liquids in tanks or portable tanks for fueling motor vehicles at motor fuel-dispensing facilities or where connected to fuel-burning equipment.

   Exception: Fuel oil and used motor oil used for space or water heating.

5. through 11. (No change to proposed text)

Commenter's Reason: The intent of the original proposal was to only require a permit for fuel systems connected to generators and motor vehicle fuel dispensing systems utilizing B100/B99 biodiesel (a Class IIIB liquid). While the original intent was achieved, the approved text inadvertently now requires homeowners and other entities to obtain an annual operating permit when heating oil or other fuels that are Class IIIB liquids (liquids that have a flash points ≥ 200°F) are used in connection with furnaces and water heaters in homes and businesses. This proposed modification, which will add an exception to new Item #4, will correct this unintended oversight by removing the annual operating permit requirement for Class IIIB liquids used in connection with furnaces and water heaters.

Final Hearing Results

F23-07/08 **AMPC**

Code Change No: F24-07/08

Original Proposal

Section: 105.6.16

Proponent: Jon Napier, Fire Department, City of Kent, WA, representing Washington State Building Code Council

Revise as follows:

105.6.16 Flammable and combustible liquids. An operational permit is required:

1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOTn) nor does it apply to piping systems.
2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:

2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the code official, would cause an unsafe condition.

2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.

3. To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.
4. To remove Class I or Class II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes.
5. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.
6. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or combustible liquid tank.
7. To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than that for which the tank was designed and constructed.
8. To manufacture, process, blend or refine flammable or combustible liquids.
9. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.
10. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles, vessels and other special equipment at commercial, industrial, governmental or manufacturing establishments.

Reason: Section 105.6.16 does not address the issue of permits for the sites used for dispensing fuel from tank vehicles into the fuel tanks of marine vessels and special equipment. Section 105.6.16(10) requires a permit for utilizing a site for fueling motor vehicles but no mention is made of marine vessels or special equipment. Issuing a permit for dispensing fuel into marine vessels or special equipment would give the code official awareness of the operation and the opportunity to inspect the site. The requirement for a permit could be done by adding “vessels and special equipment” to subsection 10. Recently adopted IFC Chapter 46 – Marinas – defines vessels so we need to address the sites where tank vehicles will be used to fuel them. Special equipment would include equipment at farm and construction sites.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that the added term "vessels" is in conflict with the use of the term in other sections of the code. Also, the term "special equipment" is subjective and could lead to inconsistent enforcement. It is also possible that the added text could be interpreted to require a farmer with a small diesel tank in the bed of his pickup truck to get a permit to fill the tank.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jon Napier, Fire Department, Kent, WA, representing Washington State Building Code Council, requests Approval as Modified by this public comment.

Modify proposal as follows:

105.6.16 Flammable and combustible liquids. An operational permit is required:

1. through 9. (No change to current text)
10. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles, ~~vessels~~ marine craft and other special equipment at commercial, industrial, governmental or manufacturing establishments.

Commenter’s Reason: The intent of this code change is to ensure that permits are required when the conditions allowed in Section 3406.5.4.1 occur. I received feedback from the council about using the terms vessel and special equipment. I have removed the defined term of vessel and utilize the term marine craft as used in 3406.5.4.1. I kept special equipment since it also is used in Section 3406.5.4.1 which is shown below for information only.

3406.5.4.1 Marine craft and special equipment. Liquids intended for use as motor fuels are allowed to be transferred from tank vehicles into the fuel tanks of ***marine craft and special equipment*** when approved by the fire code official, and when:

1. The tank vehicle's specific function is that of supplying fuel to fuel tanks.
2. The operation is not performed where the public has access or where there is unusual exposure to life and property.
3. The dispensing line does not exceed 50 feet (15 240 mm) in length.
4. The dispensing nozzle is approved.

Final Hearing Results

F24-07/08 AMPC

Code Change No: F26-07/08

Original Proposal

Section: 105.7.3

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

Revise as follows:

105.7.3 Compressed gases. When the compressed gases in use or storage exceed the amounts listed in Table 105.6.8, a construction permit is required to install, repair damage to, abandon, remove, place temporarily out of service or close or substantially modify a compressed gas system.

Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

~~The permit applicant shall apply for approval to close storage, use or handling facilities at least 30 days prior to the termination of the storage, use or handling of compressed or liquefied gases. Such application shall include any change or alteration of the facility closure plan filed pursuant to Section 2701.6.3. The 30-day period is not applicable when approved based on special circumstances requiring such waiver.~~

Reason: Section 2701.6 addresses facility closure and a 30 day notice is required by 2701.6.3. The requirements in Section 105.7.3 are slightly different from 2701.6.3 where changes to the closure plan are noted and the use of a waiver is mentioned. There is no need to establish permit requirements for closure plans to be submitted for compressed gases that are different from closure plans for any other hazardous material. Closure plans must be approved as required by 2701.5, and if circumstances require additional time the closure plan should be adjusted accordingly. The modifications proposed for Section 105.7.3 bring the requirements for compressed gases into parity with those required by Section 105.7.7 for other hazardous materials.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it deletes text on closed storage, use and handling facilities that was brought forward in error from the legacy Uniform Fire Code during the IFC drafting process.

Assembly Action: **None**

Final Hearing Results

F26-07/08 AS

Code Change No: F27-07/08

Original Proposal

Section: 105.7.4 (New)

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

Add new text as follows:

105.7.4 Cryogenic fluids. A construction permit is required for installation of or modification to outdoor stationary cryogenic fluid storage systems where the system capacity exceeds the amounts listed in Table 105.6.10. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

Reason: There are two types of permits required by Section 105.1.2, operational, and construction. Operational and construction permits are required for compressed gas installations under the requirements of Sections 105.6.8 and 105.7.3; however, only operational permits have been required for cryogenic fluids under Section 105.6.10. The omission of required construction permits for cryogens appears to be an oversight. The application for permit is intended to trigger a plan review that will examine constraints on location, and the requirements of Chapter 32. The issuance of a permit to construct is intended to require the jurisdiction review the appropriate requirements to ensure that the installation meets or exceeds the minimum design criteria integral to the code.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

105.7.4 Cryogenic fluids. A construction permit is required for installation of or ~~modification~~ alteration to outdoor stationary cryogenic fluid storage systems where the system capacity exceeds the amounts listed in Table 105.6.10. Maintenance performed in accordance with this code is not considered an alteration ~~modification~~ and does not require a construction permit.

Committee Reason: The proposal was approved because the committee felt that it corrects an accidental omission of construction permit requirements during the IFC drafting process and provides a needed clarification of the code. The modification improves internal correlation by using language that is consistent with other sections of the IFC.

Assembly Action: **None**

Final Hearing Results

F27-07/08 **AM**

Code Change No: F28-07/08

Original Proposal

Section: 105.7.6

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Revise as follows:

105.7.6 Flammable and combustible liquids. A construction permit is required:

1. To install, repair or modify a pipeline for the transportation of flammable or combustible liquids.

2. To install, construct or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.
3. To install, alter, remove, abandon or otherwise dispose of a flammable or combustible liquid tank.

Reason: The current language in 105.7.6 (1) omits the installation of a permit for a new pipeline but requires a permit to repair or modify. This appears to be an oversight as requiring a permit to repair or modify and but not install would leave a large gap in the code compliance oversight for this type of installation. In addition, (2) and (3) or 105.7.6 require a permit for the installation of other types of equipment.

Cost Impact: The code change will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that, due to their hazardous contents, flammable liquid transportation pipelines are as much in need of scrutiny during installation as during repair or modification.

Assembly Action: **None**

Final Hearing Results

F28-07/08 **AS**

Code Change No: F33-07/08

Original Proposal

Section: 112 (New)

Proponent: Rebecca Baker, Jefferson County, CO, Chair, ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin)

Add new section as follows:

SECTION 112
SERVICE UTILITIES

112.1 Authority to disconnect service utilities. The fire code official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards set forth in Section 102.6 in case of emergency where necessary to eliminate an immediate hazard to life or property. The fire code official shall notify the serving utility and, whenever possible, the owner and occupant of the building, structure or service system of the decision to disconnect prior to taking such action if not notified prior to disconnection. The owner or occupant of the building, structure or service system shall be notified in writing as soon as practical thereafter.

Reason: Consistency and coordination among the I-Codes are cornerstones of the ICC Code Development Process. This holds true for not only the technical code provisions but also for the administrative code provisions as contained in Chapter 1 of all the I-Codes.

In response to concerns raised by the ICC membership since publication of the first editions of the I-Codes, the ICC Board established, for the 2006/2007 cycle, and extended, for the 2007/2008 cycle, the ICC Ad Hoc Committee on the Administrative Provisions in the I-Codes (AHC-Admin) to review Chapter 1 administrative provisions in the International Codes family and improve the correlation among the I-Codes through the code development process.

The AHC-Admin is submitting a series of code change proposals designed to provide consistent and correlated administrative provisions among the I-Codes. The intent of this correlation effort is not necessarily to have absolutely identical text in each of the I-Codes but, rather, text that has the same intent in accomplishing the administrative tasks among the I-Codes.

This proposal focuses on the fire code official's authority to disconnect service utilities under emergency conditions and is being submitted by the AHC-Admin to correlate the IFC with Section 111.3 of the *International Building Code*, Section R111.3 of the *International Residential Code* and the code change that was approved in the 2006/2007 cycle creating Section 111.2 of the *International Wildland Urban Interface Code* (see *Supplement to the International Codes/2007)*.

This section would authorize the code official to take definitive action to abate hazards caused by or contributed by building utilities by means of disconnection of one or more of a building's utility services where all other lesser remedies have proven ineffective. This section also provides that such an action must be preceded by written notice to the utility and the owner and occupants of the building. When the hazard to the public health, safety or welfare is so imminent as to mandate immediate disconnection, this section makes it clear that the fire code official has the authority and even the obligation to cause disconnection without notice.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

SECTION 112
SERVICE UTILITIES

112.1 Authority to disconnect service utilities. The fire code official shall have the authority to authorize disconnection of utility service to the building, structure or system in order to safely execute emergency operations or ~~regulated by this code and the referenced codes and standards set forth in Section 102.6 in case of emergency where necessary~~ to eliminate an immediate hazard ~~to life or property~~. The fire code official shall notify the serving utility and, whenever possible, the owner and occupant of the building, structure or service system of the decision to disconnect prior to taking such action if not notified prior to disconnection. The owner or occupant of the building, structure or service system shall be notified in writing as soon as practical thereafter.

Committee Reason: The proposal was approved because the committee felt that the proponent's reason statement accurately and adequately substantiates the need for the change, which authorizes the code official to take definitive action to abate hazards caused by or contributed to by building utilities by means of disconnection of one or more of a building's utility services where all other lesser remedies have proven ineffective. The modification clarifies that disconnection of utilities is primarily a fire operational issue.

Assembly Action: **None**

Final Hearing Results

F33-07/08 **AM**

Code Change No: F36-07/08

Original Proposal

Section: 202 (New)

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

Add new definition as follows:

SECTION 202
GENERAL DEFINITIONS

INERT GAS. A gas that is capable of reacting with other materials only under abnormal conditions such as high temperatures, pressures and similar extrinsic physical forces. Within the context of the code, inert gases do not exhibit either physical or health hazard properties as defined (other than acting as a simple asphyxiant) or hazard properties other than those of a compressed gas. Some of the more common inert gases include argon, helium, krypton, neon, nitrogen and xenon.

Reason: The term inert gas is used in a number of sections throughout the code. For example, in Section 1601.1 exception when ethylene is used in fruit ripening, in Section 2006.4 for process mills and kettles, in Section 2211.8.2 for repair of hydrogen systems in repair garages as well as in Chapters 30 Compressed Gases, Chapter 34 Flammable and Combustible Liquids, and Chapter 41 Pyrophoric Materials.

The term "inert gas" is also used in the IMC and the IFGC without definition. The proposed definition is not in conflict with the provisions found in either of these companion codes. The definition includes an explanatory sentence intended to inform the user that inert gases do not react readily with other materials under normal temperatures and pressures, but it is possible for a reaction to occur. For example, even nitrogen

combines with some of the more active metals such as lithium and magnesium to form nitrides, and at high temperatures it will also combine with hydrogen, oxygen, and other elements. The rare inert gases neon, krypton and xenon are considered rare due to their scarcity. Although these gases are commonly referred to as inert gases the formation of compounds is possible. For example, xenon combines with fluorine to form various fluorides, and with oxygen to form oxides. The compounds formed are crystalline solids.

By defining the term the likely use of gases that are not inert including carbon dioxide will be avoided.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will clarify the code by providing a reasonable definition of the term "inert gas" that is used in many sections of the IFC. It was also felt that using the dictionary definition could incorrectly lead to the unanticipated and unintended regulation of certain gases, such as radon.

Assembly Action: **None**

Final Hearing Results

F36-07/08 **AS**

Code Change No: F40-07/08

Original Proposal

Sections: 301.1, 507, 316 (New), 401.5

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Revise as follows:

CHAPTER 3
GENERAL ~~PRECAUTIONS AGAINST FIRE~~ REQUIREMENTS

SECTION 301 GENERAL

301.1 Scope. The provisions of this chapter shall govern the occupancy and maintenance of all structures and premises for precautions against fire and the spread of fire and general requirements of fire safety.

2. Delete Section 507 and relocate to new Section 316 as follows:

SECTION ~~507~~ 316
HAZARDS TO FIRE FIGHTERS

~~507.1~~ 316.1 Trapdoors to be closed. Trapdoors and scuttle covers, other than those that are within a dwelling unit or automatically operated, shall be kept closed at all times except when in use.

~~507.2~~ 316.2 Shaftway markings. Vertical shafts shall be identified as required by this section.

~~507.2.1~~ 316.2.1 Exterior access to shaftways. Outside openings accessible to the fire department and which open directly on a hoistway or shaftway communicating between two or more floors in a building shall be plainly marked with the word SHAFTWAY in red letters at least 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible from the outside of the building.

~~507.2.2~~ 316.2.2 Interior access to shaftways. Door or window openings to a hoistway or shaftway from the interior of the building shall be plainly marked with the word SHAFTWAY in red letters at least 6 inches (152 mm) high on a white background. Such warning signs shall be placed so as to be readily discernible.

Exception: Marking shall not be required on shaftway openings which are readily discernible as openings onto a shaftway by the construction or arrangement.

~~**507.3**~~ **316.3 Pitfalls.** The intentional design or alteration of buildings to disable, injure, maim or kill intruders is prohibited. No person shall install and use firearms, sharp or pointed objects, razor wire, explosives, flammable or combustible liquid containers, or dispensers containing highly toxic, toxic, irritant or other hazardous materials in a manner which may passively or actively disable, injure, maim or kill a fire fighter who forcibly enters a building for the purpose of controlling or extinguishing a fire, rescuing trapped occupants or rendering other emergency assistance.

3. Relocate current code Section 401.5 to new Section 316.4 as follows:

~~**401.5**~~ **316.4 Security device.** Any security device or system that emits any medium that could obscure a means of egress in any building, structure or premise shall be prohibited.

Reason: Section 507 is relocated from Chapter 5 to Chapter 3 since the scope of Chapter 5 is "fire service features". These requirements are not components or features for the fire service. These issues are general hazards that could exist in any building. Chapter 3 is retitled to "general requirements" and with the revision in the scope this is a more appropriate location for these requirements.

Section 401.5 is also relocated to this new Section 316 addressing FF Hazards. When a user of the IFC looks for this regulation, the user is probably going to look in another location besides Chapter 4 as this is not an emergency planning and preparedness issue.

There is no change in the application or the intent of the code text. These sections are merely relocated to provide a more logical location for finding and applying these provisions.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that the proponent's reason statement accurately and adequately substantiates the need for the change which provides a needed reorganization of the common fire hazards and firefighter safety issues.

Assembly Action: **None**

Final Hearing Results

F40-07/08 **AS**

Code Change No: F41-07/08

Original Proposal

Section: 304.3.2

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

304.3.2 Capacity exceeding 5.33 cubic feet. Containers with a capacity exceeding 5.33 cubic feet (40 gallons) (0.15m^3) shall be provided with lids. Containers and lids shall be constructed of noncombustible materials or ~~approved~~ combustible materials with a peak rate of heat release not exceeding 300 kW/m^2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation.

Exception: Waste baskets in Group I-3 occupancies shall comply with Section 808.1.

Reason: Most nonmetallic waste containers are manufactured from polyethylene which has a fuel value of 20,050 btu per pound compared to newsprint at 9,000 btu per pound. To contain combustible waste in another combustible material which has twice the fuel potential value makes little sense. This change will eliminate the possibility of using larger non retardant polyethylene trash containers within a structure. The current language "Approved combustible material" provides no direction. DuPont and Rubbermaid have had the formulation for years to make a retardant polyethylene.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides needed technical specifications for waste containers consistent with other provisions of the IFC. Large containers that do not meet these requirements can pose a significant fuel load hazard.

Assembly Action: **None**

Final Hearing Results

F41-07/08 **AS**

Code Change No: F42-07/08

Original Proposal

Section: 304.3.4 (New)

Proponent: James E. Everitt, Everitt and Associates, representing himself

Add new text as follows:

304.3.4 Plastic dumpsters exceeding one cubic yard. Plastic dumpsters having a peak rate of heat release exceeding 300 kW/m2 at an incident flux of 50 kW/m2 in the horizontal orientation when tested in accordance with ASTM E 1354 shall not be stored within buildings or placed within 15 feet of combustible walls, openings, or combustible roof lines.

Exceptions:

1. Dumpsters or containers in areas protected by an approved automatic sprinkler system complying with Chapter 9.
2. Storage in a structure shall not be prohibited where the structure is of Type I or Type IIA construction, located not less than 10 feet (3048mm) from other buildings and used exclusively for dumpster or container storage

Reason: 03 Commentary Although waste containers of this size (1.5 yards) are nearly always constructed of welded steel because of the weight of the waste load, the very fact that the waste load is large makes the containers *a large fire hazard*.

Medium density polyethylene dumpsters up to nine cubic yards are now being distributed which have a fuel content of 20,020btu per pound (municipal solid waste averages 4,500btu lb). Medium density polyethylene is essentially equal to the fuel value for gasoline! This material becomes a burning liquid spreading and flowing, it is an unnecessary risk to place them five feet away from a nearby structure.

"FIRE LOSS IN THE UNITED STATES DURING 2005" States: Fires in rubbish outside of structures including dumpsters have increased 10.8% nationally from 2004.

POLYETHYLENE CART

Cost Impact: The code change proposal will not increase the cost of construction. The use of these containers is not wide spread.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because it contains a dumpster size criterion in the section title but not in the body of the text. Since titles are editorial, the section has no framework of applicability. In addition, Section 304.3 scopes its subsections to waste containers inside of buildings, making this proposal out of place as a regulation of dumpsters outside of buildings.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 2:

Marcelo M. Hirschler, GBH International, representing American Fire Safety Council, requests Approval as Modified by this public comment.

Replace proposal as follows:

304.3 Containers. Combustible rubbish, and waste material kept within or near a structure shall be stored in accordance with Sections 304.3.1 through ~~304.3.3~~ 304.3.4 .

304.3.3 Capacity exceeding 1.5 cubic yards. Dumpsters and containers with an individual capacity of 1.5 cubic yards [40.5 cubic feet (1.15 m^3)] or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines.

Exceptions:

1. Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.

304.3.4 Dumpsters with a capacity of 1 cubic yard or greater. Dumpsters with an individual capacity of 1.0 cubic yard [200 gallons (0.76 m^3)] or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines unless they are constructed of noncombustible materials or of combustible materials with a peak rate of heat release not exceeding 300 kW/m^2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation.

Exceptions:

1. Dumpsters in areas protected by an approved automatic sprinkler system installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
2. Storage in a structure shall not be prohibited where the structure is of Type I or Type IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.

Commenter's Reason: The committee stated that they disapproved this proposal for two reasons: (a) the proposal contained a dumpster size criterion in the section title but not in the body of the text and (b) the proposal addressed waste containers outside of buildings. Changes were made to address both issues.

1. Language, including a title, is being proposed that includes the dumpster size.
2. A change is being proposed to the charging section to show that it actually addresses waste storage near buildings, since section 304.3.3 already covers storage within 5 feet of combustible walls, openings or combustible roof eave lines.
3. The comment proposes revised language that is parallel to that in 304.3.3 with regard to the storage near buildings and the exceptions.
4. The charging section is being proposed to be modified so as to encompass this new section.
5. The new section allows dumpsters to be constructed of non combustible materials.
6. The new section describes dumpsters rather than plastic dumpsters, to make it more generic, as there are no noncombustible plastic materials.

As explained in the original proposal, if these dumpsters are constructed of polyethylene (as they usually are) they represent a severe fire source. The peak rate of heat release criterion recommended, based on ASTM E 1354, is the same one that is already included in the IFC in section 808.1 and was proposed in the accepted proposal F41 for section 304.3.2, as well as in the IBC in 402.11.1.

Final Hearing Results

F42-07/08 AMPC2

Code Change No: F43-07/08

Original Proposal

Section: 307.1.1

Proponent: A. Keith Brown, North Metro Fire Rescue District, representing Fire Marshal's Association of Colorado

Revise as follows:

307.1.1 Prohibited open burning. Open burning ~~that is offensive or objectionable because of smoke or odor emissions or~~ when atmospheric conditions or local circumstances make such fires hazardous shall be prohibited.

Reason: The purpose of the proposed code change is to delete a prohibition imposed by the code; namely, a prohibition against offensive or objectionable smoke or odors resulting from open burning. Enforcement of said prohibition is inherently arbitrary and capricious because the current code language compels the Fire Code Official to render an unreasonably subjective and irreproducible judgment in the absence of quantitative guidelines provided in Section 307 or referenced standards. The proposed language preserves those historic prohibitions, such as high winds (atmospheric conditions) and/or drought (local circumstances), that are demonstrably linked to fire behavior.

Cost Impact: The code change will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that the current text provides guidance for the fire code official by indicating the basis for responding to open burning complaints and should be retained without change.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

A. Keith Brown, North Metro Fire Rescue, representing Fire Marshal's Association of Colorado, requests Approval as Modified by this public comment.

Modify proposal as follows:

307.1.1 Prohibited open burning. Open burning that is offensive or objectionable because of smoke emissions or when atmospheric conditions or local circumstances make such fires hazardous shall be prohibited.

Commenter's Reason: F43-07/08 was disapproved by Committee action. This public comment reflects the Committee's discussion that offensive smoke is a long-standing and legitimate basis for responding to open-burning complaints but that responding to complaints of an objectionable odor caused by open burning poses significant enforcement problems due to the excessive subjectivity inherent in evaluating odors. For example, the odor associated with a typical campfire may be pleasant to many people but may be considered acrid and objectionable by many others. The proposed change would eliminate language that forces the code official to make arbitrary decisions often based only on personal perception.

Final Hearing Results

F43-07/08 **AMPC**

Code Change No: F44-07/08

Original Proposal

Sections: 307.4.3 (New), 307.5, 302.1, 307

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Add new text as follows:

307.4.3 Portable outdoor fireplaces. Portable outdoor fireplaces shall not be operated within 15 feet (3048 mm) of a structure or combustible material.

Exception: Portable outdoor fireplaces used in accordance with manufacturer's instructions at one- and two-family dwellings.

2. Revise as follows:

307.5 Attendance. Open burning, bonfires, ~~or~~ recreational fires and use of portable outdoor fireplaces shall be constantly attended until the fire is extinguished. A minimum of one portable fire extinguisher complying with Section 906 with a minimum 4-A rating or other approved on-site fire-extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be available for immediate utilization.

3. Revise definitions as follows:

302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

OPEN BURNING. The burning of materials wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. Open burning does not include road flares, smudgepots and similar devices associated with safety or occupational uses typically considered open flames, ~~or~~ recreational fires or use of portable outdoor fireplaces. For the purpose of this definition, a chamber shall be regarded as enclosed when, during the time combustion occurs, only apertures, ducts, stacks, flues or chimneys necessary to provide combustion air and permit the escape of exhaust gas are open.

PORTABLE OUTDOOR FIREPLACE. A portable, outdoor, solid-fuel-burning fireplace that may be constructed of steel, concrete, clay or other noncombustible material. A portable outdoor fireplace may be open in design, or may be equipped with a small hearth opening and a short chimney or chimney opening in the top.

RECREATIONAL FIRE. An outdoor fire burning materials other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, portable outdoor fireplace, barbeque grill or barbeque pit and has a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height for pleasure, religious, ceremonial, cooking, warmth or similar purposes.

4. Revise section title as follows:

SECTION 307
OPEN BURNING, ~~AND~~ RECREATIONAL FIRES AND PORTABLE OUTDOOR FIREPLACES

Reason: This proposal adds a definition for portable outdoor fireplace and makes minor revision to definitions of open burning and recreational fire for clarification. The proposed addition of subsection 307.4.3 Portable Outdoor Fireplaces makes clear that the use of these devices is specifically regulated.

Portable outdoor fireplaces designed to burn solid fuel are available at retailers ranging from the local grocery to hardware store to big box retailers. Their widespread availability and use has created considerable confusion for citizens and the fire service as to how or if they are regulated by the IFC.

Fires in portable outdoor fireplaces cannot be considered a "recreational fire" because critical to that definition is the concept that the fire is not contained in an incinerator, outdoor fireplace, barbeque grill or barbeque pit. Some may then suggest that a portable outdoor fireplace is merely a type of "outdoor fireplace", but the IFC doesn't contain any references pertaining to where an outdoor fireplace can be located or operated.

Under the definition of open burning, the IFC commentary refers to patio fireplaces and states "These devices neither meet the literal definition of "open burning" nor is their use the type of burning intended to be regulated by Section 307, ..." However, the use and any hazard associated from operating a patio fireplace is closer to the type of activities regulated in Section 307 than use of other specific types of open flame addressed in Section 308. The current IFC Sections 307 and 308 are essentially silent on use of this specific type of device.

The proposal prohibiting use of portable outdoor fireplaces within 15 feet from any structure replicates the first exception under 307.4 Location. However, the proposal allows an exception for use of patio fireplaces at one- and two-family dwellings.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

307.4.3 Portable outdoor fireplaces. Portable outdoor fireplaces shall be used in accordance with the manufacturer's instructions and shall not be operated within 15 feet (3048 mm) of a structure or combustible material.

~~Exception:~~ ~~Portable outdoor fireplaces used in accordance with manufacturer's instructions at one- and two-family dwellings.~~

(Portions of the proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that it provides needed clarification of the open burning regulations with respect to portable outdoor fireplaces. The modifications recognize that manufacturer's often provide additional safety suggestions in their instructions and that the new provisions should be applicable to all buildings without exception.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Diane Hansen, Fire Department, City of Seattle, WA, representing Washington State Association of Fire Marshals, requests Approval as Modified by this public comment.

Further modify proposal as follows:

307.4.3. Portable outdoor fireplaces. Portable outdoor fireplaces shall be used in accordance with the manufacturer's instructions and shall not be operated within 15 feet (3048 mm) of a structure or combustible material.

Exception: Portable outdoor fireplaces used at one-and two-family dwellings.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: Proposal F-44 was submitted to provide clarity to the fire service and the public regarding regulation of the use of portable outdoor fireplaces, as their use does not meet the definition of either open burning or a recreational fire. Anyone who has ever answered or monitored the incoming phone lines at a large fire department will attest this question has become increasingly more frequent, as availability of the devices has increased to where they can now be found at a wide variety of retail stores, including your local grocery.

The unintended effect of striking the exception to F-44 will result in a new body of work for the fire service as the "portable outdoor fireplace police" and the arbitrator of every neighbor dispute over such use.

The original proposed code language of F-44 was developed with the intent to specifically regulate use of portable outdoor fireplaces at R-1 and R-2 occupancies, but not at one-and two-family homes. The practice of providing exceptions for one- and two-family dwellings from certain regulated activities is consistent with other areas of the code as noted in the following examples.

308.3.1 Open-flame cooking devices – An exception is provided for one and two-family dwellings from the prohibition on use of open flame on combustible balconies and within 10 ft of combustible construction.
308.3.1.1 Liquefied–petroleum-gas-fueled cooking devices. – An exception is provided for one and two-family dwellings from the prohibition on use of LP fueled cooking devices on combustible balconies (greater than 2.5 pounds) and within 10 ft. of combustible construction.
603.4 Portable unvented heaters. An exception is provided for one and two-family dwellings on the prohibition of use of unvented heaters inside dwellings.
903.4 Sprinkler system monitoring and alarms and **907.15 Monitoring.** One and two-family dwellings are exempted from the monitoring of sprinkler systems and alarms through an exception.

The IFC provides minimum standards for fire and life safety. There may be some states where climatic conditions are such that potential for urban, urban-interface and wildland fires would warrant the regulation of these devices at one- and two-family dwellings. But as a minimum code, those jurisdictions requiring more stringent regulations should enact those regulations, and not subject all jurisdictions to enforcing requirements that may not be necessary, and may in fact be too burdensome when compared with the incidence of fire from the regulated activity.

Approving the F-44 as modified by the proposed exception takes a similar activity and treats it consistently with the manner in which the code addresses use of open flame and use of charcoal and LP-fueled cooking devices at one and two-family dwellings.

Approving the exception as proposed by this comment will relieve the fire service from the role as regulator of a common activity in one-and two-family dwellings. This is a delicate line that should be crossed only when fire incidence and imminent threat to life safety clearly warrants such action.

Final Hearing Results

F44-07/08 **AMPC1**

Code Change No: F48-07/08

Original Proposal

Section: 308.3.1

Proponent: Michael E. Dell'Orfano, South Metro Fire District, representing Fire Marshal's Association of Colorado

Revise as follows:

~~**308.3.1**~~ **308.7 (Supp) Open-flame cooking devices.** Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or within 10 ft (3048 mm) of any combustible construction.

Exceptions:

1. One- and two-family dwellings.
2. Where buildings, balconies and decks are protected by an automatic sprinkler system.
3. LP-gas cooking devices having an LP-gas container with a water capacity not greater than 2.5 pounds [nominal 1 pound (0.454 kg) LP-gas capacity].

Reason: The focus of IFC Section 308.3 appears to be on open-flame decorative devices and their related uses. The flow and intent of Section 308.3 gets confused when a stand-alone topic such as "open-flame cooking devices" is inserted. Therefore, the purpose of this code change proposal is to remove open-flame cooking device regulations from Section 308.3 and create a new section (308.7) to address this issue. Section 308.7, then, would be similar to Sections 308.5 and 308.6 which address other stand-alone, specific topics.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a desirable relocation of the open flame cooking provisions to a more appropriate section.

Assembly Action: **None**

Final Hearing Results

F48-07/08 **AS**

Code Change No: F51-07/08

Original Proposal

Section: 308

Proponent: Ian MacDonald, Fire Department, City of Orange, CA, representing California Fire Chiefs Association

1. Revise as follows:

308.1 General. Open flame, fire and burning on all premises shall be in accordance with Sections 308.1 through 308.4, and with other applicable sections of this code. ~~This section shall control open flames, fire and burning on all premises.~~

~~**308.2**~~ **308.1.1 Where prohibited.** A person shall not take or utilize an open flame or light in a structure, vessel, boat or other place where highly flammable, combustible or explosive material is utilized or stored. Lighting appliances shall be well-secured in a glass globe and wire mesh cage or a similar approved device.

~~**308.2.1**~~ **308.1.2 Throwing or placing sources of ignition.** No person shall throw or place, or cause to be thrown or placed, a lighted match, cigar, cigarette, matches, or other flaming or glowing substance or object on any surface or article where it can cause an unwanted fire.

~~**308.4**~~ **308.1.3 Torches for removing paint.** Persons utilizing a torch or other flame-producing device for removing paint from a structure shall provide a minimum of one portable fire extinguisher complying with Section 906 and with a minimum 4-A rating, two portable fire extinguishers, each with a minimum 2-A rating, or a water hose connected to the water supply on the premises where such burning is done. The person doing the burning shall remain on the premises 1 hour after the torch or flame-producing device is utilized.

~~**308.3.1**~~ **(Supp) 308.1.4 Open-flame cooking devices**. Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or within 10 feet (3048 mm) of combustible construction**.**

Exceptions:

1. One- and two-family dwellings.
2. Where buildings, balconies and decks are protected by an automatic sprinkler system.

~~3.~~ **308.1.4.1 Liquefied-petroleum-gas-fueled cooking devices**. LP-gas cooking devices having LP gas containers with a water capacity not greater than 2.5 pounds (nominal 1 pound (0.454 kg) LP-gas capacity) shall not be located on combustible balconies or within 10 feet (3048 mm) of combustible construction.

Exception: One- and two-family dwellings.

~~**308.3.3**~~ **308.1.5 Location near combustibles.** Open flames such as from candles, lanterns, kerosene heaters, and gas-fired heaters shall not be located on or near decorative material or similar combustible materials.

~~308.5~~ **(Supp) 308.1.6 Open-flame devices.** Torches and other devices, machines or processes liable to start or cause fire shall not be operated or used in or upon wildfire risk areas, except by a permit in accordance with Section 105.6 secured from the fire code official.

Exception: Use within inhabited premises or designated campsites which are a minimum of 30 feet (9144 mm) from grass-, grain-, brush- or forest-covered areas.

~~308.5.1~~ **(Supp) 308.1.6.1 Signals and markers.** Flame-employing devices, such as lanterns or kerosene road flares, shall not be operated or used as a signal or marker in or upon wildfire risk areas.

Exception: The proper use of fuses at the scenes of emergencies or as required by standard railroad operating procedures.

~~308.5.2~~ **308.1.6.2 Portable fueled open-flame devices.** Portable open-flame devices fueled by flammable or combustible gases or liquids shall be enclosed or installed in such a manner as to prevent the flame from contacting combustible material.

Exceptions:

1. LP-gas-fueled devices used for sweating pipe joints or removing paint in accordance with Chapter 38.
2. Cutting and welding operations in accordance with Chapter 26.
3. Torches or flame-producing devices in accordance with Section 308.4.
4. Candles and open-flame decorative devices in accordance with Section 308.3.

2. Add new text as follows:

308.2 Permits required. Permits shall be obtained from the fire code official in accordance with Section 105.6 prior to engaging in the following activities involving open flame, fire and burning:

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

3. Revise as follows:

~~308.3.7~~ **308.3 Group A occupancies.** Open-flame, ~~devices~~ fire and burning shall not be ~~used~~ allowed in ~~a~~ Group A ~~occupancy~~ occupancies unless specifically permitted by the fire code official, and used in accordance with the requirements of Sections 308.1 and 308.3.

Exceptions:

1. Open-flame devices are allowed to be used in the following situations, provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants:
   1.1. Where necessary for ceremonial or religious purposes in accordance with Section 308.3.5.
   1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.6.
   1.3. Where candles on tables are securely supported on substantial noncombustible bases and the candle flames are protected.
2. Heat-producing equipment complying with Chapter 6 and the International Mechanical Code.
3. Gas lights are allowed to be used provided adequate precautions satisfactory to the fire code official are taken to prevent ignition of combustible materials.

~~308.3.2~~ **308.3.1 Candles and other open-flame decorative devices.** Candles and other open-flame decorative devices in drinking and dining establishments shall comply with all of the following restrictions:

1. Class I and Class II liquids and LP-gas shall not be used.
2. Liquid- or solid-fueled lighting devices containing more than 8 ounces (237 ml) of fuel must self-extinguish and not leak fuel at a rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.
3. The device or holder shall be constructed to prevent the spillage of liquid fuel or wax at the rate of more than 0.25 teaspoon per minute (1.26 ml per minute) when the device or holder is not in an upright position.

4. The device or holder shall be designed so that it will return to the upright position after being tilted to an angle of 45 degrees from vertical.

   Exception: Devices that self-extinguish if tipped over and do not spill fuel or wax at the rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.

5. The flame shall be enclosed except where openings on the side are not more than 0.375 inch (9.5 mm) diameter or where openings are on the top and the distance to the top is such that a piece of tissue paper placed on the top will not ignite in 10 seconds.
6. Chimneys shall be made of noncombustible materials and securely attached to the open-flame device.

   Exception: A chimney is not required to be attached to any open-flame device that will self-extinguish if the device is tipped over.

7. Fuel canisters shall be safely sealed for storage.
8. Storage and handling of combustible liquids shall be in accordance with Chapter 34.
9. Shades, where used, shall be made of noncombustible materials and securely attached to the open-flame device holder or chimney.
10. Candelabras with flame-lighted candles shall be securely fastened in place to prevent overturning, and shall ` be located away from occupants using the area and away from possible contact with drapes, curtains or other combustibles.

~~**308.3.5**~~ **308.3.1.1 Religious ceremonies.** When, in the opinion of the fire code official, adequate safeguards have been taken, participants in religious ceremonies are allowed to carry hand-held candles. Hand-held candles shall not be passed from one person to another while lighted.

~~**308.3.4**~~ **308.3.1.2 Aisles and exits.** Candles shall be prohibited in areas where occupants stand, or in an aisle or exit.

~~**308.6**~~ **308.3.2 Flaming food and beverage preparation.** The preparation of flaming foods or beverages in ~~places of~~ assembly ~~and drinking or dining establishments~~ areas, dining areas of restaurants and drinking establishments shall be in accordance with Sections ~~308.6.1~~ 308.3.2.1 through ~~308.6.5~~ 308.3.2.5.

~~**308.6.1**~~ **308.3.2.1 Dispensing.** Flammable or combustible liquids used in the preparation of flaming foods or beverages shall be dispensed from one of the following:

1. A 1-ounce (29.6 ml) container; or
2. A container not exceeding 1-quart (946.5 ml) capacity with a controlled pouring device that will limit the flow to a 1-ounce (29.6 ml) serving.

~~**308.6.2**~~ **308.3.2.2 Containers not in use.** Containers shall be secured to prevent spillage when not in use.

~~**308.6.3**~~ **308.3.2.3 Serving of flaming food.** The serving of flaming foods or beverages shall be done in a safe manner and shall not create high flames. The pouring, ladling or spooning of liquids is restricted to a maximum height of 8 inches (203 mm) above the receiving receptacle.

~~**308.6.4**~~ **308.3.2.4 Location.** Flaming foods or beverages shall be prepared only in the immediate vicinity of the table being serviced. They shall not be transported or carried while burning.

~~**308.6.5**~~ **308.3.2.5 Fire protection.** The person preparing the flaming foods or beverages shall have a wet cloth towel immediately available for use in smothering the flames in the event of an emergency.

~~**308.3.6**~~ **308.3.3 Theatrical performances.** Where ~~approved~~ permitted, open-flame devices used in conjunction with theatrical performances are allowed to be used when adequate safety precautions have been taken in accordance with NFPA 160.

4. Add new text as follows:

308.4 Group R Occupancies. Open flame, fire and burning in Group R occupancies shall comply with the requirements of Sections 308.1 through 308.1.6.2 and 308.4.1.

5. Revise as follows:

~~308.3.8~~ 308.4.1 Group R-2 dormitories. Candles, incense and similar open-flame-producing items shall not be allowed in sleeping units in Group R-2 dormitory occupancies.

Reason: This proposal creates consistency within Section 308, consistency with the language in Sections 105.6.30, 105.6.31, and 105.6.32 (permits), and with the rest of the fire code. Specifically, it cleans up inconsistent code language, reformats the section to provide more consistency with the rest of the code as well as improving the logical flow of the section, moves open-flame cooking devices out from underneath Group A and E occupancy requirements, and allows for sections related to open flame, fire and burning in other areas of the code (e.g. Sections 1503.2.2. and 1103.1).

Justification for revisions and new text is as follows:

Section 308.1 This language specifies all of the subsections in section 308, as is consistent with other IFC code language. Provisions are added for required compliance with the remainder of the code.

Sections 308.1.1 through 308.1.6.2 All of the general code sections have been moved to 308.1, which is appropriately named "General." Sections containing special requirements according to occupancies groups contain language requiring compliance with the specific and general requirements. This language is consistent with the remainder of the fire code (e.g. Section 2704.1).

Section 308.1.4 has been moved from 308.3.1. It was originally a subsection of 308.3, which contained requirements for obtaining a permit for open flame in Group A and E occupancies. Section 308.3.1 and 308.3.1.1 should not only apply to open-flame cooking devices within Group A and E occupancies, especially with exceptions for one- and two-family dwellings.

Section 308.2 New text was added for permits. The ".2" subsection is consistent within the code for permit information.

Section 308.3 The language was modified for consistency with Section 308.1. The revised language also ensures compliance with both the general and specific requirements.

Section 308.3.1 The addition of candles in the language provides clarity to the requirements without diminishing them. The more general reference to drinking and dining establishments is appropriate, as there should not be the differentiation between the kitchen and dining areas of the restaurant in this case. The differentiation is appropriate when addressing flaming food and beverage preparation, which is appropriately conducted in the kitchen.

Section 308.3.2 The differentiation between assembly, drinking and dining areas of restaurants and drinking establishments, and the kitchen or preparation areas.

Section 308.4 The added language ensures compliance with both the general and specific requirements of Section 308, and is also consistent with the rest of the fire code language.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that the proponent's efforts should be continued to correct the issues cited in his failed modification and several items that were noted by the committee, including the all-inclusive Group A applicability of some provisions that would exempt Group B religious or assembly uses of less than 50 persons and the confusing language "drinking and dining establishments" in Section 308.3.1 that could exempt bars that do not serve food and restaurants that do not serve liquor. Also, Section 308.1.4.1 could be interpreted as allowing LP-gas fired cooking devices with tanks greater than 2.5 pounds to be used within 10 feet of combustible construction.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Ian MacDonald, City of Orange, CA, representing California Fire Chiefs' Association, requests Approval as Modified by this public comment.

Replace proposal as follows:

308.1 General. Open flame, fire and burning on all premises shall be in accordance with Sections 308.1 through 308.4, and with other applicable sections of this code. ~~This section shall control open flames, fire and burning on all premises.~~

~~308.2~~ 308.1.1 Where prohibited. A person shall not take or utilize an open flame or light in a structure, vessel, boat or other place where highly flammable, combustible or explosive material is utilized or stored. Lighting appliances shall be well-secured in a glass globe and wire mesh cage or a similar approved device.

~~308.2.1~~ 308.1.2 Throwing or placing sources of ignition. No person shall throw or place, or cause to be thrown or placed, a lighted match, cigar, cigarette, matches, or other flaming or glowing substance or object on any surface or article where it can cause an unwanted fire.

~~308.4~~ 308.1.3 **Torches for removing paint.** Persons utilizing a torch or other flame-producing device for removing paint from a structure shall provide a minimum of one portable fire extinguisher complying with Section 906 and with a minimum 4-A rating, two portable fire extinguishers, each with a minimum 2-A rating, or a water hose connected to the water supply on the premises where such burning is done. The person doing the burning shall remain on the premises 1 hour after the torch or flame-producing device is utilized.

~~308.3.1~~ **(Supp)** 308.1.4 **Open-flame cooking devices**. Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or within 10 feet (3048 mm) of combustible construction**.**

Exceptions:

1. One- and two-family dwellings.
2. Where buildings, balconies and decks are protected by an automatic sprinkler system.
3. LP-gas cooking devices having LP gas containers with a water capacity not greater than 2.5 pounds [nominal 1 pound (0.454 kg) LP-gas capacity~~)~~.

~~308.3.3~~ 308.1.5 **Location near combustibles.** Open flames such as from candles, lanterns, kerosene heaters, and gas-fired heaters shall not be located on or near decorative material or similar combustible materials.

~~308.5~~ **(Supp)** 308.1.6 **Open-flame devices.** Torches and other devices, machines or processes liable to start or cause fire shall not be operated or used in or upon wildfire risk areas, except by a permit in accordance with Section 105.6 secured from the fire code official.

Exception: Use within inhabited premises or designated campsites which are a minimum of 30 feet (9144 mm) from grass-, grain-, brush- or forest-covered areas.

~~308.5.1~~ **(Supp)** 308.1.6.1 **Signals and markers.** Flame-employing devices, such as lanterns or kerosene road flares, shall not be operated or used as a signal or marker in or upon wildfire risk areas.

Exception: The proper use of fusees at the scenes of emergencies or as required by standard railroad operating procedures.

~~308.5.2~~ 308.1.6.2 **Portable fueled open-flame devices.** Portable open-flame devices fueled by flammable or combustible gases or liquids shall be enclosed or installed in such a manner as to prevent the flame from contacting combustible material.

Exceptions:

1. LP-gas-fueled devices used for sweating pipe joints or removing paint in accordance with Chapter 38.
2. Cutting and welding operations in accordance with Chapter 26.
3. Torches or flame-producing devices in accordance with Section 308.1.3.
4. Candles and open-flame decorative devices in accordance with Section 308.3.1.

~~308.3.5~~ 308.1.7 **Religious ceremonies.** When, in the opinion of the code official, adequate safeguards have been taken, participants in religious ceremonies are allowed to carry hand-held candles. Hand-held candles shall not be passed from one person to another while lighted.

~~308.3.4~~ 308.1.7.1 **Aisles and exits.** Candles shall be prohibited in areas where occupants stand, or in an aisle or exit.

~~308.6~~ 308.1.8 **Flaming food and beverage preparation.** The preparation of flaming foods or beverages in places of assembly and drinking or dining establishments shall be in accordance with Sections ~~308.6.1~~ 308.1.8 through ~~308.6.5~~ 308.1.8.5.

~~308.6.1~~ 308.1.8.1 **Dispensing.** Flammable or combustible liquids used in the preparation of flaming foods or beverages shall be dispensed from one of the following:

1. A 1-ounce (29.6 ml) container, or
2. A container not exceeding 1 quart (946 ml) capacity with a controlled pouring device that will limit the flow to a 1 ounce (29.6 ml) serving.

~~308.6.2~~ 308.1.8.2 **Containers not in use.** Containers shall be secured to prevent spillage when not in use.

~~308.6.3~~ 308.1.8.3 **Serving of flaming food.** The serving of flaming foods or beverages shall be done in a safe manner and shall not create high flames. The pouring, ladling or spooning of liquids is restricted to a maximum height of 8 inches (203 mm) above the receiving receptacle.

~~308.6.4~~ 308.1.8.4 **Location.** Flaming foods or beverages shall be prepared only in the immediate vicinity of the table being serviced. They shall not be transported or carried while burning.

~~308.6.5~~ 308.1.8.5 **Fire protection.** The person preparing the flaming foods or beverages shall have a wet cloth towel immediately available for use in smothering the flames in the event of an emergency.

308.2 Permits required. Permits shall be obtained from the fire code official in accordance with Section 105.6 prior to engaging in the following activities involving open flame, fire and burning:

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

~~308.3.7~~ 308.3 **Group A occupancies.** Open-flame devices shall not be used in a Group A occupancy.

Exceptions:

1. Open-flame devices are allowed to be used in the following situations, provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants:

1.1. Where necessary for ceremonial or religious purposes in accordance with Section 308.1.7.
1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.2.
1.3. Where candles on tables are securely supported on substantial noncombustible bases and the candle flames are protected.
2. Heat-producing equipment complying with Chapter 6 and the *International Mechanical Code*.
3. Gas lights are allowed to be used provided adequate precautions satisfactory to the fire code official are taken to prevent ignition of combustible materials.

~~308.3.2~~ **308.3.1 Open-flame decorative devices.** Open-flame decorative devices shall comply with all of the following restrictions:

1. Class I and Class II liquids and LP-gas shall not be used.
2. Liquid- or solid-fueled lighting devices containing more than 8 ounces (237 ml) of fuel must self-extinguish and not leak fuel at a rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.
3. The device or holder shall be constructed to prevent the spillage of liquid fuel or wax at the rate of more than 0.25 teaspoon per minute (1.26 ml per minute) when the device or holder is not in an upright position.
4. The device or holder shall be designed so that it will return to the upright position after being tilted to an angle of 45 degrees from vertical.

   Exception: Devices that self-extinguish if tipped over and do not spill fuel or wax at the rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.

5. The flame shall be enclosed except where openings on the side are not more than 0.375 inch (9.5 mm) diameter or where openings are on the top and the distance to the top is such that a piece of tissue paper placed on the top will not ignite in 10 seconds.
6. Chimneys shall be made of noncombustible materials and securely attached to the open-flame device.

   Exception: A chimney is not required to be attached to any open-flame device that will self-extinguish if the device is tipped over.

7. Fuel canisters shall be safely sealed for storage.
8. Storage and handling of combustible liquids shall be in accordance with Chapter 34.
9. Shades, where used, shall be made of noncombustible materials and securely attached to the open-flame device holder or chimney.
10. Candelabras with flame-lighted candles shall be securely fastened in place to prevent overturning, and shall be located away from occupants using the area and away from possible contact with drapes, curtains or other combustibles.

~~308.3.6~~ **308.3.2 Theatrical performances.** Where approved, open-flame devices used in conjunction with theatrical performances are allowed to be used when adequate safety precautions have been taken in accordance with NFPA 160.

308.4 Group R Occupancies. Open flame, fire and burning in Group R occupancies shall comply with the requirements of Sections 308.1 through 308.1.6.2 and 308.4.1.

~~308.3.8~~ **308.4.1 Group R-2 dormitories.** Candles, incense and similar open-flame-producing items shall not be allowed in sleeping units in Group R-2 dormitory occupancies.

Commenter's Reason: The intent behind the original proposal was to simplify the section by reformatting it. Along the way, the proponent erringly mixed code changes with the reformat, which overly complicated the proposal.

After the committee hearing, the proponent heeded the advice of the committee, and changed much of the language back to its original form. Other committee-recommended changes were made to make the format appealing to code users:

- "Religious ceremonies" and "flaming food and beverage preparation" were moved out from under the "assembly" provisions to the "general" provisions to allow for application in Group B occupancies.
- The references to "drinking and dining" establishments were removed to preclude confusion regarding establishments that are "dining" only, without serving alcohol, and "drinking" establishments that do not serve food.
- The exception for LP-gas fired cooking devices was changed back to its original language.

These changes were made to allow the vote to concentrate on the reformatting, and not code changes. Here is the existing format:
308 – Open flame
308.1 – General
308.2 – Where prohibited
308.3 – Open flame
308.4 – Torches for removing paint
308.5 – Open flame devices
308.6 – Flaming food and beverage preparation

Many good changes have been made to Section 308, but the lack of a recent comprehensive format has made the flow of code requirements a bit awkward. For example, requirements for permits are referenced throughout the requirements. Requirements based upon occupancy are layered within the "open flame" requirements. The "open flame" subsection seems redundant, as the whole of the section addresses open flame. "Torches for removing paint" does not fall under the subsection addressing open flame.

Here is the new format:
308 – Open flame
308.1 – General
308.2 – Permits required
308.3 – Group A occupancies
308.4 – Group R occupancies

All of the special subjects are grouped under the general section. All three of the required permits are addressed in one subsection. You will find that the flow of the requirements, which have not changed, is smoother and more logical now. If it can be done better, please contact the proponent to fix the modification. Thank you.

Final Hearing Results

F51-07/08 AMPC

Code Change No: F53-07/08

Original Proposal

Section: 311.2.2

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

311.2.2 Fire protection. Fire alarm, sprinkler and standpipe systems shall be maintained in an operable condition at all times.

Exceptions:

1. When the premises have been cleared of all combustible materials and debris and, in the opinion of the fire code official, the type of construction, fire separation distance and security of the premises do not create a fire hazard.
2. Where approved, buildings that will not be heated and where fire protection systems will be exposed to freezing temperatures, fire alarm and sprinkler systems are permitted to be placed out of service and standpipes are permitted to be maintained as dry systems (without an automatic water supply) provided the building has no contents or storage, and windows, doors and other openings are secured to prohibit entry by unauthorized persons.

Reason: This proposal will require that the allowance to place either a fire sprinkler system or a fire alarm system out of service must be approved. It will not be an automatic allowance and acceptable practice. This proposal only indicates “approval” which will require that the use of this exception is approved by what ever process the local jurisdiction determines to be appropriate. It may need to include the fire code official, building code official, and fire chief, or any combination of these positions.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

311.2.2 Fire protection. Fire alarm, sprinkler and standpipe systems shall be maintained in an operable condition at all times.

Exceptions:

1. When the premises have been cleared of all combustible materials and debris and, in the opinion of the fire code official, the type of construction, fire separation distance and security of the premises do not create a fire hazard.
2. Where approved by the fire chief, buildings that will not be heated and where fire protection systems will be exposed to freezing temperatures, fire alarm and sprinkler systems are permitted to be placed out of service and standpipes are permitted to be maintained as dry systems (without an automatic water supply) provided the building has no contents or storage, and windows, doors and other openings are secured to prohibit entry by unauthorized persons.

Committee Reason: The proposal was approved because the committee felt that it is appropriate to require the jurisdiction to determine the appropriateness of taking an unheated building fire protection system out of service. The modification recognizes that this is primarily an operational issue and places the approval with the fire chief.

Assembly Action: **None**

Final Hearing Results

F53-07/08 **AM**

Code Change No: F54-07/08

Original Proposal

Section: 311.5.4

Proponent: Sean DeCrane, Fire Department, Cleveland, OH, representing International Association of Fire Fighters, Local 93

Revise as follows:

311.5.4 Placard symbols. The design of the placards shall use the following symbols:

1. [ ] This symbol shall mean that the structure had normal structural conditions at the time of marking.
2. [\] This symbol shall mean that structural or interior hazards exist and interior fire-fighting or rescue operations should be conducted with extreme caution.
3. [X] This symbol shall mean that structural or interior hazards exist to a degree that consideration should be given to limit fire fighting to exterior operations only, with entry only occurring for known life hazards.
4. Vacant Marker Hazard Identification Symbols: The following symbols shall used to designate known hazards on the Vacant Building Marker. They shall be painted directly above the symbol.
   - 4.1. R/O - Roof Open
   - 4.2. S/M - Stairs, Steps and Landing Missing
   - 4.3. F/E – Avoid Fire Escapes
   - 4.4. H/F – Holes in Floor

Reason: There are a number of cities that are now requiring their fire departments to identify, and label, vacant buildings and the hazards they present to fire fighters. A vacant building can contain many hazards and unknowns to a responding fire fighter. During normal fire company operations, or after a response to a fire in a vacant structure, the fire department can simply paint, or use a placard, to designate the hazards encountered in the structure. By labeling the various degrees of hazards, the incident commanders can restrict operations to strictly defensive or cautious offensive operations. Simply identifying the known hazards allows the Incident Commander to have a clearer picture of the hazards contained in the building.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

311.5.4 Placard symbols. The design of the placards shall use the following symbols:

1. [ ] This symbol shall mean that the structure had normal structural conditions at the time of marking.
2. [\] This symbol shall mean that structural or interior hazards exist and interior fire-fighting or rescue operations should be conducted with extreme caution.
3. [X] This symbol shall mean that structural or interior hazards exist to a degree that consideration should be given to limit fire fighting to exterior operations only, with entry only occurring for known life hazards.
4. Vacant Marker Hazard Identification Symbols: The following symbols shall used to designate known hazards on the Vacant Building Marker. They shall be ~~painted~~ placed directly above the symbol.
   - 4.1. R/O - Roof Open
   - 4.2. S/M - Stairs, Steps and Landing Missing
   - 4.3. F/E – Avoid Fire Escapes
   - 4.4. H/F – Holes in Floor

Committee Reason: The proposal was approved because the committee felt that it is appropriate to provide the fire department incident commander with enhanced tactical information about the hazards to firefighters present in vacant buildings. The modification provides flexibility in how the placards are to be displayed rather than only allowing them to be painted on the building which could present long-term maintenance issues.

Assembly Action: **None**

Final Hearing Results

F54-07/08 **AM**

Code Change No: F55-07/08

Original Proposal

Section: 313.1

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

313.1 General. Fueled equipment, including but not limited to motorcycles, mopeds, lawn-care equipment, portable generators and portable cooking equipment, shall not be stored, operated or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the *International Building Code*.
2. Where allowed by Section 314.
3. Storage of equipment utilized for maintenance purposes is allowed in approved locations when the aggregate fuel capacity of the stored equipment does not exceed 10 gallons (38 L) and the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

Reason: This revision is needed to clarify that portable generators are not allowed for use inside buildings based on the current code text. The only exception to this is when utilized in accordance with one of the exceptions. This provision clarifies the current intent of the code. As the result of recent tragic hurricanes it was documented that multiple fatalities occurred as the result of the improper use and location of portable generators.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which clarifies the intent of the code in its prohibition of the storage, use or repair of fueled equipment inside of buildings by including portable generator sets.

Assembly Action: **None**

Final Hearing Results

F55-07/08 **AS**

Code Change No: F56-07/08

Original Proposal

Section: 315.3.1

Proponent: Ernest Little, Captain-Code Compliance, Prince William County, VA Fire Marshals Office

Revise as follows:

315.3.1 Storage beneath overhead projections from buildings. ~~Combustible materials stored or displayed outside of buildings that are protected by automatic sprinklers shall not be stored or displayed under nonsprinklered eaves, canopies or other projections or overhangs.~~ Where buildings are required to be protected by automatic

sprinklers, the outdoor storage, display, and handling of combustible materials under eaves, canopies or other projections or overhangs is prohibited except where automatic sprinklers are installed under such eaves, canopies or other projections or overhangs,

Reason: The purpose of this code language change is to clarify the requirement for automatic sprinklers, where automatic sprinklers are "required" to be installed to protect the building, to protect the space under eaves, canopies, or other projections or overhangs when combustibles are stored, displayed, or handled there. When a building is "required" to have an automatic sprinkler system installed throughout, NFPA 13, the standard for installation of sprinkler systems, has clear intention to have this space protected by automatic sprinklers. This NFPA standard has been the adopted reference in the past by the BOCA Basic Building Code and IBC for installation of automatic sprinklers. NFPA 13- 02 section 8-14.7.4 states "Sprinklers shall be installed under roofs or canopies over areas where combustibles are stored and handled." The intent of this requirement is to prevent a fire involving the combustible materials stored or handled under a roof or canopy, from entering the overhead area and getting above the sprinkler system protecting the structure, thus overwhelming the fire protection system preventing control and extinguishment of the fire. The NFPA 13 standard requires automatic sprinklers "in" the canopy or an overhead structure when it contains combustible construction and under the canopy or overhead structure when combustibles are stored, displayed, or handled under it. The current language contained in the IFC is not clear as to the need for automatic sprinklers "under" the overhead structure. When challenged, the current code section, as written, could be interpreted as only requiring automatic sprinklers "in" the canopy. The code change provides the necessary clarification of the code requirement.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

315.3.1 Storage beneath overhead projections from buildings. Where buildings are ~~required to be~~ protected by automatic sprinklers, the outdoor storage, display, and handling of combustible materials under eaves, canopies or other projections or overhangs is prohibited except where automatic sprinklers are installed under such eaves, canopies or other projections or overhangs.

Committee Reason: The proposal was approved because the committee felt that it will reinforce the requirements of NFPA 13 and provide clearer guidance to the fire code official in regulating outdoor combustible storage under eaves and canopies. The modification reflects the committee's opinion that any building protected by sprinklers should comply with the requirements as a matter of good fire protection, not just those required by the code to be sprinklered.

Assembly Action: **None**

Final Hearing Results

F56-07/08 **AM**

Code Change No: F58-07/08

Original Proposal

Section: 316 (New)

Proponent: James Everitt, Everitt and Associates, representing McClure Industries

Add new section as follows:

SECTION 316
LAUNDRY CARTS

316.1 Laundry carts in commercial laundries. Laundry carts used for commercial laundries shall be constructed of noncombustible materials or materials having a peak rate of heat release not exceeding 300 kW/m^2 at a flux of 50 kW/m^2 when tested in a horizontal orientation in accordance with ASTM E 1354. Such laundry carts shall be permanently labeled indicating capacity and peak rate of heat release.

Exceptions:

1. Laundry carts in buildings protected with an approved automatic sprinkler system in accordance with Sections 903.3.1.1 or 903.3.1.2.
2. Laundry carts in coin-operated laundries.

Reason: The change from cooking with animal fat to vegetable oil has increased the amount of spontaneous ignition fires. These fires occur outside due to external heating form the sun or by insufficient cool down time in the laundry process and have been known to ignite in freshly folded linen.

Polyethylene laundry carts have a fuel value equal to gasoline and the continued use of these carts is inappropriate. The City of Portland has experienced three recent fires two of which were $400k+ each with extensions $100k+ each, due to spontaneous ignition. Last year the Oregon State Coffey Creek Correction Facility had a commercial dryer fire with no loss using the ASTME 1354 container. The commercial dryer fire was emptied in to the container and taken outside and overhauled without evacuation, loss to the structure or damage the container.

These laundry carts are currently available. This revision is supported by the Oregon Laundry Association and is now part of the Oregon amended IFC.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that the proposal lacked clarity as to whether carts in coin-operated laundries would be included in the regulations and that the use of the undefined term "commercial laundry" could result in inconsistent enforcement. Also, the applicability of the regulations to existing carts has not been portrayed. The committee felt that a size/capacity of the carts to be regulated should be included.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

James Everitt, Everitt and Associates, requests Approval as Modified by this public comment.

Replace proposal as follows:

SECTION 316
LAUNDRY CARTS

316.1 Laundry carts with a capacity exceeding 1 cubic yard. Laundry carts with an individual capacity of 1 cubic yard [200 gallons (0.76 m^3)] or more, used in laundries within group B, F-1, I, and group R-1 occupancies shall be constructed of noncombustible materials or materials having a peak rate of heat release not exceeding 300 kW/m^2 at a flux of 50 kW/m^2 when tested in a horizontal orientation in accordance with ASTM E 1354.

Exceptions:

1. Laundry carts in areas protected by an approved automatic sprinkler system installed throughout in accordance with Section 903.3.1.1.
2. Laundry carts in coin-operated laundries

Commenter's Reason:

1) To comply with the directions of the committee.
2) As stated by the original proposal: Polyethylene laundry carts have a fuel value equal to gasoline and are frequently subject to spontaneous ignition. The City of Portland has experienced two recent fires $400k+ each with extensions $100k+ each, due to spontaneous ignition. Last year the Oregon State Coffey Creek Correction Facility had a commercial dryer fire with no loss using the ASTME 1354 container. The commercial dryer fire was empted in to the container and taken outside and overhauled without evacuation, loss to the structure or damage the container. This revision is supported by the Oregon Laundry Association.

Final Hearing Results

F58-07/08 **AMPC1**

Code Change No: F59-07/08

Original Proposal

Section: 403.3 (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Add new text as follows:

403.3 Crowd manager. Trained crowd managers shall be provided for facilities or events where more than 1000 persons congregate. The minimum number of crowd managers shall be established at a ratio of one crowd manager to every 250 persons. Where approved by the fire code official, the ratio of crowd managers shall be permitted to be reduced where the facility is equipped throughout with an approved automatic sprinkler system or based upon the nature of the event.

Reason: The only requirement for crowd managers is in Section 2404.20 for tents. Large assemblies of people create the need for crowd management due to panic and fear in emergency situations in numerous other locations than just tents. It is the intent of this proposal for crowd managers to be personnel already assigned and employed by the facility. Current employees can be trained as crowd managers to fulfill this requirement. At the time of an emergency, the trained crowd managers would take on these additional responsibilities to control and direct the audience or attendees in a safe manner.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it is appropriate to provide enhanced life safety in large Group A venues by providing patron assistance in emergencies. The committee did observe, however, that there should be more guidance on the training required and clarification that existing staff can be used and the fact that new staff need not be hired for this purpose.

Assembly Action: **None**

Final Hearing Results

F59-07/08 **AS**

Code Change No: F60-07/08

Original Proposal

Section: 404.2, Table 405.2

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

404.2 Where required. An approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

1. Group A, other than Group A occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000.
2. Group B buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.

3. Group E.
4. Group F.
~~4.~~ 5. Group H.
~~5.~~ 6. Group I.
~~6.~~ 7. Group R-1.
~~7.~~ 8. Group R-2 college and university buildings.
~~8.~~ 9. Group R-4.
~~9.~~10. High-rise buildings.
~~10.~~11. Group M buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.
~~11.~~12. Covered malls exceeding 50,000 square feet (4645 m^2) in aggregate floor area.
~~12.~~13. Underground buildings.
~~13.~~14. Buildings with an atrium and having an occupancy in Group A, E or M.

TABLE 405.2
FIRE AND EVACUATION DRILL FREQUENCY AND PARTICIPATION

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION
Group A	Quarterly	Employees
Group B[c]	Annually	Employees
Group E	Monthly[a]	All occupants
Group F	Annually	Employees
Group I	Quarterly on each shift	Employees[b]
Group R-1	Quarterly on each shift	Employees
Group R-2[d]	Four annually	All occupants
Group R-4	Quarterly on each shift	Employees[b]
High-rise buildings	Annually	Employees

(Footnotes remain unchanged)

Reason: The IFC currently requires fire-safety plans in practically every occupancy group with the exception of Group F occupancies. Under the Code, the only "manufacturing" occupancy that requires a fire-safety plan is Group H occupancies. The only difference between a Group F and a Group H occupancy is the aggregate amount of hazardous materials present in the facility and some of the manufacturing processes. In many Group F occupancies, there can be processes and hazards that theoretically make them just as hazardous as a Group H occupancy. But because these facilities fall short of the aggregate amount of chemicals, they are not classified as Group H.

Group F manufacturing facilities should have written fire safety and evacuation plans to protect the workers. Under 29 CFR 1910.39(b), OSHA requires that any workplace with more than ten (10) employees shall have a written fire prevention plan. The code should at least parallel the OSHA Standard.

Manufacturing facilities should be required to have at least annual emergency evacuation drills due to the size and complexity of some of these facilities. It will increase the life safety of the occupants to practice evacuation procedures.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it is appropriate to enhance the level of safety in industrial occupancies by requiring a fire safety and evacuation plan and drills for employees. The committee did observe, however, that further definition of the applicability triggers is needed, e.g. in how big a Group F, how many occupants, should Group F-2, which deals with essentially noncombustible materials, be included?

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee, requests Approval as Modified by this public comment.

Modify proposal as follows:

404.2 Where required. An approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

1. Group A, other than Group A occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000.
2. Group B buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.
3. Group E.
4. Group F buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.
5. through 14. (No change to current text)

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The Code Development Committee approved this item on the basis that the Joint Fire Service Review Committee would return and provide some parameters and limitations on the application to F occupancies.

This Public Comment limits the application of these requirements to F occupancies with more than 500 occupants, or F occupancies with more than 100 occupants above or below the level of exit discharge.

Consideration was given as to whether F-2 should be included along with the F-1 occupancies. Based on the fact that IFC 907.2.4 requires a fire alarm to be installed in either an F-1 or an F-2 at the same threshold of 500 occupants or 100 above or below exit discharge, it was determined that same fire evacuation drill requirements would be appropriate. The F-2 will have a fire alarm installed at these levels, therefore, the occupants should be aware of their expected action when it activates.

Final Hearing Results

F60-07/08 AMPC

Code Change No: F61-07/08

Original Proposal

Sections: 404.1, 404.3.3 through 404.3.3.3 (New), 406.3.3 (New), 402.1 (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Revise as follows:

404.1 General. Fire safety, evacuation and lockdown plans and associated drills shall comply with the requirements of this section. The plans shall not conflict with other sections of this code.

2. Add new text as follows:

404.3.3 Lockdown plans. Where facilities develop a lockdown plan, the lockdown plan shall be in accordance with Sections 404.3.3.1 through 404.3.3.3.

404.3.3.1 Lockdown plan contents. Lockdown plans shall be approved by the fire code official and shall include the following:

1. Initiation. The plan shall include instructions for reporting an emergency that requires a lockdown.
2. Accountability. The plan shall include accountability procedures for staff to report the presence or absence of occupants.
3. Recall. The plan shall include pre-arranged signal for returning to normal activity.
4. Communication and coordination. The plan shall include an approved means of two-way communication between a central location and each secured area.
5. The plan shall be in accordance with the National Incident Management System and applicable state and federal laws or regulations.

404.3.3.2 Training frequency. The training frequency shall be included in the lockdown plan. The lockdown drills shall not substitute for any of the fire and evacuation drills required in Section 405.2.

404.3.3.3 Lockdown notification. The method of notifying building occupants of a lockdown shall be included in the plan. The method of notification shall be separate and distinct from the fire alarm signal.

406.3.3 Emergency lockdown training. Where a facility has a lockdown plan, employees shall be trained on their assigned duties and procedures in the event of an emergency lockdown.

(Renumber remaining sections)

3. Add new definition as follows:

402.1 Definition. The following word and term shall, for the purposes of this chapter and as used elsewhere in this code, have the meaning shown herein.

LOCKDOWN. An emergency situation requiring that the occupants be sheltered and secured in place within a building when normal evacuation would put occupants at risk.

Reason: Buildings are developing “lockdown” plans in response to security threats. This proposal will add requirements to the IFC on lockdown plans, lockdown drills and lockdown operations, not only in schools, but in all buildings where a lockdown plan is desired.

The code does not require a lockdown plan, however if a plan is to be developed, the plan must maintain the integrity of the egress system to an acceptable level. These lockdown plans include procedures for locking occupants into individual rooms within the building, and typically do not consider the impact of lockdowns on fire safety. This proposal is intended to establish the conditions for lockdown plans so that they will not decrease the level of life safety in the event of fires.

Many facilities are adopting procedures that can significantly affect fire safety, such as using the fire alarm system to signal a security emergency, locking doors with devices that prevent egress, and chaining exit discharge doors from the inside to prevent occupants from leaving the building. It is important that plans for security threats do not include procedures that result in violations of life safety and actually increase the hazard to the occupants.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

404.3.3.1 Lockdown plan contents. Lockdown plans shall be approved by the fire code official and shall include the following:

1. Initiation. The plan shall include instructions for reporting an emergency that requires a lockdown.
2. Accountability. The plan shall include accountability procedures for staff to report the presence or absence of occupants.
3. Recall. The plan shall include pre-arranged signal for returning to normal activity.
4. Communication and coordination. The plan shall include an approved means of two-way communication between a central location and each secured area.
5. ~~The plan shall be in accordance with the National Incident Management System and applicable state and federal laws or regulations.~~

Committee Reason: The proposal was approved because the committee felt that it is appropriate to provide a means for involving the fire code official in lockdown procedure planning that is currently being done but without fire service input. The modification recognizes that the NIMS is primarily a tool for emergency forces and deletes unclear language regarding other applicable laws. The committee also observed that the regulations could be improved by including the police and other interested and affected agencies and officials in the lockdown planning process. In addition, guidance should be provided on the "accountability procedures" and the "central location" in Sections 404.3.3.1(2) and 404.3.3.1(4), respectively, and providing applicable exceptions to compliance with other parts of the code in lieu of the new last sentence in Section 404.1.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee, requests Approval as Modified by this public comment.

Further modify proposal as follows:

404.1 General. Fire safety, evacuation and lockdown plans and associated drills shall comply with the requirements of this section. ~~The plans shall not conflict with other sections of this code.~~

402.1 Definition. The following word and term shall, for the purposes of this chapter and as used elsewhere in this code, have the meaning shown herein.

LOCKDOWN. An emergency situation, in other than a Group I-3 occupancy, requiring that the occupants be sheltered and secured in place within a building when normal evacuation would put occupants at risk.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: This item was approved by the Code Development Committee with instruction to the Joint Fire Service Review Committee to return with some enhancements.

Specifically, the 2nd sentence of 404.1 is deleted. If the Lockdown Plan is conflicting with the code, it should not be approved.

The definition of lockdown is revised to eliminate the inclusion of detention facilities.

All of the revisions as a result of floor testimony and as requested by the committee have been included so that the IFC can now more efficiently evaluate lockdown plans as they become more commonplace across the country.

Final Hearing Results

F61-07/08 AMPC1

Code Change No: F62-07/08

Original Proposal

Section: 407.2

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing The Chlorine Institute

Revise as follows:

407.2 Material safety data sheets. Material Safety Data Sheets (MSDS) for all hazardous materials shall be either readily available on the premises as a paper copy, or where approved, shall be permitted to be readily retrievable by electronic access.

Reason: Use of electronic databases as a means to make MSDSs available is common all along the hazardous materials supply chain. This proposal seeks only to update the code to recognize this longstanding common practice.

The use of electronic means to handle MSDSs is a far more efficient method of keeping this material up to date, organized and readily accessible from many locations. It also makes the information electronically searchable and avoids the enormous administrative effort required to maintain paper copies MSDSs in binders or file cabinets duplicated at many sites.

To address concerns expressed by some individuals when a similar proposal was considered last cycle, such as power interruptions that might make MSDSs inaccessible at times, a condition of local approval has been added to limit the permissible use of electronic systems. With this addition, jurisdictions desiring hard copies on site will still have these, while jurisdictions desiring to permit electronic databases will have a means of encouraging such systems without requiring the owner to submit an alternate method proposal.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which is a response to the committee's request for alternative storage means in its disapproval of code change F37-06/07 in the last code development cycle.

Assembly Action: **None**

Final Hearing Results

F62-07/08 AS

Code Change No: F65-07/08

Original Proposal

Section: 501.3

Proponent: Steven L. Schoon, Golder Ranch Fire District, Arizona Fire Marshals Association

Revise as follows:

501.3 Construction documents. Construction documents for proposed fire apparatus access, location of fire lanes, security gates across fire apparatus access and construction documents and hydraulic calculations for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.

Reason: Section 501.3 requires fire apparatus access to have construction documents submitted to the fire department for review and approval prior to construction. Section 503.6 requires the installation of security gates across a fire apparatus access road be approved by the fire chief. Adding the proposed language ties these two sections together and requires the security gate to have a construction document for the fire department to review. Furthermore, if a security gate was not on the original construction plans for the fire apparatus access, this new text reinforces that a security gate installed at a later time does require a construction plan to be submitted and approved prior to construction.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it is appropriate to give the fire code official important plan review information on the site security arrangements which could affect FD access. The committee observed that, since this section is applicable to proposed fire apparatus access, gates installed after the fire apparatus access is completed would not be subject to plan review.

Assembly Action: **None**

Final Hearing Results

F65-07/08 **AS**

Code Change No: F67-07/08

Original Proposal

Section: 503.2.1, Appendix D103.1, D105.2

Proponent: Edwin M. Berkel, CFI, Mehlville Fire Protection District, representing himself

Revise as follows:

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm), exclusive of shoulders. See Figure D103.1.

D105.2 Width. Fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm), exclusive of shoulders, in the immediate vicinity of any building or portion of building more than 30 feet (9144 mm) in height.

Reason: The intent of the width requirements for fire apparatus access roads is that the all-weather surface capable of supporting the expected imposed loads of apparatus be applicable to the full 20 foot width of the road to provide space for fire apparatus to pass one another during fireground operations. The need to pass may occur when engines are parked for hydrant hookup or laying hose or when trucks are performing aerial ladder operations. Including adjacent road shoulders in the 20 foot width measurement could yield sub-standard and inadequate driving surfaces for apparatus. This proposal will make it clear that the shoulders are not to be included in the minimum fire apparatus access road width.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change which will provide for full-width, properly surfaced fire apparatus access roads.

Assembly Action: **None**

Final Hearing Results

F67-07/08 **AS**

Code Change No: F68-07/08

Original Proposal

Section: 503.2.8 (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Add new text as follows:

503.2.8 Angles of approach and departure. The angles of approach and departure for fire apparatus access roads shall be within the limits established by the fire code official based on the fire department's apparatus.

Reason: The Angle of Approach is the angle between the ground and a line running from the bottom of the front tire to the lowest-hanging point directly in front of it, which is usually the front bumper. This angle gives an indication of how steep an incline the vehicle can clear when approaching that angle.

The Angle of Departure is the angle between the ground and a line running from the bottom of the rear tire to the lowest-hanging point directly behind it, which is usually the rear step. Similar to the approach angle, this angle indicates how steep an incline the vehicle can clear when departing from that angle.

Currently, no language exists in the IFC regarding angles of approach and departure. This design aspect of a fire apparatus access road is crucial to successful navigation by apparatus.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it is appropriate to provide the fire code official with a means of preventing road grades that might cause fire apparatus to get "hung up" along the entry grades and changing grades of fire apparatus roads. The proposal brings to light an important issue that is often overlooked in fire apparatus access road design.

Assembly Action: **None**

Final Hearing Results

F68-07/08 **AS**

Code Change No: F69-07/08

Original Proposal

Section: 503.3

Proponent: Daniel Najera, University of California, Davis Fire Department, representing California Fire Chief's Association (CFCA)

Revise as follows:

503.3 Marking. Where required by the fire code official, approved signs or other approved ~~notices~~ markings that include the words NO PARKING - FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. ~~Signs or notices~~ The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

Reason: This code revision replaces the word "notices" with "marking" and adds the words "NO PARKING FIRE LANE". Marking is more consistent code language and is reflected in the title of this section. Notices is an ambiguous term that does not reflect permanency but allows for floating fire lanes and handed out paper notices. The existing language leaves too much room for interpretation that may not reflect the original intent of this section.

The addition of the words NO PARKING FIRE LANE assists the fire department, local law enforcement authority's and the judicial system in upholding fire lane enforcement. It is common code language that is easily understood and is commonly used in vehicle codes around the country.

This proposal does not mention size, color or material to be used for fire lane markings. It is understood by the word approved that fire lane markings have to be approved by the local authority having jurisdiction.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

503.3 Marking. Where required by the fire code official, approved signs or other approved notices and/or markings that include the words NO PARKING - FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

Committee Reason: The proposal was approved because the committee felt that it strengthens the section by clarifying the marking requirements and adds standard marking legend wording. The modification recognizes that there are times when notice with or without the markings may be appropriate.

Assembly Action: **None**

Final Hearing Results

F69-07/08 **AM**

Code Change No: F70-07/08

Original Proposal

Sections: 503.5, 503.6, Appendix D103.5, Chapter 45 (New)

Proponent: Joseph R. Hetzel, PE, Thomas Associates, Inc., representing Door & Access Systems Manufacturers Association

1. Revise as follows:

503.5 Required gates or barricades. The fire code official is authorized to require the installation and maintenance of gates or other approved barricades across fire apparatus access roads, trails or other accessways, not including public streets, alleys or highways. Electric gate openers, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire chief. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate openers, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

Appendix D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).
2. Gates shall be of the swinging or the sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools or when a key box containing the key(s) to the lock is installed at the gate location.
7. Locking device specifications shall be submitted for approval by the code official.
8. Electric gate openers, where provided, shall be listed in accordance with UL 325.
9. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

2. Add standards to Chapter 45 as follows:

ASTM

ASTM F 2200-05	Standard Specification for Automated Vehicular Gate Construction

UL

UL 325-02	Door, Drapery, Gate, Louver, and Window Operators and Systems, with revisions through February, 2006

Reason: The purpose of the proposed code change is to provide requirements for automatic vehicular gates, which are not currently addressed in the Code.

The current Code provisions are inadequate because public safety needs are not addressed regarding automatic operation of vehicular gates. Protection is needed from potential entrapment of individuals between an automatically moving gate and a stationary object, or surface, in close proximity to such gate. Gates intended for automation require specific design, construction and installation to accommodate entrapment protection to minimize or eliminate certain excessive gate gaps, openings and protrusions identified as contributing to the hazard of entrapments that have historically caused numerous serious injuries and deaths.

The Code will be improved by including provisions referencing UL 325 and ASTM F 2200. UL 325 is an ANSI recognized safety standard containing provisions governing gate openers. Gate openers listed to the requirements of UL 325 provide the public with assurance that safety requirements have been met for such openers. ASTM F 2200 is a consensus document containing provisions governing the construction of vehicular gates intended for automation, and has been harmonized with the applicable provisions of UL 325.

Death and injury data does exist associated with automated vehicular gates. A previous related proposal on the topic, submitted in 2002 by the Consumer Product Safety Commission and designated as E34-02, pointed out the following information compiled by the CPSC from 1985 to that time:

1. Reports of 32 deaths relating to automatically operated vehicular gates were received, many as a result of entrapment between a moving gate and a stationary object.
2. Data from the National Electronic Injury Surveillance System estimated that approximately 2,000 people are treated annually in hospital emergency rooms due to injuries in such gates. Many of these injuries have been identified as serious, involving amputation, broken arms and broken legs.

With regard to security, both UL 325 and ASTM F 2200 make consideration for restricted access gates by recognizing gate openers and operators for such applications as a particular Class (IV) out of four different classifications.

Cost Impact: The code change proposal will increase the cost of construction**.** However, the resulting safety benefits will outweigh the increased cost.

Analysis: A review of the standards proposed for inclusion in the code, ASTM F 2200-05 and UL 325-02, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing Results

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standards ASTM F2200-05 and UL 325-02 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

Committee Action: Approved as Modified

Modify the proposal as follows:

503.5 Required gates or barricades. The fire code official is authorized to require the installation and maintenance of gates or other approved barricades across fire apparatus access roads, trails or other accessways, not including public streets, alleys or highways. Electric gate ~~openers~~ operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire chief. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate ~~openers~~ operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

Appendix D103.5 Fire apparatus access road gates. Gates securing the fire apparatus access roads shall comply with all of the following criteria:

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3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools or when a key box containing the key(s) to the lock is installed at the gate location.
7. Locking device specifications shall be submitted for approval by the code official.
8. Electric gate ~~openers~~ operators, where provided, shall be listed in accordance with UL 325.
9. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

Committee Reason: The proposal was approved because the committee felt that it provides quality assurance and operational integrity requirements for gates in fire apparatus roads. The modification revises the term to be consistent with the terminology used in the referenced standard UL325.

Assembly Action: None

Final Hearing Results

F70-07/08 AM

Code Change No: F73-07/08

Original Proposal

Sections: 504.3, 2703.8.3.4

Proponent: Philip Brazil, PE, Reid Middleton, Inc., representing himself

Revise as follows:

504.3 Stairway access to roof. New buildings four or more stories ~~in height~~ above grade plane, except those with a roof slope greater than four units vertical in 12 units horizontal (33.3 percent slope), shall be provided with a stairway to the roof. Stairway access to the roof shall be in accordance with Section 1009.12. Such stairway shall be marked at street and floor levels with a sign indicating that the stairway continues to the roof. Where roofs are used for roof gardens or for other purposes, stairways shall be provided as required for such occupancy classification.

2703.8.3.4 Fire-resistance rating requirements. The required fire-resistance rating for fire barriers shall be in accordance with Table 2703.8.3.2. The floor construction of the control area and the construction supporting the floor of the control area shall have a minimum 2-hour fire-resistance rating.

Exception: The floor construction of the control area and the construction supporting the floor of the control area is allowed to be 1-hour fire-resistance rated in buildings of Type IIA, IIIA and VA construction, provided that both of the following conditions exist:

1. The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1; and
2. The building is three stories or less ~~in height~~ above grade plane.

Reason: The changes are proposed for consistency with the actions taken by the membership on Proposals G6-06/07-AS and G8-06/07-AMPC1. Refer to IBC (and IFC) Section 1009.11 in Proposal G8-06/07-AMPC1 for Section 504.3 on stairway access to the roof. Refer to IBC Section 414.2.4 in Proposal G6-06/07-AS for Section 2703.8.3.4 on control areas.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide better correlation of the IFC with the IBC in measuring the height of buildings.

Assembly Action: **None**

Final Hearing Results

F73-07/08 **AS**

Code Change No: F78-07/08

Original Proposal

Sections: 507.4 (New), 502.1 (New)

Proponent: Scott Poster, Fire Department, Los Angeles County, CA

Add new text as follows:

507.4. Structures and outdoor storage underneath high-voltage transmission lines. Structures and outdoor storage underneath high-voltage transmission lines shall comply with Section 507.4.1 and 507.4.2.

507.4.1 Structures. Structures shall not be constructed within the utility easement underneath high-voltage transmission lines.

Exception: Restrooms and unoccupied telecommunication structures of non-combustible construction less than 15 feet in height.

507.4.2 Outdoor storage. Outdoor storage within the utility easement underneath high-voltage transmission lines shall be limited to noncombustible material. Storage of hazardous materials including, but not limited to, flammable and combustible liquids is prohibited.

Exception: Combustible storage, including vehicles, is allowed provided that a plan indicating the storage configuration is submitted and approved.

502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

HIGH-VOLTAGE TRANSMISSION LINE. An electrical power transmission line operating at or above 66 kilovolts

Reason: Structure fires underneath high-voltage transmission lines could cause arcing and shock hazard. Firefighting operations involve the use of elevated aerial apparatus and other emergency equipment, personnel aboveground and hose streams that may come in close proximity to high-voltage transmission lines. According to nationally recognized utility companies, manual de-energization of lines may take 20 minutes or longer to accomplish. A history of problems with structure fires underneath high voltage lines does not exist, due to the fact that the utility companies have set internal policies that until recently allowed only low-intensity use of the property underneath high-voltage transmission lines.

From NIOSH Hazard ID #15, January 2002, Firefighters Exposed to Electrical Hazards During Wildland Fire Operations "Dense smoke can obscure energized electrical lines or equipment and can become charged and conduct electrical current."

From Bonneville Power Administration, Living and Working Safely Around High Voltage Power Lines p.7, 2001, DOE/BP-1821, "Smoke and hot gases from a large fire can create a conductive path for electricity. When a fire is burning under a transmission line, electricity could arc from the conductor to the ground, endangering people and objects near the arc"

From SP-Ausnet, Corporate Communications Team, Melbourne, Victoria. "Excessive exposure to "electric fields" and "magnetic fields" is deemed harmful to humans or animals. Powerlines are designed such that the electric and magnetic fields at ground level and at the boundaries of easements are kept within these standards. If one was to change the conditions on the ground under a high voltage line, such as building a structure or raise the ground level, etc. then the persons in the vicinity of these higher levels are exposed to higher than accepted electric and magnetic fields. It should be noted that the effect of these fields are proportional to the field strength as well as the duration of exposure."

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

315.4 Storage underneath high-voltage transmission lines. Storage located underneath high-voltage transmission lines shall be in accordance with Section 507.4.

(Portions of the proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that it will provide enhanced firefighter safety when working on incidents underneath high-voltage transmission lines. The modification provides a needed cross-reference to the provisions from a new section in the combustible storage section in Chapter 3.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Robert J. Davidson, Davidson Code Concepts, LLC, representing Plug Power, Inc., requests Approval as Modified by this public comment.

Further modify proposal as follows:

507.4.2 Outdoor storage. Outdoor storage within the utility easement underneath high-voltage transmission lines shall be limited to noncombustible material. Storage of hazardous materials including, but not limited to, flammable and combustible liquids is prohibited.

Exception: Combustible storage, including vehicles, and fuel storage for back up power equipment servicing public utility equipment is allowed provided that a plan indicating the storage configuration is submitted and approved.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The restrictions the fire code committee added by their acceptance of F78-07/08 are a good addition to the code that will address a potential hazard to firefighters. However, as currently approved the new code language will conflict with a need to provide fuel for back up power supplies for critical public utility equipment installations. Some of this equipment involves telecommunications equipment that emergency services rely on for communication. The modification contained within this proposal is intended to address that issue.

Some equipment installations that are located upon the utility easement underneath high-voltage transmission lines, such as the telecommunication structures permitted by the exception to Section 507.4.1, require back up power supplies. Many of the back up power installations require liquid or gaseous fuel storage and the new code language currently accepted by the fire code committee would prohibit the fuel supply from being located on the utility easement.

This proposed modification of Section 507.4.2 would allow the fuel for back up powers supplies to be located on the utility easement, however, it would limit the fuel to only that necessary for equipment servicing public utility equipment and subject to the approval of the fire code official allowing the fire service to maintain control over the installations.

Final Hearing Results

F78-07/08 **AMPC**

Code Change No: F84-07/08

Original Proposal

Sections: 509.1 (IBC [F] 911.1)

Proponent: Ken Kraus, Fire Department, Los Angeles, CA

Revise as follows:

509.1 (IBC [F] 911.1) (Supp) Features. Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of ~~96~~ 250

square feet (~~9~~ 23 m^2) with a minimum dimension of ~~8~~ 10 feet (~~2438~~ 3048 mm). A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply with NFPA 72 and shall contain the following features:

1. The emergency voice/alarm communication system unit.
2. The fire department communications system.
3. Fire-detection and alarm system annunciator system.
4. Annunciator unit visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air-handling systems.
6. The fire-fighters control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking stairway doors simultaneously.
8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access.
13. Work table.
14. Generator supervision devices, manual start and transfer features.
15. Public address system, where specifically required by other sections of this code.
16. Elevator fire recall switch in accordance with ASME A17.1.
17. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

Reason: This proposal is intended to increase the minimum size of the Fire Command Center to a size and configuration that is conducive to effective use of the facility by emergency responders.

The current minimum requirement for the size of a Fire Command Center is impractical. Fire Command Centers (FCC) not only need to be designed to accommodate a significant number of emergency responders wearing full personel protective equipment. FCC's are also used to review building emergency plans during incidents, co-locate decision makers within the Incident Command System (ICS) and interpret fire protection system information. Given the multiple uses of the FCC, it is extremely likely that the limitations of a 10'by 10' room would serve to compromise the effectiveness of Incident management.

The current minimum size has proven in both exercise and emergency incident scenarios to be too small and confining.

A minimum size of 250 square feet allows for the necessary personnel to effectively perform the required tasks associated with a Fire Command Center.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

509.1 (IBC [F] 911.1) (Supp) Features. Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of ~~250~~ 200 square feet (~~23~~ 19 m^2) with a minimum dimension of 10 feet (3048 mm). A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply with NFPA 72 and shall contain the following features:

(Features 1 through 17 are unchanged)

Committee Reason: The proposal was approved because the committee felt that it will provide additional working room for the fire command staff who will occupy the fire command center. The modification provides a more reasonable working size for the fire command center.

Assembly Action: **None**

Final Hearing Results

F84-07/08 **AM**

Code Change No: F85-07/08

Original Proposal

Sections: 509.1 (IBC [F] 911.1)

Proponent: Lawrence G. Perry, AIA, representing Building Owners and Managers Association International (BOMA)

Revise as follows:

509.1 (IBC [F] 911.1) (Supp) Features. Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of 96 square feet (9 m2) with a minimum dimension of 8 feet (2438 mm). A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply with NFPA72 and shall contain the following features:

1. The emergency voice/alarm communication system unit.
2. The fire department communications system.
3. Fire-detection and alarm system annunciator system.
4. Annunciator visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air-handling systems.
6. The fire-fighter=s control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking stairway doors simultaneously.
8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access<u>, and the location of fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions</u>.
13. Work table.
14. Generator supervision devices, manual start and transfer features.
15. Public address system, where specifically required by other sections of this code.
16. Elevator fire recall switch in accordance with ASME A17.1.
17. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

Reason: This proposal will add additional information to first responders in buildings having fire command centers. It will require that the schematic building plans, which are already required, include the location of fire walls, fire barriers, fire partitions, smoke barriers, and smoke partitions. BOMA believes this is a far better method of providing this information to fire inspectors and responding fire fighters than providing stencils or stickers on walls throughout the building. BOMA has submitted a separate proposal to delete the requirement for marking of rated walls (newly added to Section 703.6 of the IBC).

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide the emergency operations commander with needed information in a convenient location at little or no cost.

Assembly Action: **None**

Final Hearing Results

F85-07/08 **AS**

Code Change No: F87-07/08

Original Proposal

Sections: 511 (New), 907.2.12.2 (IBC [F] 907.2.12.2), Appendix I (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Add new text as follows:

SECTION 511
EMERGENCY RESPONDER RADIO COVERAGE

511.1 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building.

511.2 Emergency responder radio coverage in existing buildings. Existing buildings that do not have approved radio coverage for emergency responders within the building shall be equipped with such coverage within 18 months of receiving notice of such deficiency from the fire code official.

2. Revise as follows:

907.2.12.2 (IBC [F] 907.2.12.2) (Supp) Fire department communication system. An approved ~~two-way, fire department communication~~ emergency responder radio coverage system ~~designed and installed in accordance with NFPA 72~~ shall be provided for fire department use. It shall operate between a fire command center complying with Section 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. ~~The fire department communication device shall be provided at each floor level within the enclosed exit stairway.~~

~~**Exception:** Fire department radio systems where approved by the fire department.~~

3. Add new appendix as follows:

APPENDIX I
EMERGENCY RESPONDER RADIO COVERAGE

SECTION I101
GENERAL

I101 Scope. Systems, components, and equipment required to provide emergency responder radio coverage shall be in accordance with this appendix.

I101.1 Permit. A construction permit is required for installation of or modification to emergency responder radio coverage systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

SECTION I102
DEFINITIONS

I102.1 Definitions. For the purpose of this appendix, certain terms are defined as follows:

AGENCY. Any emergency responder department within the jurisdiction that utilizes radio frequencies for communication. This could include, but not be limited to, various public safety agencies such as fire department, emergency medical services and law enforcement.

SECTION I103
TECHNICAL REQUIREMENTS

I103.1 Radio signal strength. The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 90 percent of all areas on each floor of the building meet the signal strength requirements in Sections I103.1.1 and I103.1.2.

I103.1.1 Minimum signal strength into the building. A minimum signal strength of -95 dBm shall be receivable within the building.

I103.1.2 Minimum signal strength out of the building. A minimum signal strength of -100 dBm shall be received by the agency's radio system when transmitted from within the building.

I103.2 System design. The emergency responder radio coverage system shall be designed in accordance with Sections I103.2.1 through I103.2.5.

I103.2.1 Amplification Systems Allowed. Buildings and structures which cannot support the required level of radio coverage shall be equipped with a radiating cable system, a distributed antenna system with FCC certified signal boosters, or other system approved by the fire code official in order to achieve the required adequate radio coverage.

I103.2.2 Technical criteria. The fire code official shall maintain a document providing the specific technical information and requirements for the emergency responder radio coverage system. This document shall contain, but not be limited to, the various frequencies required, the location of radio sites, effective radiated power of radio sites, and other supporting technical information.

I103.2.3 Secondary power. The emergency responder radio coverage system shall be equipped with a secondary source of power. The secondary source of power shall be either a battery system or an emergency generator. The secondary power supply shall supply power automatically when the primary power source is lost. The secondary source of power shall be capable of operating the emergency responder radio coverage system for a period of at least twelve hours.

I103.2.3.1 Battery Systems. The active components of the installed system or systems shall be capable of operating on an independent battery system for a period of at least twelve hours without external power input. The battery system shall automatically charge in the presence of external power input.

I103.2.4 Signal Booster requirements. If used, signal boosters shall meet the following requirements:

1. All signal booster components shall be contained in a NEMA4 type water proof cabinet.
2. The battery system shall be contained in a NEMA4 type water proof cabinet.
3. The system shall include automatic alarming of malfunctions of the signal booster and battery system. Any resulting trouble alarm shall be automatically transmitted to an approved central station or proprietary supervising station as defined in NFPA 72 or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.
4. Equipment shall have FCC Certification prior to installation.

I103.2.5 Additional frequencies and change of frequencies. The emergency responder radio coverage system shall be capable of modification or expansion in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC.

I103.3 Installation requirements. The installation of the public safety radio coverage system shall be in accordance with Sections I103.3.1 through I103.3.5.

I103.3.1 Approval prior to installation. No amplification system capable of operating on frequencies licensed to any public safety agency by the FCC shall be installed without prior coordination and approval of the fire code official.

I103.3.2 Permit required. A construction permit as required by Section 105.7.11 shall be obtained prior to the installation of the emergency responder radio coverage system.

I103.3.3 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include:

1. A Valid FCC issued General Radio Operators License, and
2. Certification of in-building system training issued by a nationally recognized organization, school or a certificate issued by the manufacturer of the equipment being installed.

The agency may waive these requirements upon successful demonstration of adequate skills and experience satisfactory to the fire code official.

I103.3.4 Acceptance test procedure. When an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to ensure that two-way coverage on each floor of the building is a minimum of 90 percent. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of 20 approximately equal areas.
2. The test shall be conducted using a calibrated portable radio of the latest brand and model used by the agency talking through the agency's radio communications system.
3. A maximum of two nonadjacent areas will be allowed to fail the test.
4. In the event that three of the areas fail the test, in order to be more statistically accurate, the floor may be divided into 40 equal areas. A maximum of four nonadjacent areas will be allowed to fail the test. If the system fails the 40-area test, the system shall be altered to meet the 90 percent coverage requirement.
5. A test location approximately in the center of each grid area will be selected for the test, then the radio will be enabled to verify two-way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire area. If the test fails in the selected test location, that grid area shall fail, and prospecting for a better spot within the grid area will not be allowed.
6. The gain values of all amplifiers shall be measured and the test measurement results shall be kept on file with the building owner so that the measurements can be verified during annual tests. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.
7. As part of the installation a spectrum analyzer or other suitable test equipment shall be utilized to insure spurious oscillations are not being generated by the subject signal booster. This test will be conducted at time of installation and subsequent annual inspections.

I103.3.5 FCC compliance. The emergency responder radio coverage system installation and components shall also comply with all applicable Federal regulations, including but not limited to, Federal Communications Rules (47 CFR 90.219).

I103.4 Maintenance. The emergency responder radio coverage system shall be maintained in accordance with Sections I103.4.1 through I103.4.5.

I103.4.1 Maintenance. The public radio coverage system shall be maintained operational at all times.

I103.4.2 Permit required. A permit as required by Section 105.7.4 shall be obtained prior to the modification or alteration of the emergency responder radio coverage system.

I103.4.3 Testing and proof of compliance. The emergency responder radio coverage system shall be inspected and tested annually or whenever structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following:

1. In-building coverage test as described in Section I103.3.4.
2. Signal boosters shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.
3. Backup batteries and power supplies shall be tested under load of a period of one hour to verify that they will properly operate during an actual power outage. If within the one hour test period the battery exhibits symptoms of failure, the test shall be extended for additional one hour periods until the integrity of the battery can be determined.
4. All other active components shall be checked to verify operation within the manufacturer’s specifications.
5. At the conclusion of the testing a report shall be submitted to the fire code official which shall verify compliance with Section I103.3.4.

I103.4.4 Additional frequencies. The building owner shall modify or expand the emergency responder radio coverage system at their expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this section.

I103.4.5 Field testing. Agency personnel shall have the right to enter onto the property at any reasonable time to conduct field-testing to verify the required level of radio coverage.

Reason: Large buildings have historically provided barriers to radio communications within them. This is the reason high rise buildings are required to install hard wired, two-way communications systems. The typical system has phone jacks strategically located throughout the building (in stairways, elevator lobbies, and inside elevators), with hand sets available to emergency responders in the lobby or the fire control room. However, problems with this solution include:

- Handset availability – even if they don't get stolen or misplaced, the typical building will only have five handsets, far too few for the dozens to hundreds of firefighters required to successfully bring a high rise fire under control
- Lack of training for responders – while some fire departments routinely train on these systems, each one is different, presenting problems remembering the special considerations necessary to operate successfully in each high rise building; other responders (law enforcement, EMS) don't train on these systems at all, and many times don't even know they exist
- Buildings other than high-rise interfere with routine radio communications, but aren't required to provide an alternative.

When this requirement was implemented, it was the best alternative available. Now, technology has progressed to a point where there are multiple solutions with multiple technologies to address virtually any situation. These solutions support emergency responders' radio systems so that no additional training is required by the responders; the same communication system that they use every day can be used in any building in a jurisdiction.

Emergency response agencies use radio communications routinely and lives depend on the adequacy of the radio communication system. Communications must be able to go both into and out of the buildings in times of emergency. Whether it be someone inside the building requesting assistance, or even worse calling May Day, or the Incident Commander outside the building trying to obtain a status report to make a determination on deployment of additional resources, communications is critical.

Some will complain of the cost of these systems, which range from the relatively inexpensive to very expensive, depending upon the solution chosen by the building owner or developer (one estimate is from $.40/ft to $1.25/ft). The fact is that tax payers have invested billions of dollars in their public safety communications systems. It isn't unusual for a mid-size jurisdiction to spend millions of dollars to equip emergency responders with communications systems, only to have a developer construct a building that defeats the entire system inside their facility. Good public policy dictates that these owners/developers bear the cost of upgrading their facilities to allow emergency responders to utilize the tools that tax payers have provided. This is in keeping with the philosophy inherent in the I-Codes that, when a facility grows too large or complex for effective fire response, that fire protection features be provided within the building at the owner's expense.

This proposal provides that an adequate level of communication is available within the building. Once a deficiency is noted in a building, the installation and technical criteria in Appendix I can be utilized to design and install a system to enhance the radio communications. There are several types of systems that can be utilized to enhance radio traffic and under this proposal any of these systems can be used.

This proposal also includes existing buildings in Section 511.2. While modeling and other techniques may provide a good prediction as to whether a building will interfere with radio communications, the reality is that it is unknown if a building will need to install any type of radio system enhancements until after the building is constructed. These issues are dependent on the construction type, shadows of other buildings, size of structure, etc. This proposal includes existing structures so that once the building is built, the system can be installed at any time, when and if it becomes necessary; it also provides a reasonable amount of time for existing buildings to come into conformance (18 months after notification).

The proposed Appendix I includes design, construction, maintenance and testing criteria. This provides guidance to the code official and ensures that the emergency responder radio coverage system will be operational throughout the life of the building.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it has merit and would resolve a serious and long-standing issue in fire department operational efficiency and safety. The committee indicated, however, that there are substantial issues which need to be resolved, including, but not limited to: applicability to "all" buildings would be unreasonable; the application to existing buildings would be onerous; there is no exception for single family residences; deleting the fire department communications system would eliminate a useful backup system; the title phrase "emergency responder" could lead to demands for other municipal departments that use radios to be provided with such a system; and technical requirements should not be relegated to an appendix. The committee expressed its hope that the continuing work on this topic by the ICC Code Technology Committee and the JFSRC would resolve the concerns.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Paul K. Heilstedt, PE, FAIA, Chair, ICC Code Technology Committee, (CTC), requests Approval as Modified by this public comment.

Tom Lariviere, Chair, ICC Joint Fire Service Review Committee (JFSRC), requests Approval as Modified by this public comment.

John Dean, representing the National Association of State Fire Marshals (NASFM), requests Approval as Modified by this public comment.

Sean DeCrane, representing the International Association of Fire Fighters (IAFM), requests Approval as Modified by this public comment.

Jack Murphy, representing the Fire Safety Directors of Greater New York, requests Approval as Modified by this public comment.

Modify proposal as follows:

511.1 Emergency responder radio coverage in ~~new~~ buildings. All ~~new~~ buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

Exceptions:

1. Where approved by the building code official and the fire code official, a wired communication system shall be permitted to be installed or maintained in lieu of an approved radio coverage system.
2. Where it is determined by the fire code official that the radio coverage system is not needed.

511.2 Radio signal strength. The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in items 511.2.1 and 511.2.2.

511.2.1 Minimum signal strength into the building. A minimum signal strength of -95 dBm shall be receivable within the building.

511.2.2 Minimum signal strength out of the building. A minimum signal strength of -100 dBm shall be received by the agency's radio system when transmitted from within the building.

~~511.2~~ 511.3 Emergency responder radio coverage in existing buildings. Existing buildings that do not have approved radio coverage for emergency responders within the building shall be equipped with such coverage according to one of the following: ~~within 18 months of receiving notice of such deficiency from the fire code official.~~

1. Wherever existing wired communication system cannot be repaired or is being replaced, or where not approved in accordance with Section 511.1 Exception 1.
2. Within a time frame established by the adopting authority.

907.2.12.2 (IBC [F] 907.2.12.2) (Supp) **Fire department communication system.** ~~An approved emergency responder radio coverage system shall be provided for fire department use. It shall operate between a fire command center complying with Section 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways.~~ Where a wired communications system is approved in lieu of a radio coverage system in accordance with section 511, the wired fire department communications systems shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 509, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the enclosed exit stairway.

APPENDIX I
EMERGENCY RESPONDER RADIO COVERAGE

SECTION I103
TECHNICAL REQUIREMENTS

~~**I103.1 Radio signal strength.** The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 90 percent of all areas on each floor of the building meet the signal strength requirements in Sections I103.1.1 and I103.1.2.~~

~~I103.1.1 Minimum signal strength into the building. A minimum signal strength of -95 dBm shall be receivable within the building.~~

~~I103.1.2 Minimum signal strength out of the building. A minimum signal strength of -100 dBm shall be received by the agency's radio system when transmitted from within the building.~~

(Renumber subsequent sections.)

(Portions of Appendix I of the proposal not shown remain unchanged.)

Commenter's Reason: The CTC also proposed a code change to address repeaters in F171 – 07/08. The CTC prefers F87 and has worked with the proponent in developing a public comment to clarify the provisions for new and existing buildings.

511.1: This section has been clarified to note that the existing coverage levels at the building (not in the building) need not be upgraded as a result of the need for coverage in the building. The purpose of the radio coverage in the building is to take the existing signal outside the building and amplify it. The exceptions provide an option for wired systems as an alternative and also if it is determined by the fire code official that emergency coverage is not needed, then it need not be provided. Obviously, both of these exceptions will require that the code official be consulted by the design professional.

There are two reasons for leaving an exception for the wired systems. One is because some fire service representatives have asked for the option to be there so they can make the decision whether or not to deal with the radio repeater system. Note that it is not automatically available, only if approved, so in your jurisdiction you won't have to approve it. The other reason for the wired option is because there are situations where you cannot solve the problem with radio repeater technology because the space is designed to prevent any radio waves from getting in or out, (lead shielding for example), in those cases the ability will exist for the local code officials to approve, (actually to require as well), a wired system if they agree it is the proper method for that space.

511.2: The provisions for signal strength are viewed as critical and need to be uniformly applied. As such, they have been relocated from the proposed appendix and incorporated into the body of the code.

511.3: There is clearly a need for existing buildings to be provided with coverage. However, requiring an existing wired system to be updated within 18 months when the system is operational or can be repaired is viewed as excessive. Further, an 18 month threshold is rather arbitrary and really should be left up to the adopting authority to decide the time frame for compliance for existing buildings.

907.2.12.2: This comment is intended to clarify where wired systems are provided and approved, it can be used in lieu of a radio system and provides the technical language concerning how the system is to be installed.

Code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: http://www.iccsafe.org/cs/cc/ctc/index.html. Since its inception in Aprril/2005, the CTC has held fifteen meetings - all open to the public. This public comment is a result of the CTC's investigation of the area of study entitled "NIST World Trade Center Recommendations". The CTC web page for this area of study is: http://www.iccsafe.org/cs/cc/ctc/WTC.html

Final Hearing Results

F87-07/08 **AMPC1**

Code Change No: F89-07/08

Original Proposal

Sections: 604.2.15.1.3, 604.2.15.3, IBC [F] 403.10.2, IBC [F] 403.11.1

Proponent: James C. Gerren, Clark County, NV Department of Development Services

1. Revise as follows:

604.2.15.1.3 Connected facilities. Power and lighting facilities for the fire command center and elevators specified in Sections 403.8 and 403.9 of the *International Building Code*, as applicable, ~~and electrically powered fire pumps required to maintain pressure,~~ shall be transferable to the standby source. Standby power shall be provided for at least one elevator to serve all floors and be transferable to any elevator.

604.2.15.3 Emergency systems. Exit signs, exit illumination as required by Chapter 10, electrically powered fire pumps required to maintain pressure, and elevator car lighting are classified as emergency systems and shall operate within 10 seconds of failure of the normal power supply and shall be capable of being transferred to the standby source.

Exception: Exit sign, exit and means of egress illumination are permitted to be powered by a standby source in buildings of Group F and S occupancies.

2. Revise IBC as follows:

[F] 403.10.2 Standby power loads. The following are classified as standby power loads:

1. Power and lighting for the fire command center required by Section 403.8; and
2. ~~Electrically powered fire pumps; and~~
3. ~~3.~~2. Ventilation and automatic fire detection equipment for smokeproof enclosures.

Standby power shall be provided for elevators in accordance with Sections 1007.4 and 3003.

[F] 403.11.1 Emergency power loads. The following are classified as emergency power loads:

1. Exit signs and means of egress illumination required by Chapter 10;
2. Elevator car lighting;
3. Emergency voice/alarm communications systems;
4. Automatic fire detection systems; and
5. Fire alarm systems.
6. Electrically powered fire pumps.

Reason: The purpose of the proposed change is to clarify the code.

Section 9.6.2.1 of NFPA 20 (2003 edition), Standard for the Installation of Stationary Pumps for Fire Protection, requires on-site generators that are used to supply alternate power to electric motor-driven fire pumps to meet the requirements of Level 1, Type 10, Class X emergency power supply systems (EPSSs) of NFPA 110, Standard for Emergency and Standby Power Systems. NFPA 110 (2005 edition), Table 4.1(b) requires Type 10 EPSSs to restore power within 10 seconds. Since standby power is required to be available within 60 seconds, it is not appropriate to include electrically powered fire pumps in the list of standby power loads. Accordingly, the proposed code change would move electrically powered fire pumps from the list of standby power loads in Section 604.2.15.1.3 and IBC [F] 403.10.2 to the list of emergency power loads in Section 604.2.15.3 and IBC [F] 403.11.1.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide correlation with the referenced standard, NFPA 20.

Assembly Action: **None**

Final Hearing Results

F89-07/08 **AS**

Code Change No: F91-07/08

Original Proposal

Section: 605.10

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

605.10 Portable, electric space heaters. Where not prohibited by other sections of this code, ~~P~~portable, electric space heaters shall ~~comply~~ be permitted to be used in all occupancies other than Groups I-2 and I-5 in accordance with Sections 605.10.1 through 605.10.4.

Exception: The use of portable electric space heaters in which the heating element cannot exceed a temperature of 212 degrees F. (100 degrees C.) shall be permitted in non-sleeping staff and employee areas in Groups I-2 and I-5 occupancies.

Reason: Currently the IFC allows portable space heaters to be located and used within Group I occupancies. This proposal will restrict their use within Group I-2 occupancies and also with Group I-5 occupancies (dependent on another code change to create the I-5).

These facilities have a higher life hazard which results in a longer evacuation time. Limiting the portable heater temperature will reduce the incidence of fire from these devices and therefore the evacuation never needs to occur. This proposal will also correlate the IFC requirements with Federal regulations for these facilities.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: The reference in this proposal to new occupancy “Group I-5” is dependent on the action on Code Change G33-07/08. If that code change is not approved, the reference to “Group I-5” would be deleted from these sections.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide improved safeguards in the use of portable electric space heaters in certain Group I occupancies.

Assembly Action: **None**

Analysis: The reference in this proposal to new occupancy "Group I-5" is dependent on the final action on Code Change G33-07/08 (D). If that code change is not approved, the reference to "Group I-5" would be deleted from these sections.

Final Hearing Results

F91-07/08 **AS**

Code Change No: F93-07/08

Original Proposal

Sections: 606.10.1.1, 606.10.2.2

Proponent: Jeffrey M. Shapiro, International Code Consultants, representing International Institute of Ammonia Refrigeration

Revise as follows:

606.10.1.1 Overpressure limit setpoint. Automatic crossover valves shall be arranged to automatically relieve excess system pressure to a lower pressure zone if the pressure in a high- or intermediate-pressure zone rises to within ~~15 psi (108.4 kPa)~~ 90 percent of the set point for emergency pressure-relief devices.

606.10.2.2 Overpressure in low-pressure zone. The lowest pressure zone in a refrigeration system shall be provided with a dedicated means of determining a rise in system pressure to within ~~15 psi (108.4 kPa)~~ 90 percent of the setpoint for emergency pressure-relief devices. Activation of the overpressure sensing device shall cause all compressors on the effected system to immediately stop.

Reason: Provides in increased safety buffer between activation of the EPCS and operation of a relief valve. Because of variances in operational tolerances among relief valves and because some relief valves may begin to seep at 90-percent of their rated operating pressure, it is appropriate to have the EPCS shut-down a system if system pressure rises to 90-percent of the relief valve set pressure. This further reduces the potential for any release from a system that has malfunctioned and overpressurized.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide an increased level of safety in refrigeration systems.

Assembly Action: **None**

Final Hearing Results

F93-07/08 **AS**

Code Change No: F94-07/08

Original Proposal

Section: 606.13

Proponent: Jeffrey M. Shapiro, International Code Consultants, representing International Institute of Ammonia Refrigeration

Revise as follows:

606.13 Discharge location for refrigeration machinery room ventilation. Exhaust from mechanical ventilation systems serving refrigeration machinery rooms containing flammable, toxic or highly toxic refrigerants, other than ammonia, capable of exceeding 25 percent of the LFL or 50 percent of the IDLH shall be equipped with approved treatment systems to reduce the discharge concentrations ~~of flammable, toxic or highly toxic refrigerants~~ to those values or lower.

Reason: The origin of the requirement in IFC Section 606.13 to treat exhaust from machinery room ventilation systems dates back to the 1994 Uniform Mechanical Code (UMC). The requirement was added as part of a complete rewrite of the UMC chapter on mechanical refrigeration, and the entire substantiation for the new provision offered by the proponent of this change was "Gives specific machinery room ventilation requirements." No statistical, technical or anecdotal basis was offered to justify the additional controls on machinery room ventilation system discharge. Nevertheless, the entire rewrite, including this section, was eventually approved by the International Conference of Building Officials (ICBO) membership at the time, and the provisions were duplicated into the Uniform Fire Code (UFC).

Presumably, the basis to justify adding this new requirement to the Uniform codes might have been parity with the general hazardous materials regulations for toxic gases in UFC Article 80; however, because Article 80 never required ventilation treatment for local exhaust systems in areas where ammonia is stored or used (because ammonia is not classified by fire codes as a toxic hazardous material), it makes no sense for ammonia refrigeration regulations to be more restrictive than general hazardous materials regulations for the same material.

During the drafting process for the International codes, the requirement for treatment of machinery room ventilation was initially dropped when the UMC was merged into the International Mechanical Code (IMC) and the UFC was merged into the IFC. At the time, the goal was to make the IMC and the IFC consistent with provisions in ASHRAE 15, which is the American National Standards Institute (ANSI) recognized standard governing refrigeration system safety, and ASHRAE 15 does not contain any requirement for treatment of exhaust from machinery room ventilation systems.

In the public comment process affecting the final draft of the IFC, a proposal was made to reinstate some of the old UFC provisions into the IFC, and the requirement related to treatment of machinery room exhaust found its way back into the code. Nevertheless, designers and engineers indicate that it is only enforced occasionally.

It should be noted that refrigeration plants in the Central and Eastern portions of the U.S. were not required by the legacy codes previously used in those regions to provide ventilation treatment systems. Justification for requiring new plants in these areas to now be burdened with this requirement is not evident. Likewise, there is no apparent justification for maintaining this requirement elsewhere, given that there was no justification to support the requirement in the first place.

It is worth pointing out that in preparing this proposal, IIAR studied the complete database on releases associated with ammonia refrigeration on file with EPA, and no incident could be identified where ammonia from machinery room ventilation was the source of injuries or off-site consequences. Since treatment of ventilation systems is very uncommon, even in newer facilities, and older facilities tend to be where release incidents occur, it is unlikely that any facilities reflected in this favorable incident history had ventilation exhaust treatment systems.
Also, it is noteworthy that the simple way of avoiding the requirement to provide machinery room exhaust treatment is to place refrigeration machinery outside of the building, where no such requirement applies. It make no sense for the code to penalize the safer condition of putting machinery in an enclosure by requiring treatment of room exhaust when an outdoor installation is at greater risk of a release to atmosphere.

Cost Impact: The code change proposal will not increase the cost of construction and will likely reduce it.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide appropriate correlation with the ASHRAE 15 refrigeration standard.

Assembly Action: **None**

Final Hearing Results

F94-07/08 **AS**

Code Change No: F95-07/08

Original Proposal

Section: 607.3 (New)

Proponent: Ed Donoghue, Edward Donoghue Associates, Inc.

Add new text as follows:

607.3 Fire service access elevator lobbies. Where fire service access elevators are required by Section 3007 of the *International Building Code,* fire service access elevator lobbies shall be maintained free of storage and furnishings.

Reason: In this specific proposal the focus is upon storage and furnishings within the fire service access elevator lobby. The fire service access elevator in high rise buildings over 120 feet above fire department vehicle access is a tool for fire fighters to enhance their ability to gain access to and undertake necessary staging activities in. Therefore, any obstructions located in lobbies associated with such elevators in the form of storage or furnishings, whether combustible or non-combustible, could hamper their ability to fully use such features. Prohibiting storage and furnishings in fire service access elevators also eliminates potential fire loads in such areas.

Background: As a result of the September 11, 2001 attacks on the World Trade Center, code provisions for emergency egress from tall buildings are being re-examined. There is renewed interest in the use of elevators for both occupant egress and fire fighters access. Therefore a Workshop on the Use of Elevators in Fires and Other Emergencies was held March 2-4, 2004, in Atlanta, Georgia. The workshop was cosponsored by American Society of Mechanical Engineers (ASME International), National Institute of Standards and Technology (NIST), International Code Council (ICC), National Fire Protection Association (NFPA), U.S. Access Board, and the International Association of Fire Fighters (IAFF).

The workshop focused on two general topics:

1. Use of Elevators by Fire fighters and
2. Use of Elevators by Occupants during Emergencies

To follow up on the ideas generated at the workshop, 2 task groups were formed; one for each topic. Their goals are:

- Review the suggestions from the Workshop on the Use of Elevators in Fires and other Emergencies.
- Develop a prioritized list of issues.
- Conduct a hazard analysis of the prioritized list of issues to see if there are any residual hazards.
- Draft code revisions for those issues that survive the process and the task group members still want addressed.

The membership of these task groups is broad and includes representatives from the elevator industry and manufacturers of devices such as fire alarms, the fire service, model codes and standards development organizations, and the accessibility community as well as fire protection engineers, architects and specialists in human factors and behavior. Since February 2005 the groups have each been conducting a hazard analysis on their assigned topic. The results of the hazard analysis focused upon the fire fighter needs are nearing completion.

The task group studied 16 different cases. In these cases a particular hazard followed by a cause/trigger was reviewed. The result of the hazard interacting with cause/trigger events may create a particular incident/effect. To address possible incident/effects corrective actions are proposed. Such corrective actions are then reviewed to see if they create any residual hazards. The hazard analysis then carries out each of the residual hazards with additional corrective actions until the hazard is mitigated. It is strictly a hazard analysis (i.e. not probabilistic) and certain assumptions were made such as a single fire start in a high rise building.

The code changes generated by this analysis are related both to the summary of corrective actions resulting from the hazard analysis and the existing language related to fire service access elevators placed into the 2007 supplement.

These proposals will work with the 2007 supplement requirements for fire service access elevators to address these concerns. It should be noted that the hazard analysis assumed a lobby to be directly connected with the fire service access elevator thus making the result of the analysis consistent with the philosophical approach found in the 2007 Supplement.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

607.3 Fire service access elevator lobbies. Where fire service access elevators are required by Section 3007 of the *International Building Code,* fire service access elevator lobbies shall be maintained free of storage ~~and furnishings~~.

Committee Reason: The proposal was approved because the committee agreed that it is desirable to have a specific prohibition on storage in fire service access elevator lobbies in the code to increase the likelihood that the lobby will be fully available for fire department operations. The modification removes language that the committee felt could result in unreasonable and inconsistent interpretation and enforcement.

Assembly Action: **None**

Final Hearing Results

F95-07/08 **AM**

Code Change No: F98-07/08

Original Proposal

Sections: 608.5.1, 608.5.2

Proponent: Stephen McCluer, APC-MGE

Revise as follows:

608.5.1 Nonrecombinant battery neutralization. For battery systems containing lead-acid, nickel-cadmium or other types of batteries with free-flowing electrolyte, the method and materials shall be capable of neutralizing a spill of the total capacity from the largest ~~lead-acid battery~~ cell or block to a pH between ~~7.0~~ 5.0 and 9.0.

608.5.2 (Supp) Recombinant battery neutralization. For VRLA or other types of sealed batteries with immobilized electrolyte, the method and material shall be capable of neutralizing a spill of 3.0 percent of the capacity of the largest ~~VRLA~~ cell or block in the room to a pH between ~~7.0~~ 5.0 and 9.0.

Exception: Lithium-Ion and Lithium Metal Polymer batteries shall not require neutralization.

Reason: The paragraph covers multiple battery types, but the neutralization is limited to only lead-acid batteries. Substitute “lead-acid battery” and “VRLA” with “cell or block”,” which covers single-cell and multi-cell containers.

Absolute neutral is pH 7.0. To accommodate both acidic (e.g., lead-acid) and basic or alkaline (e.g., nickel-cadmium), the requirement should be “neutralize a spill… to a pH of 7.0 plus or minus 2.0.

Institute of Electrical and Electronics Engineers Standard 1578, *Recommended Practice for Stationary Battery Electrolyte Spill Containment and Management* has been approved and is presently going through final editorial and printing process. It will be published in the fall of 2007 [prior to the next update of the IFC]. I do not have authorization to provide copies of the complete standard. The following paragraph applies: 4.2.2 Neutralization. Electrolyte can be acidic (for example, sulfuric acid inside a lead-acid battery) or basic (for example, potassium hydroxide inside a Ni-Cd battery). Neutralizer should be able to safely convert the electrolyte to a pH between 5.0 and 9.0

Cost Impact: The code change proposal will not increase the cost of construction beyond what is already required by the *International Fire Code*.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it captures when neutralization is needed and corrects a previous error regarding pH.

Assembly Action: **None**

Final Hearing Results

F98-07/08 **AS**

Code Change No: F100-07/08

Original Proposal

Section: 608.6.3

Proponent: Stephen McCluer, APC-MGE

Revise as follows:

608.6.3 (Supp) Supervision. Mechanical ventilation systems where required by Section 608.6.1 and 608.6.2 shall be supervised by an approved central, proprietary, or remote station service or shall initiate an audible and visual signal at a constantly attended onsite location.

Reason: The requirement to monitor ventilation in cabinets per 608.6.2 implies that there is mechanical ventilation, even though 608.6.2.specifically permits a cabinet to be "naturally ventilated." Monitoring natural ventilation is extremely difficult – if not impossible in some cases – and extremely expensive. The existing requirement effectively forces a huge burden on battery cabinet manufacturers to add mechanical ventilation systems, hydrogen detectors, or flow sensors, for little or no apparent improvement over existing methods. When this requirement was added to the IFC, the author presented no evidence to suggest that the existing designs are unsafe or do not work. This proposal would limit the monitoring requirement to only those battery cabinets that depend upon forced or mechanical ventilation.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will limit the monitoring requirement to only those cabinets that depend on mechanical ventilation.

Assembly Action: **None**

Final Hearing Results

F100-07/08 **AS**

Code Change No: F103-07/08

Original Proposal

Section 701.1

Proponent: Wayne R. Jewell, Chair, Hazard Abatement in Existing Buildings Committee

Revise as follows:

701.1 Scope. The provisions of this chapter shall specify the requirements for and the maintenance of fire-resistance-rated construction and requirements for enclosing floor openings and shafts in existing buildings. New construction or new floor openings in existing buildings shall comply with the *International Building Code*.

Reason: The addition of this language provides for clarity to separate the issue of the construction of new floor openings in existing buildings from the need to enclose existing floor openings in existing buildings, which is addressed by Section 704 Floor Openings and Shafts. The current language has had numerous questions if new construction for the enclosure of an existing floor can comply with the provisions of Section 704 or if they must comply with the requirements of the IBC. The proposed language will clarify the intent of the code

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that the current text "New construction…" would include new floor openings in existing buildings, making the proposal redundant.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Wayne R. Jewell, Chair, Hazard Abatement in Existing Buildings Committee, requests Approval as Modified by this public comment.

Modify proposal as follows:

701.1 Scope. The provisions of this chapter shall specify the requirements for and the maintenance of fire-resistance-rated construction and requirements for enclosing floor openings and shafts in existing buildings. New ~~construction~~ buildings ~~or~~ and new floor openings in existing buildings shall comply with the *International Building Code.*

Commenter's Reason: In its disapproval, the committee expressed concern that the proposal to specifically call out that new floor openings in existing buildings are required to comply with the IBC would be redundant. This is not the case because ICC staff has received a substantial number of calls for assistance on exactly this question. Without approval of the proposal it will remain unclear that the term 'new construction' applies not only to new buildings, but to the creation of new openings during the course of alterations to existing buildings. In order to remove any confusion, it is proposed to modify the language that was originally proposed.

Final Hearing Results

F103-07/08 **AMPC**

Code Change No: F104-07/08

Original Proposal

Section: 701.2 (New)

Proponent: Wayne R. Jewell, Chair, Hazard Abatement in Existing Buildings Committee

Add new text as follows:

701.2 Unsafe conditions. Where any components in this chapter are not maintained and do not function as intended or do not have the fire resistance required by the code under which the building was constructed, remodeled or altered such component(s) or portion thereof shall be deemed an unsafe condition, in accordance with Section 110.1.1. Components or portions thereof determined to be unsafe shall be repaired or replaced to conform to that code under which the building was constructed, remodeled, altered or this chapter, as deemed appropriate by the code official.

Where the extent of the conditions of components is such that any building, structure or portion thereof presents an imminent danger to the occupants of the building, structure or portion thereof, the fire code official shall act in accordance with Section 110.2.

Reason: The ICC Board approved the development of new code requirements in the I-Codes which address hazards, such as those from fire, as well as, the development of requirements relative to issues such as hazardous conditions due to structural issues. This would provide code requirements for all disciplines to be used by building owners to bring their existing building stock up to minimum standards and enforcing agencies when performing inspections of existing buildings. The Hazard Abatement of Existing Buildings Committee (HAEB) was formed to develop these requirements.

During this 07/08 cycle, the HAEB committee is proposing several unsafe conditions requirements for inclusion within the text of the existing International Codes, predominately the *International Property Maintenance Code* and the *International Fire Code*.

During last years code cycle there was concern expressed declaring that assemblies which were and are required to have a fire resistance rating and found to be in a condition that was less than that required were being called unsafe. Using the term unsafe is not new to the IFC as it is used in Section 110 Unsafe Buildings. This section of the code not only deals with "buildings" but also deals with unsafe conditions defined in Subsection 110.1.1 Unsafe Conditions. However, in reading that section the only element that is related to what is proposed here is the wording "or inadequate maintenance" which is then "deemed" to be unsafe. So we have accepted inadequate maintenance as unsafe but a condition that renders a fire resistant assembly non-functional is not unsafe.

It was expressed at the hearings that defining damaged or breached fire resistant rated assemblies as unsafe would force the evacuation of the entire building. That is a non-issue – Section 110.1 currently clearly states "*fire code official shall issue such notice or orders to remove or remedy the conditions as shall be deemed necessary in accordance with this section and shall refer the building to the building department for any repairs, alterations, remodeling, removing or demolition required.*" It is not automatic that an unsafe condition requires evacuation. It is possible that such a condition could exist that a building, structure or portion thereof does need to be evacuated until corrective actions are made, but these should be rare. What is mandated is that the fire code official issue a notice or order to rectify the conditions.

The new language of section 701.2 provides a basis of evaluating the conditions and determining a resource to determine the level of fire resistance that is required to be maintained. Again during the hearings comments were made about the lack of being able to know which code a building was constructed under and if that is not known how is this language to be applied. Well, all communities should have some record of when a building was constructed knowing what year it should be relatively easy to determine a published edition of the code that is close and prior to that year. To some this might seem like roulette, but it is better than trying to make a building constructed 30, 50 or 80 years ago comply with today's requirements that are sometimes based on alternatives, a different type of construction or fire protection systems being in place. If all else fails there is the exception for the Fire Code Official to work with the design professionals to resolve the issue. Currently, there is no direction on what to use as a basis for requirements for corrective actions, nothing is better than something?

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it resolves the concerns over unsafe buildings expressed in the committee's disapproval of similar code change F57-06/07 in the last cycle.

Assembly Action: **None**

Final Hearing Results

F104-07/08 **AS**

Code Change No: F105-07/08

Original Proposal

Sections: 703.1, 107.2

Proponent: John C. Dean, National Association of State Fire Marshals (NASFM)

Revise as follows:

703.1 Maintenance. The required fire-resistance rating of fire-resistance-rated construction (including walls, firestops, shaft enclosures, partitions, smoke barriers, floors, fire-resistive coatings and sprayed fire-resistant materials applied to structural members and fire-resistant joint systems) shall be maintained. Such elements shall be visually inspected annually, properly repaired, restored or replaced when damaged, altered, breached or penetrated. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings and holes made for any reason shall be protected with approved methods capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self- or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly.

107.2 Inspection, testing and operation. Passive fire systems and equipment requiring periodic testing or operation to ensure maintenance shall be inspected, tested or operated as specified in this code.

Reason: Currently there is no requirement for fire-resistance-rated construction to be inspected. In many areas around the country there is no formal, organized inspection program in place and as such countless buildings go without ongoing inspections. The requirement to maintain and repair suggests that this has to occur if a situation is found to exist. Even in regulated occupancies, problems exist with various coatings and spray applied fire-resistant materials[1]. Without any requirement to inspect these elements, conditions could exist for years before being noticed and repaired. This creates a false sense of security and puts building occupants at risk. The code has been formulated to require certain fire resistive features. It only stands to reason that these features should be periodically inspected to insure that they are, and remain, compliant for the life of the building.

[1] Findings from the *Initial Report of the Partnership for Safer Buildings*'. The National Association of State Fire Marshals. March 2003. http://www.firemarshals.org/mission/catastrophic/initial_report.asp.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

703.1 Maintenance. The required fire-resistance rating of fire-resistance-rated construction (including walls, firestops, shaft enclosures, partitions, smoke barriers, floors, fire-resistive coatings and sprayed fire-resistant materials applied to structural members and fire-resistant joint systems) shall be maintained. Such elements shall be visually inspected by the owner annually~~,~~ and properly repaired, restored or replaced when damaged, altered, breached or penetrated. Where concealed, such elements shall not be required to be visually inspected by the owner unless the concealed space is accessible by the removal or movement of a panel, access door, ceiling tile or similar movable entry to the space. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings and holes made for any reason shall be protected with approved methods capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self- or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly.

107.2 ~~Inspection, t~~ Testing and operation. ~~Passive fire systems and e~~ Equipment requiring periodic testing or operation to ensure maintenance shall be ~~inspected,~~ tested or operated as specified in this code.

Committee Reason: The proposal was approved because the committee felt that it provides for the periodic inspection of fire-resistance-rated construction. The modification clarifies who is to conduct the annual inspection and that permanently concealed elements are not expected to be inspected; Section 107.2 is also returned to the current text.

Assembly Action: **None**

Final Hearing Results

F105-07/08 **AM**

Code Change No: F106-07/08

Original Proposal

Section: 703.1.2, Chapter 45 (New)

Proponent: Vickie J. Lovell, InterCode Incorporated, representing Air Movement and Control Association

1. Revise as follows:

703.1.2 (Supp) Smoke barriers and smoke partitions. Required smoke barriers and smoke partitions shall be maintained to prevent the passage of smoke. All openings protected with approved smoke barrier doors or smoke dampers shall be maintained in accordance with NFPA 105.

2. Add standard to Chapter 45 as follows:

NFPA

NFPA 105-07 Installation of Smoke Door Assemblies and Other Opening Protectives

Reason: NFPA fire data indicates that assemblies intended to contain smoke to the area of the fire's origin are sometimes compromised. Protective devices and products intended to protect openings permitted by the code can fail if they are not properly installed. They may also fail to operate satisfactorily due to poor or non-existent maintenance regimen if such maintenance is not regularly carried out and the records inspected for consistent compliance**.** NFPA 105 is in the building code in Section 715.4.3.1, requiring compliance for the installation of smoke doors. The scope of the document also includes maintenance and care requirements for smoke doors and smoke dampers.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard NFPA 105-07 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria (already referenced in the IBC).

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide a needed maintenance companion section to the IBC smoke barrier and smoke partition provisions.

Assembly Action: **None**

Final Hearing Results

F106-07/08 **AS**

Code Change No: F107-07/08

Original Proposal

Section: 703.1.3

Proponent: Vickie J. Lovell, InterCode Incorporated, representing Air Movement and Control Association

Revise as follows:

703.1.3 (Supp) Fire walls, fire barriers and fire partitions. Required fire walls, fire barriers and fire partitions shall be maintained to prevent the passage of fire. All openings protected with approved doors or fire dampers shall be maintained in accordance with NFPA 80.

Reason: NFPA fire data indicates that fire –resistance rated assemblies, intended to contain a fire to the area of origin, are sometimes compromised. Protective devices and products intended to protect openings permitted by the code can also fail if they are not properly installed. They may also fail to operate satisfactorily due to poor or non-existent maintenance regimen if such maintenance is not regularly carried out and the records inspected for consistent compliance**.** NFPA 80 is already referenced in the building code for the installation of such opening protectives. The new scope of the document also includes maintenance and care requirements.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved for consistency with the action on code change F106-07/08.

Assembly Action: **None**

Final Hearing Results

F107-07/08 **AS**

Code Change No: F114-07/08

Original Proposal

Section: 801.1

Proponent: Jon Napier, Fire Department, City of Kent, WA, representing Washington State Building Code Council

Revise as follows:

801.1 Scope. The provisions of this chapter shall govern interior finish, interior trim, furniture, furnishings, decorative materials and decorative vegetation in buildings. Sections 803 through 808 of this code shall be applicable to existing buildings. Section 803 of the *International Building Code* and Sections 804 through 808 shall be applicable to new and existing buildings.

Reason: The intent of this change is to clarify which codes are to be used for new buildings and which ones are used for existing buildings. This chapter has been completely rewritten and while Section 803 of the IBC is referenced in Section 803.1, it should be included in the scope of the chapter to make it more clear to check the IBC for requirements for the application of interior finishes and interior trim. The change specifically identifies which sections are to be used only for existing buildings and which ones to use for new and existing buildings.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that the current text adequately portrays the applicability of Chapter 8 to new and existing buildings.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jon Napier, Kent Fire Department, representing Washington State Building Code Council, requests Approval as Modified by this public comment.

Modify proposal as follows:

801.1 Scope. The provisions of this chapter shall govern interior finish, interior trim, furniture, furnishings, decorative materials and decorative vegetation in buildings. Existing buildings shall comply with Sections 803 through 808 ~~of this code shall be applicable to existing buildings~~. New buildings shall comply with Sections 804 through 808 and Section 803 of the *International Building Code* ~~and Sections 804 through 808 shall be applicable to new and existing buildings~~.

Commenter's Reason: The intent of this change is to clarify which codes are to be used for new and existing buildings. I have restructured the paragraph, since Palm Springs, so it is clearer for the code reader as to the requirements for each category of building. The change specifically identifies which sections are to be used only for existing buildings and which ones to use for new and existing buildings.

Final Hearing Results

F114-07/08 **AMPC**

Code Change No: F118-07/08

Original Proposal

Sections: 803.6.2, Chapter 45 (New)

Proponent: Marcelo M. Hirschler, GBH International

1. Revise as follows:

803.6.2 Compliance alternative. Expanded vinyl wall or ceiling coverings shall be allowed to comply with the requirements for textile wall or ceiling coverings in Section 803.5. When tested in accordance with ASTM E 84 or UL 723, test specimen preparation shall be in accordance with ASTM E 2404.

2. Add standard to Chapter 45 as follows:

ASTM

E 2404-07 Standard Practice for Specimen Preparation and Mounting of Textile, Paper or Vinyl Wall or Ceiling Coverings to Assess Surface Burning Characteristics

Reason: This proposal recommends that a standard practice be referenced for testing textile wall and ceiling coverings and expanded vinyl wall and ceiling coverings in the Steiner tunnel test, ASTM E 84. The committee on fire standards, ASTM E05, developed a standard practice, entitled **Standard Practice for Specimen Preparation and Mounting of Textile, Paper or Vinyl Wall or Ceiling Coverings to Assess Surface Burning Characteristics,** specifically for a mandatory way of preparing test specimens and mounting them in the tunnel. This replaces optional guidance on mounting methods found in the Appendix of ASTM E 84 and ensures testing consistency.

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

Analysis: A review of the standard proposed for inclusion in the code, ASTM E 2404-07, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing Results

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard ASTM E 2404-07 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide an appropriate standard reference for material test sample preparation.

Assembly Action: **None**

Final Hearing Results

F118-07/08 AS

Code Change No: F119-07/08

Original Proposal

Sections: 803.8 (New), 802.1 (New), Chapter 45 (New)

Proponent: Marcelo M. Hirschler, GBH International, representing American Fire Safety Council

1. Add new text and definition as follows:

803.8 Site-fabricated stretch systems. Where used as interior wall or interior ceiling finish materials, site-fabricated stretch systems shall be tested in the manner intended for use, and shall comply with the requirements of Section 803.1.1 or 803.1.2. If the materials are tested in accordance with ASTM E 84 or UL 723, specimen preparation and mounting shall be in accordance with ASTM E 2573.

802.1 (Supp) General. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

SITE-FABRICATED STRETCH SYSTEM, A system, fabricated on site and intended for acoustical, tackable or aesthetic purposes, that is comprised of three elements:

1. A frame constructed of plastic, wood, metal or other material used to hold fabric in place,
2. A core material (infill, with the correct properties for the application), and
3. An outside layer, comprised of a textile, fabric or vinyl, that is stretched taunt and held in place by tension or mechanical fasteners via the frame.

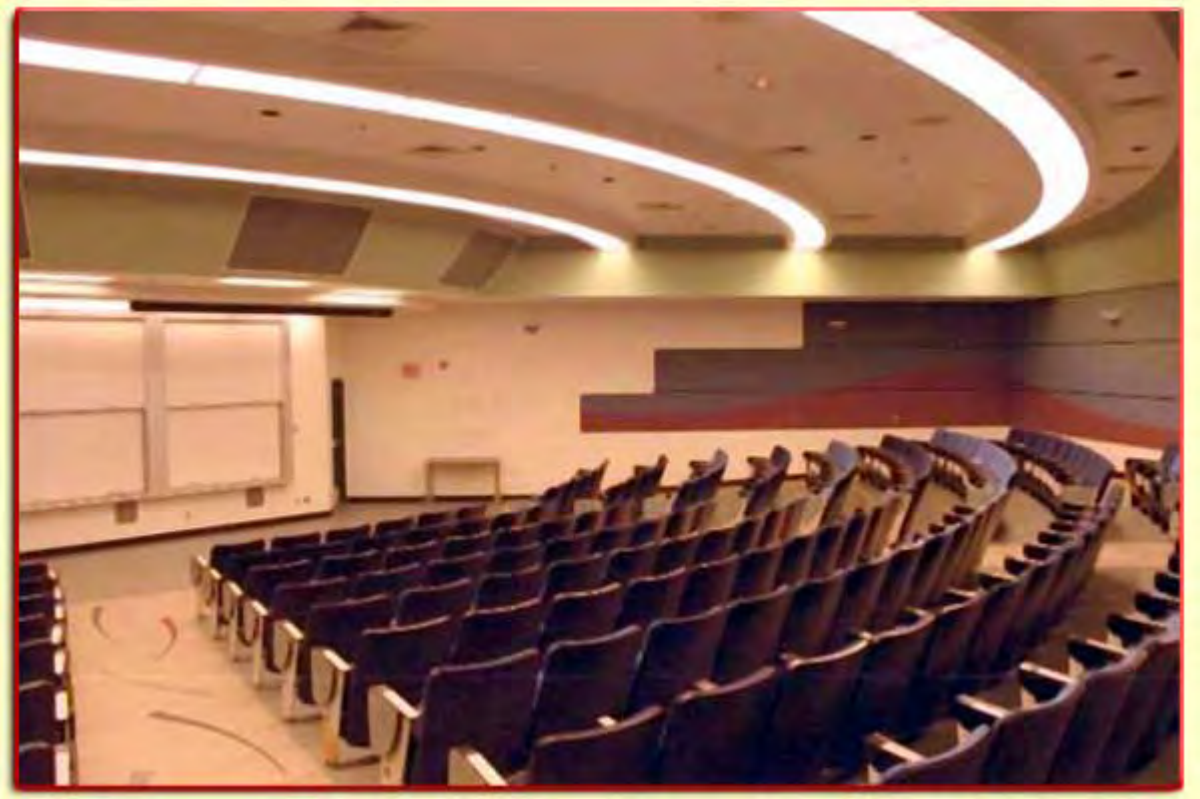
2. Add standard to Chapter 45 as follows:

ASTM

E 2573-07 Standard Practice for Specimen Preparation and Mounting of Site-Fabricated Stretch Systems to Assess Surface Burning Characteristics,

Reason: The ASTM committee on fire standards, ASTM E05, has issued a standard practice, ASTM E 2573, Standard practice for specimen preparation and mounting of site-fabricated stretch systems. Until now there was no correct mandatory way to test these systems. These systems are now being used extensively because they can stretch to cover decorative walls and ceilings with unusual looks and shapes. The systems consist of three parts: a fabric (or vinyl), a frame and an infill core material. The testing has often been done of each component separately instead of testing the composite system. That is an inappropriate way to test and not the safe way to conduct the testing. Now that a consensus standard method of testing exists, the code should recognize it. The proposed definition was taken from the standard, ASTM E 2573, word for word.

This type of product is not exclusive to any individual manufacturer. Three examples, taken from different manufacturers, are shown as illustrations.



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

Analysis: Similar requirements and definition are proposed for the *International Building Code* in code change proposal FS167-07/08.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that it would be unreasonable to apply a test for new materials retroactively. Previously approved curtain and drape material may have passed the E 84 test but might not pass the E 2573 test. If the intent is to apply to new materials, Section 803 is the wrong place to include it.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Bob Eugene, Underwriters Laboratories, Inc., requests Approval as Modified by this public comment.

Modify proposal as follows:

803.8 Site-fabricated stretch systems. Where used as newly installed interior wall or interior ceiling finish materials, site-fabricated stretch systems shall be tested in the manner intended for use, and shall comply with the requirements of Section 803.1.1 or 803.1.2. If the materials are tested in accordance with ASTM E 84 or UL 723, specimen preparation and mounting shall be in accordance with ASTM E 2573.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The addition of the words "newly installed" respond to the Committee concern that the testing requirements would be applied retroactively to existing materials that may have passed the Steiner tunnel test, but may not pass the ASTM E2573 test.

After a further review of IFC Chapter 8, this location was deemed to be the most appropriate location. New construction would be regulated under IBC Chapter 8. Companion text was approved as submitted for the IBC in proposal FS167-07/08.

The ASTM committee on fire standards, ASTM E05, has issued a standard practice, ASTM E 2573, Standard practice for specimen preparation and mounting of site-fabricated stretch systems. Until now there was no correct mandatory way to test these systems. These systems are now being used extensively because they can stretch to cover decorative walls and ceilings with unusual looks and shapes. The systems consist of three parts: a fabric (or vinyl), a frame and an infill core material. The testing has often been done of each component separately instead of testing the composite system. That is an inappropriate way to test and not the safe way to conduct the testing. Now that a consensus standard method of testing exists, the code should recognize it for newly installed products. The proposed definition was taken from the standard, ASTM E 2573, word for word.

Final Hearing Results

F119-07/08 **AMPC**

Code Change No: F120-07/08

Original Proposal

Sections: 804.1; IBC [F] 806.5

Proponent: Douglas H. Evans, PE, Department of Development Services, Clark County, NV

1. Revise IFC as follows:

804.1 (Supp) Interior trim. Material, other than foam plastic, used as interior trim shall have a minimum Class C flame spread index and smoke-developed index, when tested in accordance with ASTM E 84, as described in Section 803.1.1. Combustible trim, excluding handrails and guardrails, shall not exceed 10 percent of the specific wall or ceiling areas ~~in~~ to which it is ~~located~~ attached.

2. Revise IBC as follows:

[F] 806.5 (Supp) Interior trim. Material, other than foam plastic used as interior trim shall have a minimum Class C flame spread and smoke-developed index when tested in accordance with ASTM E 84 or UL 723, as described in Section 803.1. Combustible trim, excluding handrails and guardrails, shall not exceed 10 percent of the ~~aggregate~~ specific wall or ceiling area ~~in~~ to which it is ~~located~~ attached.

Reason: If one reads the code literally, 10 percent all the allowable decorative wall materials may be placed on a single wall, which may actually allow the quantity of decorative materials to exceed the size of a specific wall. The proposed revision limits the percentage of decorative material to the respective wall.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

804.1 (Supp) Interior trim. Material, other than foam plastic, used as interior trim shall have a minimum Class C flame spread index and smoke-developed index, when tested in accordance with ASTM E 84 or UL 723, as described in Section 803.1.1. Combustible trim, excluding handrails and guardrails, shall not exceed 10 percent of the specific wall or ceiling areas to which it is attached.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that it will provide better control of the fire load of interior finishes. The committee did express a concern that the retroactive provisions of the IFC should recognize that there may be previously approved applications based on the IBC's "aggregate" wall or ceiling area. The modification provides correlation with IBC Section [F] 806.5 and other sections that reference both ASTM E 84 and UL 723 as a result of the approval of code change FS11-06/07 in the last cycle.

Assembly Action: **None**

Final Hearing Results

F120-07/08 **AM**

Code Change No: F121-07/08

Original Proposal

Sections: 804.2.3 (IBC [F] 2604.2.3)

Proponent: Douglas H. Evans, PE, Department of Development Services, Clark County, NV

Revise as follows:

804.2.3 (IBC [F] 2604.2.3) (Supp) Area limitation. The interior trim shall not constitute more than 10 percent of the specific wall or ceiling areas ~~of a room or space~~ to which it is attached.

Reason: First of all, the code is inconsistent. Sometimes it specifies walls and ceilings and sometimes walls or ceilings. This revision can be looked at partially as clarification.

Most importantly, imagine a 100,000 sq ft casino, convention center or ballroom with 30 foot high walls (this is not uncommon). Within the other limitations specified in this section, a substantial quantity of decorative foam plastic materials may be installed on a single wall or ceiling. For the 100,000 sq ft example specified, that could allow in excess of 13,000 sq ft of decorative combustible foam plastic "trim".

Cost Impact: The code change proposal will increase the cost of construction and should not affect most applications

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved as Submitted for consistency with the action taken on code change F120-07/08.

Assembly Action: **None**

Final Hearing Results

F121-07/08 **AS**

Code Change No: F125-07/08

Original Proposal

Section: 805.3.1.2

Proponent: Marcelo M. Hirschler, GBH International, representing American Fire Safety Council

Revise as follows:

805.3.1.2 (Supp) Heat release rate. Newly introduced upholstered furniture shall have limited rates of heat release when tested in accordance with ASTM E 1537, as follows:

1. The peak rate of heat release for the single upholstered furniture item shall not exceed 80 kW.

   ~~**Exception:** In Use Condition I, II and III occupancies, as defined in the *International Building Code*, upholstered furniture in rooms or spaces protected by approved smoke detectors that initiate, without delay, an alarm that is audible in that room or space.~~

2. The total energy released by the single upholstered furniture item during the first 10 minutes of the test shall not exceed 25 MJ.

Reason: This exception for a smoke detector in a detention occupancy cell should be deleted. The exception is still there because of incomplete proposals in the last cycle. The companion exception, in the section on mattresses, does not exist. Moreover, it makes no sense for an exception associated with an alarm sounding in the cell since the inmate cannot leave the cell even when notified of a fire. The upholstered furniture needs to meet the proper fire safety requirements. An exception for smoke detectors still exists for the patient's own furniture in the section on nursing homes and that is not addressed by this proposal.

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

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it is inappropriate to maintain an exception for smoke detectors in occupancies where the occupants cannot escape without assistance.

Assembly Action: **None**

Final Hearing Results

F125-07/08 **AS**

Code Change No: F126-07/08

Original Proposal

Section: 805.4.1.1

Proponent: Marcelo M. Hirschler, GBH International, representing American Fire Safety Council

Revise as follows:

805.4.1.1 (Supp) Ignition by cigarettes. Newly introduced upholstered furniture shall be shown to resist ignition by cigarettes as determined by tests conducted in accordance with ~~NFPA 260 and shall meet the requirements for Class I~~ one of the following:

1. Mocked-up composites of the upholstered furniture shall have a char length not exceeding 1.5 inches (38 mm) when tested in accordance with NFPA 261 or
2. The components of the upholstered furniture shall meet the requirements for Class I when tested in accordance with NFPA 260.

Reason: This proposal brings consistency to the smoldering ignition requirements by allowing all upholstered furniture resistance to smoldering ignition testing to be conducted with either of the two tests, NFPA 260 or NFPA 261, in 805.4.1.1. All other occupancies covered already permit this option.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides for testing to NFPA 260 or NFPA 261, which is consistent with previous actions of the committee in allowing either standard to be used.

Assembly Action: **None**

Final Hearing Results

F126-07/08 **AS**

Code Change No: F127-07/08

Original Proposal

Section: 807.1

Proponent: Philip M. Chandler, NY State Office of Fire Prevention and Control

Revise as follows:

807.1 General requirements. In occupancies in Groups A, E, I and R-1 and dormitories in Group R-2, curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 806.2 or be noncombustible.

Exceptions:

1. Curtains, draperies, hangings and other decorative materials suspended from walls of sleeping units and dwelling units in dormitories in Group R-2 protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1 and such materials are limited to not more than 50 percent of the aggregate area of walls.
2. Decorative materials, including, but not limited to, photographs and paintings in dormitories in Group R-2 where such materials are of limited quantities such that a hazard of fire development or spread is not present.

In Groups I-1 and I-2, combustible decorative materials shall meet the flame propagation criteria of NFPA 701 unless the decorative materials, including, but not limited to, photographs and paintings, are of such limited quantities that a hazard of fire development or spread is not present. In Group I-3, combustible decorative materials are prohibited.

Fixed or movable walls and partitions, paneling, wall pads and crash pads, applied structurally or for decoration, acoustical correction, surface insulation or other purposes, shall be considered interior finish if they cover 10 percent or more of the wall or of the ceiling area, and shall not be considered decorative materials or furnishings.

In Group B and M occupancies, fabric partitions suspended from the ceiling and not supported by the floor shall meet the flame propagation performance criteria in accordance with Section 807.2 and NFPA 701 or shall be noncombustible.

Reason: It is well recognized that dormitories, especially those housing college students, present an elevated set of fire risk factors. Students often away from home for the first time, crowded conditions, experimentation with alcohol and controlled substances, smoking and use of candles and incense, not to mention a general feeling of invincibility of this age group, are all factors increasing the possibility of fire. Fire prevention experts have long recognized this fact and accordingly have worked to counter these risks with greater stringencies in the design, construction, maintenance and management of these occupancies. Section 807.1 of the IFC and its prohibition of combustible decorative materials not meeting the flame propagation standards of NFPA 701 in dormitories in Group R-2 is a good example. And not without good reason, as in the Chapel Hill fraternity fire and the Providence College fire of 1977 where ten students were killed, combustible interior trim and decorative materials were identified as playing a major role in the spread and development of the fire. (Comeau, Ed, "Campus Fire Safety," in, Cote, Arthur E. P.E., ed., *Fire Protection Handbook, Nineteenth Edition, Vol. 1,* Quincy, National Fire Protection Association, 2003: 5-99.)

Notwithstanding the above, in our zeal to prevent loss of life and limb, we have in fact gone overboard in our regulation of dormitory interior decoration. According to 807.1 college students are not allowed to post pictures of mom, team pennants, holiday cards, posters of Bob Dylan, you name it, on the walls of their own bedrooms. Nor can young coeds living at street level in inner city dormitories provide for their privacy and security by placing curtains over their windows. To be sure, no one is advocating that dormitory residents be allowed to cover every available inch of wall and ceiling with combustible materials that will most certainly enhance the growth and spread of any fire. Rather in the proposed addition of two exceptions to 807.1, we are attempting to balance the legitimate needs of dormitory residents to personalize their own spaces in accordance with their own individual tastes, preferences and privacy concerns with the over-arching need to provide for their life-safety.

In Exception 1, we are liberalizing the use of combustible materials on windows and walls only, excluding ceilings and the risk of drop-down fire spread. We allow only an amount sufficient to accommodate the real-world lifestyle of today's students. And in all cases we require the dormitories to be fully equipped with automatic sprinkler systems. For those institutions already sprinklered, we feel that this level of protection will adequately offset the relaxation of restrictions. To those institutions that have not yet sprinklered all of their existing dormitories, we feel that the market-driven need to deliver what their customers demand and can get elsewhere, will provide an added incentive to install sprinklers sooner than later. We feel strongly that sprinklers save lives.

In Exception 2, we provide for only the most basic level of personalization of dormitories. A level exactly the same as already allowed for residents of occupancies in Groups I-1 and I-2: alcohol and drug centers, half-way-houses, mental hospitals and detoxification centers, to name a few. Is it unreasonable to allow these residents the right to tack a photograph from home on the wall while denying the same right to homesick college students?

There are some that might argue that Exception 2 relies on an overly subjective assessment standard for establishing the acceptable limits of combustible decoration: Does it produce a risk of fire spread or not? They might prefer an arbitrarily set percentage of allowable combustibles as opposed to a more open-ended standard. However we in the code enforcement community have already adopted and embraced this criterion as evidenced by the language in 807.1 in regard to Groups I-1 and I-2. We as professionals are well equipped to determine if a fire hazard exists in a dormitory when dealing with such minute quantities of decorative materials without recourse to our slide rules and tape measures.

Apart from all that has been said above, consider one more reason to liberalize 807.1: its lack of practicality. If we are persistent in our efforts to enforce this provision as written, as many of us have been, seeking 100 percent compliance, we are more than likely to completely alienate students and institutional administrators as well. Fire prevention is accomplished through education as much as it is by code enforcement and engineering. If we are the ones that are seen as the grinch that stole freedom of personal expression and individuality, if we are the ones handing out fines for an American flag on the wall, our ability to get in front of students and faculty and positively influence their life-safety decisions will be severely compromised, and for what? A few scraps of paper or strips of cloth? There are laws, rules and regulations, that regardless of how well intended, are simply draconian in their impact. The cost of their enforcement is counter-productive and counter-intuitive to their purpose. Prohibition comes to mind. We feel that the proposed exceptions to 807.1 provide a more realistic and humane standard without putting the public at increased risk of harm by fire.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee expressed concerns over the lack of any apparent rationale for allowing the 50% coverage in Exception #1 and also whether such regulations might not be bordering on becoming a civil rights/freedom of speech issue. Additionally, it was felt that Exception #2 is too subjective and provides no guidance as to what "limited quantities" are, who is to make the determination that a fire spread hazard is not present or how the hazard might be analyzed and determined.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Philip M. Chandler, New York State Department, Office of Fire Prevention & Control, requests Approval as Submitted.

Commenter's Reason: The Committee identified three reasons for its disapproval of proposal F127-07/08. These reasons are concern for possible infringement of constitutionally protected free speech, "lack of apparent rationale for allowing the 50 percent coverage in Exception #1," and the seemingly vague and overly subjective criteria of Exception #2.

The issue of free speech is in fact at the very heart of the proposed modification of IFC 807.1, as this code section itself threatens the First Amendment right of free speech. As currently written, all combustible decorations and hangings, including photographs, paintings, posters and for

that matter, American flags, are effectively prohibited, as very few of these items are noncombustible or meet the flame propagation performance criteria of NFPA 701. The proposed modifications of F127-07/08 are a remedy. It is a well accepted principle in American law that there can be life-safety issues that override First Amendment rights; even school children learn that maliciously "yelling fire in a crowded theatre" is not protected speech. However, we maintain that combustible decorations do not rise to such a risk threshold as to be banned entirely, only reasonably regulated.

With the above in mind, the 50 percent sprinkler allowance of Exception #1 should be seen as a numerically perfect and reasonable compromise between those asserting that all combustible decorations in dormitories present an over-arching threat to life-safety and those asserting that there is an insufficient threat to life-safety to warrant abrogation of protected individual expression. Additionally, for those institutions not yet sprinklered, this exception provides a great inducement to install them. Those that already have sprinklers may rest assured that when properly designed and installed, they will provide wall to wall coverage and at the very least, provide a tenable environment for escape of the occupants in the event of fire. The IFC has provided a 50 percent compromise for sprinklered occupancies elsewhere without supporting data (807.1.2) and presumably as an inducement for sprinkler installation, has also relaxed building height requirements (1019.2), fire-resistance standards (1017.1) and egress criteria (1016.1); to do so here in regards to decorations would be logically consistent.

As for the Committee's assertion that Exception #2 is overly vague and subjective, consider that the concept of "such limited quantities that a hazard of fire development or spread is not present," is precisely the litmus test already adopted by the IFC in regards to I-1 and I-2 occupancies. Who analyzes the fire risk in those occupancies and according to what standards is the hazard there determined? Some might argue that these occupancy classifications are completely dissimilar: I-1 and I-2 are supervised, while R-2 dormitories are not. However this is not the case. First of all, the very definition of a dormitory in IBC 310.2 rests on the assumption that they are under "single management." R-2 dormitories are among the most tightly regulated of all occupancies. It is reasonable to expect that among all of the professionals exercising oversight of dormitories, including code enforcement personnel, are those that have adequate knowledge of fire behavior to recognize an honest-to-goodness fire hazard when present.

Final Hearing Results

F127-07/08 AS

Code Change No: F128-07/08

Original Proposal

Sections: 807.1.2 (IBC [F] 806.1.2)

Proponent: Douglas H. Evans, PE, Department of Development Services, Clark County, NV

Revise as follows:

807.1.2 (IBC [F] 806.1.2) Combustible decorative materials. The permissible amount of decorative materials meeting the flame propagation performance criteria of NFPA 701 shall not exceed 10 percent of the ~~aggregate area of~~ specific ~~walls and ceilings~~ wall or ceiling area to which it is attached.

Exceptions:

1. In auditoriums in Group A, the permissible amount of decorative material meeting the flame propagation performance criteria of NFPA 701 shall not exceed ~~50~~ 75 percent of the aggregate wall area ~~of walls and ceiling~~ where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, and where the material is installed in accordance with Section 803.4 of the *International Building Code*.
2. The amount of fabric partitions suspended from the ceiling and not supported by the floor in Group B and M occupancies shall not be limited.

Reason: First of all, the code is inconsistent. Sometimes it specifies walls and ceilings and sometimes walls or ceilings. This revision can be looked at partially as clarification.

Most importantly, imagine a 100,000 sq ft casino, convention center or ballroom with 30 foot high walls (this is not uncommon). If one reads the code literally, this section allows all the decorative materials to be placed in a single location. This could allow draperies or other combustible features to be well in excess of the entire wall area. For the 100,000 sq ft example specified, that could allow in excess of 13,000 sq ft of decorative combustible applications in a single location.

The change to Exception 1 clarifies that the surface being considered is the walls and not the ceiling. In most cases, 50 percent of the walls and ceiling area will exceed 75 percent of the wall area. As such, the proposed amendment will be more conservative (and more specific), while still allowing draperies in theaters to cover a substantial portion of the walls.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved as Submitted for consistency with the actions taken on code changes F120- and F121-07/08.

Assembly Action: **None**

Final Hearing Results

F128-07/08 **AS**

Code Change No: F129-07/08

Original Proposal

Section: 808.1

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

808.1 Wastebaskets and soiled linen containers in Group I-2, I-3 and I-5 occupancies ~~detention and correction facilities.~~ Wastebaskets, soiled linen containers and other waste containers, including their lids, located in Group I-2, I-3 and I-5 occupancies ~~detention and correction facilities~~ shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m^2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation. Metal wastebaskets and other metal waste containers with a capacity of 20 gallons (75.7 L) or more shall be listed in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons shall be stored in an area classified as a waste and linen collection room and constructed in accordance with Table 508.2 of the *International Building Code*.

Reason: This proposal will require that trash and linen containers in I-2 and I-5 occupancies (dependent on a separate code change creating the I-5 occupancy) must meet the same requirement as those containers in I-3 occupancies. In each facility, the occupants have limited, if any, ability for self-evacuation. Plastic containers can add a tremendous fuel load to a fire in a trash or linen container. Many plastic containers will more than triple the fuel load in a fire situation.

This proposal will control the fuel load for these containers that are used routinely throughout the facilities.

This proposal will correlate the IFC with Federal Regulations for these facilities.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: The reference in this proposal to a new occupancy "Group I-5" is dependent on the action on Code Change G33-07/08. If that code change is not approved, the reference to Group I-5 will be deleted from this section.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

808.1 Wastebaskets and ~~soiled~~ linen containers in Group I-2, I-3 and I-5 occupancies. Wastebaskets, ~~soiled~~ linen containers and other waste containers, including their lids, located in Group I-2, I-3 and I-5 occupancies shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m^2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation. Metal wastebaskets and other metal waste containers with a capacity of 20 gallons (75.7 L) or more shall be listed in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons shall be stored in an area classified as a waste and linen collection room and constructed in accordance with Table 508.2 of the *International Building Code*.

Committee Reason: The proposal was approved for consistency with the action on code changes F41-, F42- and F58-07/08. The modification re-focuses the change to the linen containers, which are the real issue, rather than whether their contents are clean or soiled.

Assembly Action: **None**

Analysis: The reference in this proposal to new occupancy "Group I-5" is dependent on the final action on Code Change G33-07/08 (D). If that code change is not approved, the reference to "Group I-5" would be deleted from this section.

Final Hearing Results

F129-07/08 **AM**

Code Change No: F132-07/08

Original Proposal

Sections: 903.2.1.3, 903.2.1.4 (IBC [F] 903.2.1.3, [F] 903.2.1.4)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

903.2.1.3 (IBC [F] 903.2.1.3) Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m^2);
2. The fire area has an occupant load of 300 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

~~Exception:~~ ~~Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.~~

903.2.1.4 (IBC [F] 903.2.1.4) Group A-4. An automatic sprinkler system shall be provided for Group A-4 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m^2);
2. The fire area has an occupant load of 300 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

~~Exception:~~ ~~Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.~~

Reason: The intention of the exception was for gymnasiums and similar areas where the probable occupant load was significantly less than what would be determined based on a square footage per occupant factor. These facilities have become multi-use and the occupant load is frequently higher than what was anticipated or expected when the exception was developed, and the fire load can vary based on the used to far exceed what would be expected for a sporting area.

For example, a community recreation center is constructed with no sprinklers over the gymnasium floor. The same area is also utilized for receptions and various community activities such as work fairs, rummage sale, art exhibits, emergency shelters for persons displaced by natural disasters, etc. Such uses could even include eating, sleeping, and fire loads far in excess of a few uniforms and leather volleyballs.

Cost Impact: Since the rest of the building will be sprinklered, the additional cost is only for additional sprinkler lines.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that the current exception that is aimed at limited-use facilities is needed and that the "exclusive" use of the area for participant sports is the key to successful application and must be strictly enforced by the fire code official at the outset of a project. Changes to the use of the area after occupancy should be reviewed as an illegal change in use that must be regulated.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee, requests Approval as Submitted.

Commenter's Reason: This public comment allows for the facility to be construction without any restrictions on use or the need for the local fire code official to track each and every event in each and every location where this exception was utilized within the jurisdiction.

The intention of the exception was for gymnasiums and similar areas where the probable occupant load was significantly less than what would be determined based on a square footage per occupant factor. These facilities have become multi-use and the occupant load is frequently higher than what was anticipated or expected when the exception was developed, and the fire load can vary based on the used to far exceed what would be expected for a sporting area.

For example, a community recreation center is constructed with no sprinklers over the gymnasium floor. The same area is also utilized for receptions and various community activities such as work fairs, rummage sale, art exhibits, emergency shelters for persons displaced by natural disasters, etc. Such uses could even include eating, sleeping, and fire loads far in excess of a few uniforms and leather volleyballs.

Final Hearing Results

F132-07/08 **AS**

Code Change No: F133-07/08

Original Proposal

Sections: 903.2.2 (IBC [F] 903.2.2)

Proponent: Jeff Hugo, National Fire Sprinkler Association

Revise as follows:

903.2.2 (IBC [F] 903.2.2) (Supp) Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than ~~20,000~~ 12,000 square feet (~~1858~~ 1115 m^2) in area.
2. Throughout every portion of educational buildings below the lowest level of exit discharge that serves that portion of the building.

   Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.

Reason: The continuity of mission is important for educational occupancies. If a community loses a school that community cannot quickly recover to resume normal school activities. There are several similarities between educational and several other occupancies, therefore sprinkler requirements should also be similar. Reducing the fire area from 20,000 s.f. to 12,000 s.f. will aid in fire fighter rescue, smaller area of damage, and a quicker recovery to school programs if a sprinkler system is not chosen. Although through consistent fire drills, deaths are rare, but the possibility exists for a large loss of life in educational occupancies. A threshold of 20,000 square feet is one of the highest minimum sprinkler thresholds in the code and exists without good reason. Some states have already mandated complete sprinkler protection in educational occupancies.

In most cases it is not economically feasible to build a school without sprinkler protection. The cost savings for a community to build a school is introduced when the decision to install sprinklers is done at the early stages of the project where they can take advantage of the sprinkler trade ups for building construction. Another factor to consider is federal, state, and local tax monies available to build and repair schools. A fire

sprinkled school will cost less to insure, less to rebuild, less liability to the school system, less injuries, less taxes, and less downtime. According to statistics only 24% of the nation's schools have fire sprinklers. However the average fire loss when sprinklers are present are $2,800 versus $12,900 having no sprinklers, resulting in a 78% reduction in damage.

Fires during lockdowns, hostage, or terrorist events are now a concern than during the legacy codes where the 20,000 s.f. threshold evolved from. A fire during a lockdown is a lose-lose event for the administrators' and children. Fire sprinklers can control the fire during the lockdown in lieu of endangering the children exiting during the lockdown or prohibiting egress caused by the fire.

Statistics from a four year period of 1999-2002, there were an estimated average of 7,070 structure fires in educational occupancies along with 113 injuries and $112 million in property damage. K-12 schools make up 5,230 fires, 88 injuries, and $74 million in fire damage. This is money from the taxes we pay, and these are our children getting burned and injured. Fire sprinklers can reduce the cost while increasing fire protection. Including fire sprinklers during the design process can significantly reduce the construction cost.

Bibliography:
EDUCATIONAL PROPERTIES, National Fire Protection Association, September 2006
Practical Information on Crisis Planning: A Guide for Schools and Communities, US Dept of Education, Jan. 2007

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide increased life safety and property protection in buildings that are an essential part of a community. Whereas several previous proposals sought to sprinkler all schools without exception, this proposal includes a reduced but reasonable threshold that is similar to other sprinkler thresholds in Section 903.

Assembly Action: **None**

Final Hearing Results

F133-07/08 **AS**

Code Change No: F135-07/08

Original Proposal

Sections: 903.2.6 (IBC [F] 903.2.6)

Proponent: Jesse J. Beitel, Hughes Associates, Inc., representing American Home Furnishings Alliance and National Home Furnishings Association

Revise as follows:

903.2.6 (IBC [F] 903.2.6) Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. Where a Group M fire area exceeds 12,000 square feet (1115 m^2);
2. Where a Group M fire area is located more than three stories above grade plane; ~~or~~
3. Where the combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2)~~.~~ ; or
4. Where a Group M occupancy is used primarily for the display and sale of upholstered furniture.

Reason: This proposal is submitted jointly by the American Home Furnishings Alliance (AHFA) and the National Home Furnishings Association (NHFA) in the interest of making furniture retail and warehouse facilities safer for employees, customers and first responders. AHFA represents manufacturers and importers of residential furniture, some of whom also operate branded retail stores. NHFA's membership comprises 2,800 corporate entities representing 10,000 retail furniture stores in all 50 states and several foreign countries.

The proposal to require sprinklers for Group M occupancies containing significant amounts of upholstered furniture recognizes that, under certain circumstances, all upholstered furniture will ignite and contribute to the fuel load of a fire. There is no such thing as totally fire safe upholstered furniture.

The AFHA and the NHFA have examined proposals for exempting vendors of certain constructions of furniture and concluded that such exemptions would be impractical for local code officials to enforce. This is the case because the internal construction of furniture cannot be established reliably without deconstructing it.

Further, materials and constructions touted as more fire resistant have not proven so to the satisfaction of fire authorities. The U.S. Consumer Product Safety Commission (CPSC) has tested furniture with combustion modified polyurethane foam such as that required in California and the United Kingdom and found that such foam does not meaningfully improve fire performance when furniture is exposed to an open flame. Other researchers have found that constructions employing the fire-blocking barriers now prevalent in mattresses do not reliably slow the progression of furniture fires. This is likely due to the variety of upholstery fabrics and seating geometries typical of furniture as compared to mattresses.

The most protective code measure would establish uniform, easily enforceable sprinkler requirements and not base safety considerations on differences in furniture construction that may or may not exhibit better fire performance in a retail setting.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

903.2.6 (IBC [F] 903.2.6) Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. Where a Group M fire area exceeds 12,000 square feet (1115 m^2);
2. Where a Group M fire area is located more than three stories above grade plane;
3. Where the combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2) ; or
4. Where a Group M occupancy is used ~~primarily~~ for the display and sale of upholstered furniture.

Committee Reason: The proposal was approved because the committee felt that it is a good first step supported by the furniture industry in attempting to deal with the hazards presented by upholstered furniture. The committee indicated its sense that future efforts on the topic need to address Group F and S upholstered furniture occupancies as well and that a reasonable sprinkler threshold needs to be added to provide some relief to the small businesses that will now be affected. The modification removes a subjective term that the committee felt could create serious enforcement inconsistencies.

Assembly Action: **None**

Final Hearing Results

F135-07/08 **AM**

Code Change No: F136-07/08

Original Proposal

Sections: 903.2.8, 903.2.8.1, 903.2.9 (IBC [F] 903.2.8, [F] 903.2.8.1, [F] 903.2.9)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

903.2.8 (IBC [F] 903.2.8) Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 fire area exceeds 12,000 square feet (1115 m^2);
2. A Group S-1 fire area is located more than three stories above grade plane; or
3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).
4. A group S-1 fire area used for the storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m^2).

903.2.8.1 (IBC [F] 903.2.8.1) (Supp) Repair garages. An automatic sprinkler system shall be provided throughout all buildings used as repair garages in accordance with Section 406 of the *International Building Code*, as shown:

1. Buildings having two or more stories above grade plane, including basements, with a fire area containing a repair garage exceeding 10,000 square feet (929 m^2).
2. Buildings no more than one story above grade plane, with a fire area containing a repair garage exceeding 12,000 square feet (1115 m^2).
3. Buildings with a repair garage servicing vehicles parked in the basement.
4. A group S-1 fire area used for the repair of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m^2).

903.2.9 (IBC [F] 903.2.9) (Supp) Group S-2. An automatic sprinkler system shall be provided throughout buildings classified as enclosed parking garages in accordance with Section 406.4 of the *International Building Code* as follows.

1. Where the fire area of the enclosed parking garage exceeds 12,000 square feet (1115 m^2); or
2. Where the enclosed parking garage is located beneath other groups.

~~**Exception:** Enclosed parking garages located beneath Group R-3 occupancies.~~

Reason: This proposal adds an additional trigger for sprinkler protection in repair garages. This is a logical alignment with Section 903.2.9.1. Currently, a building that stores trucks is required to be protected by a fire sprinkler system at 5,000 square but if trucks are repaired within the same building, the building can go up to 12,000 square feet. The addition of the term 'stored' within 903.2.8 has been added since a multi-purpose are used to store more than trucks, such as a fire station bay, is an S-1 rather than an S-2.

The removal of the exception to 903.2.9 is to add clarity. Group R-3 occupancies are required to be protected by a fire sprinkler system and the exception adds confusion.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

903.2.9 (IBC [F] 903.2.9) (Supp) Group S-2. An automatic sprinkler system shall be provided throughout buildings classified as enclosed parking garages in accordance with Section 406.4 of the *International Building Code* as follows.

1. Where the fire area of the enclosed parking garage exceeds 12,000 square feet (1115 m^2); or
2. Where the enclosed parking garage is located beneath other groups.

Exception: Enclosed parking garages located beneath Group R-3 occupancies.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was disapproved because the committee felt that it will provide fire protection for the more hazardous area of garages. The modification retains the exception because Group R-3 occupancies can be sprinklered with an NFPA 13D system which would not include the garages.

Assembly Action: **None**

Final Hearing Results

F136-07/08 **AM**

Code Change No: F138-07/08

Original Proposal

Sections: 903.2.10, 903.2.12.1, 903.2.12.2, 903.2.13, Table 903.2.13 (IBC [F] 903.2.10, [F] 903.2.12.1, [F] 903.2.12.2, [F] 903.2.13, [F] Table 903.2.13)

Proponent: Daniel E. Nichols, PE, NY State Division of Code Enforcement and Administration

1. Revise as follows:

903.2.10 (IBC [F] 903.2.10) ~~Windowless stories in all occupancies~~ Specific buildings areas and hazards. In all occupancies an automatic sprinkler system shall be installed for building design or hazards in the locations set forth in Sections 903.2.10.1 through ~~903.2.10.1.3~~ 903.2.10.6.

Exception: Group R-3 and Group U.

2. Relocate sections and table as follows:

~~903.2.12.1~~ 903.2.10.4 (IBC [F]~~903.2.12.1~~ [F]903.2.10.4) Ducts conveying hazardous exhausts. Where required by the *International Mechanical Code*, automatic sprinklers shall be provided in ducts conveying hazardous exhaust, flammable or combustible materials.

Exception: Ducts where the largest cross-sectional diameter of the duct is less than 10 inches (254 mm).

~~903.2.12.2~~ 903.2.10.5 (IBC [F]~~903.2.12.2~~ [F]903.2.10.5)Commercial cooking operations. An automatic sprinkler system shall be installed in a commercial kitchen exhaust hood and duct system where an automatic sprinkler system is used to comply with Section 904.

~~903.2.13~~ 903.2.10.6 (IBC [F]~~903.2.13~~ [F]903.2.10.6)Other required suppression system. In addition to requirements of 903.2, the provisions indicated in Table ~~903.2.13~~ 903.2.10 also require the installation of a suppression system for certain buildings and areas.

TABLE ~~903.2.13~~ 903.2.10 (IBC TABLE [F]~~903.2.13~~ [F]903.2.10)
ADDITIONAL REQUIRED FIRE-EXTINGUISHING SYSTEMS

(No change to table contents)

Reason: At present both Section 903.2.10 and 903.2.12 identify “other” places where sprinkler protection is required. These 5 things are either based on an identifiable hazard of the activity or design. As compared to section 903.2.11 which is essentially a list of references to other provisions, these 5 are detailed in Section 903. The distinction between the items in 903.2.10 and .12 is artificial and unneeded. Further, the existing title of 903.2.10 – Windowless stories in all occupancies is misleading. Only subsection 903.2.10.1 addresses the windowless situation. The intent of this proposal is editorial. It results in the sprinkler requirement provisions of 903 to be in 4 rough categories: 1 – Based on occupancy; 2 – based on building design or feature; 3-reference to other section; 4 – during construction;

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a logical reorganization of the sections.

Assembly Action: **None**

Final Hearing Results

F138-07/08 **AS**

Code Change No: F140-07/08

Original Proposal

Sections: 903.3.1.2 (IBC [F] 903.3.1.2)

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing National Multi Housing Council

Revise as follows:

903.3.1.2 (IBC [F] 903.3.1.2) NFPA 13R sprinkler systems. ~~Where allowed in buildings of~~ In Group R occupancies, up to and including four stories in height, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R.

Reason: The proposed change is intended to clarify application of the code with respect to NFPA 13R systems. The title of NFPA 13R is "Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, " with the key word being "occupancies." Currently, Section 903.3.1.2, by referring to "buildings of Group R," implies that NFPA 13R systems would not be permitted in any portion of a mixed use occupancy, which is inappropriate. In a mixed use containing Group R, it is entirely appropriate to permit NFPA 13R as a basis for sprinkler protection in the residential portion of the building, as well as accessory uses within residential areas. Other areas are, however, be required to be protected in accordance with NFPA 13. The proposal makes this clear.

Note that Section 903.2.7 still requires fire sprinklers throughout all buildings with a Group R fire area, so by changing Section 903.3.1.2 to refer to "occupancies," there is no impact on the requirement that the entire building containing a Group R fire area must be sprinklered.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee disagreed that the proposal is a simple clarification and clean-up of the section and felt that there is also sufficient ambiguity in Section 903.3.1and all of its subsections to create a need for a complete re-work of that section and all of its subsections. It was felt that this section could be viewed as a specific requirement that would override Section 903.3.1 which could be viewed as only the general requirement and that mixed uses could claim on that basis that non-residential parts of the building do not need to comply with NFPA 13. Based on the proposed wording, it was also felt that this revised section could mandate the use of NFPA 13R for all Group R occupancies

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Jeffrey Shapiro, PE, International Code Consultants, representing National Multi Housing Council, requests Approval as Modified by this public comment.

Replace proposal with the following:

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Section~~s~~ 903.3.1.1, unless otherwise permitted by Sections 903.3.1.2 ~~or~~ and 903.3.1.3.

903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Section 903.3.1.1.1.

903.3.1.1.1 Exempt locations. Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the fire code official.
3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.
5. Fire service access elevator machine rooms and machinery spaces.

903.3.1.2 NFPA 13R sprinkler systems. ~~Where allowed in buildings of Group R, up to and including four stories in height, a~~ Automatic sprinkler systems ~~shall be~~ in Group R occupancies up to and including four stories in height shall be permitted to be installed throughout in accordance with NFPA 13R.

903.3.1.2.1 Balconies and decks. Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units where the building is of Type V construction, provided there is a roof or deck above. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

903.3.1.3 NFPA 13D sprinkler systems. ~~Where allowed,~~ Automatic sprinkler systems ~~installed~~ in one- and two-family dwellings shall be permitted to be installed throughout in accordance with NFPA 13D.

Commenter's Reason: The proposed revision addresses the request of the code development committee for a comprehensive cleanup of this section. Although our original intent was simply to clarify application of the code with respect to NFPA 13R systems, the committee made it clear that they wanted the whole section fixed. That has now been done.

Final Hearing Results

F140-07/08 AMPC

Code Change No: F144-07/08

Original Proposal

Sections: 903.3.1.3 (IBC [F] 903.3.1.3)

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Revise as follows:

903.3.1.3 (IBC [F] 903.3.1.3) NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems installed in one and two-family dwellings and townhouses shall be installed throughout in accordance with NFPA 13D.

Reason: This proposal clarifies that NFPA 13D systems are an appropriate application in the townhouse environment. A townhouse is defined as a "single-family dwelling" by the IBC and the IRC. IRC Section R317.2 further indicates, "Each townhouse shall be considered a separate building. . ." NFPA 13D's scope states, "This standard shall cover the design and installation of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings and manufactured homes." NFPA 13D's definition of dwelling states, "Any building that contains not more than one or two dwelling units. . ." Therefore, since each townhouse is classified as a separate building designed under the IBC, IRC and 13D definitions, the 13D system is an appropriate level of protection for each townhouse.

There are also a number of practical applications that preclude the utilization of a 13R system in a townhouse environment without significant difficulty:

1. Since "townhomes" typically involve separate ownership of property and the units extent from "foundation to roof", a common 13R system piping supplying all units would necessitate a complex common ownership element shared between the differing property owners. A community association would need to be established in order to "own" the common element. This common element may also require recorded easement to access the system in each persons house.
2. This community association would need to maintain the 13R system since 13R systems require maintenance and inspections in accordance with NFPA 25. This would involve coordinated access to each property and a shared maintenance cost.
3. If an external bell or monitoring of the 13R system is required, this would necessitate a separate house electrical panel, again owned by a community association. This would create an ongoing expense of electrical service and maintenance/testing of a fire alarm monitoring panel, if present.
4. If monitoring of the 13R system is required, this would then mandate a method of transmission which may involve the added expense of phone lines to the community association. An easement may be needed to access the phone lines.

None of these issues are present when an NFPA 13D system is installed in a townhouse. Therefore, the 13D system is appropriate for the townhouse application.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it is consistent with the scope of NFPA 13D. It was pointed out, however, that the definition of "townhouse" in the IBC includes 3 or more attached dwelling units which differs from the term defined in the IRC. Some separation requirement could be added to this section to resolve that issue.

Assembly Action: **None**

Final Hearing Results

F144-07/08 **AS**

Code Change No: F147-07/08

Original Proposal

Sections: 903.4.1 (IBC [F] 903.4.1)

Proponent: Steven L. Schoon, Golder Ranch Fire District, AZ, representing Arizona Fire Marshals Association

Revise as follows:

903.4.1 (IBC [F] 903.4.1) (Supp) Monitoring. Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved ~~central station, remote supervising station or proprietary~~ supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.

Exceptions:

1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

Reason: The proposed revision is for consistency with the code language found in the fire alarm system monitoring Section 907.7.5 (2007 Supplement to the IFC) Supervising Station is defined by the IFC and the wording of central station, remote supervising station or proprietary supervising station is not needed.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it removes unnecessary text.

Assembly Action: **None**

Final Hearing Results

F147-07/08 **AS**

Code Change No: F154-07/08

Original Proposal

Section: 903.6.2 (New)

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Add new text as follows:

903.6.2 Group I-2. An automatic sprinkler system shall be provided throughout Group I-2 fire areas. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, and in all floors between the Group I-2 occupancy and the level of exit discharge.

Reason: Fire Sprinkler protection of existing hospitals and nursing homes is of critical importance due to the nature of the occupants. In the I-2 occupancies, the occupants are "not capable of self-preservation." Since the occupants are not capable of self-preservation, reliance must be placed on an active fire suppression system to provide the first line of life safety protection to these occupants. Per the NFPA report on Facilities that Care for the Aged, "The death rate per 1,000 fires was 82% lower when automatic suppression systems were present." Furthermore, the report states that "Residents of these facilities are particularly vulnerable. People over 65 face twice the risk of dying in a home fire as the general population. The risk increases with increasing age.1 Consequently, the aged are considered a high-risk population. Institutional facilities that care for older adults must work diligently to prevent fires and to train staff and to equip the property (e.g., active systems) for effective response should a fire occur. The deadliest fire in U.S. history in this property class was the 1957 Katie Jane Nursing Home fire in Warrenton, Missouri, that killed 72 people. "

Recently, the Nashville nursing home fire on September 25th 2003 resulted in 15 deaths. The Hartford nursing home fire on February 26th resulted in 16 deaths. Both of these fires were in non-fire sprinkler protected properties.

The NFPA 101 has responded to this issue by requiring fire sprinklers in all existing nursing homes. It is important to note that the proposal for this change to NFPA 101 was actually submitted by the American Health Care Association (AHCA). However, for the numerous states and jurisdictions that do not have NFPA 101 adopted, and rely solely on the IFC as a stand-alone document, this minimum protection level is not provided. . If an adopting jurisdiction chooses to remove this code provision during the adoption process, that is their local prerogative. However, it is the burden of the ICC process to promulgate codes based on a technical basis and not a potential political implication at the local level. This code change proposal will ensure that existing nursing homes are provided with a reasonable level of life safety protection that is warranted by the technical evidence and expected by the at large public.

Cost Impact: The code change will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which recognizes the life loss history of Group I-2 occupancies resulting from the occupants not being capable of self-preservation and the need to defend them in place.

Assembly Action: **None**

Final Hearing Results

F154-07/08 **AS**

Code Change No: F156-07/08

Original Proposal

Section: 904.11.6.4 (New)

Proponent: Michael J. Laderoute, MJL Associates, Inc., representing Fire Equipment Manufacturer's Association

Add new text as follows:

904.11.6.4 Existing automatic fire extinguishing systems. Where changes in the cooking media, positioning of cooking equipment or replacement of cooking equipment occur in existing commercial cooking systems, the automatic fire extinguishing system shall be required to comply with the applicable provisions of Sections 904.11 through 904.11.4.

(Renumber subsequent sections)

Reason: New text provides guidance, as well as adds clarity to when existing automatic fire extinguishing systems protecting commercial cooking operations need to be modified, upgraded or replaced to meet UL 300 requirements mandated by this code. AHJ's, inspectors and end-users have been requesting guidance from the code. Many states already adopted a similar requirement or put compliance dates into effect. The above text and requirement are consistent with other codes.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide needed direction for the re-evaluation of cooking equipment and its protection. It also recognizes that modern extinguishing system design is very precise with reduced toleration for errors and that the older generation dry chemical systems may no longer provide adequate protection.

Assembly Action: **None**

Final Hearing Results

F156-07/08 **AS**

Code Change No: F157-07/08

Original Proposal

Sections: 905.3.3 (IBC [F] 905.3.3)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

905.3.3 (IBC [F] 905.3.3) (Supp) Covered mall buildings. A covered mall building shall be equipped throughout with a standpipe system where required by Section 905.3.1. Covered mall buildings not required to be equipped with a standpipe system by Section 905.3.1 shall be equipped with Class I hose connections connected to the automatic sprinkler system sized to deliver water at 250 gallons per minute (946.4 L/min) at the most hydraulically remote

~~outlet~~ hose connection while concurrently supplying the automatic sprinkler system demand. The standpipe system shall be designed to not exceed a friction loss of 50 pounds per square inch (345 kPa) with a flow of 250 gallons per minute (946.4 L/min) from the fire department connection to the hydraulically most remote hose connection. Hose connections shall be provided at each of the following locations:

1. Within the mall at the entrance to each exit passageway or corridor.
2. At each floor-level landing within enclosed stairways opening directly on the mall.
3. At exterior public entrances to the mall.
4. At other locations as necessary so that the distance to reach all portions of a tenant space or anchor store does not exceed 200 (60 960 mm) feet from a hose connection.

Reason: Design of standpipe systems need to have two parameters, flow and pressure. Currently, there is no residual design pressure as part of the requirement which, in turn, provides a discrepancy on what output pressure to a fire department standpipe pack will be. Additionally, this section provides for hose connections connected to a sprinkler system rather than a bona-fide standpipe system. A vast majority of these systems act as a manual wet system, requiring the fire department to pump the FDC. Since this section deals with is a sprinkler system with hose connections, it makes sense that the maximum pump pressure is 175 psi so there is not unneeded damage to the sprinkler heads.

Location of the standpipe connections is revised to take into account some of the vast and varying designs found in mall layouts. The design of a covered mall has its roots to the covering of a city street. Section 402 of the IBC is still based on this premise, noticeable by the 20 foot wide mall walkway, tenant separations, etc. The fire department hose connections required by the section are to allow the fire department to extinguish a fire within the building, independent of the height of the mall. The problem is that the current hose connections are predicated on the exiting requirements found in IBC Section 402. Section 402.4.4 requires the travel distance within the mall space of a maximum of 200 feet. The theory is that the measurement starts at all mall entrances and exits, and meets the distances found in IFC Section 905 for sprinklered buildings. However, the current system does nothing for fires in tenant spaces and anchor buildings.

The current code text does not provide adequate coverage for the covered mall building design. The revision in Item 4 will allow for additional hose connections throughout the mall to reach those portions of the mall that are not within 200' of hose from a connection required in Items #1-3.

The term "outlet" is revised to "connection" so that it is consistent throughout the requirements.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

905.3.3 (IBC [F] 905.3.3) (Supp) Covered mall buildings. A covered mall building shall be equipped throughout with a standpipe system where required by Section 905.3.1. Covered mall buildings not required to be equipped with a standpipe system by Section 905.3.1 shall be equipped with Class I hose connections connected to the automatic sprinkler system sized to deliver water at 250 gallons per minute (946.4 L/min) at the most hydraulically remote hose connection while concurrently supplying the automatic sprinkler system demand. The standpipe system shall be designed to not exceed a ~~friction loss of~~ 50 pounds per square inch (345 kPa) residual pressure loss with a flow of 250 gallons per minute (946.4 L/min) from the fire department connection to the hydraulically most remote hose connection. Hose connections shall be provided at each of the following locations:

1. Within the mall at the entrance to each exit passageway or corridor.
2. At each floor-level landing within enclosed stairways opening directly on the mall.
3. At exterior public entrances to the mall.
4. At other locations as necessary so that the distance to reach all portions of a tenant space ~~anchor store~~ does not exceed 200 (60 960 mm) feet from a hose connection.

Committee Reason: The proposal was approved because the committee felt that it provides good guidance to the code official regarding design of standpipe systems in covered malls. The modifications reflect what the committee felt the correct pressure loss terminology should be and also the fact that a covered mall, by definition, does not include anchor stores.

Assembly Action: **None**

Final Hearing Results

F157-07/08 **AM**

Code Change No: F158-07/08

Original Proposal

Sections: 905.3.7 (IBC [F] 905.3.7)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Delete without substitution:

~~**905.3.7 (IBC [F] 905.3.7) Marinas and boatyards.** Marinas and boatyards shall be equipped throughout with standpipe systems in accordance with NFPA 303.~~

Reason: This section is no longer needed after the recent adoption of the Chapter 45 Marinas (Supp). Section 905.3.7 now needs to be deleted since the issue of standpipes is now addressed in Chapter 45 (Supp). The deletion needs to occur in the IFC and IBC.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

905.3.7 (IBC [F] 905.3.7) Marinas and boatyards. Standpipes in marinas and boatyards shall comply with Chapter 45.

Committee Reason: The proposal was approved because the committee felt that that the proponent's reason statement substantiates the need for the change, however the committee also felt that leaving a "pointer" section in Section 905, as indicated in the modification, would be useful to the fire code official.

Assembly Action: **None**

Final Hearing Results

F158-07/08 **AM**

Code Change No: F159-07/08

Original Proposal

Sections: 905.4 (IBC [F] 905.4)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

905.4 (IBC [F] 905.4) Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official.

2. On each side of the wall adjacent to the exit opening of a horizontal exit.

   Exception: Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30480 mm) of hose, a hose connection shall not be required at the horizontal exit.

3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.

   Exception: Where floor areas adjacent to an exit passageway are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.
5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a hose connection located either on the roof or at the highest landing of a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.
6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 200 feet (60 960 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations.

Reason: The exception to item #2 was included in the code as a recognition of the fact that multiple outlets in the same vicinity do not add to safety but merely increase costs. The same should be true for the situation described in item #3. If there is an outlet that is located in the vicinity of the exit passageway entrance, then it makes sense to use that and not require an outlet at each entrance.

To illustrate, imagine two scenarios: 1) In a multi-level covered mall building, an exit stairway exists in which a vertical standpipe is provided. The stairway is located approximately 30 feet from the mall entrance. Because the code requires an outlet at the entrance to the exit passageway, a second outlet would need to be installed although the area could be reached from the outlet in the stairway. 2) An exit passageway is provided in a health care setting as a way to meet travel distances and smoke compartment criteria. It is not a horizontal exit because the area of refuge does not exist in the passageway. Multiple doors access the corridor from rooms and spaces adjacent to it. According to the current language of the code, a hose outlet would be required adjacent to each of these doors which would result in an outlet every 20 – 30 feet (or even closer) inside the passageway.

In both these scenarios the literal application of the code does not contribute to additional safely but merely adds cost to the construction. It is only reasonable that the exception apply to this condition in the same manner as that item immediately prior.

This proposal will afford the same level of logic and reason as that in the prior item and eliminate a sometimes costly duplication.

Cost Impact: The code change proposal will not increase the cost of construction. A reduction in construction costs will occur in situations where the proposed exception reduces the redundant outlet(s).

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a useful clarification and refinement of required standpipe hose connection locations.

Assembly Action: **None**

Final Hearing Results

F159-07/08 **AS**

Code Change No: F160-07/08

Original Proposal

Sections: 906.2 (IBC [F] 906.2)

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Revise as follows:

906.2 (IBC [F] 906.2) (Supp) General requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Exceptions:

1. The travel distance to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.
2. Thirty-day inspections shall not be required and maintenance shall be allowed to be once every three years for dry-chemical or halogenated agent portable fire extinguishers that are supervised by a listed and approved electronic monitoring device, provided that all of the following conditions are met:
   2.1. Electronic monitoring shall confirm that extinguishers are properly positioned, properly charged and unobstructed.
   2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal.
   2.3. The extinguishers shall be installed inside of a building or cabinet in a noncorrosive environment.
   2.4. Electronic monitoring devices and supervisory circuits shall be tested every three years when extinguisher maintenance is performed.
   2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the owner to ensure that hydrostatic tests are conducted at the frequency required by NFPA10.
3. In Group I-3, portable fire extinguishers shall be permitted to be located at staff locations.

Reason: Extinguishers located throughout the facility are at times tampered with, removed and/or used for weapons by occupants in a detention or correctional setting. This change would protect the extinguishers from damage or removal by inmates while still making them available to staff and employees for use in an emergency situation. At least one of the Legacy Codes allowed extinguishers to be located at staff locations and/or locked.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a reasonable exception to the fire extinguisher location requirements for Group I-3 occupancies, where tampering is a concern.

Assembly Action: **None**

Final Hearing Results

F160-07/08 **AS**

Code Change No: F161-07/08

Original Proposal

Sections: 907.1.1, 907.1.2 (New) [IBC [F] 907.1.1, [F] 907.1.2 (New)]

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.1.1 (IBC [F] 907.1.1) (Supp) Construction documents. Construction documents for fire alarm systems shall be ~~submitted for review and approval prior to system installation.~~ of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code, the *International Building Code*, and relevant laws, ordinances, rules and regulations, as determined by the fire code official.

907.1.2 (IBC [F] 907.1.2) (Supp) Fire alarm shop drawings. ~~Construction documents~~ Shop drawings for fire alarm systems shall be submitted for review and approval prior to system installation~~.~~, ~~Construction documents~~ and shall include, but not be limited to, all of the following:

1. A floor plan which indicates the use of all rooms.
2. Locations of alarm-initiating ~~and notification appliances~~ devices.
3. Locations of alarm notification appliances, including candela ratings for visible alarm notification appliances.

~~3~~ 4 Location of fire alarm control unit, transponders, and notification power supplies.
~~4~~.5. Annunciators.
~~5~~.6. Power connection.
~~6~~.7. Battery calculations.
~~7~~.8. Conductor type and sizes.
~~8~~.9. Voltage drop calculations.
~~9~~.10. Manufacturers, data sheets indicating model numbers and listing information for equipment, devices and materials.
~~10~~.11. Details of ceiling height and construction.
~~11~~.12. The interface of fire safety control functions.
~~12~~.13. Classification of the supervising station.

~~907.1.2~~ (Supp) 907.1.3 (IBC [F] 907.1.3) Equipment. (No change to current text)

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

Bill Aaron (Code Consultants, Inc.),
Diane Arend (Office of the State Fire Marshal; California),
Gene Boecker (Code Consultants, Inc),
Shane Clary (Bay Alarm)
John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

These changes are important because construction documents and shop drawings are not for the same purpose. The wording added to 907.1.1 was extracted from the IBC, Section 106.1.1. Shop drawings referred to in Section 907 are specific to fire alarm equipment and installation. This information may not be available at the time the contractor applies for the building permit, but is essential for review prior to the installation of the fire alarm system.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that the change provides a needed refinement of the construction document requirements which were part of the reorganization of Section 907 in the last cycle.

Assembly Action: **None**

Final Hearing Results

F161-07/08 **AS**

Code Change No: F162-07/08

Original Proposal

Sections: 907.2 (IBC [F] 907.2)

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing National Multi Housing Council

Revise as follows:

907.2 (IBC [F] 907.2) (Supp) Where required - new buildings and structures. An approved manual, automatic or manual and automatic fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.22 and provide occupant notification in accordance with Section 907.6, unless other requirements are provided by another section of this code.

A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

Exceptions:

1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.
2. The manual fire alarm box is not required for Group R-2 occupancies.

Reason: Manual fire alarm boxes in apartment occupancies invite tampering and false alarms, and there is no apparent fire safety benefit to be gained by placing a single fire alarm box in such occupancies.

Justification offered last year to substantiate the need for the single manual alarm box was that it might be needed by a sprinkler technician to initiate an alarm if sprinklers/waterflow switches are out of service, but this makes no sense. Assuming that the alarm box is located in the valve room to avoid making it available to vandals, a technician working on any part of the sprinkler system, other than the valve, would be far away, and may or may not even know where the alarm box is. If the box were to be located where it will be accessible for occupant use, it is difficult to believe that occupants would know the location of a single pull box in a building or that they would seek out the box to initiate an alarm if the waterflow switch failed.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

907.2 (IBC [F] 907.2) (Supp) Where required - new buildings and structures. An approved manual, automatic or manual and automatic fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in

accordance with Sections 907.2.1 through 907.2.22 and provide occupant notification in accordance with Section 907.6, unless other requirements are provided by another section of this code.

A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

Exceptions:

1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.
2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the fire code official to provide a means for fire watch personnel to initiate an alarm during a sprinkler system impairment event. Where provided, the manual fire alarm box shall not be located in an area that is accessible to the public.

Committee Reason: The proposal was approved because the committee agreed that the manual fire alarm box should not be provided in Group R-2 where false alarms are a problem. The modification avoids putting the manual fire alarm box in all Group R-2 occupancies where there could be a false alarm problem while leaving open the option for the fire code official to require one in a restricted location for use by fire watch personnel, if needed.

Assembly Action: **None**

Final Hearing Results

F162-07/08 **AM**

Code Change No: F163-07/08

Original Proposal

Sections: 907.2, 907.2.6.3, 907.2.8.2, 907.2.11, 907.2.12, 907.2.12.1, 907.2.13, 907.2.14, 907.2.17, 902.1 (IBC [F] 907.2, [F] 907.2.6.3, [F] 907.2.8.2, [F] 907.2.11, [F] 907.2.12, [F] 907.2.12.1, [F] 907.2.13, [F] 907.2.14, [F] 907.2.17, [F] 902.1)

Proponent: Gene Boecker, Code Consultants, Inc.

1. Revise as follows:

907.2 (IBC [F] 907.2) (Supp) Where required new buildings and structures. An approved ~~manual, automatic or manual and automatic~~ fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.22 and provide occupant notification in accordance with Section 907.6, unless other requirements are provided by another section of this code.

A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

Exception: The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.

907.2.6.3 (IBC [F] 907.2.6.3) (Supp) Group I-3 occupancies. Group I-3 occupancies shall be equipped with a manual fire alarm system and automatic ~~fire alarm~~ smoke detection system installed for alerting staff.

907.2.8.2 (IBC [F] 907.2.8.2) (Supp) Automatic smoke detection ~~fire alarm~~ system. An automatic smoke detection ~~fire alarm~~ system that activates the occupant notification system in accordance with Section 907.6 shall be installed throughout all interior corridors serving sleeping units.

Exception: An automatic smoke ~~fire~~ detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

907.2.11 (IBC [F] 907.2.11) (Supp) Special amusement buildings. An automatic smoke detection system shall be provided in special amusement buildings in accordance with Sections 907.2.11.1 through 907.2.11.3.

~~**Exception:** In areas where ambient conditions will cause a smoke detection system to alarm, an approved alternative type of automatic fire detector shall be installed.~~

907.2.12 (IBC [F] 907.2.12) (Supp) High-rise buildings. Buildings with a floor used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with an automatic ~~fire alarm~~ smoke detection system in accordance with Section 907.2.12.1 and an emergency voice/alarm communication system in accordance with Section 907.6.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.21 and Section 412 of the *International Building Code*.
2. Open parking garages in accordance with Section 406.3 of the *International Building Code*.
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code*.
4. Low-hazard special occupancies in accordance with Section 503.1.1 of the *International Building Code.*
5. Buildings with an occupancy in Group H-1, H-2 or H-3 in accordance with Section 415 of the *International Building Code*.
6. In Group I-1 and I-2 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the paging system.

907.2.12.1 (IBC [F] 907.2.12.1) (Supp) Automatic ~~fire~~ smoke detection. ~~Smoke detectors~~ An automatic smoke detection system shall be provided in accordance with this section. ~~Smoke detectors shall be connected to an automatic fire alarm system.~~ The activation of any detector required by this section shall operate the emergency voice/alarm communication system. Smoke detectors shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection, elevator machine rooms, and in elevator lobbies.
2. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m_3/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.
3. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a smoke detector is allowed to be used in each return-air riser carrying not more than 5,000 cfm (2.4m3/s) and serving not more than 10 air-inlet openings.

907.2.13 (IBC [F] 907.2.13) (Supp) Atriums connecting more than two stories. A ~~fire alarm~~ smoke detection system shall be installed in occupancies with an atrium that connects more than two stories. The system shall be activated in accordance with Section 907.6. Such occupancies in Group A, E or M shall be provided with an emergency voice/alarm communication system complying with the requirements of Section 907.6.2.2.

907.2.14 (IBC [F] 907.2.14) (Supp) High-piled combustible storage areas. An automatic ~~fire~~ smoke detection system shall be installed throughout high-piled combustible storage areas where required by Section 2306.5.

907.2.17 (IBC [F] 907.2.14) (Supp) Underground buildings with smoke control systems. Where a smoke control system is installed in an underground building in accordance with the *International Building Code*, automatic ~~fire~~ smoke detectors shall be provided in accordance with Section~~s~~ 907.2.17.1 ~~and 907.2.17.2~~.

2. Add new definition as follows:

902.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AUTOMATIC SMOKE DETECTION SYSTEM. A fire alarm system that has initiation devices that utilize smoke detectors for protection of an area such as a room or space with detectors to provide early warning of fire.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from

various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

Bill Aaron (Code Consultants, Inc.),
Diane Arend (Office of the State Fire Marshal; California),
Gene Boecker (Code Consultants, Inc),
Shane Clary (Bay Alarm)
John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

The main purpose of this code proposal is to align terms within this Section to two main terms, “automatic smoke detection system” and “manual fire alarm system.” Currently, the language can be confusing with some sections requiring automatic fire detection systems and others requiring automatic smoke detection systems. Both of these terms are technically requiring the same thing. However, an automatic fire detection can be interpreted as a sprinkler system, which is not the intent of this section. If it was, the requirements would be found in Section 903.

A definition has been added for automatic smoke detection system, to assist the code user in determining what the code is specifically requiring.

Of special note, Section 907.2.11 appears to be a technical change. However, this is editorial since this allowance is globally accepted throughout Section 907, being specifically regulated in Section 907.5.3.

Furthermore, Section 907.2.12.1 removes redundant language with the addition of the ‘system’ requirement and is not a technical change.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

907.2.13 (IBC [F] 907.2.13) (Supp) Atriums connecting more than two stories. A fire alarm ~~smoke detection~~ system shall be installed in occupancies with an atrium that connects more than two stories, with smoke detection installed throughout the atrium. The system shall be activated in accordance with Section 907.6. Such occupancies in Group A, E or M shall be provided with an emergency voice/alarm communication system complying with the requirements of Section 907.6.2.2.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that it will provide correlated usage of the newly defined term “automatic smoke detection system” and the term “manual fire alarm system”, thus eliminating the current confusion caused by some sections requiring “automatic fire detection systems” (which could be interpreted as being a sprinkler system) and others requiring “automatic smoke detection systems”. The modification provides clarification that only the atrium portion of the building is required to be provided with smoke detection, not the entire building.

Assembly Action: **None**

Final Hearing Results

F163-07/08 **AM**

Code Change No: F164-07/08

Original Proposal

Sections: 907.2.5, 907.2.6, 907.2.6.3.3, 907.2.7.1, 907.2.12.2, 907.6, 907.6.2.1.1, 9097.6.2.1.2, 907.6.2.2, 907.6.2.3.3 (New), 907.6.2.2.4, 907.7.3.2, 907.7.4 (IBC [F] 907.2.5, [F] 907.2.6, [F] 907.2.6.3.3, [F] 907.2.7.1, [F] 907.2.12.2, [F] 907.6, [F] 907.6.2.1.1, [F] 907.6.2.1.2, [F] 907.6.2.2, [F] 907.6.2.3.3 (New), [F] 907.6.2.2.4, [F] 907.7.3.2, [F] 907.7.4

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.5 (IBC [F] 907.2.5) (Supp) Group H. A manual fire alarm system that activates the occupant notification system shall be installed in Group H-5 occupancies and in occupancies used for the manufacture of organic coatings. An automatic smoke detection system that activates the occupant notification system shall be installed for highly toxic gases, organic peroxides and oxidizers in accordance with Chapters 37, 39 and 40, respectively.

907.2.6 (IBC [F] 907.2.6) (Supp) Group I. A manual fire alarm system that activates the occupant notification system shall be installed in Group I occupancies. An automatic smoke detection system that activates the occupant notification system shall be provided in accordance with Sections 907.2.6.1 and 907.2.6.2.

907.2.6.3.3 (IBC [F] 907.2.6.3.3) Smoke detectors. An automatic smoke detection system shall be installed throughout resident housing areas, including sleeping units and contiguous day rooms, group activity spaces and other common spaces normally accessible to residents.

Exceptions:

1. Other approved smoke-detection arrangements providing equivalent protection, including, but not limited to, placing detectors in exhaust ducts from cells or behind protective guards listed for the purpose, are allowed when necessary to prevent damage or tampering.
2. Sleeping units in Use Conditions 2 and 3 as described in Section 308 of the *International Building Code*.
3. Smoke detectors are not required in sleeping units with four or fewer occupants in smoke compartments that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

907.2.7.1 (IBC [F] 907.2.7.1) (Supp) Occupant notification. During times that the building is occupied, the initiation of a signal from a manual fire alarm box or from a water flow switch shall not be required to activate the alarm notification appliances when an alarm signal is activated at a constantly attended location from which evacuation instructions shall be initiated over an emergency voice/alarm communication system installed in accordance with Section 907.6.2.2.

~~The emergency voice/alarm communication system shall be allowed to be used for other announcements, provided the manual fire alarm use takes precedence over any other use.~~

907.2.12.2 (IBC [F] 907.2.12.2) (Supp) Fire department communication system. An approved two-way, fire department communication system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It shall operate between a fire command center complying with Section 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the enclosed exit stairway.

Exception: Fire department radio systems are allowed to replace two-way fire department communication systems where approved by the fire department.

907.6 (IBC [F] 907.6) (Supp) ~~Alarm~~ Occupant notification systems. A fire alarm system shall annunciate at the panel and shall initiate occupant notification upon activation, in accordance with Sections 907.6.1 through 907.6.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes.
4. Automatic fire-extinguishing systems.

Exceptions:

~~1. Occupant notification is not required for fire detectors used to control fire safety functions in accordance with Section 907.4.~~
~~2.~~ Where notification systems are allowed elsewhere in Section 907 to annunciate at a constantly attended location.

907.6.2.1.1 (IBC [F] 907.6.2.1.1) (Supp) Average sound pressure. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every ~~occupied~~ occupiable space within the building. The minimum sound pressure levels shall be: 75 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies.

907.6.2.1.2 (IBC [F] 907.6.2.1.2) (Supp) Maximum sound pressure. The maximum sound pressure level for audible alarm notification appliances shall be 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than ~~105~~ 95 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.

907.6.2.2 (IBC [F] 907.6.2.2) (Supp) Emergency voice/alarm communication system. The emergency voice/alarm communication system shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions for a general or staged evacuation ~~on a minimum of the alarming floor, the floor above and the floor below~~ in accordance with the buildings fire safety and evacuation plans required by Section 404. In high-rise buildings, the system shall operate on a minimum of the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. As a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. Exit stairways.
3. Each floor.
4. Areas of refuge as defined in Section 1002.1.

Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

907.6.2.2.3 (IBC [F] 907.6.2.2.3) Alternate uses. The emergency voice/alarm communication system shall be allowed to be used for other announcements, provided the manual fire alarm use takes precedence over any other use.

(Renumber subsequent section)

907.7.3.2 (IBC [F] 907.7.3.2) (Supp) High-rise buildings. In buildings with a floor used for human occupancy that is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access, a separate zone by floor shall be provided for ~~all~~ each of the following types of alarm-initiating devices where provided:

1. Smoke detectors.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes.
4. Other approved types of automatic fire detection devices or suppression systems.

907.7.4 (IBC [F] 907.7.4) (Supp) Access. Access shall be provided to each ~~detector~~ fire alarm device and notification appliance for periodic inspection, maintenance and testing.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Diane Arend (Office of the State Fire Marshal; California),
Gene Boecker (Code Consultants, Inc),
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John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

907.2.5 Justification – The added language is for consistency with the language for other Occupancy Groups.
907.2.6 Justification – The added language is for consistency with the language for other Occupancy Groups.
907.2.6.3.3 Exceptions Justification – The added language is to identify where to find more information regarding Use Conditions 2 and 3. This improves usability of the Code.
907.2.7.1 Justification – The language is relocated to section 907.6.2.2 for clarity so that emergency voice alarm system requirements are grouped in one area.
907.2.12.2 Justification – The added language is for clarity indicating that fire department radio systems are allowed as a substitute for two-way fire department communications systems.
907.6 Justification – This exception is in direct conflict with the requirements of Section 907.4 which requires occupant notification.
907.6.2.1.1 Justification **-** The added language is for consistency with the language throughout this code.
907.6.2.1.2 Justification **–** The decibel level is revised to be in alignment with NFPA 72 and A.D.A.
907.6.2.2.3 Justification – The language is relocated from section 907.2.7.1 for clarity so that emergency voice alarm system requirements are grouped in one area.
907.6.2.2.~~34~~ Justification – Renumbering to incorporate the relocated emergency voice/alarm communication requirement.
907.7.4 Justification – The added language is for clarity indicating that access is to be provide for all fire alarm devices for servicing

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee agreed that the change provides a logical, needed refinement and correlation of the language used in all occupancy group fire alarm requirements which were part of the reorganization of Section 907 in the last cycle.

Assembly Action: **None**

Final Hearing Results

F164-07/08 **AS**

Code Change No: F165-07/08

Original Proposal

Sections: 907.2.6 (IBC [F] 907.2.6)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.6 (IBC [F] 907.2.6) (Supp) Group I. A manual fire alarm system shall be installed in Group I occupancies. An automatic smoke detection system shall be provided in accordance with Sections 907.2.6.1 and 907.2.6.2.

Exceptions:

1. Manual fire alarm boxes in resident or patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at all nurses= control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2 are not exceeded.
2. Occupant notification systems are not required to be activated where private mode signaling installed in accordance with NFPA 72 is approved by the fire code official.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it is consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Diane Arend (Office of the State Fire Marshal; California),
Gene Boecker (Code Consultants, Inc),
Shane Clary (Bay Alarm)
John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

The new exception is to clearly allow only notifying the staff instead of all building occupants in the event of a fire. This is a common practice in Group I occupancies, and the current language would not allow that.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that there is no need to notify of a fire alarm the occupants who are incapable of taking meaningful evacuation action in response to it and that the fire code official should have specific approval authority in that decision.

Assembly Action: **None**

Final Hearing Results

F165-07/08 **AS**

Code Change No: F166-07/08

Original Proposal

Sections: 907.2.9.1 (IBC [F] 907.2.9.1)

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing himself

Revise as follows:

907.2.9.1 (IBC [F] 907.2.9.1) (Supp) Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-2 occupancies where:

1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge;
2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit; or
3. The building contains more than 16 dwelling units or sleeping units.

Exceptions:

1. A fire alarm system is not required in buildings not more than two stories in height where all dwelling units or sleeping units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least 1-hour fire partitions and each dwelling unit or sleeping unit has an exit directly to a public way, exit court or yard.

~~1.~~ 2. Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and the occupant notification appliances will automatically activate throughout the notification zones upon a sprinkler water flow.

~~2. A manual fire alarm system is not required in buildings not more than two stories in height that do not have interior corridors serving dwelling units provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1023.6, Exception 4.~~

3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1023.6, Exception 4.

Reason: This proposal returns the exceptions in Section 907.2.9.1 to the 2006 IFC text. These exceptions were changed as part of Proposal F122-06/07, which according to the proponent was not intended to make technical changes to the 2006 requirements. However, closer scrutiny revealed that the change significantly reduced the scope of the old Exception 3 (which was revised and renumbered as Exception 2 in the 2007 Supplement) by limiting application to only allow elimination of manual alarms, as opposed to the entire alarm system, and only in buildings not exceeding two stories in height.

Likewise, the change to the old Exception 1 (which was revised and incorporated into Exception 2 in the 2007 Supplement) significantly reduced the scope of Exception 1 by only allowing elimination of manual fire alarm boxes, as opposed to the entire alarm system. Because Proposal F122 provided no justification for making these technical changes, this proposal simply reverses unsubstantiated revisions to the code.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that the change returning the exceptions to the 2006 edition Section 907.2.9.1 is appropriate because the reorganization of Section 907 in the last cycle did not intend to make any technical changes but did in this case, without any justification.

Assembly Action: **None**

Final Hearing Results

F166-07/08 **AS**

Code Change No: F167-07/08

Original Proposal

Sections: 907.2.10 through 907.2.10.3 (New) [IBC [F] 907.2.10 through [F] 907.2.10.3 (New)], 907.3.3.4

Proponent: Gene Boecker, Code Consultants, Inc.

1. Add new text as follows:

907.2.10 (IBC [F] 907.2.10) Group R-4. Fire alarm systems and smoke alarms shall be installed in Group R-4 occupancies as required in Sections 907.2.10.1 through 907.2.10.3.

907.2.10.1 (IBC [F] 907.2.10.1) Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-4 occupancies.

Exceptions:

1. A manual fire alarm system is not required in buildings not more than two stories in height where all individual sleeping units and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by at least 1-hour fire partitions and each individual sleeping unit has an exit directly to a public way, exit court or yard.
2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:
   2.1. The building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
   2.2. The notification appliances will activate upon sprinkler water flow; and
   2.3. At least one manual fire alarm box is installed at an approved location.
3. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at exits where located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2.1 are not exceeded.

907.2.10.2 (IBC [F] 907.2.10.2) Automatic smoke detection system. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens.

Exceptions:

1. Smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

2. An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

907.2.10.3 (IBC [F] 907.2.10.3) Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.

(Renumber subsequent sections)

2. Revise as follows:

907.3.3.4 (Supp) Group R-4. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-4 residential care/assisted living facilities in accordance with Section 907.2.10.

Exceptions:

1. Where there are interconnected smoke alarms meeting the requirements of Section ~~907.2.10~~ 907.2.11 and there is at least one manual fire alarm box per floor arranged to sound continuously the smoke alarms.
2. Other manually activated, continuously sounding alarms approved by the fire code official.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This is to add a requirement for new Group R-4 occupancies. Reviewing the occupancy categories in Chapter 3, a Group R-4 can be considered either a small Group I-1 or a Group R-2 with occupants that have special needs or limitations. A further review finds that both Group I-1 and Group R-2 occupancies both have fire alarm requirements for new buildings, but Group R-4 does not. The lack of needed requirements in the current IBC/IFC is very evident. The code change proposal will not increase the cost of construction since IFC Section 907.3 requires a fire alarm retroactively in Group R-4 occupancies. As the IFC currently reads, a one day old R-4 would technically be required to retrofit an automatic or manual alarm system into the building, which doesn't make sense.

The proposed language is based on the Group R-2 requirements for manual fire alarm systems and Group I-1 requirements for automatic smoke detection systems. The proposed language adds exceptions that would apply to Group I-1 occupancies, such as additional manual pull box exceptions for sprinklered sleeping areas and nurses stations, and removes the 16 dwelling unit requirement for manual fire alarms since an Group R-4 cannot have more than 16 occupants.

The proposed language also modifies the retroactive Group R-4 requirements to reference back to the new requirements. Currently, there is not clear direction on what is required for a fire alarm system retroactively. The reference to the new section provides needed requirements.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee felt that the change provides a needed refinement and correlation of the fire protection requirements for new Group R-4 occupancies, which are currently in conflict with the alarm requirements for existing Group R-4 occupancies. Currently, existing Group R-4 occupancies are required to be provided with an automatic or manual fire alarm whereas new Group R-4 occupancies are not required to be so equipped.

Assembly Action: **None**

Final Hearing Results

F167-07/08 **AS**

Code Change No: F168-07/08

Original Proposal

Sections: 907.2.12 (IBC [F] 907.2.12)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.12 (IBC [F] 907.2.12) (Supp) High-rise buildings. Buildings with a floor used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communication system in accordance with Section 907.6.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.21 and Section 412 of the *International Building Code*.
2. Open parking garages in accordance with Section 406.3 of the *International Building Code*.
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code*.
4. Low-hazard special occupancies in accordance with Section 503.1.1 of the *International Building Code.*
5. Buildings with an occupancy in Group H-1, H-2 or H-3 in accordance with Section 415 of the *International Building Code*.
6. In Group I-1 and I-2 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the ~~paging system~~ emergency voice/alarm communication system.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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All other fire alarm systems in high-rises require the use of an emergency voice/alarm communication system. Paging systems do not have supervised wiring or specific secondary power requirements. There is no assurance this system will work when it is needed to work. NFPA 72 and this Code allow emergency voice/alarm systems to be used for other purposes, such as paging. In addition, NFPA 72 does not require emergency voice/alarm systems to operate automatically, so the operation will be the same with the added benefit of having the circuits supervised and the ability to operate on secondary power in the event of a building power failure. Currently there is no requirement for paging systems to be on an emergency power source.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it corrects the type of voice system suitable for high-rise buildings to a more reliable, supervised voice alarm communications system.

Assembly Action: **None**

Final Hearing Results

F168-07/08 **AS**

Code Change No: F169-07/08

Original Proposal

Sections: 907.2.12.1, 907.2.12.1.1 (New), 907.2.12.1.2 (New) [IBC [F] 907.2.12.1, [F] 907.2.12.1.1 (New), [F] 907.2.12.1.2 (New)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.12.1 (IBC [F] 907.2.12.1) (Supp) Automatic fire detection. Automatic smoke detection in high rise buildings shall be in accordance with Sections 907.2.12.1.1 and 907.2.12.1.2.

907.2.12.1.1 (IBC [F] 907.2.12.1.1) Area smoke detection. Area smoke detectors shall be provided in accordance with this section. Smoke detectors shall be connected to an automatic fire alarm system. The activation of any detector required by this section shall operate the emergency voice/alarm communication system in accordance with Section 907.6.2.2. Smoke detectors shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection~~, elevator machine rooms, and in elevator lobbies~~.
2. In each elevator machine room and in elevator lobbies.

907.2.12.1.2 (IBC [F] 907.2.12.1.2) Duct smoke detection. Duct smoke detectors complying with Section 907.4.1 shall be located as follows:

~~2.~~ 1. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m^3/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.

~~3.~~ 2. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a smoke detector is allowed to be used in each return-air riser carrying not more than 5,000 cfm ($2.4m^3/s$) and serving not more than 10 air-inlet openings.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

Justification for proposal for Section 907.2.12.1: Item 2 is added to avoid confusion with the requirements of item 1. Elevator machine rooms and elevator lobbies are required to have smoke detectors for elevator recall even if these locations are sprinklers. By moving them to a separate line, it should reduce confusion in interpretations in this code.

Justification for proposal for Section 907.2.12.1.2: A separate duct smoke detection section is being added to avoid confusion and to clarify that the type of smoke detector used shall be approved for duct applications (higher air velocities, temperatures and humidity) and to allow the use of a supervisory signal in lieu of a fire alarm signal (emergency voice alarm/communication notification).

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides needed clarification of the automatic fire detection and duct smoke detection systems for high-rise buildings.

Assembly Action: **None**

Final Hearing Results

F169-07/08 **AS**

Code Change No: F172-07/08

Original Proposal

Sections: 907.2.18.1 (IBC [F] 907.2.18.1)

Proponent: Gene Boecker, Code Consultants, Inc.

Delete without substitution:

~~**907.2.18.1 (IBC [F] 907.2.18.1) (Supp) Public address system.** Where a fire alarm system is not required by Section 907.2, a public address system shall be provided which shall be capable of transmitting voice communications to the highest level of exit discharge serving the underground portions of the structure and all levels below.~~

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This is a ‘do-loop’ and old language. The ‘do-loop’ is that an automatic smoke detection system is required by 907.2 (namely 907.2.17), so 907.2.18.1 is not needed. Also, if a reason was found where an automatic detection system isn’t needed, the PA system is in direct conflict with the EVACS system found in 907.2.18 for deep underground buildings.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which deletes an unneeded and unenforceable section.

Assembly Action: **None**

Final Hearing Results

F172-07/08 **AS**

Code Change No: F173-07/08

Original Proposal

Sections: 907.2.21 (IBC [F] 907.2.21)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.21 (IBC [F] 907.2.21) (Supp) Airport traffic control towers. An automatic fire detection system that activates the occupant notification system in accordance with Section 907.6 shall be provided in airport control towers in all occupiable and equipment spaces.

Exception: Audible appliances shall not be installed within the control tower cab.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

The proposed changes to 907.2.21 are to provide clarification as to where fire alarm devices and appliances are required within airport traffic control towers. Equipment spaces have been added as these may be areas within an airport traffic control tower where a fire may begin, but may not be occupied. Early warning of a fire in these areas is required so as to alert the occupants of occupancy and emergency forces.

Due to the nature of the operation of airport traffic control towers, the notification of occupants within the cab is to be by visual notification appliances only.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

907.2.21 (IBC [F] 907.2.21) (Supp) Airport traffic control towers. An automatic ~~fire~~ smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be provided in airport control towers in all occupiable and equipment spaces.

Exception: Audible appliances shall not be installed within the control tower cab.

Committee Reason: The proposal was approved because the committee felt that it recognizes the critical need for quiet in air traffic control tower cabs. The modification provides correlation of the terminology in this section with the terminology established by code change F163-07/08.

Assembly Action: **None**

Final Hearing Results

F173-07/08 **AM**

Code Change No: F174-07/08

Original Proposal

Sections: 907.2.22 (IBC [F] 907.2.22)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.22 (IBC [F] 907.2.22) (Supp) Battery rooms. An automatic smoke detection system shall be installed in areas containing stationary storage battery systems with a liquid capacity of more than 50 gallons (189 L). ~~The detection system shall activate a local alarm signal at a constantly attended location or shall be supervised by an approved central, proprietary, or remote station service.~~

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This is in conflict with IFC Section 907.7.5 (Supp) regarding monitoring. A battery room does not have any special conditions that should give the local alarm option since IFC 907.7.5 (Supp) does not permit any other automatic smoke detection system from utilizing a local alarm only.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it deletes text that is in conflict with the alarm monitoring requirements of Section 907.

Assembly Action: **None**

Final Hearing Results

F174-07/08 **AS**

Code Change No: F175-07/08

Original Proposal

Sections: 907.3, 907.3.2, 907.3.2.1, 907.3.2.2, 907.3.2.3

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.3 (Supp) Where required - retroactive in existing buildings and structures. An approved ~~manual, automatic or manual and automatic~~ fire alarm system shall be installed in existing buildings and structures in accordance with Sections 907.3.1 through 907.3.1.8 and provide occupant notification in accordance with Section 907.6 unless other requirements are provided by other sections of this code.

Exception: Occupancies with an existing, previously approved fire alarm system.

907.3.2 (Supp) Group I. A fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group I occupancies in accordance with Sections 907.3.2.1 through 907.3.2.3.

Exception: Manual fire alarm boxes in resident or patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section ~~907.5.2~~ 907.5.2.1 are not exceeded.

907.3.2.1 (Supp) Group I-1. An automatic ~~or manual~~ fire alarm system shall be installed in existing Group I-1 residential care/assisted living facilities in accordance with Section 907.2.6.1.

Exception: Where each sleeping room has a means of egress door opening directly to an exterior egress balcony that leads directly to the exits in accordance with Section 1014.5, and the building is not more than three stories in height.

907.3.2.2 (Supp) Group I-2. An automatic ~~or manual~~ fire alarm system shall be installed in existing Group I-2 occupancies in accordance with Section 907.2.6.2.

907.3.2.3 (Supp) Group I-3. An automatic ~~or~~ and manual fire alarm system shall be installed in existing Group I-3 occupancies in accordance with Section 907.2.6.3.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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907.3 Justification – The removed language is to clarify and reduce confusion between the code requirements of the specific Occupancy Groups.
907.3.2 Justification – The added language is for consistency with the language for other Occupancy Groups.
907.3.2 Exception Justification – This proposal is editorial to direct the code user to the specific section regarding travel distances.
907.3.2.1 Justification – The removed language is to clarify the code requirements for this Occupancy Group.
907.3.2.2 Justification – The removed language is to clarify the code requirements for this Occupancy Group
907.3.2.3 Justification – The removed language is to clarify the code requirements for this Occupancy Group

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which provides a needed revision to clarify the reorganized Section 907 from code change F122-06/07 by clearly indicating the type of fire alarm system required in Group I.

Assembly Action: **None**

Final Hearing Results

F175-07/08 **AS**

Code Change No: F176-07/08

Original Proposal

Sections: 907.3.3.1, 907.3.3.1.1 (New)

Proponent: Gene Boecker, Code Consultants, Inc.

1. Revise as follows:

907.3.3.1 (Supp) Group R-1 hotel and motel <u>manual fire alarm system</u>. A~~n automatic or~~ manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 hotels and motels more than three stories or with more than 20 sleeping units.

Exception: Buildings less than two stories in height where all sleeping units, attics and crawl spaces are separated by 1-hour fire-resistance-rated construction and each sleeping unit has direct access to a public way, exit court or yard.

2. Add new text as follows:

<u>907.3.3.1.1 Group R-1 hotel and motel automatic fire alarm system.</u> <u>An automatic fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 hotels and motels throughout all interior corridors serving sleeping rooms not equipped with an approved, supervised sprinkler system installed in accordance with Section 903.</u>

<u>Exception:</u> <u>An automatic fire detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.</u>

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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This proposal is part of the effort to clean up the language for existing occupancies. The existing language requires an automatic or manual fire alarm system to be installed in existing R-1 hotel occupancies with no explanation of where the automatic fire alarm system would be required. By adding new language in 907.3.3.1.1, it clearly states where an automatic fire alarm system is required. The next exception allows an exception when existing R-1 hotel occupancies have a fire sprinkler system, since the legacy codes allowed the sprinkler exception. This was added to ensure the existing requirements are no more stringent than past new requirements.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

907.3.3.1.1 Group R-1 hotel and motel automatic ~~fire alarm~~ smoke detection system. An automatic ~~fire alarm~~ smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 hotels and motels throughout all interior corridors serving sleeping rooms not equipped with an approved, supervised sprinkler system installed in accordance with Section 903.

Exception: An automatic ~~fire~~ smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that it provides a needed improvement to the re-write effort begun in Section 907 in the last cycle by clearly indicating where an automatic smoke detection system is required in Group R-1 hotels and motels. The modification provides correlation of the terminology in this section with the terminology established by code change F163-07/08.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gene Boecker, Code Consultants, Inc., representing himself, requests Approval as Modified by this public comment.

Further modify proposal as follows:

907.3.3.1 (Supp) Group R-1 hotel and motel manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 hotels and motels more than three stories or with more than 20 sleeping units.

Exceptions:

1. Buildings less than two stories in height where all sleeping units, attics and crawl spaces are separated by 1-hour fire-resistance-rated construction and each sleeping unit has direct access to a public way, exit court or yard.

2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:
   2.1. The building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2;
   2.2. The notification appliances will activate upon sprinkler water flow; and
   2.3. At least one manual fire alarm box is installed at an approved location.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: During the committee hearings it was noted that while the intent of this code change was to include the exceptions for existing facilities in like manner to those already in the code for new construction, an exception did not make it through. The added text to 907.3.3.1 accomplished that task for smoke detection but one exception for the manual alarm device was not included in the prior code change. The exception noted above is taken verbatim from that in 907.2.8.1(supp) for new construction (Section 907.2.8.1 in the 2006 IBC).

The modification will harmonize the requirements for existing R-1 occupancies with that for new construction. Without this change it can be construed that the code is more restrictive on existing construction than on new construction. Clearly that is not the intent of the code. Therefore the language is needed for clarification.

Final Hearing Results

F176-07/08 AMPC

Code Change No: F177-07/08

Original Proposal

Sections: 907.3.3.2, 907.3.3.2.1 (New)

Proponent: Gene Boecker, Code Consultants, Inc.

1. Revise as follows:

907.3.3.2 (Supp) Group R-1 boarding and rooming house. An ~~automatic or~~ manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 boarding and rooming houses.

Exception: ~~Buildings that have single-station smoke alarms meeting or exceeding the requirements of Section 907.2.10.1 and where the fire alarm system includes at least one manual fire alarm box per floor arranged to initiate the alarm.~~ Buildings less than two stories in height where all sleeping units, attics and crawl spaces are separated by 1-hour fire-resistance-rated construction and each sleeping unit has direct access to a public way, exit court or yard.

2. Add new text as follows:

907.3.3.2.1 Automatic fire alarm system. An automatic fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 boarding and rooming houses throughout all interior corridors serving sleeping units not equipped with an approved, supervised sprinkler system installed in accordance with Section 903.

Exception: Buildings equipped with single-station smoke alarms meeting or exceeding the requirements of Section 907.2.10.1 and where the fire alarm system includes at least one manual fire alarm box per floor arranged to initiate the alarm.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

Bill Aaron (Code Consultants, Inc.),
Diane Arend (Office of the State Fire Marshal; California),
Gene Boecker (Code Consultants, Inc),

Shane Clary (Bay Alarm)
John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This proposal is part of the effort to clean up the language for existing occupancies. The existing language requires an automatic or manual fire alarm system to be installed in existing R-1 boarding and rooming house occupancies with no explanation of where the automatic fire alarm system would be required. By adding new language in 907.3.3.1.1, it clearly states where an automatic fire alarm system is required. The next exception allows an exception when existing R-1 boarding and rooming houses occupancies that have a fire sprinkler system, since the legacy codes allowed the sprinkler exception. This was added to ensure the existing requirements are no more stringent than past new requirements.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

907.3.3.2.1 Automatic ~~fire alarm~~ smoke detection system. An automatic ~~fire alarm~~ smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 boarding and rooming houses throughout all interior corridors serving sleeping units not equipped with an approved, supervised sprinkler system installed in accordance with Section 903.

Exception: Buildings equipped with single-station smoke alarms meeting or exceeding the requirements of Section 907.2.10.1 and where the fire alarm system includes at least one manual fire alarm box per floor arranged to initiate the alarm.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that it provides a needed improvement to the re-write effort begun in Section 907 in the last cycle by clearly indicating where an automatic smoke detection system is required in Group R-1 boarding and rooming houses. The modification provides correlation of the terminology in this section with the terminology established by code change F163-07/08.

Assembly Action: **None**

Final Hearing Results

F177-07/08 **AM**

Code Change No: F178-07/08

Original Proposal

Sections: 907.3.4 through 907.3.4.3

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

907.3.4 (Supp) Single- and multiple-station smoke alarms. Single- and multiple-station smoke alarms shall be installed in existing Group R occupancies and in dwellings not classified as Group R occupancies in accordance with Sections 907.3.4.1 through 907.3.4.3.

907.3.4.1 (Supp) Where required. Existing Group R occupancies and dwellings not classified as Group R occupancies not already provided with single-station smoke alarms shall be provided with single-station smoke alarms. Installation shall be in accordance with Section 907.2.10, except as provided in Sections 907.3.4.2 and 907.3.4.3.

907.3.4.2 (Supp) Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit or sleeping unit ~~in Group R-1, R-2, R-3 or R-4~~, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind.
2. Smoke alarms in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

907.3.4.3 (Supp) Power source. ~~In Group R occupancies,~~ Single-station smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery back-up shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exception: Smoke alarms are permitted to be solely battery operated: in existing buildings where no construction is taking place; in buildings that are not served from a commercial power source; and in existing areas of buildings undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes.

Reason: The IPMC requires smoke alarms to be installed in R occupancies and dwellings not considered R occupancies. The IPMC reads as follows:

> **"704.2 Smoke alarms.** Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4 and in dwellings not regulated in Group R occupancies, regardless of occupant load at all of the following locations…"

The IPMC language has been simplified by stating that smoke alarms are required in "all residential occupancies".

Section 907.3.4 in the IFC covers smoke alarms in all other dwelling units and guest rooms. This revision will provide consistency with the requirements in IPMC Section 704.2.

The revisions in Sections 907.3.4.2 and 907.3.4.3 only remove the reference to R-1 through R-4. The inclusion of this terminology is unnecessary, since the charging statements in Sections 907.3.2 and 907.3.2.1 already specify that the subsections apply to "Group R occupancies and dwellings not classified as Group R". It is not necessary to restate the applicable occupancies in every section.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

907.3.4 (Supp) Single- and multiple-station smoke alarms. Single- and multiple-station smoke alarms shall be installed in existing Group R occupancies and in dwellings ~~not classified as Group R occupancies~~ constructed in accordance with the *International Residential Code* in accordance with Sections 907.3.4.1 through 907.3.4.3.

907.3.4.1 (Supp) Where required. Existing Group R occupancies and dwellings ~~not classified as Group R occupancies~~ constructed in accordance with the *International Residential Code* not already provided with single-station smoke alarms shall be provided with single-station smoke alarms. Installation shall be in accordance with Section 907.2.10, except as provided in Sections 907.3.4.2 and 907.3.4.3.

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which provides correlation with the IPMC in requiring single- and multiple-station smoke alarms in all dwelling units, whether considered in Group R or not. The committee felt that the modification clarifies that the dwellings intended to be regulated are those constructed in accordance with the IRC.

Assembly Action: **None**

Analysis: The original proposal included the language "…and in dwellings not classified as Group R occupancies", which was proposed based upon the *International Property Maintenance Code*. The modification recommended refers to the dwelling units constructed in accordance with the IRC for retroactive requirements for installation of smoke alarms, which has no application given that the IRC requires smoke alarms for all new dwelling units constructed in accordance with the IRC. Further, this modification imposes a retroactive requirement for the IRC that is outside the scope of the IFC. A public comment is recommended to resolve this issue.

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Steve Orlowski, National Association of Home Builders (NAHB), requests Approval as Submitted.

Commenter's Reason: As indicated in the report on public hearings, the modification proposed by the committee would have no application on dwellings constructed under the IRC. The IRC already requires dwelling units to be equipped with smoke alarms in accordance with NFPA 72. The proposed modification does not improve the IFC nor does it correlate with the requirements found in the IPMC as originally proposed by the proponent. Furthermore, the committee's modification to impose retroactive requirements on the IRC was analyzed by ICC staff and was determined to be outside the scope of the IFC.

Final Hearing Results

F178-07/08 AS

Code Change No: F179-07/08

Original Proposal

Sections: 907.4.1 (IBC [F] 907.4.1)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.4.1 (IBC [F] 907.4.1) (Supp) Duct smoke detectors. Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is required by 907.2. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall perform the intended fire safety function in accordance with this code and the *International Mechanical Code*. Duct smoke detectors shall not be used as a substitute for required open area detection.

Exceptions:

1. The supervisory signal at a constantly attended location is not required where duct smoke detectors activate the buildings alarm notification appliances.
2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

Bill Aaron (Code Consultants, Inc.),
Diane Arend (Office of the State Fire Marshal; California),
Gene Boecker (Code Consultants, Inc),
Shane Clary (Bay Alarm)

John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This section is being modified to clarify that duct smoke detectors shall be listed for the air velocity, temperature and humidity present in the duct system (due to the higher air velocities, temperatures and humidity's inside HVAC ducts) and to correlate with the fire safety function requirements of the International Mechanical Code (HVAC shut-down and fire-smoke damper activation). The language in this proposal is also consistent with the requirements of NFPA 72.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a clear statement that duct smoke detectors must be suitable and listed for the environment within the duct system.

Assembly Action: **None**

Final Hearing Results

F179-07/08 **AS**

Code Change No: F180-07/08

Original Proposal

Sections: 907.5.3, 907.5.3.1 (New) [IBC [F] 907.5.3, [F] 907.5.3.1 (New)]

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.5.3 (IBC [F] 907.5.3) (Supp) Automatic smoke detection. An automatic smoke detection system shall utilize ~~The automatic fire detectors shall be~~ smoke detectors~~. Where~~ unless ambient conditions prohibit such an installation. ~~of smoke detectors,~~ In spaces where smoke detectors are not utilized, other approved automatic fire detection shall be ~~permitted~~ required. ~~Where an automatic sprinkler protection system installed in such areas in accordance with Section 903.3.1.1 or 903.3.1.2 is provided and connected to the building fire alarm system, automatic heat detection required by this section shall not be required.~~

907.5.3.1 (IBC [F] 907.5.3.1)Automatic sprinkler system. In areas where ambient conditions prohibit the installation of smoke detectors, an automatic sprinkler system installed in such areas in accordance with Section 903.3.1.1 or 903.3.1.2 and connected to the fire alarm system shall be approved as automatic fire detection.

Exception: Heat detectors for elevator functions.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

Bill Aaron (Code Consultants, Inc.),
Diane Arend (Office of the State Fire Marshal; California),
Gene Boecker (Code Consultants, Inc),

Shane Clary (Bay Alarm)
John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This is an attempt to clean up the language regarding automatic smoke detection. The purpose is to drive home that automatic smoke detection systems use smoke detectors unless they are not able to be installed because of the space being served. Also, it spins off the automatic sprinkler system tradeoff to make it an approved use in place of smoke detectors when the area cannot be served with smoke detectors and the system is connected to the fire alarm system. The exception listed as part of the proposed sprinkler system tradeoff section is so the code user does not utilize this section for the prescriptive elevator requirements in ASME A17.1 for the specialized fire safety functions regulated therein.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that it does not provide the clarity desired by the proponent and would cause confusion in the application of the section.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gene Boecker, Code Consultants, Inc., representing himself, requests Approval as Modified by this public comment.

Modify proposal as follows:

907.5.3 (IBC [F] 907.5.3) (Supp) Automatic smoke detection. Where an ~~An~~ automatic smoke detection system is required it shall utilize smoke detectors unless ambient conditions prohibit such an installation. In spaces where smoke detectors ~~are~~ cannot be utilized due to ambient conditions, ~~other~~ approved automatic ~~fire~~ heat detectors ~~detection~~ shall be ~~required~~ permitted.

907.5.3.1 (IBC [F] 907.5.3.1) Automatic sprinkler system. For conditions other than specific fire safety functions noted in Section 907.4, in ~~In~~ areas where ambient conditions prohibit the installation of smoke detectors, an automatic sprinkler system installed in such areas in accordance with Section 903.3.1.1 or 903.3.1.2 ~~and~~ that is connected to the fire alarm system shall be approved as automatic ~~fire~~ heat detection.

~~**Exception:** Heat detectors for elevator functions.~~

Commenter's Reason: The language intent in the original proposal is incorporated into the single section. Consistent with the other code changes this year, the distinction is made between smoke detection and "fire alarm." The application whereby heat detection is permitted is included but clarified so that sprinklers cannot be used as a substitution for specific heat detectors required in Section 907.4. This is consistent with current intent.

While there may yet be a need to clean up some of the interpretation applications it is important to get the "fire alarm' language out of the code since it is being deleted elsewhere and will no longer have relevance. This maintains the status quo in application while cleaning up the language for the 2009 edition.

Final Hearing Results

F180-07/08 **AMPC**

Code Change No: F189-07/08

Original Proposal

Sections: 909.11 (IBC [F] 909.11)

Proponent: Robert J. Davidson, Davidson Code Concepts, LLC, representing himself

Revise as follows:

909.11 (IBC [F] 909.11) (Supp) Power systems. The smoke control system shall be supplied with two sources of power. Primary power shall be the normal building power systems. Secondary power shall be from an approved standby source complying with the International Code Council *Electrical Code Administrative Provisions*. The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gear and ventilated directly to and from the exterior. The room shall be enclosed with not less than 1-hour fire barriers constructed in accordance with Section 706 of the *International Building Code* or horizontal assemblies constructed in accordance with Section 711 of the *International Building Code*, or both. ~~Power distribution from the two sources shall be by independent routes.~~ Transfer to full standby power shall be automatic and within 60 seconds of failure of the primary power. The systems shall comply with this code or the International Code Council *Electrical Code Administrative Provisions*.

Reason: This deletion is being recommended form a practical standpoint. The section requires that the stand-by power source and the transfer switches be in a room separate from the normal power transformers and switch gear.

Both the normal power supply and the stand-by power supply are controlled by the transfer switches. The power to the various devices and equipment that make up the smoke control system are distributed from the transfer switches.

That being the case, how can you distribute power from the two sources independently? To do so would require the power supply to go to a transfer switch located at each device or piece of equipment.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it deletes problematic, unenforceable code text.

Assembly Action: **None**

Final Hearing Results

F189-07/08 **AS**

Code Change No: F193-07/08

Original Proposal

Sections: 910.2 (IBC [F] 910.2)

Proponent: Rick Thornberry, PE, The Code Consortium, representing AAMA Smoke Vent Task Group

Revise as follows:

910.2 (IBC [F] 910.2) Where required. Smoke and heat vents shall be installed in the roofs <u>and draft curtains shall be installed on the underside of roofs</u> of one-story buildings or portions thereof occupied for the uses set forth in Sections 910.2.1 through 910.2.3.

Reason: This is an editorial clarification to provide for a charging requirement that draft curtains are required to be installed under the provisions of this section as are smoke and heat vents.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The committee felt that the proposal could create confusion in that it appears to require draft curtain in all cases whereas Chapter 23 allows certain exceptions. It was also felt that that the subject matter should be located in Section 910.3.5.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Rick Thornberry, The Code Consortium, Inc., representing AAMA Smoke Vent Task Group, requests Approval as Modified by this public comment.

Replace proposal as follows:

910.3.5 (IBC [F] 910.3.5) Draft curtains. Where required by Table 910.3, draft curtains shall be ~~provided~~ installed on the underside of the roof in accordance with this section.

Exception: Where areas of buildings are equipped with ESFR sprinklers, draft curtains shall not be provided within these areas. Draft curtains shall only be provided at the separation between the ESFR sprinklers and the conventional sprinklers.

Commenter's Reason: Based on the Committee's suggestion made in its Reason for disapproval of the original code change proposal, we are submitting this Public Comment. Instead of revising Section 910.2, we are proposing to revise Section 910.3.5 Draft Curtains as indicated in the Committee's Reason statement. This is an editorial clarification which indicates that the draft curtains are to be installed on the underside of the roof. Although this may be obvious, there is no definition for draft curtain, nor any other indication that draft curtains are to be installed on the underside of roofs. However, it is a basic assumption made by designers and installers who provides draft curtains in conjunction with smoke and heat vents.

Final Hearing Results

F193-07/08 **AMPC**

Code Change No: F194-07/08

Original Proposal

Table 910.3 (IBC [F] Table 910.3)

Proponent: Rick Thornberry, PE, The Code Consortium, representing AAMA Smoke Vent Task Group

Revise table footnote as follows:

TABLE 910.3 (IBC TABLE [F] 910.3)
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS[a]

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929m^2.

a. ~~Requirements for rack storage heights in excess of those indicated shall be in accordance with Chapter 23.~~ For solid-piled storage heights in excess of those indicated, an approved engineered design shall be used.
b. The distance specified is the maximum distance from any vent in a particular draft curtained area to walls or draft curtains which form the perimeter of the draft curtained area.
c. Where draft curtains are not required, the vent area to floor area ratio shall be calculated based on a minimum draft curtain depth of 6 feet (Option 1).
d. "H" is the height of the vent, in feet, above the floor.

Reason: Chapter 23 does not contain specific requirements for smoke and heat vents. It refers to Section 910.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The committee felt that Note a serves valuable function in directing the code user to Chapter 23, notable Section 2308.5, and should be retained

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Rick Thornberry, The Code Consortium, Inc., representing AAMA Smoke Vent Task Group, requests Approval as Modified by this public comment.

Replace proposal as follows:

TABLE 910.3 (IBC TABLE [F] 910.3)
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS[a]

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m^2

a. Additional requirements for rack storage heights in excess of those indicated shall be in accordance with Chapter 23. For solid-piled storage heights in excess of those indicated, an approved engineered design shall be used.
b. The distance specified is the maximum distance from any vent in a particular draft curtained area to walls or draft curtains which form the perimeter of the draft curtained area.
c. Where draft curtains are not required, the vent area to floor area ratio shall be calculated based on a minimum draft curtain depth of 6 feet (Option 1).
d. "H" is the height of the vent, in feet, above the floor.

Commenter's Reason: We agree with the Committee's concerns expressed in their Reason for disapproving this code change that the reference to Chapter 23 for rack storage heights in excess of those indicated in the table as noted in Footnote a serves a valuable function. However, the purpose for us deleting the reference was that there were no specific requirements that addressed smoke and heat vents and/or draft curtains. Therefore, we felt that it was an unnecessary reference within the context of the Table and Section 910. To remedy this and to clarify the code reference, we have proposed this Public Comment which slightly revises Footnote a to indicate that Chapter 23 should be referred to for "additional" requirements for those rack storage heights in excess of those indicated in the table. This will alert the user of the code to the fact that there are other requirements that should be considered in addition to those for the smoke and heat vents specified in Table 910.3 for these very rack storage facilities. Yet they will not need to refer to Chapter 23 for any additional criteria for smoke and heat vents or draft curtains.

Final Hearing Results

F194-07/08 **AMPC**

Code Change No: F195-07/08

Original Proposal

Table 910.3 (IBC [F] Table 910.3)

Proponent: Rick Thornberry, PE, The Code Consortium, representing AAMA Smoke Vent Task Group

Revise table column heading and footnote as follows:

TABLE 910.3 (IBC TABLE [F] 910.3)
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS[a]

OCCUPANCY GROUP AND COMMODITY CLASSIFICATION	DESIGNATED STORAGE HEIGHT (feet)	MINIMUM DRAFT CURTAIN DEPTH (feet)	MAXIMUM AREA FORMED BY DRAFT CURTAINS (square feet)	VENT-AREA-TO FLOOR-AREA RATIO[c]	MAXIMUM SPACING OF VENT CENTERS (feet)	MAXIMUM DISTANCE ~~TO~~ FROM VENTS ~~FROM~~ TO WALL OR DRAFT CURTAIN[b] (feet)

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929m^2.

a. Requirements for rack storage heights in excess of those indicated shall be in accordance with Chapter 23. For solid-piled storage heights in excess of those indicated, an approved engineered design shall be used.
b. ~~The distance specified is the maximum distance from any vent in a particular draft curtained area to walls or draft curtains which form the perimeter of the draft curtained area.~~ Vents adjacent to walls or draft curtains shall be located within a horizontal distance not greater than the maximum distance specified in this column as measured perpendicular to the wall or draft curtain that forms the perimeter of the draft curtained area.
c. Where draft curtains are not required, the vent area to floor area ratio shall be calculated based on a minimum draft curtain depth of 6 feet (Option 1).
d. "H" is the height of the vent, in feet, above the floor.

Reason: This proposal is for editorial clarity. Not every vent is required to be within the specified maximum distance from a wall or draft curtain. That limitation is only applicable to those vents adjacent to the walls or draft curtains and not to other vents located in the middle of the draft curtained area.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which clarifies the intent of the code with regard to vent spacing.

Assembly Action: **None**

Final Hearing Results

F195-07/08 **AS**

Code Change No: F198-07/08

Original Proposal

Sections: 910.3.4 (IBC [F] 910.3.4)

Proponent: Rick Thornberry, PE, The Code Consortium, representing AAMA Smoke Vent Task Group

Revise as follows:

910.3.4 (IBC [F] 910.3.4) (Supp) Vent locations. Smoke and heat vents shall be located 20 feet (6096 mm) or more from adjacent lot lines and fire walls and 10 feet (3048 mm) or more from fire barriers. Vents shall be uniformly located within the roof area ~~above high-piled storage areas,~~ with consideration given to roof pitch, draft curtain location, sprinkler location and structural members.

Reason: Editorial clarification. This requirement should apply in all cases, not just for high piled storage areas.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The committee felt that the proposal could lead to vents being required throughout all roof areas, even where they would serve no useful purpose.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Rick Thornberry, The Code Consortium, Inc., representing AAMA Smoke Vent Task Group, requests Approval as Modified by this public comment.

Modify proposal as follows:

910.3.4 (IBC [F] 910.3.4) (Supp) Vent locations. Smoke and heat vents shall be located 20 feet (6096 mm) or more from adjacent lot lines and fire walls and 10 feet (3048 mm) or more from fire barriers. Vents shall be uniformly located within the roof <u>in the</u> area<u>s of the building where the vents are required to be installed by Section 910.2</u> with consideration given to roof pitch, draft curtain location, sprinkler location and structural members.

Commenter's Reason: This Public Comment responds to the Committee's Reason for disapproving the original code change proposal. The Committee was concerned that the original revisions to this section would have caused vents to be required throughout all roof areas in the building, even in areas where they would serve no useful purpose or were not otherwise required. So we have revised the code change proposal so that it clearly indicates that the vents are only to be installed in those areas of the building where the vents are required by Section 910.2. The important point of this revision is that the vents must be uniformly located within the roof in those areas where vents are to be provided and not just where they are located above high-piled storage areas.

Final Hearing Results

F198-07/08 **AMPC**

Code Change No: F199-07/08

Original Proposal

Sections: 910.3.5 (IBC [F] 910.3.5)

Proponent: Edwin M. Berkel, CFI, Mehlville Fire Protection District, representing himself

Revise as follows:

910.3.5 (IBC [F] 910.3.5) Draft curtains. Where required, draft curtains shall be provided in accordance with this section.

Exception: Where areas of buildings are equipped with ESFR sprinklers, draft curtains shall not be provided within these areas. Draft curtains shall only be provided at the separation between the ESFR sprinklers and the ~~conventional~~ standard response sprinklers

Reason: The existing code text makes use of an undefined term, "conventional sprinklers". This code change corrects that by using "standard response sprinklers" which is the correct term utilized in the reference standards.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which provides clarification by using correct sprinkler terminology in the correct manner.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Bob Eugene, Underwriters Laboratories, Inc., requests Approval as Modified by this public comment.

Modify proposal as follows:

910.3.5 (IBC [F] 910.3.5) Draft curtains. Where required, draft curtains shall be provided in accordance with this section.

Exception: Where areas of buildings are equipped with ESFR sprinklers, draft curtains shall not be provided within these areas. Draft curtains shall only be provided at the separation between the ESFR sprinklers and the ~~standard response~~ non-ESFR sprinklers.

Commenter's Reason: The approved code text uses "standard response sprinklers" which is the correct term utilized in the reference standards, but might limit some of the sprinkler response technology. The intent is to limit the early response of sprinklers using different response technology and this change will provide an unlimited array of sprinklers that maybe found in High-piled storage arrangement.

Final Hearing Results

F199-07/08 **AMPC**

Code Change No: F201-07/08

Original Proposal

Sections: 912.2.1 (IBC [F] 912.2.1)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

912.2.1 (IBC [F] 912.2.1) Visible location. Fire department connections shall be located on the street side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as otherwise approved by the fire ~~code official~~ chief.

Reason: Item F132-06/07, Section 912.2 received a lengthy debate and committee modification which subsequently received membership approval at the final action hearings in NY. The final revision to IFC 912.2 requires that the FDC is located as required by the fire chief and reads as follows:

> **912.2 Location.** With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be approved by the fire chief.

The proposed revision to IFC 912.2.1 merely correlates with the revision to IFC 912.2 and eliminates conflict between the two sections.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which properly changes the approval authority from the fire code official to the fire chief since fire department connection location is a fire department operational issue.

Assembly Action: **None**

Final Hearing Results

F201-07/08 **AS**

Code Change No: F202-07/08

Original Proposal

Sections: 912.4 (IBC [F] 912.4)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

912.4 (IBC [F] 912.4) Signs. An ~~metal~~ approved permanent sign with ~~raised~~ letters at least 1 inch (25 mm) in size shall be mounted on ~~all~~ new and existing fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.

Reason: Many sprinkler and standpipe systems where installed prior to current standards. Furthermore, standpipe systems are currently allowed to be manual or automatic in non high-rise buildings as well as many buildings have partial sprinkler or standpipe systems.

The purpose of the sign is to provide the responding firefighters with the correct information on which portions of a building are served by the fire department connection. Many buildings include multiple sets of fire department connections which are not interconnected. Some examples include:

1. Separate connections for the building sprinkler system and the dry standpipe system in open parking structures
2. Rehabilitated buildings where a sprinkler system is only installed on certain floors
3. A high-rise building constructed prior to the adoption of a building code that has a manual wet system

Signs are also required in NFPA 14, and this proposal will allow the raised letter sign to be provided as indicated in NFPA 14 or provide another sign. Many departments are requiring other signs which are more descriptive and provide more information than the minimal sign required in NFPA 14.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

912.4 (IBC [F] 912.4) Signs. A~~n~~ metal ~~approved permanent~~ sign with raised letters at least 1 inch (25 mm) in size shall be mounted on all ~~new and existing~~ fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide important information to the fire department as to which of multiple fire department connections should be used. The modification retains the current text of the first sentence of the section for correlation with the requirements of NFPA 13.

Assembly Action: **None**

Final Hearing Results

F202-07/08 **AM**

Code Change No: F203-07/08

Original Proposal

Sections: 913.2.1 (New) [IBC 913.2.1 (New)]

Proponent: Phillip Brazil, PE, Reid Middleton, Inc., representing himself

1. (IFC) Add new text as follows:

913.2 Protection against interruption of service. The fire pump, driver, and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

913.2.1 Protection of fire pump rooms. Rooms where fire pumps are located shall be separated from all other areas of the building in accordance with the *International Building Code*.

2. (IBC) Add new text as follows:

[F] 913.2 [Supp] Protection against interruption of service. The fire pump, driver, and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

[F] 913.2.1 Protection of fire pump rooms. Fire pumps shall be located in rooms that are separated from all other areas of the building by 2-hour fire barriers constructed in accordance with Section 706 or 2-hour horizontal assemblies constructed in accordance with Section 711, or both.

Exceptions:

1. In other than high-rise buildings, separation by 1-hour fire barriers constructed in accordance with Section 706 or 1-hour horizontal assemblies constructed in accordance with Section 711, or both, shall be permitted in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Separation is not required for fire pumps physically separated in accordance with NFPA 20.

Reason: The Standard for the Installation of Stationary Pumps for Fire Protection, NFPA 20, specifies protection for indoor fire pumps by means of physical or fire separation. I assume the 2007 edition of NFPA 20 will be the edition that is referenced in the 2009 IBC and IFC. Section 5.12.1.1 of NFPA 20 specifies physical separation or protection by fire-rated construction. I interpret "fire-rated construction" to be a reference to separation by a fire barrier, horizontal assembly, or both. Section 5.12.1.1.1 specifies a 2-hour fire-resistance rating for the separation in high-rise buildings but is silent on the physical separation distance. Table 5.12.1.1.2 specifies the physical separation distances and fire-resistance ratings for nonhigh-rise buildings. A 2-hour fire-resistance rating for the separation is specified except for fully sprinklered buildings and pump rooms/houses (i.e., equipped throughout with an automatic sprinkler system complying with NFPA 13 or NFPA 13R). A minimum physical separation distance of 50 feet is specified in all cases and, presumably, would apply when physical separation is utilized in a high-rise building.

By referencing NFPA 20 in the IBC, the physical or fire separation specified in Section 5.12.1.1 of NFPA 20 becomes a construction requirement. The purpose of this proposal is to specify the fire separation as a requirement in the IBC so that designers and building officials are made aware of it. The proposed language will also clarify what is required. The reference to separation by "fire-rated construction" in NFPA 20 does not make it clear what is required for protection of the separating walls and horizontal assemblies at openings, penetrations, joints, ducts and air transfer openings. It is also silent on requirements for continuity, where one or more of the separating walls is an exterior wall, and where one of the horizontal assemblies is a roof assembly. Specifying fire barriers and horizontal assemblies makes it clear what is required by virtue of their provisions in Sections 706 and 711, respectively.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide an increased level of fire pump reliability by enclosing them in a fire-resistance rated pump room using requirements correlated with NFPA 20.

Assembly Action: **None**

Final Hearing Results

F203-07/08 **AS**

Code Change No: F206-07/08

Original Proposal

Section: 1027.5

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

1027.5 Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

1. Group A having 50 or more occupants.

   Exception: Assembly occupancies used exclusively as a place of worship and having an occupant load of less than 300.

2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below the level of exit discharge, or buildings with 1,000 or more total occupants.
3. Group E in interior stairs, corridors, windowless areas with student occupancy, shops and laboratories.
4. Group F having more than 100 occupants.

   Exception: Buildings used only during daylight hours which are provided with windows for natural light in accordance with the *International Building Code*.

5. Group I.
6. Group M.

   Exception: Buildings less than 3,000 square feet (279 m^2) in gross sales area on one story only, excluding mezzanines.

7. Group R-1.

   Exception: Where each sleeping unit has direct access to the outside of the building at grade.

8. Group R-2.

   Exception: Where each dwelling unit or sleeping unit has direct access to the outside of the building at grade.

9. Group R-4.

   Exception: Where each sleeping unit has direct access to the outside of the building at ground level.

1027.5.1 Emergency power duration and installation. In other than Group I-2, the emergency power system shall provide power for not less than 60 minutes and consist of storage batteries, unit equipment or an on-site generator. In Group I-2, the emergency power system shall provide power for not less than 90 minutes and consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.

Reason: Group I-2 occupancies contain patients who need additional time to evacuate. In many situations the patients are incapable of evacuation on their own and therefore become dependent on someone else to evacuate them.

This proposal takes that additional time into account by extending the duration of the secondary power supply for the emergency exitway lighting. This additional 30 minutes provides time to allow for staff to evacuate a patient on a gurney and then return to assist in the evacuation of the next patient. By providing this additional time, it ensures that the lighting system will be effective during the evacuation process.

This proposal will correlate the IFC with Federal regulations for these facilities.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: This proposal is based on Section 1027 – Means of Egress for Existing Buildings of the IFC 2006 edition.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide an expanded duration of emergency lighting from 60 to 90 minutes which will correlate with Section 1011.5.3, the National Electrical Code and federal regulations. This will provide more evacuation time in occupancies where the occupants cannot self-evacuate.

Assembly Action: **None**

Final Hearing Results

F206-07/08 **AS**

Code Change No: F209-07/08

Original Proposal

Table 1027.17.2

Proponent: William E. Koffel, Koffel Associates, Inc.

Revise table as follows:

TABLE 1027.17.2
COMMON PATH, DEAD-END AND TRAVEL DISTANCE LIMITS (by occupancy)

OCCUPANCY	COMMON PATH LIMIT		DEAD-END LIMIT		TRAVEL DISTANCE LIMIT	
	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)
Group E	75	75	20	~~20~~ 50	200	250
Group I-1	75	75	20	~~20~~ 50	200	250
Group U	75	75	20	~~20~~ 50	200	250

(Portions of table and footnotes not shown remain unchanged)

Reason: The allowance of 50 foot dead-end corridors in fully sprinkler protected Group E, Group I-1, and Group U buildings is consistent with other national codes, including the 2006 Edition of NFPA 101 Table A.7.6, the 2006 Edition of NFPA 5000, the 2006 Edition of the International Existing Building Code (2006 IEBC), and Section 1017.3 of the 2007 Supplement to the 2006 International Fire Code (IFC) and the 2006 International Building Code (IBC). In other than Group A and H occupancies, the 2006 IEBC permits newly created dead-end corridors of 50 feet on floors protected with an automatic sprinkler system in accordance with the 2006 International Building Code (IBC) for Alterations – Level 2 (605.6 exc. 4) and Alterations – Level 3 (705.1). In addition, Section 812.4.1.1 (Means of egress for change in occupancy to higher hazard) of the 2006 IEBC references Section 605.6 for existing dead-end corridors. Further, when the change of occupancy complies with Section 812.3 of the 2006 IEBC, Section 812.4.1.2 (Means of egress for change of use to equal or lower hazard category) of the 2006 IEBC allows existing dead-end corridors no matter what length to remain regardless of the presence of an automatic sprinkler system. Further, because of the 2007 Supplement language to Section 1017.3 of the 2006 IFC, there is now a conflict within the IFC itself for means of egress. The Supplement language for Section 1017.3 of the IFC and for Section 1017.3 of the IBC permits dead-end corridors of 50 feet in Group E, Group I-1, and Group U buildings with an automatic sprinkler system in accordance with Section 903.3.1.1 of both codes, respectively.

Once a new building is given its Use & Occupancy approval, any future work in the building can reference the 2006 IEBC and 2006 IFC requirements. The lack of conformity between the dead-end corridor requirements of the 2006 IFC and the 2006 IEBC creates a conflict when future Alteration level work occurs. Amending Table 1027.17.2 of the 2006 IFC to allow 50 foot dead-end corridors in Group E, Group I-1 and Group U buildings, where the building is protected throughout with an automatic sprinkler system in accordance with NFPA 13 requirements allows for consensus between the IFC, the IBC, and the IEBC.

Group U buildings historically do not have significant occupant loads. Occupant load factors and travel distance limitations are consistent with Group F and S occupancies as indicated in Table 1004.1.1 and Table 1016.1 of the 2006 IFC. Further, Table 1027.17.2 of the 2006 IFC permits 50 foot dead-end corridors for Group F and S occupancies regardless of the presence of an automatic sprinkler system. Group U buildings also tend to be smaller than Group F and S buildings.

No new standard is referenced. Existing national standards are referenced. The code change proposal is meant to bring the IFC into consensus with the 2007 Supplement to the IBC, and other national codes.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: This proposal is based on Section 1027 – Means of Egress for Existing Buildings of the IFC 2006 edition.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide correlation with Section 1017.3 for new buildings which was revised by code change E130-06/07 by increasing the dead-end limits to 50 feet in sprinklered Groups E, I-1 and U.

Assembly Action: **None**

Final Hearing Results

F209-07/08 **AS**

Code Change No: F210-07/08

Original Proposal

Table 1027.17.2

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise table as follows:

TABLE 1027.17.2
COMMON PATH, DEAD-END AND TRAVEL DISTANCE LIMITS (BY OCCUPANCY)

Occupancy	Common Path Limit		Dead-End Limit		Travel Distance Limit	
	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)
Group I-2 (Health Care)	NR[e]	NR[e]	NR	NR	150	200[c]

a. through d. (No change to current text).

e. Any patient sleeping room, or any suite that includes patient sleeping rooms, of more than 1,000 square feet (93 m^2) shall have at least two exit access doors separated by one-third the diagonal.

(Portions of table and footnotes not shown remain unchanged)

Reason: This proposal only addresses existing Group I-2 facilities. For new construction, 2 exit access doors are required within any room or suite exceeding 1,000 square feet. This proposal will require that existing facilities also provide two paths of egress from these larger areas within the I-2 occupancy.

As the rooms expand in size, egress and travel path becomes more critical. This is only compounded more when there a room that is larger than 1,000 square feet and may contain multiple bed-ridden, or confined patients. This will facilitate removing the patients from the room through a 2nd exit access door.

This requirement will establish the minimum acceptable level of safety for egress from these larger patient rooms. The proposal is consistent with federal regulations for these facilities.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: This proposal is based on Section 1027 – Means of Egress for Existing Buildings of the IFC 2006 edition.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will facilitate emergency evacuation of bed-ridden patients in existing Group I-2 by providing an additional exit access door in larger patient rooms or suites, consistent with Section 1014.2.2.

Assembly Action: **None**

Final Hearing Results

F210-07/08 **AS**

Code Change No: F211-07/08

Original Proposal

Section 1027.22 (New)

Proponent: Gary Lewis, City of Summit, NJ, representing ICC Ad-Hoc Committee on Terrorism Resistant Buildings

Add new text as follows:

1027.22 Exit path markings. Existing buildings of Group A ,B, E, I, M, and R-1 having occupied floors located more than 75 feet (22 860mm) above the lowest level of fire department vehicle access shall have exit path markings in accordance with Section 1027 (Supp).

Reason: The membership, at the final hearings of the 2006/2007 code development cycle, overturned the committee action on E84-06/07 with a two-thirds majority vote to include requirements in the IBC and the IFC for luminous exit path markings. The TRB Ad Hoc committee was the original proponent to this code change and it was our intent to make these requirements retroactive for existing buildings. Our intent was not clear in the original proposal, so, at this time, the TRB Ad Hoc committee is proposing to make these requirements applicable to existing buildings.

The proposed new section on exit path markings will require luminescent exit path markings be provided in existing buildings. This proposal will facilitate rapid egress and assist in full building evacuation and is drawn from Recommendations 17 and 18 of the National Institute of Standards and Technology's (NIST) report on the World Trade Center tragedy.

Up to this point, code requirements for high rise buildings were written under the assumption that the building would be evacuated floor by floor. In most instances, in a building with a full suppression system, only the floor where the fire is located and the floors immediately above and below would be evacuated. Acts of terrorism and accidental incidents like power failures have made it necessary to consider design for full building evacuation that is as rapid as possible. This may be made necessary in response to an event within the building or an event outside the building. The proposed code change to require exit path markings is intended to facilitate the most rapid possible full building evacuation.

In the City of New York, after the first bombing of the WTC, requirements were instituted to require exit path markings in vertical exit enclosures in new and existing buildings. This proposal is taken directly from those requirements.

Bibliography:

1. Reference Standard 6-1, Photoluminescent exit path markings as required by Local Law 26 of 2004, New York City Building Code, § 27-383(b)
2. National Institute of Standards and Technology. Final Report of the National Construction Safety Team on the Collapses of the World Trade Center Towers. United States Government Printing Office: Washington, D.C. September 2005.

Cost Impact: The proposal will increase the cost of construction however, the life safety benefit is great.

Analysis: This proposal is based on Section 1027 – Means of Egress for Existing Buildings of the 2006 edition, which will be renumbered to be 1028 in the 2009 edition (due to the addition of new Section 1027 - Exit Path Markings in the 2006/2007 cycle). The reference in this proposal to Section 1027 (Supp) will be to the new Section 1027 in the 2009 edition.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that it was overbroad and would require immediate compliance in all high-rises of the listed occupancies. Historic buildings, which are very difficult to retrofit, would be included. It was noted that there is no documentation on the cost-effectiveness of these markings in existing buildings and that the NIST report did not discuss requiring egress path markings in existing buildings. The section, in order to be effective, would require retrofitting of exit enclosure illumination in accordance with Section 1027.1.7 of the 2007 Supplement. It was suggested that the IEBC might be a better place to deal with this issue.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Gary Lewis, Chair, ICC Ad Hoc Committee on Terrorism Resistant Buildings, requests Approval as Modified by this public comment.

Modify proposal as follows:

1027.22 Exit path markings. Existing buildings of Group A, B, E, I, M and R-1 having occupied floors located more than 75 feet (22,860 mm) above the lowest level of fire department vehicle access shall be provided with exit path markings in accordance with Section 1027 (Supp).

Exception: Open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program.

Commenter's Reason: This comment is intended to support the requirements for photo luminescent exit path markings in vertical exit enclosures in existing buildings of Group A, B, E, I, M and R-1. This same language, minus the exception for historic structures, was already approved by the membership as the standard in the IBC for all newly-constructed high rises.

In situations where building evacuation is necessary, it is not unusual for power to be lost, rendering stairwells darker than when lit. If criminal intent was involved, stairway lighting may be one of the first targets to deactivate. Emergency lighting can leave dark spots in stairwells as well. Occupants may move slower than egress model plans for the building as a result, also confirmed by the study by recent research.

Photoluminescent markings (PLM) have been proven to improve occupant egress in buildings. Research has shown a marked improvement in egress time when PLM's are present in buildings vs. unmarked unlit stairwells.1 From 65-75% of building occupants using stairwells with PLM's felt comfortable going town the stairwells with PLM and reduced lighting. Additionally the speed of movement in this study showed an improvement in speed to egress the building. Handrail marking seemed to help considerably.

A perceived emergency situation requiring evacuation brings an amount of stress to occupants. Building egress systems can often be complex and non-intuitive to users. 2 Adding comfort of occupants during this difficult and stressful emergency evacuation egress situation may reduce stress keeping occupants focused on the task of negotiating the stairway and transfer corridors, with very clear pathways marked for egress more frequently than exit signs.

Products and information on the process for installation of PLM's exist due to New York City's mandate retroactively in 2004. Surface preparation for adhesive backed systems and discussion about mechanically fastened systems has been taking place in leading groups like the Society of Fire Protection Engineers.3

Some compromises were made from the original proposal as existing buildings can be a bit more challenging when retrofitting passive life safety systems. The compromises were made based on the February 18 – March 1, 2008 Public Hearings on the 2006 Edition of the International Fire Code Committee Hearing results. The hearing results noted that this proposal was disapproved based on the fact that the committee determined it to be "overbroad and would require immediate compliance in all high-rises of the listed occupancies." Of particular importance, the committee noted that "Historic buildings, which are very difficult to retrofit, would be included." The Ad Hoc committee concurs with the concerns and has adjusted the proposal accordingly.

The Committee has modified F211 to take into account the aesthetics and possible natural light in an open, unenclosed stairway, in a historic building. Also, the requirement is only applicable to buildings above 75 feet above the lowest level of the fire department access, so the requirement has limited application in the first place within these historic structures.

Photo luminescent exit path markings will facilitate quick egress from buildings during full building evacuation, regardless of emergency or non-emergency conditions. This type of marking is similar to what is currently used in the airline industry to evacuate large aircraft. It has been proven to work in the airline industry, and it will work in the building industry too. Photo luminescent markings in the vertical exit enclosures will not only help to illuminate the exit path, it will provide clear guidance on the travel direction for exiting the building.

This proposal also in alignment with the NIST recommendation number 18 on egress system be designed items (2) "to maintain their functional integrity and survivability under foreseeable building-specific or large-scale emergencies" and (3) "with consistent layouts, standard signage, and guidance so that systems become intuitive and obvious to building occupants during evacuations

The marking requirement is only applicable to those buildings that have occupied floors exceeding 75 feet above the lowest level of fire department vehicle access. The cost impact on existing buildings is minor when considering the life safety benefit. Therefore, it is logical and affordable to extend this same level of protection provided new high rise structures, to existing high rise buildings.

1. Evaluation and comparison of different installations of photoluminescent marking on stairwells of a high rise building. N. Benichou, Proulx, G, Sept. 3-5, 2007.
2. The Human Factor: building designers often forget how important the reactions of the human occupants are when they specify fire and life safety systems. Proulx., G; Richardson, J.K., May, 2002
3. Escape from New York, "The use of Photoluminescent pathway-marking Systems in High-Rise, James D. Amy, Jr., PE, Rolf Jensen Assoc., FPE Magazine Archives, Emerging Trends Newsletter, December, 2006.

Final Hearing Results

F211-07/08 **AMPC**

Code Change No: F217-07/08

Original Proposal

Section: 1501.2 (New)

Proponents: Lynne M. Kilpatrick, Fire Department, Seattle, WA, representing Washington State Association of Fire Marshals; Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Add new text as follows:

1501.2 Nonapplicability. This chapter shall not apply to spray finishing utilizing flammable or combustible liquids which do not sustain combustion, including:

1. Liquids that have no fire point when tested in accordance with ASTM D 92.
2. Liquids with a flashpoint greater than 95°F (35°C) in a water-miscible solution or dispersion with a water and inert (noncombustible) solids content of more than 80 percent by weight.

Reason: There are a variety of water-based paint products available on the market today that have a flash point and meet the definition of a flammable or combustible liquid but cannot sustain combustion due to the sheer quantity of inert solids and water present in their composition. Many consumer latex paints fall into this category. Chapter 15 currently regulates spray finishing of any material defined as a flammable or combustible liquid by requiring that the spraying operation be confined to either a spray booth or an approved spray room. This proposed code change clarifies for the reader that liquids that do not have a fire point are not regulated by Chapter 15. This proposal also exempts water-miscible liquids with a flash point over 95ºF (35ºC) having an aggregate water and inert solid content by weight of at least 80 percent from regulation under Chapter 15. Materials meeting these same criteria are currently exempted from the storage and use requirements in Chapter 34 (see Sec. 3401.2) but it has been unclear to code users, including jurisdictions having authority, whether the same two exemptions should apply when these products are used in spray finishing operations. Currently it is common practice to apply these water-based paint products for interior and exterior finishing without additional controls. This proposal provides consistency between the real world use of these products and the regulatory requirements by clarifying when Chapter 15 does not apply.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which provides a useful clarification of the non-applicability of the chapter to a category of flammable and combustible liquids which will not sustain combustion.

Assembly Action: **None**

Final Hearing Results

F217-07/08 **AS**

Code Change No: F219-07/08

Original Proposal

Sections: 1802.1 (IBC [F] 415.2), 2703.2.2.1

Proponent: Doug Hall, Fire Department, City of Westminster, CO, representing Fire Marshal's Association of Colorado

Revise as follows:

SECTION 1802
DEFINITIONS

1802.1 (IBC [F] 415.2) Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

HAZARDOUS PRODUCTION MATERIAL (HPM). A solid, liquid or gas associated with semiconductor manufacturing that has a degree-of-hazard rating in health, flammability or ~~reactivity~~ instability of Class 3 or 4 as ranked by NFPA 704 and which is used directly in research, laboratory or production processes which have as their end product materials that are not hazardous.

2703.2.2.1 Design and construction. Piping, tubing, valves, fittings and related components used for hazardous materials shall be in accordance with the following:

1. Piping, tubing, valves, fittings and related components shall be designed and fabricated from materials that are compatible with the material to be contained and shall be of adequate strength and durability to withstand the pressure, structural and seismic stress and exposure to which they are subject.
2. Piping and tubing shall be identified in accordance with ASME A13.1 to indicate the material conveyed.
3. Readily accessible manual valves or automatic remotely activated fail-safe emergency shutoff valves shall be installed on supply piping and tubing at the following locations:
   3.1. The point of use.
   3.2. The tank, cylinder or bulk source.
4. Manual emergency shutoff valves and controls for remotely activated emergency shutoff valves shall be identified and the location shall be clearly visible, accessible and indicated by means of a sign.
5. Backflow prevention or check valves shall be provided when the backflow of hazardous materials could create a hazardous condition or cause the unauthorized discharge of hazardous materials.
6. Where gases or liquids having a hazard ranking of:

   Health hazard Class 3 or 4
   Flammability Class 4
   ~~Reactivity~~ Instability Class 3 or 4

   in accordance with NFPA 704 are carried in pressurized piping above 15 pounds per square inch gauge (psig) (103 kPa), an approved means of leak detection and emergency shutoff or excess flow control shall be provided. Where the piping originates from within a hazardous material storage room or area, the excess flow control shall be located within the storage room or area. Where the piping originates from a bulk source, the excess flow control shall be located as close to the bulk source as practical.

Exceptions:

1. Piping for inlet connections designed to prevent backflow.
2. Piping for pressure relief devices.

Reason: NFPA 704 no longer recognizes the “Reactivity” label for the applicable classification of hazardous materials. Revising the classification to the current 2007 edition of NFPA 704 terminology reflects exactly what the IFC standards reference states. The use of the term “reactivity” misinforms the intent of this specific classification. Appropriate use of the term “instability” reflects the intent of the current NFPA 704 classification system for fire personnel and industrial emergency responders.

“Reactivity” has been erroneously taught to thousands of emergency responders and private industry users that the numeric rating system quantified the degree of reactivity a chemical might have with other chemicals, i.e. how reactive a chemical is to something else.

Instability directly correlates to the degree of intrinsic susceptibility of materials to release energy when exposed to thermal or mechanical shock and/or elevated temperatures or pressure. There is no direct correlation with a chemical's compatibility to another chemical substance.

There are approximately 16 references in the 2007 IFC to the NFPA 704 standard. The IFC should accurately reflect the information from a standard.

Cost Impact: No direct cost impact to facility users as the NFPA 704 numeric rating system has not changed for instability.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which would provide a useful clarification of the terminology and correlation with NFPA 704.

Assembly Action: **None**

Final Hearing Results

F219-07/08 **AS**

Code Change No: F223-07/08

Original Proposal

Section: 1805.2.3.4

Proponent: Patrick A. McLaughlin, McLaughlin & Associates, representing The Semiconductor Industry Association

Delete without substitution:

~~**1805.2.3.4 Clearances.** Workstations where HPM is used shall be provided with horizontal servicing clearances of not less than 3 feet (914 mm) for electrical equipment, gas cylinder connections and similar hazardous conditions. These clearances shall apply only to normal operational procedures and not to repair- or maintenance-related work.~~

Reason: This proposal deletes an outdated and confusing tool clearance requirement from the code. Clean room cost in excess of $4000/ft2, so maximizing this space without introducing occupant safety hazards is a goal of the device manufacturer. Clearance requirements for equipment should be driven by the activities that take place in the space, and 36" is arbitrary clearance dimension. Also, as written it causes confusion within both the industry and enforcement community and as a result is erroneously applied. In addition, the NEC for energized electrical work already includes these requirements and OSHA has other clearance requirements. Lastly, ergonomic requirements for safe operator work space define these dimensions. The current requirement in the section adds another constraint to space planning of the user, with no real benefit to the occupants or emergency responders.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which deletes outdated, arbitrary text that is covered in other sections and standards.

Assembly Action: **None**

Final Hearing Results

F223-07/08 **AS**

Code Change No: F225-07/08

Original Proposal

Sections: 2201.1, 2202.1 (New), 1103.5, 1106.1; IBC 412.1 (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Revise as follows:

2201.1 Scope. Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities <u>aircraft motor-vehicle fuel-dispensing facilities</u> and repair garages shall be in accordance with this chapter and the *International Building Code, International Fuel Gas Code* and the *International Mechanical Code*. Such operations shall include both operations that are accessible to the public and private operations.

1103.5 Dispensing of flammable and combustible liquids. The dispensing, transferring and storage of flammable and combustible liquids shall be in accordance with this chapter and Chapter 34. Aircraft motor vehicle fuel-dispensing ~~stations~~ facilities shall be in accordance with Chapter 22.

1106.1 Aircraft motor vehicle fuel-dispensing ~~stations~~ facilities. Aircraft motor vehicle fuel-dispensing ~~stations~~ facilities shall be in accordance with Chapter 22.

2. Add new definition as follows:

2202.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AIRCRAFT MOTOR-VEHICLE FUEL-DISPENSING FACILITY. That portion of property where flammable or combustible liquids or gases used as motor fuels are stored and dispensed from fixed equipment into the fuel tanks of aircraft.

3. Add new text as follows:

IBC 412.1 General. Aircraft related occupancies shall comply with this section and the *International Fire Code*.

(Renumber subsequent sections)

Reason: The IFC has construction requirements for aircraft related facilities in Chapter 11 Aviation Facilities, however, Section 412 Aircraft-related Occupancies in the IBC does not direct the user to the fire code other than for aircraft paint hangers. The new language proposed for Section 412.1 will provide that reference.

Additionally, IFC Chapter 11 Aviation Facilities requires “Aircraft Motor-Vehicle Fuel-Dispensing Stations” to be installed in accordance with Chapter 22 of that code, however, of all the different types of motor vehicle facilities defined by Chapter 22 and listed in Section 2201.1 Scope, aircraft motor-vehicle fuel-dispensing stations are not included. The proposed language clarifies that these facilities are within the scope of Chapter 22 and provides a definition.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

2202.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AIRCRAFT MOTOR-VEHICLE FUEL-DISPENSING FACILITY. That portion of property where flammable or combustible liquids or gases used as motor fuels are stored and dispensed from fixed automotive-type equipment into the fuel tanks of aircraft.

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which fills the need for defining this type of motor fuel dispensing facility. The modification further clarifies that these facilities, found mainly at small, local airports, use the same type of dispensing equipment as automotive facilities rather than the more sophisticated fuelers and systems found at larger airports.

Assembly Action: **None**

Final Hearing Results

F225-07/08 **AM**

Code Change No: F226-07/08

Original Proposal

Sections: 2204.4.1, 2210.3.4

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing himself

Revise as follows:

2204.4.1 Approved containers required. Class I, II and IIIA liquids shall not be dispensed into a portable container unless such container does not exceed 5 gallons (18.9 L) capacity, is listed or of approved material and construction, and has a tight closure with screwed or spring-loaded cover so designed that the contents can be dispensed without spilling. Liquids shall not be dispensed into portable tanks or cargo tanks.

2210.3.4 Portable containers. Dispensing of Class I, II or IIIA liquids into containers, other than fuel tanks, shall be in accordance with Section 2204.4.1. ~~Class I, II or IIIA liquids shall not be dispensed into a portable container unless such container is approved.~~

Reason: The revision to Section 2204.4.1 is intended to prohibit filling of a new class of portable gasoline containers that have entered the marketplace. These cans, some of which hold as much as 14 gallons and weigh over 100 pounds when full, often include integrated hoses and dispensing nozzles, yet they do not comply with any UL, ASTM or similar recognized standard.

Apparently, they are certified by the manufacturer as meeting UN/DOT standards for transportation, but it is questionable whether the safety standards required for transportation are adequate for storage and use of these products. For example, there are concerns about the ability of users to safely hoist these containers off of and on to vehicles to avoid static accumulation during filling, and the static charge will be greater than that experienced with smaller cans because there is more fuel transferred during filling. Given that UL30, UL1313 and ASTM F852 or F976 (the recognized standards for construction of portable gas containers) all limit container capacities to approximately 5 gallons, it makes sense for the IFC to reflect this limitation.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

2204.4.1 Approved containers required. Class I, II and IIIA liquids shall not be dispensed into a portable container unless such container does not exceed ~~5~~ 6 gallons (~~18.9~~ 22.7 L) capacity, is listed or of approved material and construction, and has a tight closure with screwed or spring-loaded cover so designed that the contents can be dispensed without spilling. Liquids shall not be dispensed into portable tanks or cargo tanks.

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which limits the size of portable containers which can be filled. The modification provides correlation with industry size standards for approved portable containers.

Assembly Action: **None**

Final Hearing Results

F226-07/08 **AM**

Code Change No: F228-07/08

Original Proposal

Sections: 2205.2.1 (New), 2205.2.2 (New)

Proponents: Bob Eugene/Ken Boyce, Underwriters Laboratories, Inc., representing UL, US Department of Energy, National Renewable Energy Laboratory, Clean Vehicle Education Foundation

Add new text as follows:

2205.2.1 Inspections. Flammable and combustible liquid fuel dispensing and containment equipment shall be periodically inspected where required by the fire code official to verify that it is in proper working order and not subject to leakage.

2205.2.2 Repairs and service. The fire code official is authorized to require damaged or unsafe containment and dispensing equipment to be repaired or serviced in an approved manner, including, but not limited to, equipment that shows signs of physical damage, internal and external corrosion, leakage, brittleness, aging or undue wear and tear.

(Renumber subsequent sections)

Reason: This proposal provides basic provisions for the inspection, repair and servicing of flammable and combustible liquid dispensing system equipment, which are not currently covered in this code or in NFPA 30A. The proposed requirements constitute good practice, and will also help to proactively mitigate potential leakage of fuel dispensing system components, including those for use with E85.

Proposed Section 2205.2.1 authorizes the fire code official to require inspection of equipment on a periodic basis, and identifies that the inspection is to verify the equipment is in proper working order and isn't leaking. This inspection is supported by an operational permit in Section 105.6.16 (9) for the dispensing of flammable and combustible liquids into motor vehicles. The frequency and nature of the inspections is up to the discretion of the fire code official. Proposed Section 2205.2.2 authorizes the fire code official to require damaged or leaking equipment to be serviced or repaired in an approved manner. Together the new proposed provisions work well with the other requirements in Section 2205.

The proposal reinforces development of a comprehensive set of requirements covering the inspection and testing of motor vehicle fuel containment and dispensing system components, similar to requirements in place for fire alarm systems.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proposal will provide the fire code official with needed authority to require maintenance inspections and to order the repair of containment and dispensing equipment as needed.

Assembly Action: **None**

Final Hearing Results

F228-07/08 **AS**

Code Change No: F230-07/08

Original Proposal

Sections: 2206.8 through 2206.8.5 (New), 2206.7, 2202.1 (New)

Proponent: Bob Eugene/Ken Boyce, Underwriters Laboratories, Inc., representing UL, US Department of Energy, National Renewable Energy Laboratory, Clean Vehicle Education Foundation

1. Add new text as follows:

2206.8 Alcohol blended fuel-dispensing operations. The design, fabrication and installation of alcohol blended fuel-dispensing systems shall also be in accordance with Sections 2206.7 and Sections 2206.8.1 through 2206.8.5..

2206.8.1 Approval of equipment. Dispensers, hoses, nozzles, breakaway fittings, swivels, flexible connectors or dispenser emergency shutoff valves, vapor recovery systems and pumps used in alcohol blended fuel-dispensing systems shall be listed or approved for the specific purpose.

2206.8.2 Change of system contents. Fuel dispensing systems subject to change in contents from gasoline to alcohol blended fuels shall be subject to fire code official review and approval prior to commencing dispensing operations.

2206.8.3 Facility identification. Facilities dispensing alcohol blended fuels shall be identified by an approved means.

2206.8.4 Marking. Dispensers shall be marked in an approved manner to identify the types of alcohol blended fuels to be dispensed.

2206.8.5 Maintenance and inspection. Equipment shall be maintained and inspected in accordance with Section 2205.2.

2. Revise as follows:

2206.7 Fuel-dispensing systems for flammable or combustible liquids. The design, fabrication and installation of fuel-dispensing systems for flammable or combustible liquid fuels shall be in accordance with Sections 2206.7.1 through 2206.7.9.2.4. Alcohol blended fuel dispensing systems shall also comply with Section 2206.8.

3. Add new definition as follows:

2202.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

ALCOHOL BLENDED FUELS. Alcohol blended fuels, including those containing 85% ethanol and 15% unleaded gasoline (E85), are flammable liquids consisting of ethanol or other alcohols blended greater than 15% by volume. Alcohols are polar compounds that exhibit increased moisture absorption, water solubility, polar solvency and solution conductivity relative to gasoline. Alcohol-gasoline blended fuels have unique properties that may affect material compatibility and fire response.

Reason: This proposal includes provisions covering dispensing of alcohol blended fuels, including E85. The code change is needed because section 2206.7.1 currently requires certain dispensing system components to be listed, and these listings are not yet available from nationally recognized testing laboratories. These organizations are currently working with stakeholders to address corrosion and material compatibility issues associated with E85 and other alcohol blended fuels.

Section 2206.8.1 allows the dispensing equipment to be approved by the fire code official and identifies dispensing system components that should be listed or approved for use with alcohol blended fuels. The code official will base approval of equipment not listed for use with alcohol blended fuels on prevailing regulations where established. In the absence of prevailing regulations it is anticipated that the code official will base acceptance on additional documentation provided by the manufacturer confirming equipment compatibility with alcohol blended fuels, and other applicable information.

Section 2206.8.2 allows the code official the ability to re-approve installations that convert from gasoline dispensing to alcohol blended fuel dispensing; this allows for verification that the installation complies with the new requirements. It also ensures that the fire officials know the new fuels will be present on site, which might impact local fire suppression operations, and the proposed provision would permit the necessary coordination.

Sections 2206.8.3 and 2206.8.4 address facility and equipment identification, respectively, for alcohol blended fuel. Identification of the facility is intended to promote first responder awareness of the presence of alcohol blended fuels. Identification of the equipment for the specific alcohol blended fuels communicates the intended use of the installed equipment.

Section 2206.8.5 is intended to help direct the fire code official to provisions for maintenance and inspection of equipment, since one of the concerns with alcohol blended fuels is its potentially degrading effects on system components.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

ALCOHOL BLENDED FUELS. Alcohol blended fuels, including those containing 85% ethanol and 15% unleaded gasoline (E85), are flammable liquids consisting of ethanol or other alcohols blended greater than 15% by volume. ~~Alcohols are polar compounds that exhibit increased moisture absorption, water solubility, polar solvency and solution conductivity relative to gasoline. Alcohol-gasoline blended fuels have unique properties that may affect material compatibility and fire response.~~

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the proposal will provide needed regulations for a type of alternative motor fuel and its dispensing equipment that has grown in popularity. The modification removes text that is useful for commentary but not needed in the definition.

Assembly Action: **None**

Final Hearing Results

F230-07/08 **AM**

Code Change No: F233-07/08

Original Proposal

Sections: 2209.5.1.1, Chapter 45 (New); IBC 406.5.2, Chapter 35 (New)

THESE PROPOSALS ARE ON THE AGENDA OF THE IFC AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent: Thomas Joseph, Chair, Hydrogen Industry Panel on Codes (HIPOC)

1. PART I – IFC

Revise as follows:

2209.5.1.1 (Supp) Vehicle fueling pad. The vehicle ~~fueling pad~~ shall be fueled on non-coated ~~of~~ concrete or ~~a~~ other approved paving material having a ~~resistivity~~ resistance not exceeding one megohm as determined by ~~an approved method~~ the methodology specified in DIN EN 1081.

2. Add standard to Chapter 45 as follows:

European Committee for Standardization (EN)
Central Secretariat
Rue de Stassart 36
B-10 50 Brussels

European Standard EN 1081: 1998 Resilient Floor Coverings – Determination of the Electrical Resistance

PART I – IBC GENERAL

406.5.2 (Supp) Vehicle fueling pad. The vehicle ~~fueling pad~~ shall be fueled on non-coated ~~of~~ concrete or ~~a~~ other approved paving material having a ~~resistivity~~ resistance not exceeding 1 megohm as determined by ~~an approved method~~ the methodology specified in DIN EN 1081.

2. Add standard to Chapter 35 as follows:

European Committee for Standardization (EN)
Central Secretariat
Rue de Stassart 36
B-10 50 Brussels

European Standard EN 1081: 1998 Resilient Floor Coverings – Determination of the Electrical Resistance

Reason: The proposed changes retain the original intent of this section while correcting some incorrect language and providing additional guidance for the code official. These changes address concerns voiced by ICC members during the last code cycle regarding the specified units and the request for additional guidance for the code official by using a referenced standard.

Units: Megohms are the appropriate measurement of resistance, not resistivity.

Referenced Standard: The referenced EN standard 1081:1998, which now has DIN status, is the best available standard that is applicable to measuring resistance of vehicle fueling pads. With this change the official still has the option to use another approved method, but DIN EN 1081:1998 is the referred method for measurement if non-coated concrete is not used. It may be worth noting that DIN EN 1081:1998 was created using an open, transparent and consensus-based process similar to the procedures used by ANSI-approved standard development organizations. Considering Standard 1081 also bares the EN designation, the U.S. building regulatory community should be comfortable that it has been, and will continue to be, carefully scrutinized and representative of the work of a true consensus body that we Americans are familiar with.

These proposed changes will retain the original intent of this section to dissipate static electricity built up on the vehicle from driving before the driver's door is opened--with corrected language and better guidance. The overall goal is to increase the safety of vehicle fueling. Concrete is allowed for the fueling pad with no resistance measurements needed; if an alternate material is desired, it can be used as long as it has a resistance less than or equal to 1 megohm. Both the concrete and 1 megohm criteria are cited from the American Petroleum Institute (API) 2003 Recommended Practices (RP), section 4.6.9.2. NFPA 77: *Recommended Practice on Static Electricity,* section 7.4.1.3 also points out that a resistance of 1 megohm or less is considered adequate to dissipate any charges. Additionally, the proposed language has been proposed by the State of Michigan, Department of Environmental Quality – Waste and Hazardous Materials Division for Michigan's *Hydrogen Storage and Dispensing Rules*, and is consistent with changes proposed under the current cycle to NFPA 55-2005, *Standard for the Storage, Use, and Handling of Compressed Gasses and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks*.

Cost Impact: The code change proposal will increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, EN 1081: 1998, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing Results

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard EN 1981:1998 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

PART I – IFC
Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that the proponent had responded to the committees concerns regarding the way the standard is referenced. That concern was expressed in the committee action on code change F156-07/07 in the last cycle.

Assembly Action: **None**

PART II – IBC GENERAL
Committee Action: **Disapproved**

Committee Reason: The committee did not receive enough data to determine the applicability of the requirements.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted for Part II.

Public Comment:

Thomas Joseph, Chair, Hydrogen Industry Panel on Codes, requests Approval as Submitted.

Commenter's Reason: The Hydrogen Industry asks the Membership to uphold IFC Committee Action on Part I for "As Submitted" and reverse IBC General Committee Action on Part II from "Disapprove" to "As Submitted" for consistency and uniformity in enforcement.

Fifteen (15) copies of the European Standard DIN EN 1081:1998-04, proposing electrostatic discharge (ESD) material and testing requirements for vehicle fueling surfaces were purchased and provided to the IFC Secretariat and Code Development Committee. The Secretariat's analysis indicated DIN EN 1081 was reviewed for compliance with ICC policy and accepted as compliant. Part I was subsequently reviewed and approved by the IFC Development Committee.

Part II was disapproved by IBC General Development Committee, not on technical grounds, but based on (1) Not having received additional copies of the standard and (2) that the IFC Secretariat's review and acceptance of DIN EN 1081 had not been coordinated with the IBC-General Secretariat or the IBC General Committee.

Final Hearing Results

F233-07/08, Part I	**AS**
F233-07/08, Part II	**AS**

Code Change No: F235-07/08

Original Proposal

Section: 2211.7.2.1, Chapter 45 (New)

Proponent: Bob Eugene, Underwriters Laboratories

1. Revise as follows:

2211.7.2.1 (Supp) System design. The flammable gas detection system shall be listed or approved and shall be calibrated to the types of fuels or gases used by vehicles to be repaired. Gas detectors or sensors shall be listed in accordance with UL 2075 and shall indicate the gases they are intended to detect. The gas detection system shall be designed to activate when the level of flammable gas exceeds 25 percent of the lower flammable limit (LFL). Gas detection shall also be provided in lubrication or chassis repair pits of repair garages used for repairing nonodorized LNG-fueled vehicles.

2. Add standard to Chapter 45 as follows:

UL

2075-2007 Standard for Gas and Vapor Detectors and Sensors

Reason: The flammable gas detection system is design to produce an alarm or signal when exposed to different concentrations of gases or vapor. As part of that system, the gas detectors or gas sensor is an import part of the system for the detection of these different gasses. The proposal provides direction on the standard and proper marking for the different fuels. Under ANSI/UL 2075, a set flammable gases and concentrations (PPM) is developed for each detector or sensor and the manufacturer is required to provide what gases and the concentration the device is designed to detect. ANSI/UL 2075 verifies performance of each detector or sensor for each gas it is designed to detect. The manufacturer determines what gas their product is designed to detect and will now mark the device with what gases it is design to identify. The intended gases may be in the manufacturer's instructions rather than on the product.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, UL 2075-2007, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing Results

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard UL 2075-2007 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which provides an appropriate referenced standard for flammable gas detectors.

Assembly Action: **None**

Final Hearing Results

F235-07/08 **AS**

Code Change No: F237-07/08

Original Proposal

Sections: 2301.1, 2308.4, 2310.1, 2501.1, 3404.3.3.9, Chapter 45 (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Revise as follows:

2301.1 Scope. High-piled combustible storage shall be in accordance with this chapter. In addition to the requirements of this chapter, the following material-specific requirements shall apply:

1. Aerosols shall be in accordance with Chapter 28.
2. Flammable and combustible liquids shall be in accordance with Chapter 34.
3. Hazardous materials shall be in accordance with Chapter 27.
4. Storage of combustible paper records shall be in accordance with NFPA 13 and NFPA ~~230~~ 232.
5. Storage of combustible fibers shall be in accordance with Chapter 29.
6. Storage of miscellaneous combustible material shall be in accordance with Chapter 3.

2308.4 Column protection. Steel building columns shall be protected in accordance with NFPA ~~230~~ 13.

2310.1 General. Records storage facilities used for the rack or shelf storage of combustible paper records greater than 12 feet (3658 mm) in height shall be in accordance with Sections 2306 and 2308 and NFPA 13 and NFPA ~~230~~ 232. Palletized storage of records shall be in accordance with Section 2307.

2501.1 Scope. Tire rebuilding plants, tire storage and tire byproduct facilities shall comply with this chapter, other applicable requirements of this code and NFPA 13 ~~and NFPA 230~~. Tire storage in buildings shall also comply with Chapter 23.

3404.3.3.9 Idle combustible pallets. Storage of empty or idle combustible pallets inside an unprotected liquid storage area shall be limited to a maximum pile size of 2,500 square feet (232 m^2) and to a maximum storage height of 6 feet (1829 mm). Storage of empty or idle combustible pallets inside a protected liquid storage area shall comply with NFPA 13 ~~and NFPA 230~~. Pallet storage shall be separated from liquid storage by aisles that are at least 8 feet (2438 mm) wide.

2. Revise Chapter 45 standards as follows:

NFPA

~~230—03 Fire Protection of Storage~~
232-07 Protection of Records

Reason: NFPA 230 has been eliminated as a standard. The various references throughout the code are being revised in this proposal as appropriate. Some of the references now refer to NFPA 232 *Protection of Records*, and some refer to NFPA 13 *Installation of Sprinkler Systems* as the appropriate standard.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, NFPA 232-07, for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

2301.1 Scope. High-piled combustible storage shall be in accordance with this chapter. In addition to the requirements of this chapter, the following material-specific requirements shall apply:

1. Aerosols shall be in accordance with Chapter 28.
2. Flammable and combustible liquids shall be in accordance with Chapter 34.
3. Hazardous materials shall be in accordance with Chapter 27.
4. Storage of combustible paper records shall be in accordance with NFPA 13 ~~and NFPA 232~~.
5. Storage of combustible fibers shall be in accordance with Chapter 29.
6. Storage of miscellaneous combustible material shall be in accordance with Chapter 3.

2310.1 General. Records storage facilities used for the rack or shelf storage of combustible paper records greater than 12 feet (3658 mm) in height shall be in accordance with Sections 2306 and 2308 and NFPA 13 ~~and NFPA 232~~. Palletized storage of records shall be in accordance with Section 2307.

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the proponent's reason statement accurately substantiates the need for the change and removes references to a standard that has been withdrawn from service by its promulgator. The proposed standard NFPA 232 was submitted for review after the standards reviews were posted on the ICC website and, although it was the announced opinion of staff that it complies with the ICC standards policy, the committee did not feel that it would be a useful standard for reference. The committee observed that the proposed standard is more of a business continuity standard rather than focusing on fire protection and therefore removed it from the proposal through the modification.

Assembly Action: **None**

Final Hearing Results

F237-07/08 **AM**

Code Change No: F238-07/08

Original Proposal

Section: 2305.6

Proponent: Michael E. Dell'Orfano, South Metro Fire Rescue, representing Fire Marshal's Association of Colorado

Add new text as follows:

2305.6 Designation of storage heights. Where required by the fire code official, a visual method of indicating the maximum allowable storage height shall be provided.

(Renumber subsequent sections)

Reason: The purpose of this code change proposal is to add new requirements to allow the fire code official to designate the maximum storage height allowed for a high-piled combustible storage area. Often rooms or buildings have ceiling heights that would allow storage heights beyond that allowed by the fire code or beyond the limits of the fire protection systems. Designating the maximum storage height would allow business owners and fire code officials to visually identify these requirements easily. Examples may include striping the wall or rack uprights, hanging markers from the ceiling, posting signs stating the maximum allowable storage heights, or displaying a floor plan with storage heights indicated. A list of possible methods to indicate maximum storage heights is not included in the code language in order to avoid a "laundry list approach" that may limit creativity for a particular storage area. Improper storage heights appear to be a common issue amongst fire departments across the country and this code change will help to bring uniformity, along with a specific code section to clarify the fire code official's authority.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a useful tool for the fire code official as well as premises operating staff in regulating the height for storage.

Assembly Action: **None**

Final Hearing Results

F238-07/08 **AS**

Code Change No: F240-07/08

Original Proposal

Sections: 2309.4 (New), 2302.1 (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Add new text as follows:

2309.4 Automated rack storage. High-piled storage areas with automated rack storage shall be provided with a manually activated emergency shut down switch for use by emergency personnel. The switch shall be clearly identified and shall be in a location approved by the fire code official.

2. Add new definition as follows:

2302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AUTOMATED RACK STORAGE. Automated rack storage is a stocking method whereby the movement of pallets, products, apparatus, or systems are automatically controlled by mechanical or electronic devices that take the place of human labor.

Reason: This proposal will provide that if an emergency is to occur in an automated rack storage facility the remotely controlled pallet moving equipment can be manually shut-down. This shut down accomplishes two objectives. First, the potential to either move additional product into the fire or move burning product through the storage area via remotely controlled pallet movers is ceased. Secondly, it is not safe to place emergency personnel within the automated storage area when the system is still active. Many of these automated devices move much faster than personnel can get out of the way, and there is a physical danger to personnel. This shut-down will eliminate danger to personnel and reduce property damage.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

2309.4 Automated rack storage. High-piled storage areas with automated rack storage shall be provided with a manually activated emergency shut down switch for use by emergency personnel. The switch shall be clearly identified and shall be in a location approved by the fire chief ~~code official~~.

2302.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AUTOMATED RACK STORAGE. Automated rack storage is a stocking method whereby the movement of pallets, products, apparatus, or systems are automatically controlled by mechanical or electronic devices ~~that take the place of human labor~~.

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change which will provide enhanced firefighter safety when working in and around high-piled storage areas. The modification to Section 2309.4 appropriately changes the approving authority to the fire chief since this is a fire department operational issue. The modification to the definition deletes unnecessary text that is commentary

Assembly Action: **None**

Final Hearing Results

F240-07/08 **AM**

Code Change No: F241-07/08

Original Proposal

Sections: 2403.8.4 (New); IBC 3102.1

Proponent: Daniel E. Nichols, PE, NY State Division of Code Enforcement and Administration

THESE PROPOSALS ARE ON THE AGENDA OF THE IFC AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IFC

Add new text as follows:

2403.8.4 Membrane structures on buildings. Membrane structures that are erected on buildings, balconies, decks, or other structures shall be regulated as permanent membrane structures in accordance with Section 3102 of the *International Building Code*.

(Renumber subsequent sections)

PART II – IBC GENERAL

3102.1 General. The provisions of this section shall apply to air-supported, air-inflated, membrane-covered cable and membrane-covered frame structures, collectively known as membrane structures, erected for a period of 180 days or longer. Those erected for a shorter period of time shall comply with the *International Fire Code*. Membrane structures covering water storage facilities, water clarifiers, water treatment plants, sewage treatment plants, greenhouses and similar facilities not used for human occupancy, are required to meet only the requirements of Sections 3102.3.1 and 3102.7. Membrane structures erected on a building, balcony, deck or other structure for any period of time shall comply with this section.

Reason: The purpose of this code proposal is to limit the location where temporary membrane structures can be erected, based on regulations already found in the temporary membrane structure requirements.

Temporary membrane structures that are placed in a field or parking lot are afforded several safety features including fire separation distance from other hazards (buildings, vehicles), separation from other tents, and provide an unobstructed means of egress path for the uniformly located exits. When a membrane structure is placed upon a building or deck, the temporary membrane structure requirements do not currently regulate exiting from the temporary membrane structure to a set of stairs or door nor do they regulate the hazards that could be below the temporary membrane structure. Furthermore, the temporary membrane structure section does not contain requirements on the regulation of the loads temporary membrane structures would have on a structure below.

With the means of egress, fire separation, and structural issues, it is best for temporary membrane structures to be regulated as permanent membrane structures and subject to the International Building Code.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

PART I – IFC
Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because it provides needed guidance to the fire code official on how membrane structures erected on buildings are to be viewed and regulated. Without this change, they are essentially a building addition without regulation. The action is also consistent with the action taken by the IBC-General Committee on Part II.

Assembly Action: **None**

PART II – IBC GENERAL
Committee Action: **Approved as Submitted**

Committee Reason: If a membrane is constructed on a building it needs to be regulated. This proposal would clarify between the temporary requirements in the IFC and the permanent membrane requirements in the IBC.

Assembly Action: **None**

Final Hearing Results

F241-07/08, Part I	**AS**
F241-07/08, Part II	**AS**

Code Change No: F242-07/08

Original Proposal

Section: 2403.12.6.1

Proponent: Bob Eugene, Underwriters Laboratories

Revise as follows:

2403.12.6.1 (Supp) Exit sign illumination. Exit signs shall be <u>either</u> listed and labeled <u>in accordance with UL 924</u> as ~~a self-luminous~~ <u>the internally illuminated</u> type ~~having a minimum duration of 90 minutes luminosity~~ <u>and used in accordance with the listing</u> or shall be ~~internally or~~ externally illuminated by luminaires supplied in the following manner:

1. Two separate circuits, one of which shall be separate from all other circuits, for occupant loads of 300 or less; or
2. Two separate sources of power, one of which shall be an approved emergency system, shall be provided when the occupant load exceeds 300. Emergency systems shall be supplied from storage batteries or from the on-site generator set, and the system shall be installed in accordance with NFPA 70. The emergency system provided shall have a minimum duration of 90 minutes when operated at full design demand.

Reason: Internally illuminated exit signs Listed in accordance with UL 924 include electrically powered, self-luminous and photoluminescent types, each of which provide for a minimum of 90 minutes luminosity upon loss of normal power. The proposed change complements IBC/IFC section 1011.4.

> ***IBC 1011.4 Internally illuminated exit signs.*** *Electrically powered, self-luminous and photoluminescent exit signs shall be listed and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer's instructions and Section 2702. Exit signs shall be illuminated at all times.*

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides needed correlation between Chapters 10 and 24 on the subject of exit sign illumination.

Assembly Action: **None**

Final Hearing Results

F242-07/08 **AS**

Code Change No: F243-07/08

Original Proposal

Chapter 24, Sections: 105.6.43, 105.7.13, 202 (IBC 202); Table 906.1 (IBC Table [F] 906.1)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

THESE PROPOSALS ARE ON THE AGENDA OF THE IFC AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IFC

1. Revise Chapter 24 as follows:

CHAPTER 24
TENTS, CANOPIES AND OTHER MEMBRANE STRUCTURES

SECTION 2401
GENERAL

2401.1 (Supp) Scope. Tents~~, canopies~~ and membrane structures shall comply with this chapter. The provisions of Section 2403 are applicable only to temporary tents~~, canopies~~ and membrane structures. The provisions of Section 2404 are applicable to temporary and permanent tents~~, canopies~~ and membrane structures.

SECTION 2402
DEFINITIONS

~~**CANOPY.** A structure, enclosure or shelter constructed of fabric or pliable materials supported by any manner, except by air or the contents it protects, and is open without sidewalls or drops on 75 percent or more of the perimeter~~

TENT. A structure, enclosure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported by any manner except by air or the contents that it protects.

SECTION 2403
TEMPORARY TENTS, CANOPIES AND MEMBRANE STRUCTURES

2403.1 General. All temporary tents~~, canopies~~ and membrane structures shall comply with this section.

2403.2 Approval required. Tents and membrane structures having an area in excess of ~~200~~ 400 square feet (~~19~~ 37 m^2) ~~and canopies in excess of 400 square feet (37 m^2)~~ shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official.

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. ~~Fabric canopies~~ Tents open on all sides which comply with all of the following:
   2.1. Individual ~~canopies~~ tents having a maximum size of 700 square feet (65 m^2).
   2.2. The aggregate area of multiple ~~canopies~~ tents placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m^2) total.
   2.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.

2403.3 Place of assembly. (No change to current text)
2403.4 Permits. (No change to current text)

2403.5 Use period. Temporary tents, air-supported, air-inflated or tensioned membrane structures ~~and canopies~~ shall not be erected for a period of more than 180 days within a 12-month period on a single premises.

2403.6 Construction documents. A detailed site and floor plan for tents~~, canopies~~ or membrane structures with an occupant load of 50 or more shall be provided with each application for approval. The tent~~, canopy~~ or membrane structure floor plan shall indicate details of the means of egress facilities, seating capacity, arrangement of the seating and location and type of heating and electrical equipment.

2403.7 Inspections. (No change to current text)
2403.7.1 Inspection report. (No change to current text)

2403.8 Access, location and parking. Access location and parking for temporary tents~~, canopies~~ and membrane structures shall be in accordance with this section.

2403.8.1 Access. (No change to current text)

2403.8.2 Location. Tents~~, canopies~~ or membrane structures shall not be located within 20 feet (6096 mm) of lot lines, buildings, other tents~~, canopies~~ or membrane structures, parked vehicles or internal combustion engines. For the purpose of determining required distances, support ropes and guy wires shall be considered as part of the temporary membrane structure~~,~~ or tent ~~or canopy~~.

Exceptions:

1. Separation distance between membrane structures~~,~~ and tents ~~and canopies~~ not used for cooking, is not required when the aggregate floor area does not exceed 15,000 square feet (1394 m^2).
2. Membrane structures~~,~~ or tents ~~or canopies~~ need not be separated from buildings when all of the following conditions are met:
   2.1. The aggregate floor area of the membrane structure~~,~~ or tent ~~or canopy~~ shall not exceed 10,000 square feet (929 m^2).
   2.2. The aggregate floor area of the building and membrane structure~~,~~ or tent ~~or canopy~~ shall not exceed the allowable floor area including increases as indicated in the *International Building Code*.
   2.3. Required means of egress provisions are provided for both the building and the membrane structure~~,~~ or tent or ~~canopy,~~ including travel distances.
   2.4. Fire apparatus access roads are provided in accordance with Section 503.

2403.8.3 Location of structures in excess of 15,000 square feet in area. (No change to current text)
2403.8.4 Connecting corridors. (No change to current text)

2403.8.5 Fire break. An unobstructed fire break passageway or fire road not less than 12 feet (3658 mm) wide and free from guy ropes or other obstructions shall be maintained on all sides of all tents~~, canopies~~ and membrane structures unless otherwise approved by the fire code official.

2403.9 Anchorage required. Tents~~, canopies~~ or membrane structures and their appurtenances shall be adequately roped, braced and anchored to withstand the elements of weather and prevent against collapsing. Documentation of structural stability shall be furnished to the fire code official on request.

2403.10 Temporary air-supported and air-inflated membrane structures. (No change to current text)
2403.10.1 Door operation. (No change to current text)

2403.10.2 Fabric envelope design and construction. (No change to current text)
2403.10.3 Blowers. (No change to current text)
2403.10.4 Auxiliary power. (No change to current text)

2403.11 Seating arrangements. Seating in tents~~, canopies~~ or membrane structures shall be in accordance with Chapter 10.

2403.12 Means of egress. Means of egress for temporary tents~~, canopies~~ and membrane structures shall be in accordance with Sections 2403.12.1 through 2403.12.8.

2403.12.1 Distribution. (No change to current text)
2403.12.2 Number. (No change to current text)

TABLE 2403.12.2
MINIMUM NUMBER OF MEANS OF EGRESS AND MEANS OF EGRESS WIDTHS FROM TEMPORARY MEMBRANE STRUCTURES~~,~~ AND TENTS ~~AND CANOPIES~~

OCCUPANT LOAD	MINIMUM NUMBER OF MEANS OF EGRESS	MINIMUM WIDTH OF EACH MEANS OF EGRESS (inches)	MINIMUM WIDTH OF EACH MEANS OF EGRESS (inches)
		Tent ~~or Canopy~~	Membrane Structure
10 to 199	2	72	36
200 to 499	3	72	72
500 to 999	4	96	72
1,000 to 1,999	5	120	96
2,000 to 2,999	6	120	96
Over 3,000[a]	7	120	96

For SI: 1 inch = 25.4 mm.
a. When the occupant load exceeds 3,000, the total width of means of egress (in inches) shall not be less than the total occupant load multiplied by 0.2 inches per person.

2403.12.3 Exit openings from tents. (No change to current text)
2403.12.4 Doors. (No change to current text)
2403.12.5 Aisle. (No change to current text)
2403.12.5.1 Arrangement and maintenance. (No change to current text)
2403.12.6 Exit signs. (No change to current text)
2403.12.6.1 (Supp) Exit sign illumination. (No change to current text)
2403.12.7 Means of egress illumination. (No change to current text)
2403.12.8 Maintenance of means of egress. (No change to current text)

SECTION 2404
TEMPORARY AND PERMANENT TENTS~~, CANOPIES~~ AND MEMBRANE STRUCTURES

2404.1 General. All tents~~, canopies~~ and membrane structures, both temporary and permanent, shall be in accordance with this section. Permanent tents~~, canopies~~ and membrane structures shall also comply with the *International Building Code*.

2404.2 Flame propagation performance treatment. Before a permit is granted, the owner or agent shall file with the fire code official a certificate executed by an approved testing laboratory certifying that the tents; ~~canopies and~~ membrane structures and their appurtenances; sidewalls, drops and tarpaulins; floor coverings, bunting and combustible decorative materials and effects, including sawdust when used on floors or passageways, shall be composed of material meeting the flame propagation performance criteria of NFPA 701 or shall be treated with a flame retardant in an approved manner and meet the flame propagation performance criteria of NFPA 701, and that such flame propagation performance criteria are effective for the period specified by the permit.

2404.3 Label. Membrane structures~~,~~ or tents ~~or canopies~~ shall have a permanently affixed label bearing the identification of size and fabric or material type.

2404.4 Certification. An affidavit or affirmation shall be submitted to the fire code official and a copy retained on the premises on which the tent or air-supported structure is located. The affidavit shall attest to the following information relative to the flame propagation performance criteria of the fabric:

1. Names and address of the owners of the tent~~, canopy~~ or air-supported structure.
2. Date the fabric was last treated with flame-retardant solution.
3. Trade name or kind of chemical used in treatment.
4. Name of person or firm treating the material.
5. Name of testing agency and test standard by which the fabric was tested.

2404.5 (Supp) Combustible materials. Hay, straw, shavings or similar combustible materials shall not be located within any tent~~, canopy~~ or membrane structure containing an assembly occupancy, except the materials necessary for the daily feeding and caring of animals. Sawdust and shavings utilized for a public performance or exhibit shall not be prohibited provided the sawdust and shavings are kept damp. Combustible materials shall not be permitted under stands or seats at any time.

2404.6 Smoking. Smoking shall not be permitted in tents~~, canopies~~ or membrane structures. Approved “No Smoking” signs shall be conspicuously posted in accordance with Section 310.

2404.7 Open or exposed flame. Open flame or other devices emitting flame, fire or heat or any flammable or combustible liquids, gas, charcoal or other cooking device or any other unapproved devices shall not be permitted inside or located within 20 feet (6096 mm) of the tent~~, canopy~~ or membrane structures while open to the public unless approved by the fire code official.

2404.8 Fireworks. Fireworks shall not be used within 100 feet (30 480 mm) of tents~~, canopies~~ or membrane structures.

2404.9 Spot lighting. (No change to current text)

2404.10 Safety film. Motion pictures shall not be displayed in tents~~, canopies~~ or membrane structures unless the motion picture film is safety film.

2404.11 (Supp) Clearance. (No change to current text)
2404.12 Portable fire extinguishers. (No change to current text)
2404.13 Fire protection equipment. (No change to current text)
2404.14 Occupant load factors. (No change to current text)
2404.15 Heating and cooking equipment. (No change to current text)
2404.15.1 Installation. (No change to current text)

2404.15.2 Venting. Gas, liquid and solid fuel-burning equipment designed to be vented shall be vented to the outside air as specified in the *International Fuel Gas Code* and the *International Mechanical Code*. Such vents shall be equipped with approved spark arresters when required. Where vents or flues are used, all portions of the tent~~, canopy~~ or membrane structure shall be not less than 12 inches (305 mm) from the flue or vent.

2404.15.3 Location. (No change to current text)
2404.15.4 Operations. (No change to current text)

2404.15.5 Cooking tents. Tents where cooking is performed shall be separated from other tents~~, canopies~~ or membrane structures by a minimum of 20 feet (6096 mm).

2404.15.6 Outdoor cooking. Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet (6096 mm) of a tent~~, canopy~~ or membrane structure.

2404.15.7 Electrical heating and cooking equipment. (No change to current text)

2404.16 LP-gas. (No change to current text)
2404.16.1 General. (No change to current text)

2404.16.2 Location of containers. LP-gas containers shall be located outside. Safety release valves shall be pointed away from the tent~~, canopy~~ or membrane structure.

2404.16.2.1 Containers 500 gallons or less. (No change to current text)
2404.16.2.2 Containers more than 500 gallons. (No change to current text)

2404.16.3 Protection and security. Portable LP-gas containers, piping, valves and fittings which are located outside and are being used to fuel equipment inside a tent~~, canopy~~ or membrane structure shall be adequately protected to prevent tampering, damage by vehicles or other hazards and shall be located in an approved location. Portable LP-gas containers shall be securely fastened in place to prevent unauthorized movement.

2404.17 Flammable and combustible liquids. (No change to current text)
2404.17.1 Use. (No change to current text)

2404.17.2 Flammable and combustible liquid storage. Flammable and combustible liquids shall be stored outside in an approved manner not less than 50 feet (15 240 mm) from tents~~, canopies~~ or membrane structures. Storage shall be in accordance with Chapter 34.

2404.17.3 Refueling. Refueling shall be performed in an approved location not less than 20 feet (6096 mm) from tents~~, canopies~~ or membrane structures.

2404.18 Display of motor vehicles. Liquid- and gas-fueled vehicles and equipment used for display within tents~~, canopies~~ or membrane structures shall be in accordance with Sections 2404.18.1 through 2404.18.5.3.

2404.18.1 Batteries. (No change to current text)

2404.18.2 Fuel systems. Vehicles or equipment shall not be fueled or defueled within the tent~~, canopy~~ or membrane structure.

2404.18.2.1 Quantity limit. (No change to current text)
2404.18.2.2 Inspection. (No change to current text)
2404.18.2.3 Closure. (No change to current text)
2404.18.3 Location. (No change to current text)
2404.18.4 Places of assembly. (No change to current text)

2404.18.5 Competitions and demonstrations. Liquid and gas-fueled vehicles and equipment used for competition or demonstration within a tent~~, canopy~~ or membrane structure shall comply with Sections 2404.18.5.1 through 2404.18.5.3.

2404.18.5.1 Fuel storage. (No change to current text)
2404.18.5.2 Fueling. (No change to current text)
2404.18.5.3 Spills. (No change to current text)

2404.19 Separation of generators. Generators and other internal combustion power sources shall be separated from tents~~, canopies~~ or membrane structures by a minimum of 20 feet (6096 mm) and shall be isolated from contact with the public by fencing, enclosure or other approved means.

2404.20 Standby personnel. When, in the opinion of the fire code official, it is essential for public safety in a tent~~, canopy~~ or membrane structure used as a place of assembly or any other use where people congregate, because of the number of persons, or the nature of the performance, exhibition, display, contest or activity, the owner, agent or lessee shall employ one or more qualified persons, as required and approved, to remain on duty during the times such places are open to the public, or when such activity is being conducted.

Before each performance or the start of such activity, standby personnel shall keep diligent watch for fires during the time such place is open to the public or such activity is being conducted and take prompt measures for extinguishment of fires that occur and assist in the evacuation of the public from the structure.

There shall be trained crowd managers or crowd manager supervisors at a ratio of one crowd manager/supervisor for every 250 occupants, as approved.

2404.21 (Supp) Combustible vegetation. Combustible vegetation that could create a fire hazard shall be removed from the area occupied by a tent~~, canopy~~ or membrane structure, and from areas within 30 feet (9144 mm) of such structures.

2404.22 (Supp) Combustible waste material. The floor surface inside tents~~, canopies~~ or membrane structures and the grounds outside and within a 30 foot (9144 mm) perimeter shall be kept clear of combustible waste and other combustible materials that could create a fire hazard. Such waste shall be stored in approved containers and shall be removed from the premises at least once a day during the period the structure is occupied by the public.

2. Revise as follows:

105.6.43 Temporary membrane structures~~,~~ and tents ~~and canopies.~~ An operational permit is required to operate an air-supported temporary membrane structure or a tent having an area in excess of ~~200~~ 400 square feet (~~19~~ 37 m^2)~~, or a canopy in excess of 400 square feet (37 m^2)~~.

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. ~~Fabric canopies~~ Tents open on all sides which comply with all of the following:
   2.1. Individual ~~canopies~~ tents having a maximum size of 700 square feet (65 m^2).
   2.2. The aggregate area of multiple ~~canopies~~ tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m^2) total.
   2.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.

105.7.13 Temporary membrane structures~~,~~ and tents ~~and canopies.~~ A construction permit is required to erect an air-supported temporary membrane structure or a tent having an area in excess of ~~200~~ 400 square feet (~~19~~ 37 m^2)~~,~~ ~~or a canopy in excess of 400 square feet (37 m^2)~~.

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.
3. ~~Fabric canopies~~ Tents and awnings open on all sides which comply with all of the following:
   3.1. Individual ~~canopies~~ tents shall have a maximum size of 700 square feet (65 m^2).
   3.2. The aggregate area of multiple ~~canopies~~ tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m^2) total.
   3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.

SECTION 202
GENERAL DEFINITIONS

CANOPY. ~~See Section 2402.1.~~ A structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration, and may be structurally independent or supported by attachment to a building on one end and by not less than one stanchion on the outer end.

TABLE 906.1 [IBC [F] TABLE 906.1 (Supp)]
ADDITIONAL REQUIRED PORTABLE FIRE EXTINGUISHERS

SECTION	SUBJECT
2404.12	Tents~~, canopies~~ and membrane structures

(Portions of table not shown remain unchanged)

PART II – IBC GENERAL

Revise definitions as follows:

SECTION 202
DEFINITIONS

CANOPY. ~~An~~ A permanent structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration, and shall be structurally independent or ~~and is~~ supported by ~~the~~ attachment to a building ~~to which it is attached and at the outer~~ on one end and by not less than one stanchion on the outer end. ~~A canopy is comprised of a rigid structure over which a covering is attached.~~

TENT (Supp). A structure, enclosure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported in any manner except by air or the contents it protects.

Reason: General:
The pivot point of this proposed code change affecting tents and canopies is the major difference in the way “tents” and “canopies” are defined between the building and fire codes. If it’s agreed the difference is significant and that the two codes need to be correlated, then the majority of changes needed are to be made to the fire code.

With some minor differences in the respective wording, a tent is a tent in either code. But that's not the case with canopies.

To date, the building code definition of a canopy has been broad and general enough to encompass most everything thought of in the vernacular, be it a covered walkway or the structure that stands over fuel dispensing islands.

Using the current fire code verbiage of a tent or canopy, the following fits the definition of a tent:

This photo fits the definition of a canopy, and at the same time, fits the building code definition of a tent:

In the vernacular, the following are examples of canopies in the building code:

The above photo is also addressed in the fire code as a canopy but it doesn't fit the fire code definition.

Definitions:

The proposed change to the definition of canopy in both codes is to ensure what's being described still includes everything previously thought of in the vernacular but to the exclusion of the fire code's current definition of a canopy which is essentially a tent without sidewalls. Therefore, the definition of canopy is proposed for deletion and relocation in the fire code so as to cover the multiple applications currently found in the code.

By example, while the current definition of canopy in the fire code is found in Chapter 24 Tents, Canopies and Other Membrane Structures, the context and application of a canopy is totally out sync with how canopies are addressed in Chapter 22, Motor Fuel-Dispensing Facilities and Repair Garages. Unlike the temporary nature of tents and canopies in an unchanged Chapter 24, through Chapter 22, canopies are basically independent structures with some permanence expected. In addition, the building code uses the fire code as a reference for the design and construction of canopies at fueling stations. (See IBC Sections 406.5.2, 406.5.2.1 and 2606.10.) By redefining canopies as proposed and locating the revised definition in IFC Chapter 2, it will apply to all sections of the code where canopies are addressed.

Through this proposal, there is no attempt to change the current numerical values found in the code as they relate to exit discharge capacity, the number of exits, occupancy load, etc. What is desired is to change the definitions in both codes to ensure both codes comport with each other.

Code side-by-side comparison:
Attached is a comparison of the building and fire code to help illustrate the need to revise and correlate the definitions of tents and canopies, and how the technical applications of the codes get applied.

IBC Definition	IFC Definition	Permit Thresholds		Proposed change to IBC and IFC	Webster's 3rd New International Dictionary (as referenced in IFC Section 201.4)
		IBC	IFC		
AWNING. An architectural projection that provides weather protection, identity or decoration and is wholly supported by the building to which it is attached. An awning is comprised of a lightweight, rigid skeleton structure over which a covering is attached.	Silent. Not defined.				
CANOPY. An architectural projection that provides weather protection, identity or decoration and is supported by the building to which it is attached and at the outer end by not less than one stanchion. A canopy is comprised of a rigid structure over which a covering is attached.	**CANOPY.** A structure, enclosure or shelter constructed of fabric or pliable materials supported by any manner, except by air or the contents it protects, and is open without sidewalls or drops on 75 percent or more of the perimeter.	>0 sq. ft.	>400 sq. ft.	**Canopy.** A structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration, and may be structurally independent or supported by attachment to a building on one end by not less than one stanchion on the outer end.	**Canopy. 1:** a covering usu. For shelter or protection **a:** a covering usu. of cloth suspended from the four high posts of a bed **d:** a temporary or permanent cover providing shelter and decoration (as over a door or window) **f:** an awning or marquee often stretching from doorway to curb or covering a section of grandstand.
TENT. Any structure, enclosure or shelter which is constructed of canvas or pliable material supported in any manner except by air or the contents it protects.	**TENT.** A structure, enclosure or shelter constructed of fabric or pliable material supported by any manner except by air or the contents that it protects.	>120 sq. ft. (Sec. 3103.1.1)	>200 sq. ft. Exception: Aggregate (w/ less than 12 ft. fire break) or individual fabric canopies = or <700 sq. ft.	**TENT.** A structure, enclosure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported by any manner except by air or the contents that it protects.	**Tent. 1:** a collapsible shelter of canvas or other material stretched and sustained by poles, usu. made fast by ropes attached to pegs hammered into the ground, and used for camping outdoors (as by soldiers or vacationers) or as a temporary building (as for theatrical performance) **3:** something that resembles a tent or that servers as a shelter

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES									
IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC			
	Canopy		Tents			Canopy		Tents	
1 Administration					1 Administration	105.6.43	Operational permit threshold	105.6.43	Operational permit threshold
						105.7.13	Construction permit threshold	105.7.13	Construction permit threshold
2 Definitions	202	Definition of canopy	202	Definition of tent	2 Definitions				
3 Use and Occupancy Classification					3 General precautions against fire	315.3.1	Storage prohibitions under unsprinklered "eaves, canopies or other projections or		

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES									
IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC			
	Canopy		Tents			Canopy		Tents	
							overhangs".		
4 Special detailed requirements based on use and occupancy	406.5.2	Motor fuel dispensing facilities							
	406.5.2.1	Motor fuel dispensing facilities for hydrogen							
					6 Building services and systems			604.2.9	Emergency power for exit signs in temporary tents
7 Fire-resistance rated construction	705.5.2	Fire walls to extend to outer edge of canopies							
					9 Fire protections systems	T903.2.13	Cross ref for add req fire ext for Hydrogen fueling area canopies		
						T906.1	Additional required fire extinguishers	T906.1	Additional required fire extinguishers
10 Means of egress	1025.6.2.2	Smoke protected seating; roof height			10 Means of egress	1025.6.2.2	Smoke protected seating; roof height		
16 Structural design	T1607.1 (30)	Uniform and concentrated live loads from canopies							
	1607.11.2.4	Ref to T1607.1, Sec 1608 &1609 for uniform live loads of canopies							
					22 Motor fuel-dispensing and repair garages	2202.1	Motor fuel-dispensing facilities; definition of "dispensing device, overhead type" under canopies		
						2203.1(2) Exce	Location of fuel dispensing devices		
						2207.4 Excep	LP dispensing under canopies		
						2208.3.1 Excep	CNG dispensing under canopies		
						T2209.3.1 Note c	Minimum separation for gaseous dispensers from other features		
						2209.3.2.6	Motor fuel-dispensing facilities; canopy tops – hydrogen		
						2209.3.2.6.1	Motor fuel-dispensing facilities;		

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES									
IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC			
	Canopy		Tents			Canopy		Tents	
							canopy top construction – hydrogen – refers to IBC 406.5		
						2209.3.2.6.2	Required automatic fire extinguishing system under fueling canopies		
						2209.3.2.6.2.1	Motor fuel-dispensing facility; Emergency hydrogen discharge from canopy		
						2209.3.2.6.3	Motor fuel-dispensing facility; hydrogen canopy signage		
						2209.3.3	Canopy design to prevent hydrogen gas accumulation		
						2209.5.4.1	Location of hydrogen vent not to be under canopy		
					24 Tents, canopies and other membrane structures	2401.1	Scoping of Canopies	2401.1	Scoping of Tents
						2402.1	Definition of canopy	2402.1	Definition of tent
						2403.1	General statement of compliance to section	2403.1	General statement of compliance to section
						2403.2	Approval threshold and exceptions	2403.2	Approval threshold and exceptions
						2403.5	Limitation of 180 days for temporary canopies	2403.5	Limitation of 180 days for temporary tents
						2403.6	Construction documents	2403.6	Construction documents
						2403.8	Access location and parking for temporary canopies	2403.8	Access location and parking for temporary tents
						2403.8.2	Canopy location with exceptions	2403.8.2	Tent location with exceptions
								2403.8.4	Connecting corridors between tents
						2403.8.5	Required fire break around canopies	2403.8.5	Required fire break around tents
						2403.9	Adequate anchorage requirement	2403.9	Adequate anchorage requirement
						2403.11	Seating in canopies to comply w/ Chap 10	2403.11	Seating in tents to comply w/ Chap 10
						2403.12	Means of egress	2403.12	Means of egress

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES

IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC			
	Canopy		Tents			Canopy		Tents	
						2403.12.1	Means of egress distribution	2403.12.1	Means of egress distribution
						2403.12.2 & T 2403.12.2	Number of means of egress	2403.12.2 & T 2403.12.2	Number of means of egress
						2404.1	Temp canopies to comply w/ IFC Permanent canopies to also comply w/ IBC	2404.1	Temp tents to comply w/ IFC. Permanent tents to also comply w/ IBC
						2404.2	Canopy material to comply w/ 701	2404.2	Tent material to comply w/ 701
						2404.3	Canopy material label requirement	2404.3	Tent material label requirement
						2404.4	Certification requirement about fabric treatment	2404.4	Certification requirement about fabric treatment
						2404.5	Proximity of combustible materials	2404.5	Proximity of combustible materials
						2404.6	Smoking prohibition	2404.6	Smoking prohibition
						2404.7	Proximity of open flames	2404.7	Proximity of open flames
						2404.8	No fireworks w/in 100 feet of canopy	2404.8	No fireworks w/in 100 feet of tent
						2404.10	Restriction against showing movies under canopies unless using safety film	2404.10	Restriction against showing movies under tents unless using safety film
						2404.15.2	Venting of heating & cooking equip.	2404.15.2	Venting of heating & cooking equip.
						2404.15.5	Canopy separation from cooking tents	2404.15.5	Cooking tent separation from other tents
						2404.15.6	Proximity of outdoor cooking (grease & sparks)	2404.15.6	Proximity of outdoor cooking (grease & sparks)
						2404.16.2	Location of LP-gas containers	2404.16.2	Location of LP-gas containers
						2404.16.3	LP-gas container security	2404.16.3	LP-gas container security
						2404.17.1	Prohibition against using flammable liquid fueled equipment in canopies	2404.17.1	Prohibition against using flammable liquid fueled equipment in tents
						2404.17.2	Separation requirement between canopy and flammable liquid storage	2404.17.2	Separation requirement between tent and flammable liquid

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES									
IBC Chapter and Subject	**IBC**				**IFC Chapter and Subject**	**IFC**			
	Canopy		**Tents**			**Canopy**		**Tents**	
									storage
						2404.18	Display of motor vehicles	2404.18	Display of motor vehicles
						2404.18.2	Prohibition of fueling vehicles in canopies	2404.18.2	Prohibition of fueling vehicles in tents
						2404.18.5	Fuel-fired vehicle competitions & demo under canopy	2404.18.5	Fuel-fired vehicle competitions & demo under tent
						2404.19	Separation of generators from canopies	2404.19	Separation of generators from tent
						2404.20	Standby personnel; fire watch	2404.20	Standby personnel; fire watch
						2404.21	Vegetation removal	2404.21	Vegetation removal
						2404.22	Required removal or clearance of waste material from canopies	2404.22	Required removal or clearance of waste material from tent
26 Plastic	2606.10	Criteria for light-transmitting plastics used in canopies at motor fuel-dispensing facilities							
			2702.2.9	Emergency power for exit signs					
31 Special construction	3101.1	Scoping for canopies							
			3103.1	Temp tents (<180 days) to comply w/ IFC. Permanent tents to comply w/ IBC provisions.					
			3103.4	Temporary structures to comply with Chap 10					
	3105.1	General reference for canopy requirements							
	3105.3	Reference to Chap 16 for wind or lateral loads and live loads for canopies							
	3105.4	Canopy materials; flame spread							
32 Encroachments into the public right-of-way	3201.4	Limit of drainage water from canopy to encroach upon public right-of-way							

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES									
IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC			
	Canopy		Tents			Canopy		Tents	
	3202.3.1	Limit of encroachment of canopy structure to public right-of-way							
33 Safeguards during construction	3306.7	Canopy height over walkway							
Appendix D Fire Districts	D102.2.8	Permanent canopies in fire districts							

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

PART I – IFC
Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a needed clarification and improved correlation between the tent and canopy provisions of the IBC and those of the IFC. It was observed, however, that the lack of a definition for canopy in the IFC may become problematic later on. The action is also consistent with the action of the IBC-General Committee on Part II.

Assembly Action: **None**

PART II – IBC GENERAL
Committee Action: **Approved as Submitted**

Committee Reason: Clarifies within the IBC the difference between a tent-like structure and permanent canopy structure such as those used in locations such as fuel service stations.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted for Part I.

Public Comment:

Daniel E. Nichols, New York State Division of Code Enforcement and Administration, representing himself, requests Approval as Modified by this public comment.

Modify proposal as follows:

2404.15.5 Cooking tents. Tents with sidewalls or drops where cooking is performed shall be separated from other tents or membrane structures by a minimum of 20 feet (6096 mm).

(Portions of proposal not shown remain unchanged)

Commenter's Reason: This code proposal was to remove the term 'canopy' and make it synonymous with the term 'tent', both of which are currently defined within the IFC. A comparison table has been provided within the code change proposal showing how the terms are essentially treated the same. However, the subtle change to Section 2404.15.5 drastically changes its meaning.

Currently, IFC Section 2404.15.5 requires tents used for cooking to be separated from other canopies, tents, or other membrane structures by a distance of 20 feet. The difference is that cooking is permitted to be performed in a canopy (tent without sides) and not meet the separation requirements. Clearly, this is more than an editorial change.

The reason for this being such a large change is that many Health Departments (including the State of New York Department of Health) do not find it acceptable to carry food from one tent to another without a covering overhead. The use of a 'canopy' to cook in allows another canopy to be connected as a walkway and then the seating/serving area.

This comment adds the term 'with sidewalls or drops' after the term 'tent' to reintroduce the difference currently recognized in the IFC.

Final Hearing Results

F243-07/08, Part I	**AMPC**
F243-07/08, Part II	**AS**

Code Change No: F244-07/08

Original Proposal

Section: 2502.2

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

2505.2 Separation of piles. Individual tire storage piles shall be separated ~~from other piles of salvage~~ by a clear space of at least 40 feet (12 192 mm).

Reason: This code change proposes to remove these words, and as a result clear up the confusion in this section. The separation distances are intended to apply to all tires, new, used or otherwise and provide a separation distance between piles. The word salvage limits the application of this section to only salvage tire piles. The fire load is as significant in the salvage pile as it is in the new tire piles. This proposal will provide for application of the 40 foot separation distance to all piles.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

2505.2 Separation of piles. Individual tire storage piles shall be separated <u>from other piles</u> by a clear space of at least 40 feet (12 192 mm).

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will remove the limiting language from the section. The modification is consistent with the proponent's reason statement and restores and further clarifies the original intent of the section.

Assembly Action: **None**

Final Hearing Results

F244-07/08	**AM**

Code Change No: F245-07/08

Original Proposal

Sections: 2701.2.2.1, 2702.1 (IBC [F] 307.2)

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

1. Revise as follows:

2701.2.2.1 Physical hazards. The material categories listed in this section are classified as physical hazards. A material with a primary classification as a physical hazard can also pose a health hazard.

1. Explosives and blasting agents.
2. Flammable and combustible liquids.
3. Flammable solids ~~and gases~~.
4. Organic peroxide materials.
5. Oxidizer materials.
6. Pyrophoric materials.
7. Unstable (reactive) materials.
8. Water-reactive solids and liquids.
9. Cryogenic fluids.
10. Compressed gases.

2. Revise definition as follows:

2702.1 (IBC [F] 307.2) Definitions. The following words and terms shall, for the purposes of this chapter, Chapters 28 through 44 and as used elsewhere in this code, have the meanings shown herein.

PHYSICAL HAZARD. A chemical for which there is evidence that it is a combustible liquid, compressed gas, cryogenic, explosive, ~~flammable gas,~~ flammable liquid, flammable solid, organic peroxide, oxidizer, pyrophoric or unstable (reactive) or water-reactive material.

Reason: All compressed gases are physical hazards by definition. Those gases that are regulated as either physical or health hazards within the context of Chapter 27 are identified in Tables 2703.1.1(1) through 2703.1.1(4). Compressed gases with no listed MAQ are not regulated within Chapter 27; however, they are regulated by Chapter 30.

Deleting the term "and gases" from item 3 of Section 2701.2.2.1 and adding a general category of "compressed gases" and deleting the term "flammable gas" from the definition will correlate this section with the definition of physical hazard.

Revision of the term physical hazard has been made to delete "flammable gas" as it is redundant to the category of "compressed gas."

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: Disapproved at the request of the proponent who wishes to revise the proposal to reflect a consensus that has been reached on how to better deal with physical and health hazards since the proposal was first submitted.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Larry Fluer, Fluer, Inc., representing Compressed Gas Association, requests Approval as Modified by this public comment.

Modify proposal as follows:

2701.2.2.1 Physical hazards. The material categories listed in this section are classified as physical hazards. A material with a primary classification as a physical hazard can also pose a health hazard.

1. Explosives and blasting agents.
2. ~~Flammable and~~ Combustible liquids.
3. Flammable solids, liquids and gases.
4. Organic peroxide ~~materials~~ solids or liquids.
5. Oxidizer ~~materials~~ solids or liquids.
6. Oxidizing gases.

~~6.~~ 7. Pyrophoric ~~materials~~ solids, liquids or gases.
~~7.~~ 8. Unstable (reactive) materials solids, liquids or gases.
~~8.~~ 9. Water-reactive materials solids ~~and~~ or liquids.
~~9.~~ 10. Cryogenic fluids.
~~10. Compressed gases.~~

2702.1 (IBC [F] 307.2) Definitions. The following words and terms shall, for the purposes of this chapter, Chapters 28 through 44 and as used elsewhere in this code, have the meanings shown herein.

PHYSICAL HAZARD. A chemical for which there is evidence that it is a combustible liquid, ~~compressed gas,~~ cryogenic fluid, explosive, flammable solid, liquid or gas, ~~flammable liquid, flammable solid,~~ organic peroxide solid or liquid, oxidizer solid or liquid, oxidizing gas, pyrophoric solids, liquid or gas or unstable (reactive) materials solid, liquid or gas or water-reactive materials, solid or liquid.

Commenter's Reason: The original submittal was initially triggered by the introduction of a definition for oxidizing gases and changes in terminology to clarify the differences between "oxidizer, solids and liquids" vs. oxidizing gases. During discussion with participants at the committee hearings a concern was raised with the inclusion of a general category of "compressed gas" to the list of physical hazards even though the term was used within the definition itself.

The proposed modification adds oxidizing gases to the list of items in Section 2701.2.2.1 and correlates the terminology used in the definition with that used in the list of materials. The apparent inconsistency in terminology for unstable and water reactive materials is driven by the definitions as they appear in material specific chapters 43 and 44 respectively using the term "unstable (reactive) material" to include solids, liquids and gases and the term "water-reactive material" to describe the material regulated which is limited to the solid and liquid form of materials in this category.

Approval of this modification will bring consistency between the definition of physical hazard and the list of materials regulated as physical hazards within the context of the IFC.

Final Hearing Results

F245-07/08 AMPC

Code Change No: F246-07/08

Original Proposal

Sections: 2701.5.1, 2701.5.2, Appendix H

Proponents: William Winslow, representing Washington State Association of Fire Marshals; Pat McLaughlin, representing Sherwin Williams Company

1. Revise as follows:

2701.5.1 Hazardous Materials Management Plan. Where required by the fire code official, ~~each~~ an application for a permit shall include a Hazardous Materials Management Plan (HMMP). The HMMP shall include a facility site plan designating the following:

1. Access to each storage and use area~~s~~.
2. ~~Maximum amount of each material stored or used in each area.~~ Location of emergency equipment.
3. ~~Range of container sizes.~~ Location where liaison will meet emergency responders.
4. ~~Locations of emergency isolation and mitigation valves and devices.~~ Facility evacuation meeting point locations.
5. ~~Product conveying piping containing liquids or gases, other than utility-owned fuel gas lines and low-pressure fuel gas lines.~~ The general purpose of other areas within the building.
6. ~~On and off positions of valves for valves that are of the self-indicating type.~~ Location of all aboveground and underground tanks and their appurtenances including, but not limited to, sumps, vaults, below-grade treatment systems, and piping.
7. ~~Storage plan showing the intended storage arrangement, including the location and dimensions of aisles.~~ The hazard classes in each area.
8. ~~The location and type of emergency equipment. The plans shall be legible and drawn approximately to scale. Separate distribution systems are allowed to be shown on separate pages.~~ Show locations of all control areas and Group H occupancies.
9. The emergency exits.

2701.5.2 Hazardous Materials Inventory Statement (HMIS). Where required by the fire code official, an application for a permit shall include a~~n~~ HMIS, such as SARA (Superfund Amendments and Reauthorization Act of 1986) Title III, Tier II Report, or other approved statement. The HMIS shall include the following information:

1. ~~Manufacturer's~~ Product name.
2. ~~Chemical name, trade names, hazardous ingredients~~ Component.
3. ~~Hazard classification~~ Chemical Abstract Service (CAS) Number.
4. ~~MSDS or equivalent~~ Location where stored or used.
5. ~~United Nations (UN), North America (NA) or the Chemical Abstract Service (CAS) identification number~~ Container size.
6. ~~Maximum quantity stored or used on site at one time~~ Hazard classification.
7. Amount in storage ~~conditions related to the storage type, temperature and pressure~~.
8. Amount in use-closed systems.
9. Amount in use-open systems.

2. Delete Appendix H (Supp) in its entirety and substitute a new Appendix H, including Instructions and Figures 1 through 6 as follows:

APPENDIX H
HAZARDOUS MATERIALS MANAGEMENT PLAN (HMMP) AND HAZARDOUS MATERIALS INVENTORY STATEMENT (HMIS) INSTRUCTIONS

SECTION H101 – HMMP

1.1 Part A (See Example Format in Figure 1)

1.1.1 Fill out items and sign the declaration.

1.1.2 Part A of this section is required to be updated and submitted annually, or within 30 days of a process or management change.

1.2 Part B – General Facility Description / Site Plan (See Example Format in Figure 2)

1.2.1 Provide a site plan on 8½- by 11-inch (215 mm by 279 mm) paper, showing the locations of all buildings, structures, outdoor chemical control or storage and use areas, parking lots, internal roads, storm and sanitary sewers, wells, and adjacent property uses. Indicate the approximate scale, northern direction and date the drawing was completed.

1.3 Part C – Facility Storage Map - Confidential Information (See Example Format in Figure 3)

1.3.1 Provide a floor plan of each building identified on the site plan as containing hazardous materials on 8½- by 11-inch (215 mm by 279 mm) paper, identifying the northern direction, and showing the location of each storage and use area.

1.3.2 Identify storage and use areas, including hazard waste storage areas

1.3.3 Show the following:

1.3.3.1 Accesses to each storage and use area.

1.3.3.2 Location of emergency equipment.

1.3.3.3 Location where liaison will meet emergency responders.

1.3.3.4 Facility evacuation meeting point locations.

1.3.3.5 The general purpose of other areas within the building.

1.3.3.6 Location of all aboveground and underground tanks to include sumps, vaults, below-grade treatment systems, piping, etc.

1.3.3.7 Show hazard classes in each area.

1.3.3.8 Show locations of all H occupancies, control areas, and exterior storage and use areas.

1.3.3.9 Show emergency exits.

SECTION H102 – HMIS

2.1 Inventory Statement

2.1.1 HMIS Summary Report (See Example Format in Figure 4).

2.1.1.1 Complete a summary report for each control area and H occupancy.

2.1.1.2 The storage summary report includes the HMIS Inventory Report amounts in storage, use-closed, and use-open conditions.

2.1.1.3 Provide separate summary reports for storage, use-closed and use-open conditions.

2.1.1.4 IBC/IFC Hazard Class.

2.1.1.5 Inventory Amount. (Solid (lb), Liquid (gal), Gas (cu ft, gal or lbs)).

2.1.1.6 IBC/IFC Maximum Allowable Quantity. (If applicable, double MAQ for sprinkler protection and/or storage in cabinets. For wholesale and retail sales occupancies, go to Tables 2703.11.1 and 3404.3.4.1 for MAQs.).

2.1.2 HMIS Inventory Report (See Example Format in Figure 5).
2.1.2.1 Complete an inventory report by listing products by location.
2.1.2.2 Product Name
2.1.2.3 Components (For mixtures specify percentages of major components if available)
2.1.2.4 CAS Number. (For mixtures list CAS Numbers of major components if available).
2.1.2.5 Location. (Identify the control area or, if it is an H occupancy, provide the classification, such as H-2, H-3, etc).
2.1.2.6 Container > 55 gal. (If product container, vessel or tank could exceed 55 gallons, indicate yes in column).
2.1.2.7 Hazard Classification. (List applicable classifications for each product).
2.1.2.8 Stored. (Amount of product in storage conditions).
2.1.2.9 Closed. (Amount of product in use-closed systems).
2.1.2.10 Open. (Amount of product in use-open systems).

SECTION H103 – EMERGENCY PLAN

3.1 Emergency Notification (See Example Format in Figure 6)
3.2 Where OSHA or State regulations require a facility to have either an Emergency Action Plan (EAP) or an Emergency Response Plan (ERP), the EAP or ERP shall be included as part of the HMMP.

FIGURE 1
HAZARDOUS MATERIALS MANAGEMENT PLAN
SECTION I: FACILITY DESCRIPTION

PART A – GENERAL INFORMATION

1. Business Name: _____Phone: _____
   Address:_____
   _____

2. Person Responsible for the Business:

Name	Title	Phone
_____	_____	_____

3. Emergency Contacts:

Name	Title	Home Number	Work Number
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

4. Person Responsible for the Application/Principal Contact:

Name	Title	Phone
_____	_____	_____

5. Principal Business Activity:
   _____
   _____
   _____

6. Number of Employees: _____

7. Number of Shifts: _____
   a. Number of Employees per Shift:
   _____
   _____
   _____

8. Hours of Operation:

FIGURE 2
HAZARDOUS MATERIALS MANAGEMENT PLAN
SECTION I: FACILITY DESCRIPTION

PART B – GENERAL FACILITY DESCRIPTION/SITE PLAN

_____
_____
_____
_____
_____
_____
_____
_____
_____

FIGURE 3
HAZARDOUS MATERIALS MANAGEMENT PLAN

SECTION I: FACILITY DESCRIPTION

PART C – FACILITY MAP

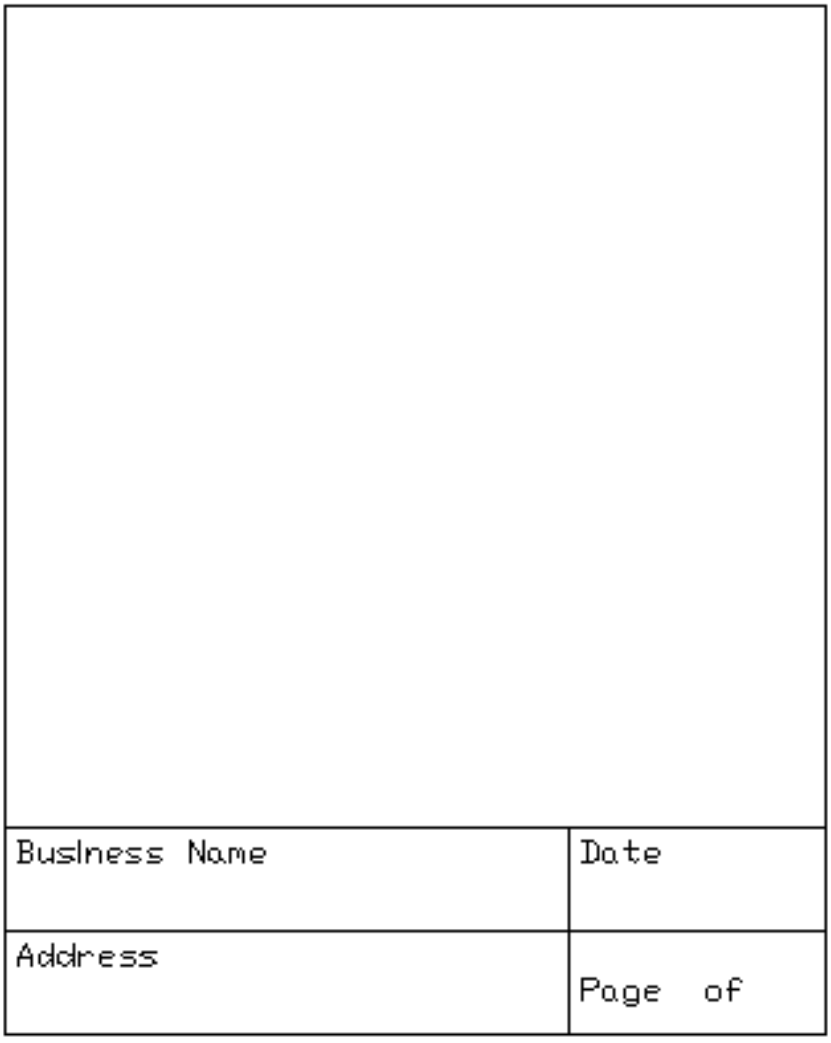

FIGURE 4

SECTION II - HAZARDOUS MATERIALS INVENTORY STATEMENT (HMIS)

HMIS SUMMARY REPORT [1]

(Storage [2] Conditions)[3]

IBC/IFC HAZARD CLASS	HAZARD CLASS	INVENTORY AMOUNT			IBC/IFC MAXIMUM ALLOWABLE QUANTITY[4]		
	(Abbrev)	Solid (lb)	Liquid (gal)	Gas (cu ft, gal, lb)	Solid (lb)	Liquid (gal)	Gas (cu ft, gal, lb)
Combustible Liquid	C2		5			120	
	C3A					330	
	C3B		6			13200	
Combustible Fiber	Loose Baled						
Cryogenics, Flammable	CryO-Flam					45	
Cryogenics, Oxidizing	CryO-Ox					45	
Flammable Gas	FLG						
(Gaseous)				150			1000
(Liquefied)						30	
Flammable Liquid	F1A					30	
	F1B & F1C		5			120	
Combination (1A, 1B, 1C)			5			120	
Flammable Solid	FLS				125		
Organic Peroxide	OPU				0		
	OP1				5		
	OP2				50		
	OP3				125		
	OP4				NL		
	OP5				NL		
Oxidizer	OX4				0		
	OX3				10		
	OX2				250		
	OX1				4000		

(1) Complete a summary report for each control area and H occupancy.

(2) Storage = storage + use-closed + use-open systems

(3) Separate reports are required for use-closed and use-open systems

(4) Include increases for sprinklers or storage in cabinets, if applicable

(This is an example, add additional hazard classes as needed)

FIGURE 5
SECTION II - HAZARDOUS MATERIALS INVENTORY STATEMENT (HMIS)
HMIS INVENTORY REPORT

(Sort Products Alphabetically by Location of Product and then Alphabetically by Product Name)

Product Name (Components)[3]	CAS Number	Location [1]	Container > 55 gal [2]	Haz Class 1	Haz Class 2	Haz Class 3	Stored (lbs)	Stored (gal)	Stored gas[4]	Closed (lbs)	Closed (gal)	Closed gas[4]	Open (lbs)	Open (gal)
ACETYLENE (Acetylene gas)	74-86-2	Control Area 1		FLG	UR2				150					
BLACK AEROSOL SPRAY PAINT (Mixture)	Mixture	Control Area 1		A-L3			24							
GASOLINE, UNLEADED (Gasoline-Mixture (Methyl-t-Butyl Ether-15%; Diisopropyl Ether-7%; Ethanol-11%; Toluene-12%; Xylene-11%))	8006-61-9 1634-04-4 108-20-3 64-17-5 108-88-3 1330-20-7	Control Area 1		F1B				5						
MOTOR OIL 1040 (Hydrotreated Heavy Paraffinic Distillate-85%; Additivies-20%)	64742-54-7 Mixture	Control Area 1		C3B				3						
DIESEL (Diesel - 99-100%; Additives)	68476-34-6 Proprietary	Control Area 2	Yes	C2				225						
TRANSMISSION FLUID (Oil-Solvent Neutral; Performance Additives)	64742-65-0	Control Area 2		C3B				3						
OXYGEN, GAS (Oxygen)	7782-44-7	H-3		OXG					5000					

(1) Identify the control area or, if it is an H occupancy, provide the classification, such as H-2, H-3, etc.
(2) If the product container, vessel, or tank could exceed 55 gallons, indicate yes in the column.
(3) Specify percentages of main components if available
(4) In cubic feet, gallons, or pounds

FIGURE 6
HAZARDOUS MATERIALS MANAGEMENT PLAN
SECTION III: EMERGENCY PLAN

1. In the event of an emergency, the following shall be notified:
a. Facility Liaison

Name	Title	Home Phone	Cell Phone
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

b. Agency

Agency	Contact	Phone Number
Fire Department	_____	_____
LEPC	_____	_____
Other	_____	_____

Reason: IFC Sections 2701.5.1 and 2701.5.2 specify the contents of a Hazardous Materials Management Plan and a Hazardous Materials Inventory Statement when these documents are required by the Fire Code Official. In the 2006 – 2007 code development cycle, Appendix H, covering HMMPs and HMISs, was added to the IFC. The materials in this appendix were taken from the Uniform Fire Code. At the time of its adoption, there was broad agreement among fire service and industry representatives that Sections 2701.5.1, 2701.5.2 and Appendix H needed modifications to make them useful for the code official and cost effective for businesses. These new Sections 2701.5.1, 2701.5.2 and Appendix H were the result of a collaborative effort by the Washington State Association of Fire Marshals and Sherwin Williams Company. They focus on three important goals. First, the HMMP includes information that fire department operations personnel need before and during an emergency response. Second, the HMMP and HMIS provide hazardous materials storage and use information necessary for inspectors. Third, the HMIS is formatted so that plan reviewers can determine the correct occupancy classifications. The amounts of each hazard class in storage and use and the applicable Maximum Allowable Quantities are provided in the HMIS. This coordinates with IFC code change proposal F22306/07, which was approved as modified at the final action hearings in Rochester, New York. This proposal requires the total of each hazard class to be provided in the HMIS.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

Add a new section to Appendix H as follows:

1.4 HMMP short form. Facilities with the maximum allowable quantities or less per control area in Tables 2703.3.3(10) through 2703.1.1(4) and where the threshold planning quantities at 40 CFR Part 355, Sections 302 and 304 are not exceeded, shall be allowed to file a short-form HMMP which shall include the following components.

1.4.1. General facility information:
1.4.2. A simple line drawing of the facility showing the location of storage facilities and indicating the hazard class or classes and physical state of the hazardous materials being stored;
1.4.3. Information that the hazardous materials will be stored and handled in a safe manner and will be appropriately contained, separated and monitored, and
1.4.4. Assurance that security precautions have been take, employees have been appropriately trained to handle the hazardous materials and react to emergency situations, adequate labeling and warning signs are posted, adequate emergency equipment is maintained and the disposal of hazardous materials will be in an appropriate manner.

Add an introduction to Section H102, as follows:

Facilities which have prepared, filed and submitted a Tier II Inventory Report required by the U.S. Environmental Protection Agency (USEPA) or required by a state which has secured USEPA approval for a similar form shall be deemed to have complied with this section.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that the proponents had reached agreement on Appendix H format and contents and had appropriately responded to the committee's suggestions in the last cycle. It was suggested that the appendix could be improved by creating a separate section on emergency preparedness/emergency response and to move the items related to those topics out of their current locations in the HMMP section. The modification provides a useful "short form" HMMP that has been accepted by the proponents for facilities not classified in Group H (i.e., having no more than the MAQ per control area).

Assembly Action: **None**

Final Hearing Results

F246-07/08 **AM**

Code Change No: F247-07/08

Original Proposal

Table 2703.1.1(1) [IBC [F] Table 307.1(1)], Table 2703.1.1(3)

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

Revise tables as follows:

TABLE 2703.1.1(1) [IBC [F] 307.1(1)](Supp)
MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIAL POSING A PHYSICAL HAZARD[a,j,m,n,p]

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE[b]			USE-CLOSED SYSTEMS[b]			USE-OPEN SYSTEMS[b]	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)
Inert gas	Gaseous	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable
	Liquefied	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable
Cryogenic Inert	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable

(Portions of table and footnotes not shown remain unchanged)

TABLE 2703.1.1(3) (Supp)
MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIAL POSING A PHYSICAL HAZARD IN AN OUTDOOR CONTROL AREA[a,b,c]

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE[b]			USE-CLOSED SYSTEMS[b]			USE-OPEN SYSTEMS[b]	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)
Inert gas	Gaseous	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable
	Liquefied	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable
Cryogenic Inert	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable

(Portions of table and footnotes not shown remain unchanged)

Reason: Permits are required for inert gases when exceeding the amounts indicated in Tables 105.6.8 and 105.6.10; however, occupancy is not determined based on a quantity of inert gas. With respect to the table inert gases should be treated in a manner similar to Unstable Reactive or Water Reactive Class 1 materials where the quantity is indicated as “unlimited.” This change will coordinate the MAQ tables with Section 2701.2.2.1 which lists cryogens and the definition of physical hazard in Section 2702.1 which lists definitions and includes all “compressed gases.”

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that the additional table entries will provide needed guidance to the fire code official in determining occupancy Group H.

Assembly Action: **None**

Final Hearing Results

F247-07/08 **AS**

Code Change No: F249-07/08

Original Proposal

Section: 2703.2.1, Chapter 45

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing Steel Tank Institute

1. Revise as follows:

2703.2.1 Design and construction of containers, cylinders and tanks. Containers, cylinders and tanks shall be designed and constructed in accordance with approved standards. Containers, cylinders, tanks and other means used for containment of hazardous materials shall be of an approved type. Pressure vessels shall comply with the ASME *Boiler and Pressure Vessel Code*.

2. Revise Chapter 45 as follows:

ASME

BPVC-~~2001~~ 2004 ASME Boiler and Pressure Vessel Code

Reason: Although the ASME Boiler and Pressure Vessel Code is the nationally recognized general standard for construction of pressure vessels, there is no direct link to this standard as a basis for constructing pressure vessels containing hazardous materials. The shortcoming of such a general reference for pressure vessel construction was noted in a recent U.S. Chemical Safety Board report on a 2004 explosion at Marcus Oil in Houston, Texas.

Likewise, a similar is also missing for vessels that do not contain hazardous materials, which are regulated in the IMC. A separate proposal has been submitted to the IMC to accomplish that change.

For specific cases where alternative standards may be appropriate, such as DOT standards for compressed gases as an example, material or process specific chapters provide these alternatives, and the code will recognize the hierarchy of specific provisions trumping general provisions to permit these alternatives.

The referenced edition of the BPVC has been updated to 2004, which is the most current edition. This correlates with the edition adopted by the IMC.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide technical specifications for pressure vessels.

Assembly Action: **None**

Final Hearing Results

F249-07/08 **AS**

Code Change No: F252-07/08

Original Proposal

Section: 2703.2.9

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

2703.2.9 Testing. The equipment, devices and systems listed in Section 2703.2.9.1 shall be tested at the time of installation and at one of the intervals listed in Section 2703.2.9.2. Written records of the tests conducted or maintenance performed shall be maintained in accordance with the provisions of Section 107.2.1.

Exceptions:

1. Testing shall not be required where approved written documentation is provided stating that testing will damage the equipment, device or system and the equipment, device or system is maintained as specified by the manufacturer.
2. Testing shall not be required for equipment, devices and systems that fail in a fail-safe manner.
3. Testing shall not be required for equipment, devices and systems that self-diagnose and report trouble. Records of the self-diagnosis and trouble reporting shall be made available to the fire code official.
4. Testing shall not be required if system activation occurs during the required test cycle for the components activated during the test cycle.
5. Approved maintenance in accordance with Section 2703.2.6 that is performed not less than annually or in accordance with an approved schedule shall be allowed to meet the testing requirements set forth in Sections 2703.2.9.1 and 2703.2.9.2.

Reason: This code change proposal is a clarification. New equipment, systems, and devices regulated by 2703.2.9 need to be tested at the time of installation to ensure that they operate as intended. It is standard practice to test new fire detection and alarm systems. This should be the same for new hazardous materials safety systems, equipment, and devices.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

2703.2.9 Testing. The equipment, devices and systems listed in Section 2703.2.9.1 shall be tested at the time of installation and at one of the intervals listed in Section 2703.2.9.2. Written records of the tests conducted or maintenance performed shall be maintained in accordance with the provisions of Section 107.2.1.

Exceptions:

1. Periodic ~~T~~ testing shall not be required where approved written documentation is provided stating that testing will damage the equipment, device or system and the equipment, device or system is maintained as specified by the manufacturer.
2. Periodic ~~T~~ testing shall not be required for equipment, devices and systems that fail in a fail-safe manner.
3. Periodic ~~T~~ testing shall not be required for equipment, devices and systems that self-diagnose and report trouble. Records of the self-diagnosis and trouble reporting shall be made available to the fire code official.
4. Periodic ~~T~~ testing shall not be required if system activation occurs during the required test cycle for the components activated during the test cycle.
5. Approved maintenance in accordance with Section 2703.2.6 that is performed not less than annually or in accordance with an approved schedule shall be allowed to meet the testing requirements set forth in Sections 2703.2.9.1 and 2703.2.9.2.

Committee Reason: The proposal was approved because the committee felt that it would provide improved safety by requiring acceptance testing rather than periodic tests only. The modification clarifies the proponent's intent that exceptions 1 through 4 should not apply to the acceptance tests.

Assembly Action: **None**

Final Hearing Results

F252-07/08 **AM**

Code Change No: F254-07/08

Original Proposal

Sections: 2704.7; IBC [F] 414.5.4

Proponent: Lance H. Edwards, The National Paint & Coatings Association

Revise as follows:

2704.7 (Supp) Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with NFPA 70 and Section 604.

Exceptions:

1. Standby or emergency power for mechanical ventilation for storage of flammable and combustible liquids in single story occupancies.
~~1.~~ 2. Storage areas for Class 1 and 2 oxidizers.
~~2.~~ 3. Storage areas for Class II, III, IV and V organic peroxides.
~~3.~~ 4. Storage areas for asphyxiant, irritant and radioactive gases.
~~4.~~ 5. For storage areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6.
~~5.~~ 6. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.

[F] 414.5.4 (Supp) Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with Section 2702.

Exceptions:

1. Standby or emergency power for mechanical ventilation for storage of flammable and combustible liquids in single story occupancies.
~~1.~~ 2. Storage areas for Class 1 and 2 oxidizers.
~~2.~~ 3. Storage areas for Class II, III, IV and V organic peroxides.
~~3.~~ 4. Storage areas for asphyxiant, irritant and radioactive gases.
~~4.~~ 5. For storage, use and handling areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6 of the *International Fire Code*.
~~5.~~ 6. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.

Reason: This proposal will remove the requirement for standby power for flammable and combustible liquid storage ventilation. The requirement for standby power was originally not applicable to flammable and combustible liquids. NFPA 30 never required it for storage and still does not. When the Chapter 27 ventilation requirements were applied to flammable and combustible liquids storage the standby power requirement was inadvertently picked up. When enforced, it is a costly provision with very limited benefit. This proposal will coordinate the IFC and NFPA 30 requirements for standby power for flammable and combustible liquids storage ventilation. These materials are in sealed containers in storage so we do not see the need for the redundant requirement for standby power for ventilation for this condition.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

2704.7 (Supp) Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with NFPA 70 and Section 604.

Exceptions:

1. ~~Standby or emergency power for m~~ Mechanical ventilation for storage of Class IB and Class IC flammable and combustible liquids in closed containers not exceeding 6.5 gallons (25 L) capacity ~~single story occupancies~~.
2. Storage areas for Class 1 and 2 oxidizers.
3. Storage areas for Class II, III, IV and V organic peroxides.
4. Storage areas for asphyxiant, irritant and radioactive gases.
5. For storage areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6.
6. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.

[F] 414.5.4 (Supp) Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with Section 2702.

Exceptions:

1. ~~Standby or emergency power for m~~ Mechanical ventilation for storage of Class IB and Class IC flammable and combustible liquids in closed containers not exceeding 6.5 gallons (25 L) capacity ~~single story occupancies~~.
2. Storage areas for Class 1 and 2 oxidizers.
3. Storage areas for Class II, III, IV and V organic peroxides.
4. Storage areas for asphyxiant, irritant and radioactive gases.
5. For storage, use and handling areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6 of the *International Fire Code*.
6. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change. The modification correlates with industry treatment of portable container storage. Notably, FM Global recognizes that storage of small, closed containers does not pose a risk that warrants ventilation for these materials. FM Data Sheet 7-29, *Flammable and Combustible Liquid Storage in Portable Containers*, does not require mechanical ventilation for flammable liquids in closed containers of not greater than 6.5 gallons individual capacity, with a flash point of not greater than 100 ºF and a boiling point equal to or greater than 100ºF. NFPA 30, *Flammable and Combustible Liquids Code*, also recognizes that closed container storage does not pose a risk that warrants ventilation (ventilation is required if there is open dispensing). These materials are in sealed containers in storage. Any loss of power would require an immediate cessation of operations, which would eliminate spill risk. By limiting the container size, the potential for accidental spills is significantly reduced.

Assembly Action: **None**

Final Hearing Results

F254-07/08 **AM**

Code Change No: F257-07/08

Original Proposal

Section: 2705.1.11

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing himself

Revise as follows:

2705.1.11 (Supp) Design. Systems shall be suitable for the use intended and shall be designed by persons competent in such design. Controls shall be designed to prevent materials from entering or leaving the process or reaction system at other than the intended time, rate, or path. Where failure of an automatic control could result in a dangerous condition or reaction, the automatic control shall be fail-safe. ~~Where automatic safety controls are used to prevent a dangerous condition or reaction, they shall be designed to be fail safe.~~

Reason: When Proposal F231-06/07 was processed last cycle, a commitment was made to further clarify the intended application of this section. To satisfy that commitment, this revision has been submitted to make it clear that ANY automatic control that could cause a dangerous condition or reaction upon failure must be fail-safe. The 2007 Supplement text limits applicability of the fail-safe requirement to SAFETY CONTROLS that could cause a dangerous condition or reaction upon failure.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it clarifies the intent of the section regarding the operation of automatic controls.

Assembly Action: **None**

Final Hearing Results

F257-07/08 **AS**

Code Change No: F260-07/08

Original Proposal

Sections: 3003.7.11 (New), 3002.1 (New)

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

1. Add new text as follows:

3003.7.11 Tube trailers. Tube trailers including those containing compatible compressed gases shall be surrounded by a clear space of not less than 3 feet (914 mm) to allow for maintenance, access and inspection.

3003.7.11.1 Individual tube trailers containing incompatible materials. Increased separation distances between individual tube trailers containing incompatible gases shall be provided when required by 3003.7.1.

3003.7.11.2 Connections. Piping systems used to connect tube trailers to a user piping system shall not be viewed as an encroachment into the 3 foot (914 mm) clear space.

2. Add new definition as follows:

3002.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

TUBE TRAILER. A semitrailer on which a number of tubular gas cylinders have been mounted. A manifold is typically provided that connects the cylinder valves enabling gas to be discharged from one or more tubes or cylinders through a piping and control system.

Reason: It is common to have more than one tube trailer on a site. A minimum separation should be provided between tube trailers to allow for access and passage of those involved in service and use activities. At filling plants operators must access the vehicles for maintenance and service related work, and at user locations access is needed to allow users unimpeded movement including access and egress. A distance of 36 inches has been selected as it accommodates a “man width” of 22 inches while addressing the fact that there could be service related connections or fittings that require them to be attended. Section 2206.2.6 requires a 3 foot clearance around flammable liquid tanks when installed inside of buildings in special enclosures to allow for access and maintenance. Although not directly related, Sections 1805.2.2.3 and 1805.2.3.4 requires a 3 foot horizontal service clearance at work stations where hazardous conditions including electrical connections, gas-cylinder connections and similar conditions may exist.

A similar definition for tube trailer is found in NFPA 55.

Provisions have been made to allow for piping systems to be connected to the tube trailer so that the piped connection is not viewed as an encroachment on the clearance otherwise required.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide appropriate regulation of tube trailers.

Assembly Action: **None**

Final Hearing Results

F260-07/08 **AS**

Code Change No: F262-07/08

Original Proposal

Sections: 3204.3, 3205.3.1

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

Revise as follows:

3204.3 Outdoor storage. Outdoor storage of containers shall be in accordance with Sections 3204.3.1 through 3204.3.1.2.3 ~~3204.3.2.2~~.

~~**3204.3.1 Stationary containers.** The outdoor storage of stationary containers shall comply with Section 3203 and this section.~~

3204.3.1 ~~3203.6~~ Separation from hazardous conditions. Cryogenic containers and systems in outdoor storage ~~or use~~ shall be separated from materials and conditions which pose exposure hazards to or from each other in accordance with Sections ~~3203.6.1~~ 3204.3.1.1 through ~~3203.6.2.1~~. 3204.3.1.1.5

3204.3.1.1 ~~3203.6.1~~ Stationary containers. Stationary containers shall be separated from exposure hazards in accordance with the provisions applicable to the type of fluid contained and the minimum separation distances indicated in Table 3204.3.1.1 ~~3203.6.1~~.

TABLE ~~3203.6.1~~ 3204.3.1.1
SEPARATION OF STATIONARY CONTAINERS FROM EXPOSURE HAZARDS

EXPOSURE	MINIMUM DISTANCE (feet)
Buildings, regardless of construction type	1
Wall openings	1
Air intakes	10
Lot lines	5
Places of public assembly	50
Nonambulatory patient areas	50
Combustible materials such as paper, leaves, weeds, dry grass or debris	15
Other hazardous materials	In accordance with Chapter 27

3204.3.1.1.1 ~~3203.6.1.1~~ Point-of-fill connections. Remote transfer points and fill connection points shall not be positioned closer to exposures than the minimum distances required for stationary containers.

3204.3.1.1.2 ~~3203.6.1.2~~ Surfaces beneath containers. The surface of the area on which stationary containers are placed, including the surface of the area located below the point where connections are made for the purpose of filling such containers, shall be compatible with the fluid in the container.

3204.3.1.1.3 ~~3204.3.1.1 (Supp)~~ Location. ~~Stationary containers shall be located in accordance with Section 3203.6.~~Containers of cryogenic fluids shall not be located within diked areas containing other hazardous materials.

3204.3.1.1.4 ~~3204.3.1.2~~ Areas subject to flooding. Stationary containers located in areas subject to flooding shall be securely anchored or elevated to prevent the containers from separating from foundations or supports.

3204.3.1.1.5 ~~3204.3.1.3~~ Drainage. The area surrounding stationary containers shall be provided with a means to prevent accidental discharge of fluids from endangering personnel, containers, equipment and adjacent structures or to enter enclosed spaces. The stationary container shall not be placed where spilled or discharged fluids will be retained around the container.

Exception: These provisions shall not apply when it is determined by the fire code official that the container does not constitute a hazard, after consideration of special features such as crushed rock utilized as a heat sink, topographical conditions, nature of occupancy, proximity to structures on the same or adjacent property, and the capacity and construction of containers and character of fluids to be stored.

3204.3.1.2 ~~3204.3.2~~ Outdoor storage of p~~P~~ortable containers. Outdoor storage of portable containers shall comply with Section 3203 and Sections 3204.3.1.2.1 through 3204.3.1.2.3.

~~**3204.3.2.1 Location.** Portable containers shall be located in accordance with Section 3203.6.~~

3204.3.1.2.1 ~~3203.6.2~~ Exposure hazard separation ~~Portable containers~~. Portable containers in outdoor storage shall be separated from exposure hazards in accordance with Table ~~3203.6.2.~~ 3204.3.1.2.1.

TABLE ~~3203.6.2~~ 3204.3.1.2.1
SEPARATION OF PORTABLE CONTAINERS FROM EXPOSURE HAZARDS

EXPOSURE	MINIMUM DISTANCE (feet)
Building exits	10
Wall openings	1
Air intakes	10
Lot lines	5
~~Room or area exits~~	~~3~~
Combustible materials such as paper, leaves, weeds, dry grass or debris	15
Other hazardous materials	In accordance with Chapter 27

3204.3.1.2.2 ~~3203.6.2.1~~ Surfaces beneath containers. Containers shall be placed on surfaces that are compatible with the fluid in the container.

3204.3.1.2.3 ~~3204.3.2.2~~ Drainage. The area surrounding portable containers shall be provided with a means to prevent accidental discharge of fluids from endangering adjacent containers, buildings, equipment or adjoining property.

Exception: These provisions shall not apply when it is determined by the fire code official that the container does not constitute a hazard.

3205.3.1 Separation. Distances from property lines, buildings and exposure hazards shall comply with Section ~~3203.6~~ 3204.3 and the material specific provisions of Section 3201.1.

Reason: During the last code cycle a new section was added to Chapter 40 to address the use of liquid oxygen in home health care. Deliberations and dialog of interested parties revealed an organizational problem with Chapter 32 between requirements for indoor systems vs. outdoor systems. The organizational problems are intended to be resolved by the proposed code change. The primary purpose of the code change is reorganization.

Existing Section 3203.6 was included as a "general provision" applicable to cryogenic containers and systems. The provisions are intended to apply to outdoor containers and systems and not to circumstances where these materials are located indoors. Section 3203.6 has been relocated with minor changes to Section 3204.3 for outdoor storage, and Section 3204.3 has been reorganized to integrate the provisions. Specific changes other than those used for the purposes of cross reference were as follows:

3204.3.1 was deleted as it was redundant.

3203.6 now 3204.3.1 was modified to include the term "outdoor" for clarity and to delete the reference to use as use is addressed in Section 3205.

3204.3.1.1 was relocated to 3204.3.1.1.3.

3204.3.2 was relocated to 3204.3.1.2 and editorially revised to match code style guidelines.

3204.3.2.1 was deleted as it was redundant.

3203.6.2 now 3204.3.1.2.1 was revised to include the term "outdoor" for clarity and the title was revised to eliminate redundancy with 3204.3.1.2.

Table 3203.6.2 now Table 3204.3.1.2.2. The row for room or area exits has been deleted as the table does not apply to indoor applications. Questions arose during the debate and discussions on the use of liquid oxygen (LOX) in home health care where a code user was applying Table

3203.6.2 to indoor uses. As Section 3203.6 was included as a general provision the concern was understandable. Redirection of these provisions to outdoor storage resolves the problem. The means of egress from rooms, buildings and areas is regulated by Chapter 10. Section 1015.2 requires that exits or exit access doorways be unobstructed. Section 1028 requires that the means of egress be maintained.

A cross reference to Section 3203.6 in 3205.3.1 has been correlated with the proposed change.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a needed reorganization and clarification of Chapter 32.

Assembly Action: **None**

Final Hearing Results

F262-07/08 **AS**

Code Change No: F265-07/08

Original Proposal

Table 3301.8.1(3)

Proponent: Rick Thornberry, PE, The Code Consortium, representing American Pyrotechnics Association (APA)

Revise table footnotes as follows:

TABLE 3301.8.1(3)
APPLICATION OF SEPARATION DISTANCE (Q-D) TABLES—DIVISION 1.4 EXPLOSIVES[a,b,c,d]

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm.

a. The minimum separation distance (Do) shall be a minimum of 50 feet.
b. Linear interpolation between tabular values in the referenced Q-D table shall not be allowed.
c. For definitions of Quantity-Distance abbreviations IBD, ILD, IMD, IPD and PTR, see Section 3302.1.
d. This table shall not apply to articles, including articles packaged for shipment, that are not regulated as an explosive under Bureau of Alcohol, Tobacco, and Firearms regulations or unpacked articles used in process operations that do not propagate a detonation or deflagration between articles, or to consumer fireworks, 1.4G.

Reason: This is an editorial clarification to indicate to the users of this table that these articles and consumer fireworks, 1.4G are not regulated by the table since they are not treated as explosives in this chapter.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

TABLE 3301.8.1(3)
APPLICATION OF SEPARATION DISTANCE (Q-D) TABLES—DIVISION 1.4 EXPLOSIVES[a,b,c,d]

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm.
a. The minimum separation distance (Do) shall be a minimum of 50 feet.
b. Linear interpolation between tabular values in the referenced Q-D table shall not be allowed.
c. For definitions of Quantity-Distance abbreviations IBD, ILD, IMD, IPD and PTR, see Section 3302.1.
d. This table shall not apply to ~~articles, including articles packaged for shipment, that are not regulated as an explosive under Bureau of Alcohol, Tobacco, and Firearms regulations or unpacked articles used in process operations that do not propagate a detonation or deflagration between articles, or to~~ consumer fireworks, 1.4G.

Committee Reason: The committee agreed that the proponent's reason statement substantiates the need for the change. The new table note is simply a reiteration of the fact that, by definition, consumer fireworks, 1.4G, are not regulated by the table. The definition is often overlooked in applying the provisions of the table and this will provide clarity for the code user. The modification corrects an error in the preparation of the original code change.

Assembly Action: **None**

Final Hearing Results

F265-07/08 **AM**

Code Change No: F266-07/08

Original Proposal

Table 3304.3

Proponent: Rick Thornberry, PE, The Code Consortium, representing American Pyrotechnics Association (APA)

Revise table and footnotes as follows:

TABLE 3304.3
STORAGE AMOUNTS AND MAGAZINE REQUIREMENTS FOR EXPLOSIVES, EXPLOSIVE MATERIALS AND FIREWORKS, 1.3G MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA

NEW UN/ DOTn DIVISION	OLD DOTn CLASS	AFT /OSHA CLASS	INDOOR[A] (pounds				OUTDOOR (pounds)	MAGAZINE TYPE REQUIRED				
			Unprotected	Cabinet	Sprinklers	Sprinklers & Cabinet		1	2	3	4	5
1.1[b]	A	High	0	0	1	2	1	X	X	X	---	---
1.2	A	High	0	0	1	2	1	X	X	X	---	---
1.2	B	Low	0	0	1	1	1	X	X	X	X	---
1.3	B	Low	0	0	5	10	1	X	X	X	X	---
1.4[c]	`B	Low	0	0	50	100	1	X	X	X	X	---
1.5	C	Low	0	0	1	2	1	X	X	X	X	---
1.5	Blasting Agent	Blasting Agent	0	0	1	2	1	X	X	X	X	X
1.6	N/A	N/A	0	0	1	2	1	X	X	X	X	X

For SI: 1 pound = 0.454 kg, 1 pound per gallon = 0.12 kg per liter, 1 ounce = 28.35 g.
a. A factor of 10 pounds per gallon shall be used for converting pounds (solid) to gallons (liquid) in accordance with Section 2703.1.2.
b. Black powder shall be stored in a Type 1, 2, 3 or 4 magazine as provided for in Section 3304.3.1.
c. This table shall not apply to consumer fireworks, 1.4G.

Reason: This is an editorial clarification to address the confusion that sometimes arises regarding the application of this table. It is not intended to apply to consumer fireworks, 1.4G since they are not explosive materials by definition in this code.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that the new table note is simply a reiteration of the fact that, by definition, consumer fireworks, 1.4G, are not regulated by the table. The definition is often overlooked in applying the provisions of the table and this will provide clarity for the code user. This is also consistent with the action taken on code change F265-07/08.

Assembly Action: **None**

Final Hearing Results

F266-07/08 **AS**

Code Change No: F267-07/08

Original Proposal

Table 3304.5.2(3)

Proponent: Rick Thornberry, PE, The Code Consortium, representing American Pyrotechnics Association (APA)

Revise table footnotes as follows:

TABLE 3304.5.2(3)
TABLE OF DISTANCES (Q-D) FOR BUILDINGS CONTAINING EXPLOSIVES —DIVISION 1.4 c

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 pound = 0.454 kg.

a. A separation distance of 100 feet is required for buildings of other than Type I or Type II construction as defined in the *International Building Code.*

b. For earth-covered magazines, no specified separation is required.
   1. Earth cover material used for magazines shall be relatively cohesive. Solid or wet clay and similar types of soil are too cohesive and shall not be used. Soil shall be free from unsanitary organic matter, trash, debris and stones heavier than 10 pounds or larger than 6 inches in diameter. Compaction and surface preparation shall be provided, as necessary, to maintain structural integrity and avoid erosion. Where cohesive material cannot be used, as in sandy soil, the earth cover over magazines shall be finished with a suitable material to ensure structural integrity.
   2. The earth fill or earth cover between earth-covered magazines shall be either solid or sloped, in accordance with the requirements of other construction features, but a minimum of 2 feet of earth cover shall be maintained over the top of each magazines. To reduce erosion and facilitate maintenance operations, the cover shall have a slope of 2 horizontal to 1 vertical.

c. Restricted to articles, including articles packaged for shipment, that are not regulated as an explosive under Bureau of Alcohol, Tobacco and Firearms regulations, or unpacked articles used in process operations that do not propagate a detonation or deflagration between articles. <u>This table shall not apply to consumer fireworks, 1.4G.</u>

Reason: This is an editorial clarification to clearly indicate that it was not the intent to apply this new table to consumer fireworks, 1.4G since they are not considered explosives by definition.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved for consistency with the action taken on code changes F265-07/08 and F266-07/08.

Assembly Action: **None**

Final Hearing Results

F267-07/08 **AS**

Code Change No: F268-07/08

Original Proposal

Section: 3309 (New)

Proponent: Rick Thornberry, PE, The Code Consortium, representing American Pyrotechnics Association (APA)

Add new section as follows:

SECTION 3309
TEMPORARY STORAGE OF CONSUMER FIREWORKS

3309.1 General. Where the temporary storage of consumer fireworks, 1.4G is allowed by Section 3301.1.3, Exception 4, such storage shall comply with the applicable requirements in NFPA 1124.

Reason: Since the temporary storage of consumer fireworks, 1.4G occurs in almost every state in the US, it makes good sense to specify fire safety regulations for those situations. NFPA 2004-2007 contains fairly comprehensive requirements for such storage that have been developed through the NFPA consensus process.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Errata: Replace the reason statement as follows:

Reason: Since the temporary storage of consumer fireworks, 1.4G occurs in almost every state in the US, it makes good sense to specify fire safety regulations for those situations. NFPA 1124-2006 contains fairly comprehensive requirements for such storage that have been developed through the NFPA consensus process.

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide good guidance on the short-term pre-holiday storage of consumer fireworks.

Assembly Action: **None**

Final Hearing Results

F268-07/08 **AS**

Code Change No: F270-07/08

Original Proposal

Sections: 3403.6.2, 3403.6.2.1, Chapter 45 (New)

Proponent: William Winslow, representing Washington State Association of Fire Marshals

1. Revise as follows:

3403.6.2 Design ~~and~~, fabrication and installation of piping systems and components. Piping systems and components shall be designed ~~and~~, fabricated and installed in accordance with the applicable standard listed in Table 3403.6.2 and Chapter 5 of NFPA 30, except as modified by this section.

TABLE 3403.6.2
PIPING STANDARDS

PIPING USE	STANDARD
Power piping	ASME B31.1
Process Piping	ASME B31.3
Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols	ASME B31.4
Building Services Piping	ASME B31.9

3403.6.2.1 Special Materials. Low-melting-point-materials (such as aluminum, copper, and brass), materials that soften on fire exposure (such as nonmetallic materials), and nonductile material (such as cast iron) shall be acceptable for use underground in accordance with ~~ASME B31.9~~ the applicable standard listed in Table 3403.6.2. When such materials are used outdoors in above-ground piping systems or within buildings, they shall be in accordance with ~~ASME B31.9~~ the applicable standard listed in Table 3403.6.2 and one of the following.

1. Suitably protected against fire exposure.
2. Located where leakage from failure would not unduly expose people or structures.
3. Located where leakage can be readily controlled by operation of accessible remotely located valves.

In all cases, nonmetallic piping shall be used in accordance with Section 5.3.6 of NFPA 30.

2. Add standards to Chapter 45 as follows:

ASME

B31.1-04 Power Piping
B31.4-06 Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols

Reason: This code change proposal is a clarification and a technical correction. NFPA 30, Chapter 5 references ASME B31, Code for Pressure Piping, not ASME B31.9, which covers Building Services Piping. In many cases, ASME B31.9 is not the correct standard for flammable liquid piping. As shown in the table, there are 4 standards within ASME B31, Code for Pressure Piping that could cover flammable and combustible liquid piping. The code user must select the correct standard based on the application.

From NFPA 30, Chapter 5: "The design, fabrication, assembly, test, and inspection of piping systems shall be suitable for the expected working pressures and structural stresses. Compliance with applicable sections of ASME B31, Code for Pressure Piping, and the provisions of this chapter shall be considered prima facie evidence of compliance with the foregoing provisions."

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that there are other standards that are available from other promulgators that may be applicable and because the proponent requested disapproval to revise the proposal.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

William Winslow, Winslow Partnership, representing Washington State Association of Fire Marshals requests Approval as Submitted.

Commenter's Reason: This code change proposal is a clarification and a technical correction. NFPA 30, Chapter 5 references ASME B31, Code for Pressure Piping, not ASME B31.9, which covers Building Services Piping. In many cases, ASME B31.9 is not the correct standard for flammable liquid piping. As shown in the table, there are 4 standards within ASME B31, Code for Pressure Piping that cover flammable and combustible liquid piping. The code user must select the correct standard based on the application.

From NFPA 30, Chapter 5: "The design, fabrication, assembly, test, and inspection of piping systems shall be suitable for the expected working pressures and structural stresses. Compliance with applicable sections of ASME B31, Code for Pressure Piping, and the provisions of this chapter shall be considered prima facie evidence of compliance with the foregoing provisions."

During the hearings in Palm Springs, there was opposition to this code change proposal, because the opponents felt there are other standards that could be used. I reviewed a few of the American Petroleum Institute recommended practices. For piping, all of them referenced ASME B31, the ASME Code for Pressure Piping. There is no conflict. This proposal should be approved as submitted for clarification and to correct the reference to ASME B31.9.

Final Hearing Results

F270-07/08 **AS**

Code Change No: F271-07/08

Original Proposal

Sections: 3404.2.3.2, 3404.2.7.3.3, 3404.2.7.5.2, 3404.2.7.5.8, 3404.2.9.4

Proponents: Lynne M. Kilpatrick, Seattle, WA Fire Department representing Washington State Association of Fire Marshals; Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

3404.2.3.2 Label or placard. Tanks more than 100 gallons (379 L) in capacity, which are permanently installed or mounted and used for the storage of Class I, II or III ~~IIA~~ liquids, shall bear a label and placard identifying the material therein. Placards shall be in accordance with NFPA 704.

Exceptions:

1. Tanks of 300-gallon (1136 L) capacity or less located on private property and used for heating and cooking fuels in single-family dwellings.
2. Tanks located underground.

3404.2.7.3.3 Vent pipe outlets. Vent pipe outlets for tanks storing Class I, II or IIIA liquids shall be located such that the vapors are released at a safe point outside of buildings and not less than 12 feet (3658 mm) above the adjacent ground level. Vapors shall be discharged upward or horizontally away from adjacent walls to assist in vapor dispersion. Vent outlets shall be located such that flammable vapors will not be trapped by eaves or other

obstructions and shall be at least 5 feet (1524 mm) from building openings or lot lines of properties that can be built upon. Vent outlets on atmospheric tanks storing Class IIIB liquids are allowed to discharge inside a building if the vent is a normally closed vent.

Exception: Vent pipe outlets on tanks storing Class IIIB liquid inside buildings and connected to fuel-burning equipment shall be located such that the vapors are released to a safe location outside of buildings.

3404.2.7.5.2 Filling, emptying and vapor recovery connections. Filling, emptying and vapor recovery connections to tanks containing Class I, II or IIIA liquids shall be located outside of buildings at a location free from sources of ignition and not less than 5 feet (1524 mm) away from building openings or lot lines of property that can be built on. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use and properly identified.

Filling and emptying connections to indoor tanks containing Class III B liquids and connected to fuel-burning equipment shall be located at a grade-level location outside of buildings. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use. A sign in accordance with Section 2703.6 that displays the following warning shall be permanently attached at the filling location:

TRANSFERRING FUEL OTHER THAN CLASS III B COMBUSTIBLE LIQUID TO THIS LOCATION TANK CONNECTION IS A VIOLATION OF THE FIRE CODE AND IS STRICTLY PROHIBITED

3404.2.7.5.8 Overfill prevention. An approved means or method in accordance with Section 3404.2.9.6.6 shall be provided to prevent the overfill of all Class I, II and IIIA liquid storage tanks. Storage tanks in refineries, bulk plants or terminals regulated by Sections 3406.4 or 3406.7 shall have overfill protection in accordance with API 2350.

Exception: Outside above-ground tanks with a capacity of 1320 gallons (5000 L) or less.

An approved means or method in accordance with Section 3404.2.9.6.6 shall be provided to prevent the overfilling of Class IIIB liquid storage tanks inside buildings connected to fuel-burning equipment.

3404.2.9.4 Aboveground tanks inside of buildings. Tanks storing Class I, II and IIIA liquids inside buildings shall be equipped with a device or other means to prevent overflow into the building including, but not limited to: a float valve; a preset meter on the fill line; a valve actuated by the weight of the tanks contents; a low head pump which is incapable of producing overflow; or a liquid- tight overflow pipe at least one pipe size larger than the fill pipe and discharging by gravity back to the outside source of liquid or to an approved location.

Tanks containing Class III-B liquids and connected to fuel-burning equipment shall be provided with a means to prevent overflow into buildings in accordance with Section 3404.2.7.5.8.

Reason: An increasing number of facilities are installing generators inside buildings that utilize B100/B99 biodiesel, a Class IIIB liquid, as the generator fuel. Currently the code has very few requirements for the installation of tanks storing Class IIIB liquids inside buildings and does not adequately address the potential hazards associated with this increasing trend. Under the current code, up to 13,200 gallons of Class IIIB liquids can be stored in an unsprinklered building in steel aboveground tanks that are unseparated from other areas. Furthermore, in sprinklered buildings an unlimited quantity of Class IIIB liquids can be stored in steel aboveground tanks that are unseparated from other areas of the building. Whether in a sprinklered or unsprinklered building,

1. The tanks are not required to be vented to the outside of the building,
2. They are not required to be filled from a remote fill location outside the building, and
3. They are not required to be equipped with any type of overfill prevention system.

The current lack of controls for Class IIIB liquid tanks inside buildings can lead to facilities loading an unprecedented amount of fuel inside structures.

One of the major concerns of a Class IIIB liquid tank installed under the current code is that if a facility discovers after installation that the fuel-burning equipment either isn't working as efficiently as desired with the Class IIIB fuel, or the fuel becomes unavailable or more costly than traditional diesel fuel, the facility may elect to switch to Class II diesel. This could easily occur unbeknownst to the jurisdiction. The result could be a significantly noncompliant tank system where the quantity of Class II fuel could far exceed the code allowance of 660 gallons. Quantities of Class II diesel fuel in excess of 660 gallons inside buildings in steel aboveground tanks would otherwise require providing a Group H occupancy or a protected aboveground tank.

This proposed code change adds prudent controls for Class IIIB liquid tanks inside buildings connected to fuel-burning equipment. The proposal intentionally only addresses tanks connected to fuel-burning equipment because it is not intended to subject all Class IIIB liquid tanks (i.e. waste oil tanks at motor vehicle repair facilities and indoor bulk motor oils in industrial buildings) to these new requirements. This proposed change would require that tanks connected to fuel-burning equipment intended for Class IIIB fuels be provided with:

1. Vents that terminate on the outside of the building,
2. A fill opening located on the outside of the building,
3. An approved overfill prevention system in accordance with Section 3404.2.9.6.6 that sounds a local alarm when the tank capacity hits 90% full and automatically stops the flow of fuel when the tank capacity reaches 95% full, and
4. A permanent label on the tank as well as permanent signage at the fill location prohibiting delivery of fuels other than Class IIIB fuels to that fill location.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

3404.2.7.3.3 Vent pipe outlets. Vent pipe outlets for tanks storing Class I, II or IIIA liquids shall be located such that the vapors are released at a safe point outside of buildings and not less than 12 feet (3658 mm) above the ~~adjacent~~ finished ground level. Vapors shall be discharged upward or horizontally away from adjacent walls to assist in vapor dispersion. Vent outlets shall be located such that flammable vapors will not be trapped by eaves or other obstructions and shall be at least 5 feet (1524 mm) from building openings or lot lines of properties that can be built upon. Vent outlets on atmospheric tanks storing Class IIIB liquids are allowed to discharge inside a building if the vent is a normally closed vent.

Exception: Vent pipe outlets on tanks storing Class IIIB liquid inside buildings and connected to fuel-burning equipment shall be located such that the vapors are released to a safe location outside of buildings.

3404.2.7.5.2 Filling, emptying and vapor recovery connections. Filling, emptying and vapor recovery connections to tanks containing Class I, II or IIIA liquids shall be located outside of buildings at a location free from sources of ignition and not less than 5 feet (1524 mm) away from building openings or lot lines of property that can be built on. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use and properly identified.

Filling and emptying connections to indoor tanks containing Class III B liquids and connected to fuel-burning equipment shall be located at a ~~grade~~ finished ground level location outside of buildings. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use. A sign in accordance with Section 2703.6 that displays the following warning shall be permanently attached at the filling location:

TRANSFERRING FUEL OTHER THAN CLASS III B COMBUSTIBLE LIQUID TO THIS LOCATION TANK CONNECTION IS A VIOLATION OF THE FIRE CODE AND IS STRICTLY PROHIBITED

3404.2.7.5.8 Overfill prevention. An approved means or method in accordance with Section 3404.2.9.6.6 shall be provided to prevent the overfill of all Class I, II and IIIA liquid storage tanks. Storage tanks in refineries, bulk plants or terminals regulated by Sections 3406.4 or 3406.7 shall have overfill protection in accordance with API 2350.

An approved means or method in accordance with Section 3404.2.9.6.6 shall be provided to prevent the overfilling of Class IIIB liquid storage tanks inside buildings connected to fuel-burning equipment.

Exception: Outside above-ground tanks with a capacity of 1320 gallons (5000 L) or less.

~~An approved means or method in accordance with Section 3404.2.9.6.6 shall be provided to prevent the overfilling of Class IIIB liquid storage tanks inside buildings connected to fuel-burning equipment.~~

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee felt that the proposal provides reasonable controls to prevent the overfilling of tanks containing Class IIIB liquids supplying fuel burning equipment and as a safeguard against the impact of potential switch-loading to a more hazardous class of liquid fuel. The modification provides correlation with the terminology used in Chapter 5 of the IBC and clarifies the intent of the proposal that the exception should apply to the entire section, including the added text on Class IIIB liquids.

Assembly Action: **None**

Final Hearing Results

F271-07/08 **AM**

Code Change No: F273-07/08

Original Proposal

Section: 3404.2.7.5.2

Proponent: Steve M. Crothers, Fire Department, Seattle, WA, representing Washington State Association of Fire Marshals

Revise as follows:

3404.2.7.5.2 Filling, emptying and vapor recovery connections. Filling, emptying and vapor recovery connections to tanks containing Class I, II or IIIA liquids shall be located outside of buildings not more than 5 feet (1524 mm) above the adjacent ground level at a location free from sources of ignition and not less than 5 feet (1524 mm) away from building openings or lot lines of property that can be built on. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use and properly identified.

Reason: This proposed change specifies that the tank fill location is required to be at ground level. It may seem obvious that the tank fill opening is required to be at ground level where the fuel truck driver has direct access. However, numerous designs have been submitted that propose to hoist fuel delivery truck hose lines up the exterior of the building to rooftops and other building levels above the finished ground level. The designs actually meet the letter of the code as it is currently written and so this code change in needed to clarify the intent.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Disapproved**

Committee Reason: The proposal was disapproved because the committee felt that the connection location should be related to where the delivering vehicle is parked. It was also suggested that the provision might be better located in Section 3404.2.7.5.6.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Steve M. Crothers, City of Seattle Fire Department, representing Washington State Association of Fire Marshals, requests Approval as Modified by this public comment.

Modify proposal as follows:

3404.2.7.5.2 Filling, emptying and vapor recovery connections. Filling, emptying and vapor recovery connections to tanks containing Class I, II or IIIA liquids shall be located outside of buildings ~~not more than 5 feet (1524 mm) above the adjacent ground level~~ in accordance with Section 3404.2.7.5.6 at a location free from sources of ignition and not less than 5 feet (1524 mm) away from building openings or lot lines of property that can be built on. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use and properly identified.

3404.2.7.5.6 Location of connections that are made or broken. Filling, withdrawl and vapor-recovery connections for Class I, II and IIIA liquids which are made and broken shall be located outside of buildings, not more than 5 feet above the finished ground level, in an approved location in close proximity to the parked delivery vehicle. Such ~~at a~~ location shall be away from sources of ignition and not less than 5 feet (1524 mm) away from building openings. Such connections shall be closed and liquid tight when not in use and shall be properly identified.

Commenter's Reason: The Committee's concerns have been addressed in this modified proposal. The intent of the original proposal was to specify that the hose connection on the building is required to be within 5 feet of the finished ground level. In response to the Committee's concerns the specific requirement has been relocated to Section 3404.2.7.5.6 with a pointer from Section 3404.2.7.5.2 to give more clarity to the reader. Also in response to the Committee's comment, the revised proposal now requires that the connection be located in an approved location near where the fuel delivery vehicle will be parked.

Final Hearing Results

F273-07/08 **AMPC**

Code Change No: F274-07/08

Original Proposal

Section: 3404.2.13.1.4

Proponent: Tom Langseth, Langseth Environmental Services, Inc., representing himself

Revise as follows:

3404.2.13.1.4 Tanks abandoned in place. Tanks abandoned in place shall be as follows:

1. Flammable and combustible liquids shall be removed from the tank and connected piping.
2. The suction, inlet, gauge, vapor return and vapor lines shall be disconnected.
3. The tank shall be filled completely with an approved inert solid material.

   ~~**Exception:** Residential heating oil tanks of 1,100 gallons (4164 L) or less, provided the fill line is permanently removed to a point below grade to prevent refilling of the tank.~~

4. Remaining underground piping shall be capped or plugged.
5. A record of tank size, location and date of abandonment shall be retained.
6. All exterior above-grade fill piping shall be permanently removed when tanks are abandoned or removed.

Reason: The IFC code (as stated in the introduction) is to "safeguard public health and safety." By allowing the majority of underground storage tanks in the country (home heating oil tanks) to be capped below grade without structural fill material creates a HUGE safety issue. These are steel tanks that will wear out. The majority of these tanks were installed in the 1950's and 1960's. The useful life of an unprotected single wall steel underground fuel tank is 35-40 years. Who becomes responsible when someone drives in or falls into one of these tanks when the steel finally corrodes? These tanks will wear out. This might not happen in your lifetime, but it will happen. This is not, in my opinion, safeguarding the public's health and safety. All underground tanks, abandoned in place, should be filled with an approved, inert solid material.

Cost Impact: The code change will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that the tanks, as they deteriorate, can leave dangerous holes in the ground that can lead to injury or property damage.

Assembly Action: **None**

Final Hearing Results

F274-07/08 **AS**

Code Change No: F275-07/08

Original Proposal

Section: 3404.2.15 (New)

Proponent: Steve M. Crothers, Fire Department, Seattle, WA, representing Washington State Association of Fire Marshals

Add new text as follows:

3404.2.15 Maintenance. Aboveground tanks, connected piping and ancillary equipment shall be maintained in a safe operating condition. Tanks shall be maintained in accordance with their listings. Damage to aboveground tanks, connected piping or ancillary equipment shall be repaired using materials having equal or greater strength and fire resistance or the equipment shall be replaced or taken out of service.

Reason: This proposal adds a new section in Chapter 34 addressing the general maintenance of flammable and combustible liquid tanks and associated equipment. Similar text appears in Chapter 27 (see Sec 2703.2.6) for general maintenance of equipment associated with hazardous materials. However, it is useful and appropriate to also have specific text to address the maintenance of flammable and combustible liquid tank systems available in Chapter 34.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it will provide needed tank and equipment maintenance requirements.

Assembly Action: **None**

Final Hearing Results

F275-07/08 **AS**

Code Change No: F276-07/08

Original Proposal

Table 3404.3.6.3(1) through Table 3404.3.6.3(8)

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing himself

1. Revise table footnotes as follows:

TABLE 3404.3.6.3(1)
MAXIMUM STORAGE HEIGHT IN CONTROL AREA

TYPE OF LIQUID	NONSPRINKLERED AREA (feet)	SPRINKLERED AREA[a] (feet)	SPRINKLERED[a] WITH IN-RACK PROTECTION[a, b] (feet)

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm.

a. In buildings required to be protected by an automatic sprinkler system, the storage height for containers and portable tanks shall not exceed the maximum storage height permitted for the fire protection scheme set forth in NFPA 30 or the maximum storage height demonstrated in a full-scale fire test, whichever is greater. NFPA 30 criteria and fire test results for metallic containers and portable tanks shall not be applied to non-metallic containers and portable tanks.

~~a.~~ b. In-rack protection shall be in accordance with Table 3404.3.6.3(5), 3404.3.6.3(6) or 3404.3.6.3(7).

TABLE 3404.3.6.3(2)
STORAGE ARRANGEMENTS FOR PALLETIZED OR SOLID-PILE STORAGE IN LIQUID STORAGE ROOMS AND WAREHOUSES

CLASS	STORAGE LEVEL	MAXIMUM STORAGE HEIGHT			MAXIMUM QUANTITY PER PILE (gallons)		MAXIMUM QUANTITY PER ROOM[a] (gallons)	
		Drums	Containers[b] (feet)	Portable tanks[b] (feet)	Containers	Portable tanks	Containers	Portable tanks

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 gallon = 3.785 L.

a. See Section 3404.3.8.1 for unlimited quantities in liquid storage warehouses.

b. ~~Storage heights are allowed to be increased for Class IB, IC, II and III liquids in metal containers having a capacity of 5 gallons or less where an automatic AFFF-water protection system is provided in accordance with Table 3404.3.7.5.1.~~ In buildings required to be protected by an automatic sprinkler system, the storage height for containers and portable tanks shall not exceed the maximum storage height permitted for the fire protection scheme set forth in NFPA 30 or the maximum storage height demonstrated in a full-scale fire test, whichever is greater. NFPA 30 criteria and fire test results for metallic containers and portable tanks shall not be applied to non-metallic containers and portable tanks.

c. These height limitations are allowed to be increased to 10 feet for containers having a capacity of 5 gallons or less.
d. For palletized storage of unsaturated polyester resins (UPR) in relieving-style metal containers with 50 percent or less by weight Class IC or II liquid and no Class IA or IB liquid, height and pile quantity limits shall be permitted to be 10 feet and 15,000 gallons, respectively, provided that such storage is protected by sprinklers in accordance with NFPA 30 and that the UPR storage area is not located in the same containment area or drainage path for other Class I or II liquids

TABLE 3404.3.6.3(3)
STORAGE ARRANGEMENTS FOR RACK STORAGE IN LIQUID STORAGE ROOMS AND WAREHOUSES

CLASS	TYPE RACK	STORAGE LEVEL	MAXIMUM STORAGE HEIGHT (feet)[b]	MAXIMUM QUANTITY PER ROOM[a] (gallons)
			Containers	Containers

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 gallon = 3.785 L.
a. See Section 3404.3.8.1 for unlimited quantities in liquid storage warehouses.
b. In buildings required to be protected by an automatic sprinkler system, the storage height for containers and portable tanks shall not exceed the maximum storage height permitted for the fire protection scheme set forth in NFPA 30 or the maximum storage height demonstrated in a full-scale fire test, whichever is greater. NFPA 30 criteria and fire test results for metallic containers and portable tanks shall not be applied to non-metallic containers and portable tanks.

2. Revise table headings as follows:

TABLE 3404.3.6.3(4)
AUTOMATIC SPRINKLER PROTECTION FOR SOLID-PILE AND PALLETIZED STORAGE OF LIQUIDS IN METAL CONTAINERS AND PORTABLE TANKS[a]

TABLE 3404.3.6.3(5)
AUTOMATIC SPRINKLER PROTECTION REQUIREMENTS FOR RACK STORAGE OF LIQUIDS IN METAL CONTAINERS OF 5-GALLON CAPACITY OR LESS WITH OR WITHOUT CARTONS ON CONVENTIONAL WOOD PALLETS[a]

TABLE 3404.3.6.3(6)
AUTOMATIC SPRINKLER PROTECTION REQUIREMENTS FOR RACK STORAGE OF LIQUIDS IN METAL CONTAINERS GREATER THAN 5-GALLON CAPACITY[a]

TABLE 3404.3.6.3(7)
AUTOMATIC AFFF WATER PROTECTION REQUIREMENTS FOR RACK STORAGE OF LIQUIDS IN METAL CONTAINERS GREATER THAN 5-GALLON CAPACITY[a,b]

TABLE 3404.3.6.3(8)
AUTOMATIC SPRINKLER PROTECTION REQUIREMENTS FOR CLASS I LIQUID STORAGE IN METAL CONTAINERS OF 1-GALLON CAPACITY OR LESS WITH UNCARTONED OR CASE-CUT SHELF DISPLAY UP TO 6.5 FEET, AND PALLETIZED STORAGE ABOVE IN A DOUBLE-ROW RACK ARRAY[a]

Reason: Item 1: The new footnote helps to ensure that storage heights will not exceed the capabilities of the level of sprinkler protection provided. The new note also clarifies that protection schemes demonstrated with metallic containers and portable tanks are not suitable for non-metallic containers and portable tanks, which present a much more significant fire challenge.

Without this clarification, which correlates with NFPA 30, height limits established by the tables place sprinklered buildings at risk of having the sprinkler system fail to control a fire because the protection scheme might not be properly matched with stored commodities.

Item 2: The provisions in these tables are based on fire tests or historic protection schemes that were based on protection of metal containers and portable tanks. The schemes are inadequate for protection of liquids in containers and portable tanks constructed of other materials, such as plastic. NFPA 30 includes a limited number of protection schemes for non-metal containers, and those schemes, which require far more protection than the IFC prescribes in these tables, can still be recognized by IFC 3404.3.7.5.1 and 3404.3.8.4. Storage configurations that do not have demonstrated or code-recognized protection schemes, such as putting plastic containers into an area protected for metallic containers, should not be permitted.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

TABLE 3404.3.6.3(1)
MAXIMUM STORAGE HEIGHT IN CONTROL AREA

TYPE OF LIQUID	NONSPRINKLERED AREA (feet)	SPRINKLERED AREA[a] (feet)	SPRINKLERED WITH IN-RACK PROTECTION[a, b] (feet)

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm.
a. In buildings ~~required to be~~ protected by an automatic sprinkler system, the storage height for containers and portable tanks shall not exceed the maximum storage height permitted for the fire protection scheme set forth in NFPA 30 or the maximum storage height demonstrated in a full-scale fire test, whichever is greater. NFPA 30 criteria and fire test results for metallic containers and portable tanks shall not be applied to non-metallic containers and portable tanks.
b. In-rack protection shall be in accordance with Table 3404.3.6.3(5), 3404.3.6.3(6) or 3404.3.6.3(7).

TABLE 3404.3.6.3(2)
STORAGE ARRANGEMENTS FOR PALLETIZED OR SOLID-PILE STORAGE IN LIQUID STORAGE ROOMS AND WAREHOUSES

CLASS	STORAGE LEVEL	MAXIMUM STORAGE HEIGHT			MAXIMUM QUANTITY PER PILE (gallons)		MAXIMUM QUANTITY PER ROOM[a] (gallons)	
		Drums	Containers[b] (feet)	Portable tanks[b] (feet)	Containers	Portable tanks	Containers	Portable tanks

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 gallon = 3.785 L.
a. See Section 3404.3.8.1 for unlimited quantities in liquid storage warehouses.
b. In buildings ~~required to be~~ protected by an automatic sprinkler system, the storage height for containers and portable tanks shall not exceed the maximum storage height permitted for the fire protection scheme set forth in NFPA 30 or the maximum storage height demonstrated in a full-scale fire test, whichever is greater. NFPA 30 criteria and fire test results for metallic containers and portable tanks shall not be applied to non-metallic containers and portable tanks.
c. These height limitations are allowed to be increased to 10 feet for containers having a capacity of 5 gallons or less.
d. For palletized storage of unsaturated polyester resins (UPR) in relieving-style metal containers with 50 percent or less by weight Class IC or II liquid and no Class IA or IB liquid, height and pile quantity limits shall be permitted to be 10 feet and 15,000 gallons, respectively, provided that such storage is protected by sprinklers in accordance with NFPA 30 and that the UPR storage area is not located in the same containment area or drainage path for other Class I or II liquids

TABLE 3404.3.6.3(3)
STORAGE ARRANGEMENTS FOR RACK STORAGE IN LIQUID STORAGE ROOMS AND WAREHOUSES

CLASS	TYPE RACK	STORAGE LEVEL	MAXIMUM STORAGE HEIGHT (feet)[b]	MAXIMUM QUANTITY PER ROOM[a] (gallons)
			Containers	Containers

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 gallon = 3.785 L.
a. See Section 3404.3.8.1 for unlimited quantities in liquid storage warehouses.
b. In buildings ~~required to be~~ protected by an automatic sprinkler system, the storage height for containers and portable tanks shall not exceed the maximum storage height permitted for the fire protection scheme set forth in NFPA 30 or the maximum storage height demonstrated in a full-scale fire test, whichever is greater. NFPA 30 criteria and fire test results for metallic containers and portable tanks shall not be applied to non-metallic containers and portable tanks.

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will clarify the proper application of the tables to the types of containers that were the subject of the referenced full-scale tests. The modification reflects the committee's opinion that there is no reason to allow the jeopardizing of the protection afforded by non-required sprinkler systems.

Assembly Action: **None**

Final Hearing Results

F276-07/08 **AM**

Code Change No: F277-07/08

Original Proposal

Section: 3405.2.4

Proponent: Marla Wilcox, Englewood Safety Services, representing Fire Marshal's Association of Colorado

Revise as follows:

3405.2.4 Class I, II and III liquids. Class I liquids ~~and~~ or Class II ~~liquids or~~ and Class III liquids that are heated up to or above their flash points, shall be transferred by one of the following methods:

Exception: Liquids in containers not exceeding a 5.3-gallon (20 L) capacity.

1. From safety cans complying with UL 30.
2. Through an approved closed piping system.
3. From containers or tanks by an approved pump taking suction through an opening in the top of the container or tank.
4. For Class IB, IC, II and III liquids, from containers or tanks by gravity through an approved self-closing or automatic-closing valve when the container or tank and dispensing operations are provided with spill control and secondary containment in accordance with Section 3403.4. Class IA liquids shall not be dispensed by gravity from tanks.
5. Approved engineered liquid transfer systems.

Reason: This revision request is for clarification of the text to eliminate interpretive difficulty and more clearly state that the liquid transfer requirements of this section are applicable to all Class I liquids, all Class II liquids and Class III liquids that are heated up to or above their flash points.

As this section currently reads, it is for Class I and Class II liquids, and Class III liquids if heated up to or above their flash points. If Sections 3405.2.2 and 3405.2.5 are for Class I liquids and II or III if heated up it makes sense that this section should be the same.

Cost Impact: The code change proposal will not increase the cost of construction; it will simply clarify the code.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a useful clarification of the text on the subject of liquid transfer.

Assembly Action: **None**

Final Hearing Results

F277-07/08 **AS**

Code Change No: F278-07/08

Original Proposal

Section: 3405.2.5

Proponent: Marla Wilcox, Englewood Safety Services, representing Fire Marshal's Association of Colorado

Revise as follows:

3405.2.5 Manual container filling operations ~~for Class I liquids.~~ Class I liquids ~~and~~ or Class II ~~or~~ and Class III liquids that are heated up to or above their flash points, shall not be transferred into containers unless the nozzle and containers are electrically interconnected. Acceptable methods of electrical interconnection include:

1. Metallic floor plates on which containers stand while filling, when such floor plates are electrically connected to the fill stem; or
2. Where the fill stem is bonded to the container during filling by means of a bond wire.

Reason: This revision request is an editorial clarification of the text to eliminate interpretive difficulty and more clearly state that the liquid filling operations in Section 3405.2.5 deal with more than Class I liquids, thus the reference to Class I liquids has been removed. The requirements of this section are applicable to all Class I liquids, those Class II and Class III liquids that are heated up to or above their flash points. A comma after "flash points" has also been added. Wording has been changed to correlate with Section 3405.2.4.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a useful clarification of the text and also for consistency with the action taken on code change F277-07/08.

Assembly Action: **None**

Final Hearing Results

F278-07/08 **AS**

Code Change No: F279-07/08

Original Proposal

Section: 3405.5.1

Proponent: Patrick A. McLaughlin, McLaughlin & Associates, representing The Consumer Specialty Products Association

Revise as follows:

3405.5.1 (Supp) Corridor installations. Where wall-mounted dispensers containing alcohol-based hand rubs are installed in corridors, they shall be in accordance with all of the following:

1. Level 2 and Level 3 aerosols containers shall not be allowed in corridors.
2. The maximum capacity of each Class I or II liquids dispenser shall be 41 ounces and the maximum capacity of each Level 1 aerosol dispenser shall be 18 ounces (.51 kg).
3. The maximum quantity allowed in a corridor within a control area shall be 10 gallons (37.85 L) of Class I or II liquids or 1135 ounces (32.2 kg) of Level 1 aerosols, or a combination of Class I or II liquids and Level 1 aerosols not to exceed, in total, the equivalent of 10 gallons (37.85 L) or 1135 oz (32.2 kg) such that the sum of the ratios of the liquid and aerosol quantities divided by the allowable quantity of liquids and aerosols, respectively, shall not exceed one.
4. The minimum corridor width shall be 72 inches (1829 mm).
5. Projections into a corridor shall be in accordance with Section 1003.3.3.

Reason: We are proposing to add a simple method of calculating the maximum allowable quantity of combined liquids and aerosols. The formula is taken from IBC Section 508.3.3.2. For example, if 4 gallons of liquids and 500 ounces of aerosols were present, 4/10 plus 500/1135 is less than one and therefore below the maximum allowable quantity.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a useful clarification of the text and is being offered in response to committee discussion on this topic in the last cycle.

Assembly Action: **None**

Final Hearing Results

F279-07/08 **AS**

Code Change No: F281-07/08

Original Proposal

Section: 3406.5.4.5

Proponent: Jon Napier, Fire Department, City of Kent, WA, representing Washington State Building Code Council

Revise as follows:

3406.5.4.5 Commercial, industrial, governmental or manufacturing. Dispensing of Class II and III motor vehicle fuel from tank vehicles into the fuel tanks of motor vehicles located at commercial, industrial, governmental or manufacturing establishments is allowed where permitted, provided such dispensing operations are conducted in accordance with the following:

1. Dispensing shall occur only at sites that have been issued a permit to conduct mobile fueling.
2. The owner of a mobile fueling operation shall provide to the jurisdiction a written response plan which demonstrates readiness to respond to a fuel spill and carry out appropriate mitigation measures, and describes the process to dispose properly of contaminated materials.
3. A detailed site plan shall be submitted with each application for a permit. The site plan shall indicate: all buildings, structures and appurtenances on site and their use or function; all uses adjacent to the property lines of the site; the locations of all storm drain openings, adjacent waterways or wetlands; information regarding slope, natural drainage, curbing, impounding and how a spill will be retained upon the site property; and the scale of the site plan.

Provisions shall be made to prevent liquids spilled during dispensing operations from flowing into buildings or off-site. Acceptable methods include, but shall not be limited to, grading driveways, raising doorsills or other approved means.

4. The fire code official is allowed to impose limits on the times and days during which mobile fueling operations may take place, and specific locations on a site where fueling is permitted.
5. Mobile fueling operations shall be conducted in areas not accessible to the public or shall be limited to times when the public is not present.
6. Mobile fueling shall not take place within 15 feet (4572 mm) of streets, alleys, public ways, buildings, property lines, ~~or~~ combustible storage or storm drains.

Exceptions:

1. The distance to storm drains shall not apply where an approved storm drain cover or an approved equivalent that will prevent any fuel from reaching the drain is in place prior to fueling or a fueling hose being placed within 15 feet of the drain. Where placement of a storm drain cover will cause the accumulation of excessive water or difficulty in conducting the fueling, such cover shall not be used and the fueling shall not take place within 15 feet of a drain.
2. The distance to storm drains shall not apply for drains that direct influent to approved oil interceptors.

7. The tank vehicle shall comply with the requirements of NFPA 385 and local, state and federal requirements. The tank vehicle's specific functions shall include that of supplying fuel to motor vehicle fuel tanks. The vehicle and all its equipment shall be maintained in good repair.
8. Signs prohibiting smoking or open flames within 25 feet (7620 mm) of the tank vehicle or the point of fueling shall be prominently posted on three sides of the vehicle including the back and both sides.
9. A portable fire extinguisher with a minimum rating of 40:BC shall be provided on the vehicle with signage clearly indicating its location.
10. The dispensing nozzles and hoses shall be of an approved and listed type.
11. The dispensing hose shall not be extended from the reel more than 100 feet (30 480 mm) in length.
12. Absorbent materials, nonwater-absorbent pads, a 10-foot-long (3048 mm) containment boom, an approved container with lid and a nonmetallic shovel shall be provided to mitigate a minimum 5-gallon (19 L) fuel spill.
13. Tank vehicles shall be equipped with a "fuel limit" switch such as a count-back switch, to limit the amount of a single fueling operation to a maximum of 500 gallons (1893 L) before resetting the limit switch.

Exception: Tank vehicles where the operator carries and can utilize a remote emergency shutoff device which, when activated, immediately causes flow of fuel from the tank vehicle to cease.

14. Persons responsible for dispensing operations shall be trained in the appropriate mitigating actions in the event of a fire, leak or spill. Training records shall be maintained by the dispensing company and shall be made available to the fire code official upon request.
15. Operators of tank vehicles used for mobile fueling operations shall have in their possession at all times an emergency communications device to notify the proper authorities in the event of an emergency.
16. The tank vehicle dispensing equipment shall be constantly attended and operated only by designated personnel who are trained to handle and dispense motor fuels.
17. ~~Prior to beginning dispensing operations, precautions shall be taken to ensure ignition sources are not present.~~ Fuel dispensing shall be prohibited within 25 feet of any source of ignition.
18. The engines of vehicles being fueled shall be shut off during dispensing operations.
19. Nighttime fueling operations shall only take place in adequately lighted areas.
20. The tank vehicle shall be positioned with respect to vehicles being fueled to prevent traffic from driving over the delivery hose.
21. During fueling operations, tank vehicle brakes shall be set, chock blocks shall be in place and warning lights shall be in operation.
22. Motor vehicle fuel tanks shall not be topped off.
23. The dispensing hose shall be properly placed on an approved reel or in an approved compartment prior to moving the tank vehicle.
24. The fire code official and other appropriate authorities shall be notified when a reportable spill or unauthorized discharge occurs.
25. Operators shall place a drip pan or an absorbent pillow, in good condition, under each fuel fill opening prior to and during dispensing operations. Drip pans shall be liquid-tight. The pan or absorbent pillow shall have a capacity of not less than 3 gallons. Spills retained in the drip pan or absorbent pillow need not be reported. Operators, when fueling, shall have on their person an absorbent pad capable of capturing diesel foam

overfills. Except during fueling, the nozzle shall face upward and an absorbent pad shall be kept under the nozzle to catch drips. Contaminated absorbent pads or pillows shall be disposed of regularly in accordance with local, state and federal requirements.

26. All persons and parties with an interest in the property such as property owners, lessors, real estate companies, property managers and operators of the property shall give written consent to allow the mobile fueling to be conducted on the property. Managers, lessees, renters and other persons shall not solely give permission. Each person or party shall indicate that they understand the risk of spills.

Reason: The intent of these changes and additions is to provide better control of possible fuel spills at construction sites and other locations where mobile fueling is done. Keeping fueling operations away from streets, alleys, property lines, drains, etc will help protect the public and adjacent landowners. Taking the precautions of using drip pans and absorbent pads for minor spills will aid keeping pollutants out of water systems. Requiring that all persons and parties with an interest in the property give their consent in writing will ensure that everyone is aware that a fueling operation will be taking place.

Cost Impact: There will be an increase to the cost of construction. Absorbent pads or pillows cost approximately 3 to 5 dollars a piece.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

3406.5.4.5 Commercial, industrial, governmental or manufacturing. Dispensing of Class II and III motor vehicle fuel from tank vehicles into the fuel tanks of motor vehicles located at commercial, industrial, governmental or manufacturing establishments is allowed where permitted, provided such dispensing operations are conducted in accordance with the following:

1. Dispensing shall occur only at sites that have been issued a permit to conduct mobile fueling.
2. The owner of a mobile fueling operation shall provide to the jurisdiction a written response plan which demonstrates readiness to respond to a fuel spill and carry out appropriate mitigation measures, and describes the process to dispose properly of contaminated materials.
3. A detailed site plan shall be submitted with each application for a permit. The site plan shall indicate: all buildings, structures and appurtenances on site and their use or function; all uses adjacent to the property lines of the site; the locations of all storm drain openings, adjacent waterways or wetlands; information regarding slope, natural drainage, curbing, impounding and how a spill will be retained upon the site property; and the scale of the site plan.
   Provisions shall be made to prevent liquids spilled during dispensing operations from flowing into buildings or off-site. Acceptable methods include, but shall not be limited to, grading driveways, raising doorsills or other approved means.
4. The fire code official is allowed to impose limits on the times and days during which mobile fueling operations may take place, and specific locations on a site where fueling is permitted.
5. Mobile fueling operations shall be conducted in areas not accessible to the public or shall be limited to times when the public is not present.
6. Mobile fueling shall not take place within 15 feet (4572 mm) of ~~streets, alleys, public ways,~~ buildings, property lines, combustible storage or storm drains.

   Exceptions:

   1. The distance to storm drains shall not apply where an approved storm drain cover or an approved equivalent that will prevent any fuel from reaching the drain is in place prior to fueling or a fueling hose being placed within 15 feet of the drain. Where placement of a storm drain cover will cause the accumulation of excessive water or difficulty in conducting the fueling, such cover shall not be used and the fueling shall not take place within 15 feet of a drain.
   2. The distance to storm drains shall not apply for drains that direct influent to approved oil interceptors.

7. The tank vehicle shall comply with the requirements of NFPA 385 and local, state and federal requirements. The tank vehicle's specific functions shall include that of supplying fuel to motor vehicle fuel tanks. The vehicle and all its equipment shall be maintained in good repair.
8. Signs prohibiting smoking or open flames within 25 feet (7620 mm) of the tank vehicle or the point of fueling shall be prominently posted on three sides of the vehicle including the back and both sides.
9. A portable fire extinguisher with a minimum rating of 40:BC shall be provided on the vehicle with signage clearly indicating its location.
10. The dispensing nozzles and hoses shall be of an approved and listed type.
11. The dispensing hose shall not be extended from the reel more than 100 feet (30 480 mm) in length.
12. Absorbent materials, nonwater-absorbent pads, a 10-foot-long (3048 mm) containment boom, an approved container with lid and a nonmetallic shovel shall be provided to mitigate a minimum 5-gallon (19 L) fuel spill.
13. Tank vehicles shall be equipped with a "fuel limit" switch such as a count-back switch, to limit the amount of a single fueling operation to a maximum of 500 gallons (1893 L) before resetting the limit switch.

    Exception: Tank vehicles where the operator carries and can utilize a remote emergency shutoff device which, when activated, immediately causes flow of fuel from the tank vehicle to cease.

14. Persons responsible for dispensing operations shall be trained in the appropriate mitigating actions in the event of a fire, leak or spill. Training records shall be maintained by the dispensing company and shall be made available to the fire code official upon request.
15. Operators of tank vehicles used for mobile fueling operations shall have in their possession at all times an emergency communications device to notify the proper authorities in the event of an emergency.
16. The tank vehicle dispensing equipment shall be constantly attended and operated only by designated personnel who are trained to handle and dispense motor fuels.

17. Fuel dispensing shall be prohibited within 25 feet of any source of ignition.
18. The engines of vehicles being fueled shall be shut off during dispensing operations.
19. Nighttime fueling operations shall only take place in adequately lighted areas.
20. The tank vehicle shall be positioned with respect to vehicles being fueled to prevent traffic from driving over the delivery hose.
21. During fueling operations, tank vehicle brakes shall be set, chock blocks shall be in place and warning lights shall be in operation.
22. Motor vehicle fuel tanks shall not be topped off.
23. The dispensing hose shall be properly placed on an approved reel or in an approved compartment prior to moving the tank vehicle.
24. The fire code official and other appropriate authorities shall be notified when a reportable spill or unauthorized discharge occurs.
25. Operators shall place a drip pan or an absorbent pillow~~, in good condition,~~ under each fuel fill opening prior to and during dispensing operations. Drip pans shall be liquid-tight. The pan or absorbent pillow shall have a capacity of not less than 3 gallons. Spills retained in the drip pan or absorbent pillow need not be reported. Operators, when fueling, shall have on their person an absorbent pad capable of capturing diesel foam overfills. Except during fueling, the nozzle shall face upward and an absorbent pad shall be kept under the nozzle to catch drips. Contaminated absorbent pads or pillows shall be disposed of regularly in accordance with local, state and federal requirements.
26. ~~All persons and parties with an interest in the property such as property owners, lessors, real estate companies, property managers and operators of the property shall give written consent to allow the mobile fueling to be conducted on the property. Managers, lessees, renters and other persons shall not solely give permission. Each person or party shall indicate that they understand the risk of spills.~~

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change to provide reasonable safeguards for spill control in mobile dispensing situations. The modifications delete what the committee felt was redundant verbiage in Item #6, subjective language in Item #25 and a cumbersome and unenforceable provision, Item #26.

Assembly Action: **None**

Final Hearing Results

F281-07/08 **AM**

Code Change No: F282-07/08

Original Proposal

Section: 3501.1

Proponent: Robert J. Davidson, Davidson Code Concepts, LLC, representing himself

Revise as follows:

3501.1 (Supp) Scope. The storage and use of flammable gases shall be in accordance with this chapter. Compressed gases shall also comply with Chapter 30 and cryogenic fluids shall also comply with Chapter 32. Bulk hydrogen compressed gas systems and bulk liquefied hydrogen gas systems shall also comply with NFPA 55. Hydrogen motor fuel-dispensing stations and repair garages and their associated above ground hydrogen storage systems shall also be designed and constructed in accordance with Chapter 22.

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 606).
2. Liquefied petroleum gases and natural gases regulated by Chapter 38.
3. Fuel-gas systems and appliances regulated under the *International Fuel Gas Code* other than gaseous hydrogen systems and appliances.
4. ~~Hydrogen motor fuel-dispensing stations and repair garages and their associated above ground hydrogen storage systems designed and constructed in accordance with Chapter 22.~~
5. ~~5.~~ 4. Pyrophoric gases in accordance with Chapter 41.

Reason: The Hydrogen Motor Fuel-Dispensing and Generation requirements found in Chapter 22 of the International Fire Code (IFC) requires compliance with Chapter 35 of the IFC at Sections 2209.1, 2209.3.2.3.3, 2209.3.2.4, and 2209.3.2.6. However, when you go to Chapter 35, Section 3501.1 Exception 4 effectively prevents the application of Chapter 35 and loops you back to Chapter 22.

By deleting Exception 4 accompanied by the addition of "**Hydrogen motor fuel-dispensing stations and repair garages and their associated above ground hydrogen storage systems shall also be designed and constructed in accordance with Chapter 22."** To the end of Section 3501.1, the more specific requirements of Chapter 22 (Section 2209) will apply along with any Chapter 35 requirements not addressed in Chapter 22.

There are no conflicts created with this modification, it is similar to the approach taken with flammable or combustible liquid motor fuels, and any potential conflicts are eliminated by application of Section 102.9, with Chapter 22 being the more specific language and Chapter 35 being the general language for this application of the code.

> *"102.9 Conflicting provisions. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable."*

The *International Fuel Gas Code* (IFGC) requires compliance with *International Fire Code* (IFC) Chapter 35 in Sections 635.1, 701.1, 703.2, and 704.3. However, when the code official or the regulated community goes to IFC Chapter 35, Section 3501.1, Exception 3 effectively stops application of Chapter 35 and sends them back to the *International Fuel Gas Code*.

If you research the history of the addition of the gaseous hydrogen system requirements to the IFGC the proposal authors identified the exception in the IFC Chapter 35 and indicated they were not changing it because they did not want Chapter 35 to be applied to fuel gases other than gaseous hydrogen. This has caused confusion with code officials and the regulated community that have tried to apply the I-Codes in a comprehensive manner.

Adding the language, "**other than gaseous hydrogen systems and appliances**" to Exception 3 clarifies that Chapter 35 is to be applied to gaseous hydrogen systems that are regulated by the IFGC without extending application of Chapter 35 to other fuel gas systems and appliances regulated by the IFCG.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides a needed resolution of conflict within the scoping text of Chapter 35.

Assembly Action: **None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because a public comment was submitted.

Public Comment:

Larry Fluer, Fluer, Inc., representing Compressed Gas Association, requests Approval as Modified by this public comment.

Modify proposal as follows:

3501.1 (Supp) Scope. The storage and use of flammable gases shall be in accordance with this chapter. Compressed gases shall also comply with Chapter 30 and cryogenic fluids shall also comply with Chapter 32. Bulk hydrogen compressed gas systems and bulk liquefied hydrogen gas systems shall ~~also~~ comply with NFPA 55. Hydrogen motor fuel-dispensing stations and repair garages and their associated above ground hydrogen storage systems shall also be designed and constructed in accordance with Chapter 22.

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 606).
2. Liquefied petroleum gases and natural gases regulated by Chapter 38.
3. Fuel-gas systems and appliances regulated under the *International Fuel Gas Code* other than gaseous hydrogen systems and appliances.
4. Pyrophoric gases in accordance with Chapter 41.

Commenter's Reason: The intent of Section 3501.1 is to refer the user to NFPA 55 for the requirements of bulk hydrogen systems whether liquid or gaseous. The NFPA standards for bulk hydrogen systems were first established in 1968 with NFPA 50A applying to gaseous hydrogen systems and NFPA 50B applying to liquefied hydrogen systems. It is appropriate that the direction to NFPA 55 be clarified and limited to bulk systems which have been defined in the 2007 Supplement to the IFC in Section 3502.1. This clarification will avoid having users misapply Table 3504.2.1 which was intended to be limited to non-bulk applications.

Approval of the modification as shown adds clarity to the code and gives the user direction for requirements when bulk hydrogen systems are involved.

Final Hearing Results

F282-07/08 **AMPC**

Code Change No: F283-07/08

Original Proposal

Sections: 3503.1.1, 4003.1.1.3

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing himself

Revise as follows:

3503.1.1 Special limitations for indoor storage and use. Flammable gases shall not be stored or used in Group A, ~~B~~, E, I or R occupancies or in offices in Group B occupancies.

Exceptions:

1. Cylinders not exceeding a capacity of 250 cubic feet (7.08 m3) each at normal temperature and pressure (NTP) used for maintenance purposes, patient care or operation of equipment.
2. Food service operations in accordance with Section 3803.2.1.7.

4003.1.1.3 Oxidizing gases. Except for cylinders not exceeding a capacity of 250 cubic feet (7 m^3) each used for maintenance purposes, patient care or operation of equipment, oxidizing gases shall not be stored or used in Group A, ~~B,~~ E, I, or R occupancies or in offices in Group B occupancies..

The aggregate quantities of gases used for maintenance purposes and operation of equipment shall not exceed the maximum allowable quantity per control area listed in Table 2703.1.1(1).

Medical gas systems and medical gas supply cylinders shall also be in accordance with Section 3006.

Reason: The revision corrects an error dating back to the UFC provisions that served as the source for the original IFC during the drafting process. Code Change F169-00, which was approved several years ago, fully documented the history of the UFC error and corrected the regulated occupancy classes to be consistent with the code's intent. However, text to limit application of this restriction to offices in Group B was overlooked in F169-00. Staff pointed out the oversight last year, and this proposal is submitted to correct the problem. The current text prevents small laboratories or other non-office uses classified as Group B from having MAQ amounts of flammable or oxidizing gases, which was never intended.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which provides needed clarification of the applicability of the section to only offices in Group B.

Assembly Action: **None**

Final Hearing Results

F283-07/08 **AS**

Code Change No: F284-07/08

Original Proposal

Sections: 3503.1.1, 4003.1.1.3

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

Revise as follows:

3503.1.1 Special limitations for indoor storage and use. Flammable gases shall not be stored or used in Group A, B, E, I or R occupancies.

Exceptions:

1. Cylinders of nonliquefied compressed gases not exceeding a capacity of 250 cubic feet (7.08 m^3) or liquefied gases not exceeding a capacity of 40 pounds (18 kg) each at normal temperature and pressure (NTP) used for maintenance purposes, patient care or operation of equipment.
2. Food service operations in accordance with Section 3803.2.1.7.

4003.1.1.3 Oxidizing gases. Except for cylinders of nonliquefied compressed gases not exceeding a capacity of 250 cubic feet (7 m^3) or liquefied compressed gases not exceeding a capacity of 46 pounds (21 kg) each used for maintenance purposes, patient care or operation of equipment, oxidizing gases shall not be stored or used in Group A, B, E, I or R occupancies.

The aggregate quantities of gases used for maintenance purposes and operation of equipment shall not exceed the maximum allowable quantity per control area listed in Table 2703.1.1(1).

Medical gas systems and medical gas supply cylinders shall also be in accordance with Section 3006.

Reason: To correlate the code change with F169-06/07 changes to Tables 2701.1.1(1) as shown in the 2007 Supplement. In the above referenced code change a unit of measure for liquefied oxidizing and flammable gases was used as the basis for Tables 2701.1.1(1) and (3). For flammable gases the density of butane and for oxidizing gases the density of chlorine was used as an index. These indexes allow the establishment of units of measure in weight units for gases that otherwise may have been shown in terms of gallons or cubic feet. The proposed modifications to Section 3503.1.1 and 4003.1.1.3 have been made to acknowledge the fact that liquefied gases are packaged in terms of weight. The exception for cylinders containing a nominal 250 cubic feet was based on a conventional 9 by 52 inch cylinder of unspecified gas. Using an index system that provides a weight basis for liquefied gases maintains the intent while providing the user with a means to evaluate containers that are typically encountered in the field. The index system is consistent with that used to establish the MAQ tables for these two hazard classes.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which provides correlation with the action taken on code change F169-06/07 in the last cycle using a weight basis for liquefied gases and a volume basis for non-liquefied gases using the same indexing system used in F169-06/07.

Assembly Action: **None**

Final Hearing Results

F284-07/08 **AS**

Code Change No: F287-07/08

Original Proposal

Section: 3504.2.1.1 (New)

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

Add new text as follows:

3504.2.1.1 Weather protection canopies. Where weather protection is provided for sheltering outdoor flammable gas storage or use areas, such areas shall be constructed in accordance with Section 2704.13 and the *International Building Code.* Outdoor storage or use of flammable compressed gases shall be located from a lot line, public street, public alley, public way in accordance with Table 3504.2.1 except that Footnote a of Table 3504.2.1 shall not apply to areas sheltered by weather protection.

Reason: Weather protection is employed as a means to protect small outdoor storage areas used for the storage of compressed gases from the elements including sun exposure in areas of extreme heat and snow in areas which are exposed to winter storms. The IBC establishes limitations on the construction of weather protection under the requirements of IBC Section 414.6.1. Such areas are limited to 1500 square feet. The IBC allows an increase in area by Section 506 including the use of sprinklers which are not otherwise required for flammable gas storage.

While the use of a fire barrier wall to shield storage in the open from exposures is recognized the use of a fire barrier in combination with an unprotected overhead structure may not be appropriate. Therefore, the tabular distances should be applied without modification.

A similar provision exists for flammable liquids in Section 3406.5.1.2 for bulk and transfer process operations where weather protection is specified along with minimum separation distances from buildings, lot lines, etc.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will clarify that the weather protection requirements do not include Note a to Table 3504.2.1.

Assembly Action: **None**

Final Hearing Results

F287-07/08 **AS**

Code Change No: F289-07/08

Original Proposal

Sections: 3704.3.4, 3704.3.2.5, 3704.3.2.6, 3704.3.2.7

Proponent: John Anicello, Airgas, Inc.

Revise as follows:

3704.3.4 Outdoor use of cylinders, containers and portable tanks. Cylinders, containers and portable tanks in outdoor use shall be located in gas cabinets or exhausted enclosures and shall comply with Sections 3704.3.4.1 through 3704.3.4.3.

~~3704.3.2.5~~ 3704.3.4.1 **Treatment systems.** The treatment system requirements set forth in Section 3704.2.2.7 shall apply to highly toxic or toxic gases located outdoors.

~~3704.3.2.6~~ 3704.3.4.2 **Emergency power.** The requirements for emergency power set forth in Section 3704.2.2.8 shall apply to highly toxic or toxic gases located outdoors.

~~3704.3.2.7~~ 3704.3.4.3 **Gas detection system.** The gas detection system requirements set forth in Section 3704.2.2.10 shall apply to highly toxic or toxic gases located outdoors.

Reason: The application of gas detection by the code in storage in outdoor environments for toxic and highly toxic gases is unintended and improper; as such gases in storage are not required to be located in gas cabinets or exhausted enclosures. Additionally, gas detection is ineffective in an outdoor environment. The way the code is currently published, it is believed to be a result of inadvertent placement of the cited provisions. By moving the cited provisions for treatment, gas detection and emergency power under 3704.3.4 Outdoor use of cylinders, containers and portable tanks puts the provisions in the proper location as they apply to use of toxic and highly toxic gases in gas cabinets or exhausted enclosures in an outdoor environment. This rational is supported by the 2003 International Fire Code commentary on page 37-17.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that the relocation of these provisions is appropriate and will clarify the code.

Assembly Action: **None**

Final Hearing Results

F289-07/08 **AS**

Code Change No: F290-07/08

Original Proposal

Sections: 4001.1, 4006

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

4001.1 (Supp) Scope. The storage and use of oxidizing materials shall be in accordance with this chapter and Chapter 27. Oxidizing gases shall also comply with Chapter 30. Oxidizing cryogenic fluids shall also comply with Chapter 32.

Exceptions:

1. Display and storage in Group M and storage in Group S occupancies complying with Section 2703.11.
2. Bulk oxygen systems at industrial and institutional consumer sites shall be in accordance with NFPA 55.
3. Liquid oxygen stored or used in home health care in Groups I-1, I-4 and R occupancies in accordance with Section 4006.

SECTION 4006 (Supp)
LIQUID OXYGEN IN HOME HEALTH CARE

4006.1 General. The storage and use of liquid oxygen (LOX) in home health care in Groups I-1, I-4 and R occupancies shall comply with Sections 4006.2 through 4006.~~3.7~~6~~, as applicable~~ or shall be stored and used in accordance with Chapter 27.

4006.2 Information and instructions to be provided. The ~~supplier~~ seller of liquid oxygen shall provide the user with ~~the following~~ information in written form that includes, but is not limited to, the following:

1. Manufacturer's instructions and labeling for safe storage and use ~~operation~~ of the containers ~~used and labeling~~.
2. Locating containers away from ignition sources, exits, electrical hazards and high temperature devices in accordance with Section 4006.3.3.
3. Restraint of containers to prevent falling in accordance with Section 4006.3.4.
4. Requirements for ~~transporting~~ handling containers in accordance with Section 4006.3.5.
5. Safeguards for refilling containers in accordance with Section 4006.3.6~~to be followed when containers are refilled~~.
6. Signage requirements in accordance with Section 4006.6.

4006.3 Liquid oxygen home care containers. ~~Liquid oxygen home care and ambulatory containers in Groups I-1, I-4, R-3 Residential Care/Assisted Living Facilities and R-4 occupancies shall be stored, used and filled in accordance with Sections 4006, 3203.1 and 3203.2.~~ Containers of liquid oxygen in home health care shall be in accordance with Sections 4006.3.1 through 4006.3.6.

4006.3.1 Maximum individual container capacity. Liquid oxygen home care containers shall not exceed an individual capacity of 15.8 gal (60 liters) in Groups I-1, I-4, and R occupancies. Liquid oxygen ambulatory containers are allowed in Groups I-1, I-4, and R occupancies. Containers of liquid oxygen in home health care shall also be stored, used and filled in accordance with Sections 4006, 3203.1 and 3203.2.

~~4006.3.1~~ 4006.3.2 Manufacturer's instructions. Containers shall be stored, used and operated in accordance with the manufacturer's instructions and labeling.

~~4006.3.2~~ 4006.3.3 Locating containers. Containers shall not be located in areas:

1. Where they can be overturned due to operation of a door,
2. Where they are in the direct path of egress,
3. Subject to falling objects,
4. Where they may become part of an electrical circuit, or
5. Where open flames and high temperature devices can cause a hazard.

~~**4006.3.3 No smoking.** Smoking shall be prohibited in rooms or areas where liquid oxygen is in use.~~
~~**4006.3.4 Signs**. A sign stating "OXYGEN NO SMOKING" shall be posted in the room or area where the liquid oxygen home care container(s) is stored or used and liquid oxygen ambulatory containers are filled.~~

~~4006.3.5~~ 4006.3.4 Restraining containers. Liquid oxygen home care containers shall be restrained while in storage or use to prevent falling caused by contact, vibration or seismic activity. Containers shall be restrained by one of the following methods:

1. Restraining containers to a fixed object with one or more restraints.
2. Restraining containers within a framework, stand or assembly designed to secure the container.
3. Restraining containers by locating a container against two points of contact like the walls of a corner of a room or a wall and a secure furnishing or object like a desk.

~~4006.3.6~~ 4006.3.5 Container ~~movement~~ handling. Containers shall be ~~transported~~ handled by use of a cart or hand truck designed for such use.

Exceptions:

1. Liquid oxygen home care containers equipped with a roller base.
2. Liquid oxygen ambulatory containers are allowed to be hand carried.

~~4006.3.7~~ 4006.3.6 Filling of containers. The filling of containers shall be in accordance with Sections ~~4006.3.7.1~~ 4006.3.6.1 through ~~4006.3.7.3~~ 4006.3.6.3.

~~4006.3.7.1~~ 4006.3.6.1 Filling location ~~of home care containers.~~ Liquid oxygen home care containers and ambulatory containers shall be filled outdoors.

Exception: Liquid oxygen ambulatory containers are allowed to be filled indoors if the supply container is specifically designed for filling such containers and written instructions are provided by the container manufacturer.

~~4006.3.7.1.1~~ 4006.3.6.2 Incompatible surfaces. A ~~liquid oxygen compatible~~ drip pan compatible with liquid oxygen shall be provided under home care container fill and vent connections during the filling process in order to protect against liquid oxygen spillage from coming into contact with combustible surfaces, including asphalt.

~~**4006.3.7.2 Filling of ambulatory care containers.** The filling of liquid oxygen ambulatory containers is allowed indoors where the supply container is designed to fill them and written instructions are provided by the container manufacturer.~~

~~4006.3.7.3~~ 4006.3.6.3 Open flames and high temperature devices. The use of open flames and high temperature devices shall be in accordance with Section 2703.7.2.

4006.4 Maximum aggregate quantity. The maximum aggregate quantity of liquid oxygen allowed in storage and in use in each dwelling unit shall be 31.6 gal (120 L).

Exceptions:

1. The maximum aggregate quantity of liquid oxygen allowed in Group I-4 occupancies shall be limited by the maximum allowable quantity set forth in Table 2703.1.1(1).
2. Where individual sleeping rooms are separated from the remainder of the dwelling unit by fire barriers and horizontal assemblies having a minimum fire-resistance rating of 1 hour in accordance with the *International Building Code*, the maximum aggregate quantity per dwelling unit can be increased to allow a maximum of 31.6 gal (120 L) of liquid oxygen per sleeping room.

4006.5 Smoking prohibited. Smoking shall be prohibited in rooms or areas where liquid oxygen is in use.

4006.6 Signs. Warning signs for occupancies using home health care liquid oxygen shall be in accordance with Sections 4006.6.1 and 4006.6.2.

4006.6.1 No smoking sign. A sign stating "OXYGEN--NO SMOKING" shall be posted in each room or area where liquid oxygen containers are stored, used or filled.

4006.6.2 Premises signage. Where required by the fire code official, each dwelling unit or sleeping unit shall have an approved sign indicating that the unit contains liquid oxygen home care containers.

4006.7 Fire department notification. Where required by the fire code official, the liquid oxygen seller shall notify the fire department of the locations of liquid oxygen home care containers.

Reason: Code change proposal F205-06/07 was accepted during the last code change cycle and is included in the 2007 Supplement. In reviewing this section with stakeholders including key industry representatives, the fire service, the fire fighter union and others, there are some changes that are still necessary to complete this subject. Included in this proposal are the consensus proposals from the discussions these groups held since the final action hearings for the 06/07 cycle.

It is not realistic to apply the MAQ/control area concept set forth in Chapter 27 to the widespread use and distribution of liquid oxygen in home health care occupancies. This proposal adds a third exception to clarify that liquid oxygen that is stored and used in home health care occupancies in accordance with Section 4006 is not required to also comply with Chapter 27 or Chapter 32 provisions. The concept in Section 4006 is to limit the individual container size and also limit the total number of containers allowed in an individual dwelling unit. Trying to further regulate the quantity in a building is not considered by either industry or the fire service to be a reasonable or enforceable regulatory approach.

This proposal accomplishes several important things:

1. It establishes a maximum capacity for individual containers of liquid oxygen (LOX) that can be stored and used in home health care occupancies. It is necessary to establish such a limit because there has been a trend to increase the size of the containers delivered to the user in some cases simply in order to avoid more frequently deliveries. If it is necessary to have individual containers larger than the limits established here, then the MAQ and control area concept set forth in Chapter 27 will apply.
2. It eliminates the direct reference to R-3 Residential Care and R-4 occupancies and more appropriately applies to all R occupancies, including single-family residences, hotels and apartments used for home health care.
3. It clarifies that it is the responsibility of the seller rather than the supplier of liquid oxygen to provide the user with important safety information as the supplier may not be the entity that has the direct contact with the user.

This change allows the fire code official to require signage for each dwelling unit or sleeping unit when the fire department deems it necessary to alert the fire fighters of the presence of LOX in a home. Using the term "when required by the fire code official" allows the fire department to require signage if that signage is part of their operational plans.

This change allows the fire code official to require the seller of LOX to notify the fire department if that fire department wants to track the locations of LOX within their jurisdiction. Some fire departments want to know where the LOX locations are so they can pre-plan those locations.

Other fire departments do not want this information due to the potentially large amount of information and do not have the resources to process that information. This proposal uses the term "when required by the fire code official" to give that option to both the fire departments that want to track the information and those who do not want to track it.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it reflects a consensus of concerned parties that responded to committee input in the last cycle and provides improved regulation of home oxygen use. Concern was expressed, however, that Sections 4006.6.2 and 4006.7 could be viewed as breach of privacy issues and could be in violation of HIPPA rules for patient medical confidentiality.

Assembly Action: **None**

Final Hearing Results

F290-07/08 **AS**

Code Change No: F291-07/08

Original Proposal

Sections: 4002.1 (IBC 307.2)

Proponent: Patrick A. McLaughlin, McLaughlin & Associates, representing Arch Chemicals, Inc., and PPG Industries, Inc.

Revise definition as follows:

4002.1 (IBC 307.2) Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

OXIDIZER. A material that readily yields oxygen or other oxidizing gas, or that readily reacts to promote or initiate combustion of combustible materials and, if heated or contaminated, can result in vigorous self-sustained decomposition ~~Examples of other oxidizing gases include bromine, chlorine and fluorine.~~

Class 4. An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock and that causes a severe increase in the burning rate of combustible materials with which it comes into contact. In addition, the oxidizer ~~will enhance~~ causes a severe increase in the burning rate and can cause spontaneous ignition of combustibles.

Class 3. An oxidizer that ~~will~~ causes a severe increase in the burning rate of combustible materials with which it comes in contact ~~or that will undergo vigorous self-sustained decomposition caused by contamination or exposure to heat~~.

Class 2. An oxidizer that will cause a moderate increase in the burning rate ~~or that causes spontaneous ignition~~ of combustible materials with which it comes in contact.

Class 1. An oxidizer that does not moderately increase the burning rate of ~~whose primary hazard is that it slightly increases the burning rate but which does not cause spontaneous ignition when it comes in contact with~~ combustible materials.

Reason: This proposal updates the IFC (IBC) definition of oxidizer to be consistent with the current definition of an oxidizer. The definition of an oxidizer in the IFC (IBC) is based on the definition in the Uniform Fire Code which came from NFPA 430.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it provides an appropriate update to the definition oxidizer consistent with OSHA regulations and NFPA 40.

Assembly Action: **None**

Final Hearing Results

F291-07/08 **AS**

Code Change No: F292-07/08

Original Proposal

Sections: 4503.7 (New), 4504

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Add new text as follows:

4503.7 Slip Identification. Slips and mooring spaces shall be individually identified by an approved numeric or alphabetic designator. Space designators shall be posted at the space. Signs indicating the space designators located on finger piers and floats shall be posted at the base of all piers, finger piers, floats, and finger floats.

2. Revise as follows:

4504.1 (Supp) General. Piers, marinas and wharves with facilities for mooring or servicing five or more vessels, and marine motor fuel dispensing facilities shall be equipped with fire-protection equipment in accordance with Sections 4504.2 through ~~4504.5~~ 4504.6.

4504.2 (Supp) Standpipes. Marinas and boatyards shall be equipped throughout with Class I manual, dry standpipe systems in accordance with NFPA 303. Systems shall be provided with outlets located such that no point on the marina pier or float system exceeds 150 feet from a standpipe outlet.

4504.2.1 Identification of standpipe outlets. Standpipe outlet locations shall be clearly identified by a flag or other approved means designed to be readily visible from the pier accessing the float system.

4504.3 (Supp) Access and water supply. (No change to current text)

4504.4 (Supp) Portable fire extinguishers. (No change to current text)

4504.5 (Supp) Communications. (No change to current text)

4504.6 Emergency operations staging areas. Space shall be provided on all float systems for the staging of emergency equipment. Emergency operation staging areas shall provide a minimum of 4 feet wide by 10 feet long clear area exclusive of walkways and shall be located at each standpipe outlet. Emergency operation staging areas shall be provided with a curb or barrier having a minimum height of 4" and maximum space between the bottom edge and surface of the staging area of 2" on the outboard sides of the staging area.

An approved sign reading "Fire Equipment Staging Area – Keep Clear" shall be provided at each staging area.

Reason: The proposed amendments to the new Chapter 45 on Marinas include:

4503.7 - Improved communications and addressing within the marina float system to speed response by emergency personnel for all emergencies in the marina, including medical responses. These requirements are relatively low cost improvements that offer great potential for improving emergency responses.

4504.2 - Revised standpipe requirements that will reduce the cost of installation and maintenance for the standpipe systems that have been required under the code for years, while providing improved functionality for firefighting purposes. As proposed, the requirement for a Class I dry manual standpipes will eliminate the cost to the marina owner of installation and annual testing and inspection of backflow valves and tenant hoses currently in use for typical marina systems;

4504.6 - Low cost requirements for equipment staging areas and standpipe outlet identification to speed fire response and protect valuable equipment.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it would provide the fire department with improved operational features. Concern was expressed that a lower marina size limit is needed to avoid applying the provisions to small marinas, that there is no requirement that slip identification be visible from the land side and the proposal did not provide signage size criteria.

Assembly Action: **None**

Final Hearing Results

F292-07/08 **AS**

Code Change No: F294-07/08

Original Proposal

Chapter 46 (New), Sections: 102.1, 202, 607.1, 701.1, 704.1, Table 704.1, 903.6.1, 905.11, 907.3 through 907.3.4.3, 1027, 2506.1

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Add new chapter as follows:

CHAPTER 46
CONSTRUCTION REQUIREMENTS FOR EXISTING BUILDINGS

SECTION 4601
GENERAL

4601.1Scope. The provisions of this chapter shall apply to existing buildings constructed prior to the adoption of this code.

4601.2 Intent. The intent of this chapter is to provide a reasonable degree of fire and life safety to persons occupying existing buildings by providing for alterations to such existing buildings which do not comply with the minimum requirements of the *International Building Code.*

4601.3 Permits. Permits shall be required as set forth in Section 105.7 and the *International Building Code*.

4601.4 Owner notification. Where a building is found to be in non-compliance, the fire code official shall duly notify the owner of the building. Upon receipt of such notice, the owner shall, subject to the following time limits, take necessary actions to comply with the provisions of Chapter 46.

4601.4.1 Plans and specifications. Plans and specifications for the necessary alterations shall be completed within a time schedule approved by the fire code official.

4601.4.2 Completion of work. Work on the required alterations to the building shall be completed within a time schedule approved by the fire code official.

4601.4.3 Extension of time. The fire code official is authorized to grant necessary extensions of time when it can be shown that the specified time periods are not physically practical or pose an undue hardship. The granting of an extension of time for compliance shall be based on the showing of good cause and subject to the filing of an acceptable systematic plan of correction with the fire code official.

SECTION 4602
DEFINITIONS

4602.1 Definition. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

EXISTING. Buildings, facilities or conditions which are already in existence, constructed or officially authorized prior to the adoption of this code.

SECTION 4603
FIRE SAFETY REQUIREMENTS FOR BUILDINGS

4603.1 Required modifications. Means of egress in existing buildings shall comply with the requirements of Section 1027 and the building code that applied at the time of construction. Where these provisions conflict, the most restrictive provision shall apply.

For existing buildings that were not required to comply with a building code at the time of construction, such buildings shall comply with the requirements of Section 1027 and, in addition, shall have a life safety evaluation prepared, consistent with the requirements of Section 104.7.2. The life safety evaluation shall identify any changes to the means of egress that are necessary to provide safe egress to occupants and shall be subject to review and approval by the fire code official. The building shall be modified to comply with the recommendations set forth in the approved evaluation.

Exception: Group U Occupancies do not need to comply.

4603.2 Elevator operation. Existing elevators with a travel distance of 25 feet (7620 mm) or more above or below the main floor or other level of a building and intended to serve the needs of emergency personnel for fire-fighting or rescue purposes shall be provided with emergency operation in accordance with ASME A17.3.

4603.3 Vertical openings. Interior vertical shafts, including but not limited to stairways, elevator hoistways, service and utility shafts, that connect two or more stories of a building shall be enclosed or protected as specified in Sections 4603.3.1 through 4603.3.7.

4603.3.1 Group I occupancies. In Group I occupancies, interior vertical openings connecting two stories or more shall be protected with 1- hour fire-resistance-rated construction.

4603.3.2 Three to five stories. In other than Group I occupancies, interior vertical openings, other than escalators, connecting three to five stories shall be protected by either 1-hour fire-resistance-rated construction or an automatic sprinkler system shall be installed throughout the building in accordance with Sections 903.3.1.1 or 903.3.1.2.

Exceptions:

1. Vertical opening protection is not required for Group R-3 occupancies.
2. Vertical opening protection is not required for open parking garages and ramps.

4603.3.3 More than five stories. In other than Group I occupancies, interior vertical openings, other than escalators, connecting more than five stories shall be protected by 1- hour fire-resistance-rated construction.

Exceptions:

1. Vertical opening protection is not required for Group R-3 occupancies.
2. Vertical opening protection is not required for open parking garages and ramps.

4603.3.4 Atriums and covered malls. In other than Group I occupancies, interior vertical openings in a covered mall building or a building with an atrium shall be protected by either 1- hour fire-resistance-rated construction or an automatic sprinkler system shall be installed throughout the building in accordance with Sections 903.3.1.1 or 903.3.1.2.

Exceptions:

1. Vertical opening protection is not required for Group R-3 occupancies.
2. Vertical opening protection is not required for open parking garages and ramps.

4603.3.5 Escalators in Group B and M occupancies. Escalators creating vertical openings connecting any number of stories shall be protected by either 1- hour fire-resistance-rated construction or an automatic fire sprinkler system in accordance with Section 903.3.1.1 installed throughout the building, with a draft curtain and closely spaced sprinklers around the escalator opening.

4603.3.6 Escalators connecting less than four stories. In other than Group B and M occupancies, escalators creating vertical openings connecting less than four stories shall be protected by either 1- hour fire-resistance-rated construction or an automatic sprinkler system in accordance with Sections 903.3.1.1 or 903.3.1.2 shall be installed throughout the building, and a draft curtain with closely spaced sprinklers shall be installed around the escalator opening.

4603.3.7 Escalators connecting more than four stories. In other than Group B and M occupancies, escalators creating vertical openings connecting five or more stories shall be protected by 1- hour fire-resistance-rated construction.

4603.4 Sprinkler systems. An automatic sprinkler system shall be provided in all existing buildings where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled in quantities exceeding 100 pounds (45 kg). Vaults located within buildings for the storage of raw pyroxylin shall be protected with an approved automatic sprinkler system capable of discharging 1.66 gallons per minute per square foot (68 L/min/m^2) over the area of the vault.

4603.5 Standpipes. Existing structures with occupied floors located more than 50 feet (15 240 mm) above or below the lowest level of fire department access shall be equipped with standpipes installed in accordance with Section 905. The standpipes shall have an approved fire department connection with hose connections at each floor level above or below the lowest level of fire department access. The fire code official is authorized to approve the installation of manual standpipe systems to achieve compliance with this section where the responding fire department is capable of providing the required hose flow at the highest standpipe outlet.

4603.6 Fire alarm systems. An approved manual, automatic or manual and automatic fire alarm system shall be installed in existing buildings and structures in accordance with Sections 4603.6.1 through 4603.6.7 and provide occupant notification in accordance with Section 907.6 unless other requirements are provided by other sections of this code.

Exception: Occupancies with an existing, previously approved fire alarm system.

4603.6.1 Group E. A fire alarm system shall be installed in existing Group E occupancies in accordance with Section 907.2.3.

Exceptions:

1. A manual fire alarm system is not required in a building with a maximum area of 1,000 square feet (93 m^2) that contains a single classroom and is located no closer than 50 feet (15 240 mm) from another building.
2. A manual fire alarm system is not required in Group E with an occupant load less than 50.

4603.6.2 Group I-1. An automatic or manual fire alarm system shall be installed in existing Group I-1 residential care/assisted living facilities in accordance with Section 907.2.6.1.

Exceptions:

1. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at exits if located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2 are not exceeded.

2. Where each sleeping room has a means of egress door opening directly to an exterior egress balcony that leads directly to the exits in accordance with Section 1014.5, and the building is not more than three stories in height.

4603.6.3 Group I-2. An automatic or manual fire alarm system shall be installed in existing Group I-2 occupancies in accordance with Section 907.2.6.2.

Exception: Manual fire alarm boxes in resident or patient sleeping areas shall not be required at exits if located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2 are not exceeded.

4603.6.4 Group I-3. An automatic or manual fire alarm system shall be installed in existing Group I-3 occupancies in accordance with Section 907.2.6.3.

4603.6.5 Group R-1. A fire alarm system and smoke alarms shall be installed in existing Group R-1 occupancies in accordance with Sections 4603.6.5.1 through 4603.6.5.2.

4603.6.5.1 Group R-1 hotels and motels. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 hotels and motels more than three stories or with more than 20 sleeping units.

Exception: Buildings less than two stories in height where all sleeping units, attics and crawl spaces are separated by 1-hour fire-resistance-rated construction and each sleeping unit has direct access to a public way, exit court or yard.

4603.6.5.2 Group R-1 boarding and rooming houses. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 boarding and rooming houses.

Exception: Buildings that have single-station smoke alarms meeting or exceeding the requirements of Section 907.2.10.1 and where the fire alarm system includes at least one manual fire alarm box per floor arranged to initiate the alarm.

4603.6.6 Group R-2. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-2 occupancies more than three stories in height or with more than 16 dwelling units or sleeping units.

Exceptions:

1. Where each living unit is separated from other contiguous living units by fire barriers having a fire-resistance rating of not less than 0.75 hour, and where each living unit has either its own independent exit or its own independent stairway or ramp discharging at grade.
2. A separate fire alarm system is not required in buildings that are equipped throughout with an approved supervised automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm to notify all occupants.
3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1023.6, Exception 4.

4603.6.7 Group R-4. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-4 residential care/assisted living facilities.

Exceptions:

1. Where there are interconnected smoke alarms meeting the requirements of Section 907.2.10 and there is at least one manual fire alarm box per floor arranged to sound continuously the smoke alarms.
2. Other manually activated, continuously sounding alarms approved by the fire code official.

4603.7 Single- and multiple-station smoke alarms. Single- and multiple-station smoke alarms shall be installed in existing Group R occupancies in accordance with Sections 4603.7.1 through 4603.7.3.

4603.7.1 Where required. Existing Group R occupancies not already provided with single-station smoke alarms shall be provided with single-station smoke alarms. Installation shall be in accordance with Section 907.2.10, except as provided in Sections 4603.7.2 and 4603.7.3.

4603.7.2 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit or sleeping unit in Group R-1, R-2, R-3 or R-4, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind.
2. Smoke alarms in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

4603.7.3 Power source. In Group R occupancies, single-station smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery back-up shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exception: Smoke alarms are permitted to be solely battery operated: in existing buildings where no construction is taking place; in buildings that are not served from a commercial power source; and in existing areas of buildings undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes.

SECTION 4604
MEANS OF EGRESS FOR EXISTING BUILDINGS

4604.1 General. Means of egress in existing buildings shall comply with the minimum egress requirements when specified in Table 4604.1 as further enumerated in Sections 4604.2 through 4604.21, and the building code that applied at the time of construction. Where the provisions conflict, the most restrictive provision shall apply. Existing buildings that were not required to comply with a building code at the time of construction shall comply with the minimum egress requirements when specified in Table 4603.1 as further enumerated in Sections 4604.2 through 4604.21, and, in addition, shall have a life safety evaluation prepared, consistent with the requirements of Section 104.7.2. The life safety evaluation shall identify any changes to the means of egress that are necessary to provide safe egress to occupants and shall be subject to review and approval by the fire code official. The building shall be modified to comply with the recommendations set forth in the approved evaluation.

4604.2 Elevators, escalators and moving walks. Elevators, escalators and moving walks shall not be used as a component of a required means of egress.

Exceptions:

1. Elevators used as an accessible means of egress where allowed by Section 1007.4.
2. Previously approved escalators and moving walks in existing buildings.

4604.3 Exit sign illumination. Exit signs shall be internally or externally illuminated. The face of an exit sign illuminated from an external source, shall have an intensity of not less than 5 foot-candles (54 lux). Internally illuminated signs shall provide equivalent luminance and be listed for the purpose.

Exception: Approved self-luminous signs that provide evenly illuminated letters shall have a minimum luminance of 0.06 foot-lamberts (0.21 cd/m^2).

4604.4 Power source. Where emergency illumination is required in Section 4604.5, exit signs shall be visible under emergency illumination conditions.

Exception: Approved signs that provide continuous illumination independent of external power sources are not required to be connected to an emergency electrical system.

4604.5 Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

1. Group A having 50 or more occupants.

   Exception: Assembly occupancies used exclusively as a place of worship and having an occupant load of less than 300.

2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below the level of exit discharge, or buildings with 1,000 or more total occupants.
3. Group E in interior stairs, corridors, windowless areas with student occupancy, shops and laboratories.
4. Group F having more than 100 occupants.

   Exception: Buildings used only during daylight hours which are provided with windows for natural light in accordance with the *International Building Code*.

5. Group I.
6. Group M.

   Exception: Buildings less than 3,000 square feet (279 m^2) in gross sales area on one story only, excluding mezzanines.

7. Group R-1.

   Exception: Where each sleeping unit has direct access to the outside of the building at grade.

8. Group R-2.

   Exception: Where each dwelling unit or sleeping unit has direct access to the outside of the building at grade.

9. Group R-4.

   Exception: Where each sleeping unit has direct access to the outside of the building at ground level. The emergency power system shall provide power for not less than 60 minutes and consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.

4604.6 Guards. Guards complying with this section shall be provided at the open sides of means of egress that are more than 30 inches (762 mm) above the floor or grade below.

4604.6.1 Height of guards. Guards shall form a protective barrier not less than 42 inches (1067 mm) high.

Exceptions:

1. Existing guards on the open side of stairs shall be not less than 30 inches (760 mm) high.
2. Existing guards within dwelling units shall be not less than 36 inches (910 mm) high.
3. Existing guards in assembly seating areas.

4604.6.2 Opening limitations. Open guards shall have balusters or ornamental patterns such that a 6-inch diameter (152 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm).

Exceptions:

1 At elevated walking surfaces for access to, and use of electrical, mechanical or plumbing systems or equipment, guards shall have balusters or be of solid materials such that a sphere with a diameter of 21 inches (533 mm) cannot pass through any opening.

2. In occupancies in Group I-3, F, H or S, the clear distance between intermediate rails measured at right angles to the rails shall not exceed 21 inches (533 mm).
3. Approved existing open guards.

4604.7 Size of doors. The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 28 inches (711 mm). Where this section requires a minimum clear width of 28 inches (711 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 28 inches (711 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. Means of egress doors in an occupancy in Group I-2 used for the movement of beds shall provide a clear width not less than 41.5 inches (1054 mm). The height of doors shall not be 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 occupancies in Groups R-2 and R-3.
2. Door openings to storage closets less than 10 square feet (0.93 m^2) in area shall not be limited by the minimum width.
3. Width of door leafs in revolving doors that comply with Section 1008.1.3.1 shall not be limited.
4. Door openings within a dwelling unit shall not be less than 78 inches (1981 mm) in height.
5. Exterior door openings in dwelling units, other than the required exit door, shall not be less than 76 inches (1930 mm) in height.
6. Exit access doors serving a room not larger than 70 square feet (6.5 m^2) shall be not less than 24 inches (610 mm) in door width.

4604.8 Opening force for doors. The opening force for interior side-swinging doors without closers shall not exceed a 5-pound (22 N) force. For other side-swinging, sliding and folding doors, the door latch shall release when subjected to a force of not more than 15 pounds (66 N). The door shall be set in motion when subjected to a force not exceeding a 30-pound (133 N) force. The door shall swing to a full-open position when subjected to a force of not more than 50 pounds (222 N). Forces shall be applied to the latch side.

4604.9 Revolving doors. Revolving doors shall comply with the following:

1. A revolving door shall not be located within 10 feet (3048 mm) of the foot or top of stairs or escalators. A dispersal area shall be provided between the stairs or escalators and the revolving doors.
2. The revolutions per minute for a revolving door shall not exceed those shown in Table 4604.9.
3. Each revolving door shall have a conforming side-hinged swinging door in the same wall as the revolving door and within 10 feet (3048 mm).

Exceptions:

1. A revolving door is permitted to be used without an adjacent swinging door for street floor elevator lobbies provided a stairway, escalator or door from other parts of the building does not discharge through the lobby and the lobby does not have any occupancy or use other than as a means of travel between elevators and a street.
2. Existing revolving doors where the number of revolving doors does not exceed the number of swinging doors within 20 feet (6096 mm).

TABLE 4604.9
REVOLVING DOOR SPEEDS

INSIDE DIAMETER	POWER-DRIVEN-TYPE SPEED CONTROL (RPM)	MANUAL-TYPE SPEED CONTROL (RPM)
6' 6"	11	12
7' 0"	10	11
7' 6"	9	11
8' 0"	9	10
8' 6"	8	9
9' 0"	8	9
9' 6"	7	8
10' 0"	7	8

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

4604.9.1 Egress component. A revolving door used as a component of a means of egress shall comply with Section 4604.9 and all of the following conditions:

1. Revolving doors shall not be given credit for more than 50 percent of the required egress capacity.
2. Each revolving door shall be credited with not more than a 50-person capacity.
3. Revolving doors shall be capable of being collapsed when a force of not more than 130 pounds (578 N) is ` applied within 3 inches (76 mm) of the outer edge of a wing.

4604.10 Stair dimensions for existing stairs. Existing stairs in buildings shall be permitted to remain if the rise does not exceed 8.25 inches (210 mm) and the run is not less than 9 inches (229 mm). Existing stairs can be rebuilt.

Exception: Other stairs approved by the fire code official.

4604.10.1 Stair dimensions for replacement stairs. The replacement of an existing stairway in a structure shall not be required to comply with the new stairway requirements of Section 1009 where the existing space and construction will not allow a reduction in pitch or slope.

4604.11 Winders. Existing winders shall be allowed to remain in use if they have a minimum tread depth of 6 inches (152 mm) and a minimum tread depth of 9 inches (229 mm) at a point 12 inches (305 mm) from the narrowest edge.

4604.12 Circular stairways. Existing circular stairs shall be allowed to continue in use provided the minimum depth of tread is 10 inches (254 mm) and the smallest radius shall not be less than twice the width of the stairway.

4604.13 Stairway handrails. Stairways shall have handrails on at least one side. Handrails shall be located so that all portions of the stairway width required for egress capacity are within 44 inches (1118 mm) of a handrail.

Exception: Aisle stairs provided with a center handrail are not required to have additional handrails.

4604.13.1 Height. Handrail height, measured above stair tread nosings, shall be uniform, not less than 30 inches (762 mm) and not more than 42 inches (1067 mm).

4604.14 Slope of ramps. Ramp runs utilized as part of a means of egress shall have a running slope not steeper than one unit vertical in ten units horizontal (10-percent slope). The slope of other ramps shall not be steeper than one unit vertical in eight units horizontal (12.5-percent slope).

4604.15 Width of ramps. Existing ramps are permitted to have a minimum width of 30 inches (762 mm) but not less than the width required for the number of occupants served as determined by Section 1005.1.

4604.16 Fire escape stairs. Fire escape stairs shall comply with Sections 4604.16.1 through 4604.16.7.

4604.16.1 Existing means of egress. Fire escape stairs shall be permitted in existing buildings but shall not constitute more than 50 percent of the required exit capacity.

4604.16.2 Protection of openings. Openings within 10 feet (3048 mm) of fire escape stairs shall be protected by fire door assemblies having a minimum ¾-hour fire-resistance rating.

Exception: In buildings equipped throughout with an approved automatic sprinkler system, opening protection is not required.

4604.16.3 Dimensions. Fire escape stairs shall meet the minimum width, capacity, riser height and tread depth as specified in Section 4604.10.

4604.16.4 Access. Access to a fire escape from a corridor shall not be through an intervening room. Access to a fire escape stair shall be from a door or window meeting the criteria of Table 1005.1. Access to a fire escape stair shall be directly to a balcony, landing or platform. These shall be no higher than the floor or window sill level and no lower than 8 inches (203 mm) below the floor level or 18 inches (457 mm) below the window sill.

4604.16.5 Materials and strength. Components of fire escape stairs shall be constructed of noncombustible materials. Fire escape stairs and balconies shall support the dead load plus a live load of not less than 100 pounds per square foot (4.78 kN/m^2). Fire escape stairs and balconies shall be provided with a top and intermediate handrail on each side. The fire code official is authorized to require testing or other satisfactory evidence that an existing fire escape stair meets the requirements of this section.

4604.16.6 Termination. The lowest balcony shall not be more than 18 feet (5486 mm) from the ground. Fire escape stairs shall extend to the ground or be provided with counterbalanced stairs reaching the ground.

Exception: For fire escape stairs serving 10 or fewer occupants, an approved fire escape ladder is allowed to serve as the termination for a fire escape stairs.

4604.16.7 Maintenance. Fire escapes shall be kept clear and unobstructed at all times and shall be maintained in good working order.

4604.17 Corridors. Corridors serving an occupant load greater than 30 and the openings therein shall provide an effective barrier to resist the movement of smoke. Transoms, louvers, doors and other openings shall be closed or be self-closing.

Exceptions:

1. Corridors in occupancies other than in Group H, which are equipped throughout with an approved automatic sprinkler system.
2. Patient room doors in corridors in occupancies in Group I-2 where smoke barriers are provided in accordance with the International Building Code.
3. Corridors in occupancies in Group E where each room utilized for instruction or assembly has at least one-half of the required means of egress doors opening directly to the exterior of the building at ground level.
4. Corridors that are in accordance with the *International Building Code*.

4604.17.1 Corridor openings. Openings in corridor walls shall comply with the requirements of the *International Building Code*.

Exceptions:

1. Where 20-minute fire door assemblies are required, solid wood doors at least 1.75 inches (44 mm) thick or insulated steel doors are allowed.
2. Openings protected with fixed wire glass set in steel frames.
3. Openings covered with 0.5-inch (12.7 mm) gypsum wallboard or 0.75-inch (19.1 mm) plywood on the room side.
4. Opening protection is not required when the building is equipped throughout with an approved automatic sprinkler system.

4604.17.2 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that dead ends do not exceed the limits specified in Table 4604.17.2.

Exception: A dead-end passageway or corridor shall not be limited in length where the length of the dead-end passageway or corridor is less than 2.5 times the least width of the dead-end passageway or corridor.

TABLE 4604.17.2
COMMON PATH, DEAD-END AND TRAVEL DISTANCE LIMITS (by occupancy)

Occupancy	Common Path Limit		Dead-End Limit		Travel Distance Limit	
	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)
Group A	20/75[a]	20/75[a]	20[b]	20[b]	200	250
Group B	75	100	50	50	200	250
Group E	75	75	20	20	200	250
Group F-1,S-1[d]	75	100	50	50	200	250
Group F-2,S-2[d]	75	100	50	50	300	400
Group H-1	25	25	0	0	75	75
Group H-2	50	100	0	0	75	100
Group H-3	50	100	20	20	100	150
Group H-4	75	75	20	20	150	175
Group H-5	75	75	20	20	150	200
Group I-1	75	75	20	20	200	250
Group I-2 (Health Care)	NR	NR	NR	NR	150	200[c]
Group I-3 (Detention and Correctional – Use Conditions II, III, IV, V)	100	100	NR	NR	150[c]	200[c]
Group I-4 (Day Care Centers)	NR	NR	20	20	200	250
Group M (Covered Mall)	75	100	50	50	200	400
Group M (Mercantile)	75	100	50	50	200	250
Group R-1 (Hotels)	75	75	50	50	200	250
Group R-2 (Apartments)	75	75	50	50	200	250
Group R-3 (One- and Two-Family)	NR	NR	NR	NR	NR	NR
Group R-4 (Residential Care/Assisted Living	NR	NR	NR	NR	NR	NR
Group U	75	75	20	20	200	250

For SI: 1 foot = 304.8 mm.

a. 20 feet for common path serving 50 or more persons; 75 feet for common path serving less than 50 persons.
b. See Section 1025.9.5 for dead-end aisles in Group A occupancies.
c. This dimension is for the total travel distance, assuming incremental portions have fully utilized their allowable maximums. For travel distance within the room, and from the room exit access door to the exit, see the appropriate occupancy chapter.
d. See the *International Building Code* for special requirements on spacing of doors in aircraft hangars.

NR = No requirements.

4604.17.3 Exit access travel distance. Exits shall be located so that the maximum length of exit access travel, measured from the most remote point to an approved exit along the natural and unobstructed path of egress travel, does not exceed the distances given in Table 4604.17.2.

4604.17.4 Common path of egress travel. The common path of egress travel shall not exceed the distances given Table 4604.17.2.

4604.18 Stairway discharge identification. A stairway in an exit enclosure which continues below the level of exit discharge shall be arranged and marked to make the direction of egress to a public way readily identifiable.

Exception: Stairs that continue one-half story beyond the level of exit discharge need not be provided with barriers where the exit discharge is obvious.

4604.19 Exterior stairway protection. Exterior exit stairs shall be separated from the interior of the building as required in Section 1023.6. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for buildings that are two stories or less above grade where the level of exit discharge is the first story above grade.
2. Separation from the interior of the building is not required where the exterior stairway is served by an exterior balcony that connects two remote exterior stairways or other approved exits, with a perimeter that is not less than 50 percent open.To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the opening not less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior stairway located in a building or structure that is permitted to have unenclosed interior stairways in accordance with Section 1020.1.
4. Separation from the interior of the building is not required for exterior stairways connected to open-ended corridors, provided that:
   - 4.1. The building, including corridors and stairs, is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
   - 4.2. The open-ended corridors comply with Section 1017.
   - 4.3. The open-ended corridors are connected on each end to an exterior exit stairway complying with Section 1023.1.
   - 4.4. At any location in an open-ended corridor where a change of direction exceeding 45 degrees occurs, a clear opening of not less than 35 square feet (3 m^2) or an exterior stairway shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

4604.20 Minimum aisles width. The minimum clear width of aisles shall be:

1. Forty-two inches (1067 mm) for aisle stairs having seating on each side.

   Exception: Thirty-six inches (914 mm) where the aisle serves less than 50 seats.

2. Thirty-six inches (914 mm) for stepped aisles having seating on only one side.

   Exception: Thirty inches (760 mm) for catchment areas serving not more than 60 seats.

3. Twenty inches (508 mm) between a stepped aisle handrail or guard and seating when the aisle is subdivided by the handrail.
4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides.

   Exception: Thirty-six inches (914 mm) where the aisle serves less than 50 seats.

5. Thirty-six inches (914 mm) for level or ramped aisles having seating on only one side.

   Exception: Thirty inches (760 mm) for catchment areas serving not more than 60 seats.

6. Twenty-three inches (584 mm) between a stepped stair handrail and seating where an aisle does not serve more than five rows on one side.

4604.21 Stairway floor number signs. Existing stairs shall be marked in accordance with Section 1020.1.6.

TABLE 4603.1
OCCUPANCY AND USE REQUIREMENTS

Section	Use			Occupancy Classification																	
	High Rise	Atrium and Covered Mall	Under ground Building	A	B	E	F	H-1	H-2	H-3	H-4	H-5	I-1	I-2	I-3	I-4	M	R-1	R-2	R-3	R-4	S
4603.2	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4603.3.1	X		X										X	X	X	X						
4603.3.2	X		X	X	X	X	X	X	X	X	X	X					X	X	X		X	X
4603.3.3	X		X	X	X	X	X	X	X	X	X	X					X	X	X		X	X
4603.3.4		X																				
4603.3.5					X												X					
4603.3.6				X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
4603.3.7				X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
4603.4				X			X		X	X							X					
4603.5	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
4603.6.1						X																
4603.6.2													X									
4603.6.3														X								
4603.6.4															X							
4603.6.5																		X				
4603.6.6																			X			
4603.6.7																					X	
4603.7																		X	X	X	X	
4604	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

SECTION 4605
REQUIREMENTS FOR OUTDOOR OPERATIONS

4605.1 Tire storage yards. Existing tire storage yards shall be provided with fire apparatus access roads in accordance with Sections 4605.1.1 and 4605.1.2.

4605.1.1 Access to piles. Access roadways shall be within 150 feet (45 720 mm) of any point in the storage yard where storage piles are located, at least 20 feet (6096 mm) from any storage pile.

4605.1.2 Location within piles. Fire apparatus access roads shall be located within all pile clearances identified in Sections 2505.4 and within all fire breaks required in Section 2505.5.

2. Revise as follows:

102.1 Construction and design provisions. The construction and design provisions of this code shall apply to:

1. Structures, facilities and conditions arising after the adoption of this code.
2. Existing structures, facilities and conditions not legally in existence at the time of adoption of this code.
3. Existing structures, facilities and conditions when ~~identified in specific sections of this code~~ required in Chapter 46.
4. Existing structures, facilities and conditions which, in the opinion of the fire code official, constitute a distinct hazard to life or property.

SECTION 202
GENERAL DEFINITIONS

EXISTING. ~~Buildings, facilities or conditions which are already in existence, constructed or officially authorized prior to the adoption of this code.~~ See Section 4602.1.

607.1 Required. Existing elevators with a travel distance of 25 feet (7620 mm) or more ~~above or below the main floor or other level of a building and intended to serve the needs of emergency personnel for fire-fighting or rescue purposes shall be provided with emergency operation in accordance with ASME A17.3~~ shall comply with the requirements in Chapter 46. New elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1.

701.1 Scope. The provisions of this chapter shall specify the requirements for and the maintenance of fire-resistance-rated construction~~ and requirements for enclosing floor openings and shafts in existing buildings. New construction shall comply with the *International Building Code*~~.

704.1 Enclosure. Interior vertical shafts, including but not limited to stairways, elevator hoistways, service and utility shafts, that connect two or more stories of a building shall be enclosed or protected as ~~specified in Table 704.1~~ required in Chapter 46.

3. Delete Table 704.1 in its entirety without substitution as follows:

~~**TABLE 704.1**~~
~~**VERTICAL OPENING PROTECTION REQUIRED**~~

4. Revise as follows:

903.6.1 Pyroxylin plastics. All structures occupied for the manufacture or storage of articles of cellulose nitrate (pyroxylin) plastic shall be equipped with an approved automatic fire-extinguishing system when required in Chapter 46. ~~Vaults located within buildings for the storage of raw pyroxylin shall be protected with an approved automatic sprinkler system capable of discharging 1.66 gallons per minute per square foot (68 L/min/m^2) over the area of the vault.~~

905.11 Existing buildings. Existing structures ~~with occupied floors located more than 50 feet (15 240 mm) above or below the lowest level of fire department access~~ shall be equipped with standpipes installed in accordance with Section 905 when required in Chapter 46. ~~The standpipes shall have an approved fire department connection with hose connections at each floor level above or below the lowest level of fire department access. The fire code official is authorized to approve the installation of manual standpipe systems to achieve compliance with this section where the responding fire department is capable of providing the required hose flow at the highest standpipe outlet.~~

907.3 (Supp) Where required – ~~retroactive~~ in existing buildings and structures. An approved manual, automatic or manual and automatic fire alarm system shall be installed in existing buildings and structures ~~in accordance with Sections 907.3.1 through 907.3.1.8 and provide occupant notification in accordance with Section 907.6 unless other requirements are provided by other sections of this code~~ where required in Chapter 46.

> ~~**Exception:** Occupancies with an existing, previously approved fire alarm system.~~

~~**907.3.1 (Supp) Group E.** A fire alarm system shall be installed in existing Group E occupancies in accordance with Section 907.2.3.~~

> ~~**Exceptions:**~~
>
> ~~1. A manual fire alarm system is not required in a building with a maximum area of 1,000 square feet (93 m^2) that contains a single classroom and is located no closer than 50 feet (15 240 mm) from another building.~~
> ~~2. A manual fire alarm system is not required in Group E with an occupant load less than 50.~~

~~**907.3.2 (Supp) Group I.** A fire alarm system shall be installed in existing Group I occupancies in accordance with Sections 907.3.2.1 through 907.3.2.3.~~

> ~~**Exception:** Manual fire alarm boxes in resident or patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at all nurses= control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2 are not exceeded.~~

~~**907.3.2.1(Supp) Group I-1.** An automatic or manual fire alarm system shall be installed in existing Group I-1 residential care/assisted living facilities in accordance with Section 907.2.6.1.~~

> ~~**Exception:** Where each sleeping room has a means of egress door opening directly to an exterior egress balcony that leads directly to the exits in accordance with Section 1014.5, and the building is not more than three stories in height.~~

~~**907.3.2.2 (Supp) Group I-2.** An automatic or manual fire alarm system shall be installed in existing Group I-2 occupancies in accordance with Section 907.2.6.2.~~

~~**907.3.2.3 (Supp) Group I-3.** An automatic or manual fire alarm system shall be installed in existing Group I-3 occupancies in accordance with Section 907.2.6.3.~~

907.3.3 (Supp) Group R. A fire alarm system and smoke alarms shall be installed in existing Group R occupancies in accordance with Sections 907.3.3.1 through 907.3.3.4.

907.3.3.1 (Supp) Group R-1 hotels and motels. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 hotels and motels more than three stories or with more than 20 sleeping units.

Exception: Buildings less than two stories in height where all sleeping units, attics and crawl spaces are separated by 1-hour fire-resistance-rated construction and each sleeping unit has direct access to a public way, exit court or yard.

907.3.3.2 (Supp) Group R-1 boarding and rooming houses. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-1 boarding and rooming houses.

Exception: Buildings that have single-station smoke alarms meeting or exceeding the requirements of Section 907.2.10.1 and where the fire alarm system includes at least one manual fire alarm box per floor arranged to initiate the alarm.

907.3.3.3 (Supp) Group R-2. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-2 occupancies more than three stories in height or with more than 16 dwelling units or sleeping units.

Exceptions:

1. Where each living unit is separated from other contiguous living units by fire barriers having a fire-resistance rating of not less than 0.75 hour, and where each living unit has either its own independent exit or its own independent stairway or ramp discharging at grade.
2. A separate fire alarm system is not required in buildings that are equipped throughout with an approved supervised automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm to notify all occupants.
3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1023.6, Exception 4.

907.3.3.4 (Supp) Group R-4. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-4 residential care/assisted living facilities.

Exceptions:

1. Where there are interconnected smoke alarms meeting the requirements of Section 907.2.10 and there is at least one manual fire alarm box per floor arranged to sound continuously the smoke alarms.
2. Other manually activated, continuously sounding alarms approved by the fire code official.

907.3.4 (Supp) Single- and multiple-station smoke alarms. Single- and multiple-station smoke alarms shall be installed in existing Group R occupancies in accordance with Sections 907.3.4.1 through 907.3.4.3.

907.3.4.1 (Supp) Where required. Existing Group R occupancies not already provided with single-station smoke alarms shall be provided with single-station smoke alarms. Installation shall be in accordance with Section 907.2.10, except as provided in Sections 907.3.4.2 and 907.3.4.3.

907.3.4.2 (Supp) Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit or sleeping unit in Group R-1, R-2, R-3 or R-4, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind.

2. ~~Smoke alarms in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.~~

~~**907.3.4.3 (Supp) Power source.** In Group R occupancies, single-station smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery back-up shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.~~

~~**Exception:** Smoke alarms are permitted to be solely battery operated: in existing buildings where no construction is taking place; in buildings that are not served from a commercial power source; and in existing areas of buildings undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes.~~

5. Delete entire section without substitution:

~~**SECTION 1027**~~
~~**MEANS OF EGRESS FOR EXISTING BUILDINGS**~~

6. Revise as follows:

2506.1 Required access. New ~~and existing~~ tire storage yards shall be provided with fire apparatus access roads in accordance with Section 503 and this section. Existing tire storage yards shall be provided with fire apparatus access roads where required in Chapter 46.

Reason: This proposal relocates current requirements in the IFC to a new Chapter 46. The requirements being relocated all apply to construction requirements that specifically apply to existing buildings to one chapter. This relocation will facilitate in application and enforcement. The intent is to clarify the requirements and provide a single location for retroactive provisions and provide a quick reference table (Table 4603.1) to determine if there may be any requirements that would be applicable as the inspector is conducting the inspection.

Each of the provisions within the current code that refer to retroactive requirements will now have a reference to Chapter 46. Chapter 46 will contain all of the construction requirements which are retroactive and applicable to existing facilities or operations.

Currently, there is confusion as to when a construction requirement can be applied to an existing building. It has been said that in every case you must declare a "distinct hazard", however this is not correct. There are specific requirements that are already determined to be retroactive construction requirements because the voting membership has made the determination that they create a distinct hazard and placed the specific provisions in the code. Since the determination of a hazard is already accomplished it is not necessary for the code official to repeat the process. Therefore, all of the requirements in Chapter 46 will apply to existing buildings.

Section 102.1 #3 is revised to indicate that the retroactive construction provisions referred to by this section are located in Chapter 46. Thus clarifying which provisions in the are actually construction provisions that should be applied to an existing building. Only those provisions listed in Chapter 46 would apply to an existing facility. Therefore, all of the other construction items in the code apply to new construction. However, as is provided now in the IFC, the code official can still exercise judgement and declare a distinct hazard under Item #4 of Section 102.1 for other items or operations not addressed in Chapter 46.

All of the requirements relocated into Chapter 46 remain the same; the requirements have not been changed, except for Section 4604.1 for means of egress. The scope section has been clarified to indicate that existing buildings must still comply with the code under which the building was built and also the minimum egress requirements in Section 4604, whichever is more restrictive. In this fashion, a building will not be allowed to reduce the egress system protection or design from the original approval. Section 4604 is not as restrictive as new construction and allows for the continued use of existing buildings when the egress is at an acceptable standard, but yet not in complete compliance with the IBC.

A roadmap of the relocated sections is provided to assist in following the proposal:

Current Section	Proposed Section	Comment
102.1	102.1	Only revised for clarification to include reference to Chapter 46
202	4602.1	Relocated definition of EXISTING to Chapter 46
607.1	4603.2	No change in requirements
701.1	701.1	Only revision for clarification
704.1	4603.3 – 4603.3.7	Table is not used, but all of the requirements are contained in text in the subsections.
903.6.1	4603.4	No change in requirements
905.11	4603.5	No change in requirements
907.3 – 907.3.3.4	4603.6 – 4603.6.7	No change in requirements
907.3.4	4603.7.3	No change in requirements
1027	4604	All of the current requirements are relocated with a revision to Section 4604.1 for clarification on application.
2506.1	4605	No change in requirements

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: The final chapter number will be determined prior to the publication of the 2009 edition.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

4601.2 Intent. The intent of this chapter is to provide a ~~reasonable~~ minimum degree of fire and life safety to persons occupying existing buildings by providing for alterations to such existing buildings which do not comply with the minimum requirements of the *International Building Code.*

4601.3 Permits. Permits shall be required as set forth in Section 105.7 and the *International Building Code* and this code.

4601.4.1 ~~Plans and specifications~~ Construction documents. ~~Plans and specifications~~ Construction documents for the necessary alterations shall be completed within a time schedule approved by the fire code official.

4603.1 Required modifications. ~~Means of egress in existing buildings shall comply with the requirements of Section 1027 and the building code that applied at the time of construction. Where these provisions conflict, the most restrictive provision shall apply.~~

~~For existing buildings that were not required to comply with a building code at the time of construction, such buildings shall comply with the requirements of Section 1027 and, in addition, shall have a life safety evaluation prepared, consistent with the requirements of Section 104.7.2. The life safety evaluation shall identify any changes to the means of egress that are necessary to provide safe egress to occupants and shall be subject to review and approval by the fire code official. The building shall be modified to comply with the recommendations set forth in the approved evaluation.~~ Existing buildings shall comply with not less than the minimum provisions specified in Table 4603.1 and as further enumerated in Sections 4603.2 through 4603.7.3.

The provisions of Chapter 46 shall not be construed to allow the elimination of fire-protection systems or a reduction in the level of fire safety provided in buildings constructed in conformance with previously adopted codes.

Exception: Group U Occupancies do not need to comply.

4603.3.6 Escalators connecting ~~less than~~ four or less stories. In other than Group B and M occupancies, escalators creating vertical openings connecting ~~less than~~ four stories or less shall be protected by either 1- hour fire-resistance-rated construction or an automatic sprinkler system in accordance with Sections 903.3.1.1 or 903.3.1.2 shall be installed throughout the building, and a draft curtain with closely spaced sprinklers shall be installed around the escalator opening.

4604.5 Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

1. Group A having 50 or more occupants.

   Exception: Assembly occupancies used exclusively as a place of worship and having an occupant load of less than 300.

2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below the level of exit discharge, or buildings with 1,000 or more total occupants.
3. Group E in interior stairs, corridors, windowless areas with student occupancy, shops and laboratories.
4. Group F having more than 100 occupants.

   Exception: Buildings used only during daylight hours which are provided with windows for natural light in accordance with the *International Building Code*.

5. Group I.
6. Group M.

   Exception: Buildings less than 3,000 square feet (279 m^2) in gross sales area on one story only, excluding mezzanines.

7. Group R-1.

   Exception: Where each sleeping unit has direct access to the outside of the building at grade.

8. Group R-2.

   Exception: Where each dwelling unit or sleeping unit has direct access to the outside of the building at grade.

9. Group R-4.

   Exception: Where each sleeping unit has direct access to the outside of the building at ground level. ~~The emergency power system shall provide power for not less than 60 minutes and consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.~~

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the proponent's reason statement substantiates the need for the change which represents a significant effort to consolidate all retroactive construction requirements into a single chapter for a more user-friendly enforcement tool. The committee acknowledged that additional work may be needed on the new chapter but felt that the scope of the work done on this proposal warrants its inclusion in the code at this time. The modifications reflect the fact that the IFC is a minimum code (Section 4601.2), "construction documents" rather than "plans and specifications" is the term used in the IFC (Section 4601.4.1) and the proposal is presented as containing no

new changes, only a reorganization, and the struck-out text in Section 4604.5, Item 9 could not be accounted for as being existing. The modification to Section 4603.1 corrects an editorial error in the preparation of the original code change which inadvertently duplicated Section 4604.1. The modification to Section 4603.3.6 corrects the inadvertent omission of 4 story buildings in the preparation of the proposal.

Assembly Action: **None**

Analysis: The purpose of this proposal is to draw together in one chapter all of the current retroactive existing building construction requirements and affects not only the sections shown in this proposal but also any additional existing building construction requirements that may be approved in the current code development cycle. Those proposals, if approved, will be correlated with and placed into the new chapter.

Final Hearing Results

F294-07/08 **AM**

Code Change No: F295-07/08

Original Proposal

Chapter 43

Proponent: Standards writing organizations as listed below.

Revise standards as follows:

ASME	American Society of Mechanical Engineers International Three Park Avenue New York, NY 10016-5990
Standard reference number	Title
A17.3—2005 ~~2002~~	Safety Code for Existing Elevators and Escalators ~~—with A17.3a-2000 Addenda~~
B16.18—2001 (Reaffirmed 2005)	Cast Copper Alloy Solder Joint Pressure Fittings
B16.22— 2001 (Reaffirmed 2005)	Wrought Copper and Copper Alloy Solder-joint Pressure Fittings—with B16.22a-1998 Addenda
B31.3— 2004 ~~2002~~	Process Piping
B31.9—2004 ~~96~~	Building Services Piping Code ~~for Pressure Piping~~
BPVC- 2004 ~~2001~~	ASME Boiler and Pressure Vessel Code, 2001 Edition of (Sections I, II, IV, V & VI, VIII)

ASTM	ASTM International 100 Barr Harbor Drive West Conshohocken, PA 19428-2959
Standard reference number	Title
B 43—98 ~~93~~(2004)	Specification for Seamless Red Brass Pipe, Standard Sizes
D 86- 07a ~~05~~	Test Method for Distillation of Petroleum Products at Atmospheric Pressure
D 92— 05a ~~02b~~	Test Method for Flash and Fire Points by Cleveland Open Cup
D 93-07 ~~05a~~	Test Method for Flash Point by Pensky-Martens Closed Cup Tester
D 323— 06 ~~99a~~	Test Method for Vapor Pressure of Petroleum Products (Reid Method)
E 1529— 06 ~~00~~	Test Method for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies
E 1537—07 ~~02a~~	Test Method for Fire Testing of Upholstered Furniture
E 1590— 07 ~~02~~	Test Method for Fire Testing of Mattresses

CGA	Compressed Gas Association 4221 Walney Road Chantilly, VA 20151-2923
Standard reference number	Title
ANSI/G-13 (2006)	Storage and Handling of Silane and Silane Mixtures (an American National Standard)
ANSI/P-18 (2006)	Standard for Bulk Inert Gas Systems (an American National Standard)
V-1-(2005)	Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections

NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, MA 02269-9101
Standard reference number	Title
10—07 ~~02~~	Portable Fire Extinguishers
13— 07 ~~02~~	Installation of Sprinkler Systems
13D— 07 ~~02~~	Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes
13R— 07 ~~02~~	Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
14— 07 ~~03~~	Installation of Standpipe and Hose Systems
15— 07 ~~01~~	Water Spray Fixed Systems for Fire Protection
16—07 ~~03~~	Installation of Foam-water Sprinkler and Foam-water Spray Systems
20— 07 ~~03~~	Installation of Stationary Pumps for Fire Protection
24— 07 ~~02~~	Installation of Private Fire Service Mains and their Appurtenances
25—08 ~~02~~	Inspection, Testing and Maintenance of Water-based Fire Protection Systems
30—08 ~~03~~	Flammable and Combustible Liquids Code
30A—08 ~~03~~	Code for Motor Fuel-dispensing Facilities and Repair Garages
30B—07 ~~02~~	Manufacture and Storage of Aerosol Products
32— 07 ~~00~~	Dry Cleaning Plants
33—07 ~~03~~	Spray Application Using Flammable or Combustible Materials
34—07 ~~03~~	Dipping and Coating Processes Using Flammable or Combustible Liquids
40—07 ~~01~~	Storage and Handling of Cellulose Nitrate Film
51—07 ~~02~~	Design and Installation of Oxygen-fuel Gas Systems for Welding, Cutting and Allied Processes
58— 08 ~~04~~	Liquefied Petroleum Gas Code
59A—06 ~~01~~	Production, Storage and Handling of Liquefied Natural Gas (LNG)
61— 08 ~~02~~	Prevention of Fires and Dust Explosions in Agricultural and Food Products Facilities
69— 08 ~~02~~	Explosion Prevention Systems
72— 07 ~~02~~	National Fire Alarm Code
86— 07 ~~03~~	Ovens and Furnaces
99—05 ~~02~~	Health Care Facilities
160—06 ~~01~~	Flame Effects Before an Audience
385— 07 ~~00~~	Tank Vehicles for Flammable and Combustible Liquids
407—07 ~~01~~	Aircraft Fuel Servicing
655— 07 ~~01~~	Prevention of Sulfur Fires and Explosions
664—07 ~~02~~	Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities
704— 07 ~~01~~	Identification of the Hazards of Materials for Emergency Response
1122—08 ~~02~~	Model Rocketry
1125—07 ~~01~~	Manufacture of Model Rocket and High Power Rocket Motors
1127—08 ~~02~~	High Power Rocketry
2001—08 ~~04~~	Clean Agent Fire Extinguishing Systems
UL	Underwriters Laboratories 333 Pfingsten Road Northbrook, IL 60062
Standard reference number	Title
30— ~~04~~ 95	Metal Safety Cans with Revisions through December 2004
197—2003	Commercial Electric Cooking Appliances – with Revisions through March 2006
217-~~97~~ 2006	Single and Multiple Station Smoke Alarms-with Revisions through ~~August 2005~~ May 2007
268-~~1996~~ 2006	Smoke Detectors for Fire ~~Protective~~ Alarm Signaling Systems~~—with Revision through January 1999~~ ~~October 2003~~
300-05	Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Equipment ~~Areas—with Revisions through December 199~~
710B—04	Recirculating Systems with Revisions through April 2006
793—03	~~Standard for~~ Automatically Operated Roof Vents for Smoke and Heat with Revisions through April 2004
864—03	~~Standard for~~ Control Units and Accessories for Fire Alarm Systems — with Revisions through March 2006 ~~July 2005~~
1275—2005	Flammable Liquid Storage Cabinets—with Revisions through May 2006
1313—93 ~~98~~	Standard for Nonmetallic Safety Cans for Petroleum Products – with Revisions through May 2003
1316— 94	Glass Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-gasoline Mixtures—with Revisio ~~1996~~ May 2006
1363-2007 ~~96~~	~~Standard for~~ Relocatable Power Taps~~—with Revisions through February 2006~~
2200— 98 ~~04~~	~~Standard for~~ Stationary Engine Generator Assemblies—with Revisions through July 2004
2208-2005 ~~96~~	Solvent Distillation Units-with Revisions through December 2006
2245—2006 ~~99~~	Below-Grade Vaults for Flammable Liquid Storage Tanks

Reason: The *CP 28 Code Development Policy*, Section 4.5* requires the updating of referenced standards to be accomplished administratively, and be processed as a Code Change Proposal. In May 2007, a letter was sent to each developer of standards that are referenced in the International Codes, asking them to provide the ICC with a list of their standards in order to update to the current edition. Above is the received list of the referenced standards that are under the maintenance responsibility of the International Fire Code Committee.

***4.5 Updating Standards:** The updating of standards referenced by the Codes shall be accomplished administratively by the appropriate code development committee in accordance with these full procedures except that multiple standards to be updated may be included in a single proposal.

Public Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The proposal was approved because it provides for a needed administrative update to the IFC referenced standards list.

Assembly Action: **None**

Final Hearing Results

F295-07/08 **AS**

Code Change No: F303-07/08

Original Proposal

Appendix E102.1.2, E103.1.3.1, E104 (New)

Proponent: Patrick A. McLaughlin, McLaughlin & Associates, representing The Semiconductor Industry Association

1. Revise appendix as follows:

E102.1.2 Compressed gases. Examples include:

1. Flammable: acetylene, carbon monoxide, ethane, ethylene, hydrogen, methane. Ammonia will ignite and burn although its flammable range is too narrow for it to fit the definition of flammable gas.

   For binary mixtures where the hazardous component is diluted with a non flammable gas, the mixture shall be categorized in accordance with CGA P-23.

2. Oxidizing: oxygen, ozone, oxides of nitrogen, chlorine and fluorine. Chlorine and fluorine do not contain oxygen but reaction with flammables is similar to that of oxygen.
3. Corrosive: ammonia, hydrogen chloride, fluorine.
4. Highly toxic: arsine, cyanogen, fluorine, germane, hydrogen cyanide, nitric oxide, phosphine, hydrogen selenide, stibine.
5. Toxic: chlorine, hydrogen fluoride, hydrogen sulfide, phosgene, silicon tetrafluoride.
6. Inert (chemically unreactive): argon, helium, krypton, neon, nitrogen, xenon.
7. Pyrophoric: diborane, dichloroborane, phosphine, silane.
8. Unstable (reactive): butadiene (unstabilized), ethylene oxide, vinyl chloride.

E103.1.3.1 Mixtures. Gases—toxic and highly toxic gases include those gases which have an LC_{50} of 2,000 parts per million (ppm) or less when rats are exposed for a period of 1 hour or less. To maintain consistency with the definitions for these materials, exposure data for periods other than 1 hour must be normalized to 1 hour. To classify mixtures of compressed gases that contain one or more toxic or highly toxic components, the LC_{50} of the mixture must be determined. Mixtures that contain only two components are binary mixtures. Those that contain more than two components are multi-component mixtures. When two or more hazardous substances (components) having an LC_{50} below 2,000 ppm are present in a mixture, their combined effect, rather than that of the individual substances components), must be considered. In the absence of information to the contrary, the effects of the hazards present must be considered as additive. Exceptions to the above rule may be made when there is a good reason to believe that the principal effects of the different harmful substances (components) are not additive.

For binary mixtures where the hazardous component is diluted with a non toxic gas such as an inert gas, the LC 50 of the mixture is estimated by use of the ~~following formula:~~ methodology contained in CGA P-20. The hazard zones specified in CGA P-20 are applicable for DOTn purposes and shall not be used for hazard classification.

(Delete equation in its entirety) ~~(Equation E-1)~~

~~For multi-component mixtures where more than one component has a listed LC_{50}, the LC_{50} of the mixture is estimated by use of the following formula:~~

(Delete equation in its entirety) ~~(Equation E-2)~~

~~where:~~

~~LC_{50m} = LC_{50} of the mixture in parts per million (ppm).~~
~~C_i = concentration of component (i) in decimal percent. The concentration of the individual components in a mixture of gases is to be expressed in terms of percent by volume.~~
~~LC_{50i} = LC_{50} of component (i). The LC_{50} of the component is based on a 1-hour exposure. LC_{50} data which are for other than 1-hour exposures shall be normalized to 1-hour by multiplying the LC_{50} for the time determined by the factor indicated in Table E103.1.3.1. The preferred mammalian species for LC_{50} data is the rat, as specified in the definitions of toxic and highly toxic in Chapter 2 of the *International Fire*~~

~~*Code*. If data for rats are unavailable, and in the absence of information to the contrary, data for other species may be utilized. The data shall be taken in the following order of preference: rat, mouse, rabbit, guinea pig, cat, dog, monkey.~~

~~i_n = component 1, component 2 and so on to the nth component.~~

~~**Examples:**~~

~~a. What is the LC_{50} of a mixture of 15 percent chlorine, 85 percent nitrogen?~~

~~The 1-hour (rat) LC_{50} of pure chlorine is 293 ppm.~~

~~LC_{50m} = 1 / (0.15 / 293) or 1,953 ppm. Therefore, the mixture is toxic.~~

~~b. What is the LC_{50} of a mixture of 15 percent chlorine, 15 percent fluorine and 70 percent nitrogen? The 1-hour (rat) LC_{50} of chlorine is 293 ppm. The 1-hour (rat) LC_{50} of fluorine is 185 ppm.~~

~~LC_{50m} = 1 / (0.15 / 293) + (0.15 / 85) or 755 ppm. Therefore the mixture is toxic.~~

~~c. Is the mixture of 1 percent phosphine in argon toxic or highly toxic? The 1-hour (rat) LC_{50} is 11 ppm.~~

~~LC_{50m} = 1 / [0.01 / (11 2)] or 2,200 ppm. Therefore the mixture is neither toxic nor highly toxic. Note that the 4-hour LC_{50} of 11 ppm was normalized to 1-hour by use of Section E103.1.3.1.~~

~~TABLE E103.1.3.1~~
~~NORMALIZATION FACTOR~~ (Delete table in its entirety)

2. Add new section as follows:

SECTION E104
REFERENCED STANDARDS

Compressed Gas Association (CGA)

CGA P-20 (2003) – Standard for Classification of Toxic Mixtures
CGA P-23 (2003) – Standard for Categorizing Gas Mixtures Containing Flammable and Nonflammable Components.

Reason: This proposal updates the code and standardizes the methodologies for the determination of hazard classification of materials. There are two areas that have been standardized:

1. Method to define hazard class for binary mixtures of inerts with toxic gases
2. Method to define hazard class for binary mixtures of inerts with flammable gases

CGA Standards provide these common methodologies which are defined in Appendix E.

1. CGA P-20. This standard will bring consistency to the definition of toxic gas mixtures. The calculations for toxic gas mixtures which are proposed for deletion are included in CGA P-20 which is referenced. It is much easier to determine the proper hazard classification of toxic gas mixtures by using CGA P-20 then the extractions currently printed in this appendix.
2. CGA P-23. This standard will bring consistency to the definition of flammable gases in mixtures with inert gases which is common in industry.

The proposed change is also consistent with Chapter 5, NFPA 55, Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Potable and Stationary Containers, Cylinders, and Tanks.

Cost Impact: The code change proposal will not increase the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, CGA P-20 (2003) and CGA P-23 (2003), for compliance with ICC criteria for referenced standards given in Section 3.6 of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

Public Hearing Results

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standards CGA P-20-2003 and CGA P-23-2003 indicated that, in the opinion of ICC Staff, the standards did comply with ICC standards criteria.

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will delete appendix text in favor of referenced standards for the classification of hazardous materials.

Assembly Action: **None**

Final Hearing Results

F303-07/08 **AS**

Code Change No: F304-07/08

Original Proposal

Appendix I (New)

Proponent: Wayne R. Jewell, Chair, Hazard Abatement in Existing Buildings Committee

Add new appendix as follows:

APPENDIX I
FIRE PROTECTION SYSTEMS – UNSAFE CONDITIONS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

I101 UNSAFE CONDITIONS

I101.1 General. This appendix is intended to identify conditions that can occur when fire protection systems are not properly maintained or components have been damaged. This appendix is not intended to provide comprehensive inspection, testing and maintenance requirements, which are found in NFPA 10, 25 and 72. Rather, its intent is to identify problems that are readily observable during fire inspections.

I101.2 Unsafe conditions requiring component replacement. The following conditions shall be deemed unsafe and shall cause the related component(s) to be replaced to comply with the provisions of this code:

1. Sprinkler heads having any of the following conditions:
   - 1.1. Signs of leakage;
   - 1.2. Paint or other ornamentation that is not factory applied;
   - 1.3. Evidence of corrosion including, but not limited to, discoloration or rust;
   - 1.4. Deformation or damage of any part;
   - 1.5. Improper orientation of sprinkler head;
   - 1.6. Empty glass bulb;
   - 1.7. Sprinkler heads manufactured prior to 1920;
   - 1.8. Replacement sprinkler heads that do not match existing sprinkler heads in orifice size, K-factor temperature rating, coating or deflector type; or
   - 1.9. Sprinkler heads for the protection of cooking equipment that have not been replaced within one year.
2. Water pressure and air pressure gauges that have been installed for more than five years and have not been tested to within 3 percent accuracy.

I101.2 Unsafe conditions requiring component repair or replacement. The following conditions shall be deemed unsafe and shall cause the related component(s) to be repaired or replaced to comply with the provisions of this code:

1. Sprinkler and standpipe system piping and fittings having any of the following conditions:

1.1. Signs of leakage;
1.2. Evidence of corrosion;
1.3. Misalignment; or
1.4. Mechanical damage.

2. Sprinkler piping support having any of the following conditions:
   2.1. Materials resting on or hung from sprinkler piping;
   2.2. Damaged or loose hangers or braces;

3. Class II and Class III standpipe systems having any of the following conditions:
   3.1. No hose or nozzle, where required;
   3.2. Hose threads incompatible with fire department hose threads;
   3.3. Hose connection cap missing;
   3.4. Mildew, cuts, abrasions, and deterioration evident;
   3.5. Coupling damaged;
   3.6. Gaskets missing or deteriorated; or
   3.7. Nozzle missing or obstructed.

4. Hose racks and cabinets having any of the following conditions:
   4.1. Difficult to operate or damaged;
   4.2. Hose improperly racked or rolled;
   4.3. Inability of rack to swing 90 degrees out of the cabinet;
   4.4. Cabinet locked, except as permitted by this code;
   4.5. Cabinet door will not fully open; or
   4.6. Door glazing cracked or broken;

5. Portable fire extinguishers having any of the following conditions:
   5.1. Broken seal or tamper indicator;
   5.2. Expired maintenance tag;
   5.3. Pressure gauge indicator in “red”;
   5.4. Signs of leakage or corrosion;
   5.5. Mechanical damage, denting or abrasion of tank;
   5.6. Presence of repairs such as welding, soldering or brazing;
   5.7. Damaged threads; or
   5.8. Damaged hose assembly, couplings or swivel joints.

6. Fire alarm and detection control equipment, initiating devices and notification appliances having any of the following conditions:
   6.1. Corroded or leaking batteries or terminals;
   6.2. Smoke detectors having paint or other ornamentation that is not factory-applied;
   6.3. Mechanical damage to heat or smoke detectors; or
   6.4. Tripped fuses.

7. Fire department connections having any of the following conditions:
   7.1. Fire department connections are not visible or accessible from the fire apparatus access road;
   7.2. Couplings or swivels are damaged;
   7.3. Plugs and caps are missing or damaged;
   7.4. Gaskets are deteriorated;
   7.5. Check valve is leaking; or
   7.6. Identification signs are missing.

8. Fire pumps having any of the following conditions:
   8.1. Pump room temperature is less than 40 degrees F;

      Exception: Pump room housing a diesel pump equipped with an engine heater.

   8.2. Ventilating louvers are not freely operable;
   8.3. Corroded or leaking system piping;
   8.4. Diesel fuel tank is less than two-thirds full; or
   8.5. Battery readings, lubrication oil or cooling water levels are abnormal.

Reason: The ICC Board approved the development of new code requirements in the I-Codes which address hazards, such as those from fire, as well as, the development of requirements relative to issues such as hazardous conditions due to structural issues. This would provide code requirements for all disciplines to be used by building owners to bring their existing building stock up to minimum standards and enforcing agencies when performing inspections of existing buildings. The Hazard Abatement of Existing Buildings Committee (HAEB) was formed to develop these requirements.

During this 07/08 cycle, the HAEB committee is proposing several unsafe conditions requirements for inclusion within the text of the existing International Codes, predominately the *International Property Maintenance Code* and the *International Fire Code*.

The purpose of this proposal is to afford the code official a list of conditions that are readily identifiable by the fire code official during the course of an inspection utilizing the *International Fire Code*. The specific conditions identified in this proposal are primarily derived from applicable NFPA standards, and represent conditions that are readily identifiable by the fire code official during the course of an inspection. All of the identified conditions pose a hazard to the proper operation of the respective systems While these do not represent all of the conditions that pose a hazard or otherwise may impair the proper operation of fire protection systems and are currently enforceable by reference to the applicable standards, identification of conditions directly in the IFC will provide a more direct path for enforcement by the fire code official.

Conditions affecting sprinkler heads, and sprinkler and standpipe system piping and fittings are from Chapter 5 of NFPA 25. Conditions affecting Class II and Class III standpipe systems, hose racks and cabinets are from Chapter 6 of NFPA 25. Identified impairments of portable fire extinguishers are from Chapter 6 and 7 of NFPA 10. Conditions affecting fire alarm systems is primarily from Chapter 10 of NFPA 72. Impairments to fire department connections are from Chapter 12 of NFPA 25, and those related to fire pumps are from Chapter 8 of NFPA 25.

In the 06/07 cycle, the Code Committee noted that the information resembles a handbook or manual more than code text. The Code Committee further commented that the subject matter is important and may be better served in an appendix. In response, the HAEB committee is proposing to delete this proposal from code text and to insert it into a new appendix to the IFC.

During the 06/07 final action hearings, at which the committee's public comment to make the proposal an appendix was heard, there were two comments in opposition.

One commenter noted that the relevant NFPA standards were essential to the inspection; thus, providing a list of items does not provide adequate information for the inspector. The committee has noted that NFPA 10 and NFPA 25 are necessary documents; however, the purpose of this proposal is to make both the building owner and the fire inspector aware of the scope of deficiencies that have the strong potential to cause a fire protection system or component to become inoperative.

The second commenter stated that some of the items listed, such as signs of leakage and evidence of corrosion, do not constitute unsafe conditions. The unsafe condition is that the fire protection system or component may not operate as intended if damage or deterioration is not addressed by repair or replacement. Evidence of leakage in one location may not in itself cause the system to become inoperable, but it may indicate installation or maintenance deficiencies that will do so over time.

While the lists are derived from the applicable NFPA standards, they were not intended to be comprehensive. The true purpose is to serve as a visual reference guide for fire inspectors during their routine visits to buildings. As a checklist, it will serve an important function in assuring that visible indications of system deficiencies are noted.

Cost Impact: The code change proposal will not increase the cost of construction.

Public Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

APPENDIX I
FIRE PROTECTION SYSTEMS – ~~UNSAFE~~ NONCOMPLIANT CONDITIONS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

I101 ~~UNSAFE~~ NONCOMPLIANT CONDITIONS

I101.2 ~~Unsafe~~ Noncompliant conditions requiring component replacement. The following ~~conditions~~ shall be deemed ~~unsafe~~ noncompliant conditions and shall cause the related component(s) to be replaced to comply with the provisions of this code:

~~I101.2 Unsafe~~ I101.3 Noncompliant conditions requiring component repair or replacement. The following ~~conditions~~ shall be deemed ~~unsafe~~ noncompliant conditions and shall cause the related component(s) to be repaired or replaced to comply with the provisions of this code:

8. Fire pumps having any of the following conditions:
   8.1. Pump room temperature is less than 40 degrees F;

   ~~**Exception:** Pump room housing a diesel pump equipped with an engine heater.~~

   8.2. Ventilating louvers are not freely operable;
   8.3. Corroded or leaking system piping;
   8.4. Diesel fuel tank is less than two-thirds full; or
   8.5. Battery readings, lubrication oil or cooling water levels are abnormal.

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the HAEB Committee's reason statement accurately and adequately substantiates the need for the change and that it addresses the concern expressed in the 2006-2007 cycle by the IFC committee that the provisions should be in an appendix and in public testimony that references to appropriate NFPA standards should be included. The modifications revise the term "unsafe" to "noncompliant" wherever it occurred based on the committee's feeling that "noncompliant" with the code better reflects the nature of the enumerated items; correct a section numbering error; revise the charging text syntax to flow better and delete an inappropriate exception which could expose diesel pump rooms to freezing.

Assembly Action: **None**

Final Hearing Results

F304-07/08 **AM**