Ad Hoc Committee on Healthcare (AHC) Meeting #11
September 23 - 24, 2013
Combined Work Group Report
Group B Public Comments

The following 2013 Group B changes have been compiled for all three AHC Work Groups. Included in this report are code changes which received a public comment following the 2013 Group B Committee Action Hearings. These changes are intended to serve as the agenda for the AHC in order to establish AHC positions, if any, for the upcoming 2013 Group B Public Comment Hearings. THIS REPORT ONLY INLCUDES THOSE CODE CHANGES FOR WHICH CTC HAS TAKEN A POSITION ON A CODE CHANGE

EB16-13
705 (NEW)

Proposed Change as Submitted

Proponent: Rebecca Morley, National Center for Healthy Housing

Add new text as follows:

SECTION 705
CARBON MONOXIDE ALARMS

705.1 General. Carbon monoxide alarms shall be installed in existing Group I or R occupancies in accordance with Section 1103.9 of the *International Fire Code*.

Reason: Carbon monoxide (CO) is an odorless, tasteless, invisible gas that kills more than 300 people in homes each year. Thousands more are admitted to the hospital with carbon monoxide poisoning. This is a serious issue that affects people nationwide is all regions of the country. The International Residential Code requires CO alarms for residences with fuel-fired appliances or attached garages. This change would make the IEBC consistent with the IRC.

The following states have required CO alarms in existing residences: Alaska, California, Colorado, Illinois, Massachusetts, Michigan, Minnesota, Montana, New Jersey, New York, North Carolina, Oklahoma, Oregon, Rhode Island, Vermont and Wisconsin. Deaths from CO are spread throughout the country as residents unwittingly use dangerous methods to stay warm in unusually cold weather.

Cost Impact: Yes, this code change proposal will increase the cost of property maintenance. A carbon monoxide alarm typically costs approximately $25.

Committee Action Hearing Results

Committee Action: **Disapproved**

Committee Reason: This proposal requiring CO in Group I and R occupancies was felt to be excessive with Level 1 Alteration requirements. There was also concern that this particular requirement to add CO alarms retroactively may not be applicable in all states. Note that it was pointed out that if Chapter 11 of the IFC is adopted these requirements would be applicable regardless of whether an alteration is undertaken.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

Jane Malone, National Center for Healthy Housing, requests Approval as Submitted.

Commenter's Reason: While not needed in jurisdictions that have adopted the *International Fire Code*, the requirement is needed for Level 1 Alterations where the IFC is not in effect.

EB16-13
Final Action: AS AM AMPC____ D

EB49-13
904.2

Proposed Change as Submitted

Proponent: Charles S. Bajnai, Chesterfield County, VA, ICC Building Code Action Committee

Revise as follows:

904.2 Fire alarm and detection systems. Fire alarm and detection systems ~~complying with Sections 804.4.1 and 804.4.3~~ shall be provided ~~throughout the building~~ in accordance with Section 907 of the *International Building Code* as required for new construction.

Reason: This proposal is submitted by the ICC Building Code Action Committee (BCAC) The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 6 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: http://www.iccsafe.org/cs/BCAC/Pages/default.aspx.

The reference back to Section 804.4.1 through 804.4.3 misses critical upgrades of alarm systems for other occupancies. The intent of this proposal is to eliminate the reference to Chapter 8 of the IEBC because the reference creates confusion. Section 904.2.1 implies that an alarm system for all occupancies in accordance with the IBC would be required, however the reference to Section 804.4 implies that only those occupancies found in Section 804.4 are required to have them installed. Section 804.4 does not cover the fire alarm requirements for all occupancies in the IBC. An alteration level 3 to an existing A occupancy is a significant change to more than 50% of the area of a building and an alarm system would not be required with the current reference to Section 804.4 left in the code.

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

Committee Action Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee approved the proposal based upon the proponent's reason. In addition, it was noted that level 3 alterations were substantial enough and fire alarm systems should be as required for new construction.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

Maureen Traxler, City of Seattle Department of Planning & Development, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

904.2 Fire alarm and detection systems. Fire alarm and detection systems shall be provided throughout the building in accordance with Section 907 of the *International Building Code* as required for new construction.

Commenter's Reason: We are proposing to reinsert the phrase "throughout the building" into this code section because it clarifies that the requirements for fire alarm systems are not limited to the work area. Section 904.2 of the 2012 IEBC requires alarms throughout, but the rest of Chapter 9 applies either to the work area only or to areas from the work area to the level of exit discharge. The phrase "as required for new construction" clarifies that "throughout the building" means that a fire alarm system is only required where Section 904.2 would require it for new construction.

EB49-13
Final Action: AS AM AMPC____ D

F105-13
806.2

Proposed Change as Submitted

Proponent: Amy Carpenter, AIA, Pioneer Network Long Term Care Code Task Force

Revise as follows:

806.2 Artificial vegetation. Artificial decorative vegetation shall ~~meet the flame propagation performance criteria of NFPA 701. Meeting the flame propagation performance criteria of NFPA 701 shall be documented and certified by the manufacturer in an *approved* manner. Alternatively, the artificial decorative vegetation item shall~~ be tested in accordance ith NFPA 289, using the 20 kW ignition source, and shall have a maximum heat release rate of 100 kW.

Exception: In Groups R-2, I-1 and I-2, artificial vegetation shall be permitted in limited quantities such that a hazard of fire development or spread is not present.

Reason: The text stricken from section 806.2 is proposed because it is not a correct reference and should not be included. NFPA 701 is the standard for "flame propagation of Textiles and Films". The scope description, in the standard, is clear that it is for

materials that will be used as curtains, drapes and window treatments, therefore it is not the correct reference standard, nor the correct test method, for artificial decorative vegetation that may be used in buildings.

In Groups R-2, I-1 and I-2 Condition 1, residents often seek to create a home-like environment and display decorative items, like a seasonal wreath at their unit entries. It is not always possible, or practical to determine compliance with NFPA 289, especially for items procured by individual residents. The language of this exception is similar to the permissions for decorative materials, in these use groups, under Section 807. Further, as all of these Occupancies are required to have sprinkler coverage, there is a reduced risk for detrimental effects of limited quantities of artificial vegetation.

Cost Impact: No cost impact

806.2-F-CARPENTER

Committee Action Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee felt that NFPA 289 was a more appropriate test for artificial vegetation. There was some concern with the language found in the exception but it was noted that such language is existing language found in other sections of 806.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

Marcelo M. Hirschler, (GBH International), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

806.2 Artificial vegetation. Artificial decorative vegetation shall be tested in accordance with NFPA 289, using the 20 kW ignition source, and shall have a maximum heat release rate of 100 kW.

~~**Exception:** In Groups R-2, I-1 and I-2, artificial vegetation shall be permitted in limited quantities such that a hazard of fire development or spread is not present.~~

Commenter's Reason: This comment proposes to eliminate the exception from the proposal because it would allow the introduction of materials that can bring a severe fire problem. It would be difficult for a fire code official to assess properly what is a "limited quantity of artificial vegetation" that does not introduce a hazard of fire development or spread without a fire test. If a fire test has been conducted and the results are satisfactory, then the exception is unnecessary and if a fire test has been conducted and the results are unsatisfactory the exception becomes moot because the artificial vegetation would clearly introduce a significant fire hazard.

The intent of the submitter is clear: to allow an occasional seasonal wreath at the unit entry. However, it is also clear that some artificial Christmas trees that are used during the holiday season can introduce a very large amount of heat release when they burn. NIST tests in 1999 have shown that the heat release rate from a single natural Christmas tree can be as high as 5 MW. More recently, tests with some artificial Christmas trees have shown that even higher levels of heat release will result, particularly when the trees are constructed of polyolefin materials.

The fact that the change introduced by the proposal requires that the fire testing be done in accordance with a much better (albeit more severe and more expensive) fire test makes the probability of finding test results for decorative vegetation more unlikely and would lead to more fire code officials being required to make determinations of fire hazard with little or no basis.

If the code is silent, the fire code official in fact always has the leeway of allowing what the submitter wishes with a much lower probability of inadvertently introducing a severe fire problem.

F105-13

Final Action: AS AM AMPC____ D

F108-13

806.3

Proposed Change as Submitted

Proponent: Robert J Davidson, Davidson Code Concepts, LLC, representing self (rjd@davidsoncodeconcepts.com)

Revise as follows:

806.3 Obstruction of means of egress. The required width of any portion of a *means of egress* shall not be obstructed by decorative vegetation. Natural cut trees shall not be located within an exit, corridor, or a lobby or vestibule.

Reason: Section 806.3 "Obstruction of the means of egress" is recommended for modification because the rapid manner in which a natural cut tree is consumed by fire with the associated release of heat and smoke would present a distinct hazard to egress regardless of whether it impinged on the required width of the means of egress. A burning tree could not be approached or passed by thus effectively blocking that portion of an egress path while spreading heat and smoke to additional portions of the means of egress. A significant impact would be a natural cut tree located within a lobby that has the allowed 50% of all egress capacity passing through the same lobby.

Cost impact: This proposal will not increase the cost of construction.

806.3-F-DAVIDSON

Committee Action Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: This proposal was approved as it simply prohibits natural cut trees within specific critical areas of the means of egress.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

Dave Frable, representing U.S. General Services Administration, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

806.3 Obstruction of means of egress. The required width of any portion of a *means of egress* shall not be obstructed by decorative vegetation. Natural cut trees shall not be located within an exit, corridor, or a lobby or vestibule.

Exception: Where *approved*, natural cut trees can be placed in the building lobby where all the following condition are met:

1. The building is protected throughout by an automatic sprinkler system designed and installed in accordance with Section 903.3.1.1 or 903.3.1.2 as applicable.
2. The tree is located in the lobby for not more than 2 weeks,
3. The tree stands in a support device capable of containing a minimum two-day supply of water,
4. The water level in the tree support device is maintained at least 2 inches above the tree trunk and checked at least once daily,
5. The position of the tree is clear of exit routes by a distance equal to the height of the tree plus 6 feet,
6. There are no other combustibles likely to be ignited by a fire in the tree within 3 feet of the outer edges of the tree,
7. The maximum height of the tree does not exceed two/thirds of the ceiling height and,
8. The tree is sprayed with an approved non-toxic flame retardant coating.

Commenter's Reason: The intent of this proposed revision is to permit the fire code official flexibility when enforcing the requirements for the placement of natural cut trees during the holiday season in buildings having large lobbies.

Although the number of natural cut tree fires is low, the proponent is correct that these fires carry a higher level of hazard than other fires that occur in a structure. A NIST study in residential structures, supported by the U. S. Fire Administration, evaluated the following three objectives: 1) characterize the heat release rate of dry Fraser fir trees 2) demonstrate the ignition resistance of a tree with a high moisture content and 3) examine the impact of a residential sprinkler on the heat release rate of a dry tree that is on fire in a compartment.

The heat release rates of the trees which were allowed to dry ranged from 3.2 MW to 4.3 MW. The study found that trees that were kept in water, so that the needles maintained a moisture content in excess of 100 %, self-extinguished after being exposed to a flaming book of matches.

The data from the furnished sprinklered room experiment demonstrated that even under conditions of extreme fire growth, a single sprinkler was able to prevent flashover and limit the spread of fire to other objects. The peak heat release rate, from the sprinklered room, was limited to approximately 1.8 MW. The furnished non-sprinklered room experiment generated a post-flashover heat release rate in excess of 6 MW.

Based on the information from the NIST study and the additional requirements in the proposed exception we believe a reasonable degree of safety can be maintain for permitting on a temporary basis natural cut trees in buildings with large lobbies.

F108-13

Final Action: AS AM AMPC____ D

F109-13

807 (IBC [F] 806)

Proposed Change as Submitted

Proponent: Amy Carpenter, representing Pioneer Network Long Term Care Code Task Force (acarpenter@lenhardtrodgers.net) and Wayne Jewell Township of Green Oak, MI representing self

Revise as follows:

SECTION 807
DECORATIVE MATERIALS OTHER THAN DECORATIVE VEGETATION IN NEW AND EXISTING BUILDINGS

807.1 (IBC [F]806.1) General. Combustible decorative materials, other than decorative vegetation, shall comply with Section 807.2 through 807.5.

~~**807.1 (IBC [F]806.1) 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 807.2 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.~~ *(relocated to Section 807.3 exception 2)*
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.~~ *(relocated to Section 807.5.5)*

~~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.~~ *(relocated to Section 807.5.6 and 807.5.7)*

~~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.~~ *(relocated to Section 807.3)*

~~In Group B and M occupancies, fabric partitions suspended from the ceiling and not supported by the floor shall meet Sections 807.2 and 807.3 the flame propagation performance criteria in accordance with Section 807.2 and NFPA 701 or shall be noncombustible.~~

~~**807.1.1(IBC [F]806.1.1)**~~ **807.2 (IBC [F] 806.2) Noncombustible materials.** The permissible amount of noncombustible decorative material shall not be limited.

~~**807.1.2 (IBC [F]806.1.1)**~~ **807.3 (IBC [F] 806.3) Combustible decorative materials.** In other than Group I-3, ~~The permissible amount of~~ curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall be flame resistant ~~meeting the flame propagation performance criteria of NFPA 701~~ in accordance with Section 807.4 and shall not exceed 10 percent of the specific wall or ceiling area to which it is attached.

Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered *interior finish* if they cover 10 percent or more of the wall or of the ceiling area, and shall not be considered *decorative materials* or furnishings. *(relocated from Section 807.1)*

Exceptions:

1. In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings ~~meeting the flame propagation performance criteria of NFPA 701~~ shall not exceed 75 percent of the aggregate wall area 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 803.11 of the *International Building Code.*
2. In Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and other similar decorative materials suspended from walls or ceiling shall not exceed 50 percent of the aggregate wall areas where the building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1. *(relocated and revised from Section 807.1, exception 1)*

3.~~2.~~ In Group B and M occupancies, 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.

~~**807.2(IBC [F] 806.2)**~~ **807.4 (IBC [F] 806.4) Acceptance criteria and reports.** Where required to be flame resistant, curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall be tested by an *approved* agency and meet the flame propagation performance criteria of NFPA 701~~, or such materials shall be noncombustible~~. Reports of test results shall be prepared in accordance with NFPA 701 and furnished to the *fire code official* upon request.

~~**807.4**~~ **807.5 Occupancy-based requirements.** In occupancies specified ~~in Group A, E and I-4 day care facilities~~, combustible decorative materials not complying with Section 807.3 ~~other than decorative vegetation~~ shall comply with Sections 807.5.1 ~~807.4.1~~ through ~~807.4.4.2~~ 807.5.7.

IFC 807.5.1 ~~807.4.1~~ General. ~~All of~~ The following requirements shall apply to all occupancies: ~~to all Group A and E occupancies and Group I-4 day care facilities regulated by Sections 807.4.2 through 807.4.4~~:

1. ~~Explosive or highly flammable materials:~~ Furnishings or decorative materials of an explosive or highly flammable character shall not be used.
2. ~~Fire-retardant coatings:~~ Fire-retardant coatings in existing buildings shall be maintained so as to retain the effectiveness of the treatment under service conditions encountered in actual use.
3. ~~Obstructions:~~ Furnishings or other objects shall not be placed to obstruct *exits,* access thereto, egress there from or visibility thereof.

807.5.2 ~~807.4.2~~ Group A. In Group A occupancies, the requirements in Sections ~~807.4.2.1~~ 807.5.2.1 through ~~807.4.2.3~~ 807.5.2.4 shall apply ~~to occupancies in Group A~~.

807.5.2.1 ~~807.4.2.1~~ Foam plastics. Exposed foam plastic materials and unprotected materials containing foam plastic used for decorative purposes or stage scenery or exhibit booths shall have a maximum heat release rate of 100 kW when tested in accordance with UL 1975, or when tested in accordance with NFPA 289 using the 20 kW ignition source.

Exceptions:

1. Individual foam plastic items or items containing foam plastic where the foam plastic does not exceed 1 pound (0.45 kg) in weight.
2. Cellular or foam plastic shall be allowed for trim in accordance with Section 804.2.

807.5.2.2 ~~807.4.2.2~~ Motion Picture Screens. The screens upon which motion pictures are projected in new and existing buildings shall either ~~meet the flame propagation performance criteria of NFPA 701~~ comply with Section 807.4 or shall comply with the requirements for a Class B interior finish in accordance with Section 803 of the *International Building Code*.

807.5.2.3 ~~807.4.2.3~~ Wood use in ~~Group A-3~~ places of religious worship. In places of religious worship, wood used for ornamental purposes, trusses, paneling or chancel furnishing shall ~~be allowed~~ not be limited.

807.5.2.4 ~~807.3 (IBC [F] 806.4)~~ Pyroxylin plastic. Imitation leather or other material consisting of or coated with a pyroxylin or similarly hazardous base shall not be used ~~in Group A occupancies~~.

807.5.3 ~~807.4.3~~ Group E. Group E occupancies, shall comply with Sections ~~the requirements in Sections 807.4.3.1~~ 807.5.3.1 through ~~and 807.4.3.2~~ 807.5.3.3 ~~shall apply to occupancies in Group E~~.

807.5.3.1 ~~807.4.3.1~~ Storage in corridors and lobbies. Clothing and personal effects shall not be stored in *corridors* and lobbies.

Exceptions:

1. *Corridors* protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.
2. *Corridors* protected by an *approved* ~~smoke detection~~ fire alarm system installed in accordance with Section 907.
3. Storage in metal lockers, provided the minimum required egress width is maintained.

807.5.3.2 ~~807.4.3.2~~ Artwork in corridors. Artwork and teaching materials shall be limited on the walls of *corridors* to not more than 20 percent of the wall area.

807.5.3.3 Artwork in classrooms. Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached.

807.5.4 ~~807.4.4~~ Group I-4~~, day care facilities~~. Group I-4 occupancies shall comply with, the requirements in Section~~s~~ ~~807.4.4.1~~ 807.5.4.1 through ~~and 807.4.4.2~~ 807.5.4.2 ~~shall apply to day care facilities classified in Group I-4~~.

807.5.4.1 ~~807.4.4.1~~ Storage in corridors and lobbies. Clothing and personal effects shall not be stored in *corridors* and lobbies.

Exceptions:

1. *Corridors* protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.
2. *Corridors* protected by an *approved* ~~smoke detection~~ fire alarm system installed in accordance with Section 907.
3. Storage in metal lockers, provided the minimum required egress width is maintained.

807.5.4.2 ~~807.4.4.2~~ Artwork in corridors. Artwork and teaching materials shall be limited on the walls of *corridors* to not more than 20 percent of the wall area.

807.5.4.3 Artwork in classrooms. Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached.

807.5.5 Dormitories in Group R-2. In Group R-2 dormitories, within sleeping units and dwelling units, the combustible decorative materials, shall be of limited quantities such that a hazard of fire development or spread is not present. *(relocated and revised from Section 807.1, exception 2)*

807.5.6 Groups I-1 and I-2. In Groups I-1 and I-2 occupancies, combustible *decorative materials* shall be of such limited quantities that a hazard of fire development or spread is not present.*(relocated from Section 807.1)*

IFC 807.5.7 Group I-3. In Group I-3, combustible *decorative materials* are prohibited. *(relocated from Section 807.1)*

Reason: The proposed revision is intended to be a clarification of the combustible materials permitted within a space. Specifically, to understand the different requirements for fabric-type decorative materials and paper-type decorative materials and what quantities of each are permitted in various use groups.

Currently, photographs and paintings, in some use groups, are required to be tested and certified to NFPA 701. The scope of this standard does not address paper items such as artwork and photographs and therefore was impossible to comply with.

The scope of NFPA 701 is as follows:
"*1.1.1* Test Method 1*
1.1.1.1 Test Method 1 shall apply to fabrics or other materials used in curtains, draperies, or other window treatments. Vinyl-coated fabric blackout linings shall be tested according to Test Method 2.

1.1.1.2 Test Method 1 shall apply to single-layer fabrics and to multi-layer curtain drapery assemblies in which the layers are fastened together by sewing or other means. Vinyl-coated fabric blackout linings shall be tested according to Test Method 2.

1.1.1.3 Test Method 1 shall apply to specimens having an areal density less than or equal to 700 g/m2 (21 oz/yd2), except where Test Method 2 is required to be used by 1.1.2."

Most revisions are editorial and serve to provide better clarity and to group requirements by use group.

807.1 – A general statement was needed so that the requirements match the Section title
The former text in 807.1 was re-organized and is now in Section 807.3 and 807.5 for better clarity.

807.2 – re-number only

807.3 - Since Group I-3 are limited to only non-combustible, the limitation is added to the front of the combustible materials.

The remainder of the sentence is revised for coordination with the next section on acceptance criteria and eliminating redundant reference to NFPA 701. That section starts out with "where required to be flame resistant". The limitation to "curtains, draperies, hangings and other decorative materials suspended from walls or ceilings" is in the first paragraph in Section 807.1. The addition of the words "fabric" hangings and other "similar" combustible decorative materials is to differentiate between fabrics and films that are covered under NFPA Standard 701 and other materials used for decorative effect, that are discussed in 807.5 for each use group.

Exception 1 is specific to Group A for percentage of materials complying with 701.

Exception 2, curtains for dormitories is relocated from 807.1. It was reformatted to be consistent with the exception for auditoriums. Revised language shown below:

> 2. In Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and other similar decorative materials suspended from walls or ceiling ~~of *sleeping units* and *dwelling units* in dormitories in Group R-2~~ shall not exceed 50 percent of the aggregate wall areas where the building is equipped throughout with ~~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~~.

Exception 3, reformatted to put groups first.

807.4 – Deleted text is not needed as this is addressed in 807.2. Added text is intended to specifically reference decorative items that are covered under the NFPA Standard.

807.5 – This proposed revision places requirements for multiple use groups in this section so the listing of groups was deleted. In addition, new section 807.1 already states this section is not applicable to decorative vegetation, so this language was deleted.

807.5.1 – these requirements should apply to all occupancies in this section.
Titles at the beginning of each sentence were redundant and not proper code language.

807.5.2 – text re-organized for consistency. The intent is to clarify the following conditions are applicable to Group A

807.5.2.1 – Re-number only

807.5.2.2 - Re-number. This is a subsection of Group A criteria, so group not needed. Consistency between subsections.

807.5.2.3 – Re-number. This is a subsection of Group A criteria, so group not needed. Plus, only in the title, not the text. Consistency between subsections.

807.5.2.4 - Relocated to group with Group A requirements. This is a subsection of Group A criteria, so group not needed. Consistency between subsections.

807.5.3 - text re-organized for consistency. The intent is to clarify the following conditions are applicable to Group E

807.5.3.1 – Re-number. Change in Exception 2 is for consistency in language with Section 907.

807.5.3.2 – Re title and re-number only.

807.5.3.3 - This provide guidance within the classroom as to how much art work is permitted.

807.5.4 - The intent of the first sentence is to clarify that the general provisions are applicable for Group I-4. The phrase "day care facilities" is redundant.

807.5.4.1 – Re-number. Change in Exception 2 is for consistency in language with Section 907.

807.5.4.2 – Re-title and re-number only.

807.5.4.3 – This provide guidance within the classroom as to how much art work is permitted.

807.5.5 - Relocate existing exception 2 in 807.1 related to Group R-2 dormitories. Language is similar to paper in school corridors. NFPA 701 does not apply to Photos or paintings. All Group R are now required to be sprinklered, so the threat of flame spread is reduced. Revised language shown below:

807.5.5 (IBC [F] 806.5.5) Dormitories in Group R-2. In Group R-2 dormitories, within sleeping units and dwelling units, the combustible decorative materials, ~~including, but not limited to, photographs and paintings in dormitories in Group R-2 where such materials are~~ shall be of limited quantities such that a hazard of fire development or spread is not present.

807.5.6 - Relocate existing Group I-1 and I-2 from 2nd paragraph of 807.1. New 807.3 would apply to curtains in all occupancies, including Group I-1 and I-2. This allowance is just for the paper permitted in the facilities. Revised language shown below:

IFC 807.5.6 Groups I-1 and I-2. 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~~ be of such limited quantities that a hazard of fire development or spread is not present.

807.5.7 – Re-located from 2nd paragraph of 807.1. Also scoped in 807.3

Cost Impact: None

807.1-F-CARPENTER.doc

Committee Action Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

SECTION 807
DECORATIVE MATERIALS OTHER THAN DECORATIVE VEGETATION IN NEW AND EXISTING BUILDINGS

807.1 (IBC [F]806.1) General. Combustible decorative materials, other than decorative vegetation, shall comply with Section 807.2 through 807.5.

807.2 General. The following requirements shall apply to all occupancies:

1. Furnishings or decorative materials of an explosive or highly flammable character shall not be used.
2. Fire-retardant coatings in existing buildings shall be maintained so as to retain the effectiveness of the treatment under service conditions encountered in actual use.
3. Furnishings or other objects shall not be placed to obstruct *exits,* access thereto, egress there from or visibility thereof.
4. The permissible amount of noncombustible decorative materials shall not be limited.

~~**807.2 (IBC [F] 806.2) Noncombustible materials.** The permissible amount of noncombustible decorative material shall not be limited.~~

807.3 (IBC [F] 806.3) Combustible decorative materials. In other than Group I-3, curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall comply ~~be flame resistant in accordance~~ with Section 807.4 and shall not exceed 10 percent of the specific wall or ceiling area to which they are ~~it is~~ attached.

Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered *interior finish,* shall comply with Section 803 ~~if they cover 10 percent or more of the wall or of the ceiling area,~~ and shall not be considered *decorative materials* or furnishings. *(relocated from Section 807.1)*

Exceptions:

1. In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall not exceed 75 percent of the aggregate wall area 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 803.11 of the *International Building Code.*
2. n Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and other similar decorative materials suspended from walls or ceiling shall not exceed 50 percent of the aggregate wall areas where the building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1. *(relocated and revised from Section 807.1, exception 1)*
3. In Group B and M occupancies, the amount of combustible fabric partitions suspended from the ceiling and not supported by the floor shall comply with Section 807.4 and shall not be limited.

807.4 (IBC [F] 806.4) Acceptance criteria and reports. Where required to exhibit improved fire performance ~~be flame resistant~~, curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall be

tested by an *approved* agency and meet the flame propagation performance criteria of Test 1 or Test 2, as appropriate of NFPA 701 or exhibit a maximum rate of heat release of 100kW when tested in accordance with NFPA 289, using the 20 kW ignition source. Reports of test results shall be prepared in accordance with the test method used ~~NFPA 701~~ and furnished to the *fire code official* upon request.

807.5 Occupancy-based requirements. In occupancies, combustible decorative materials not complying with Section 807.3 shall comply with Sections 807.5.1 through 807.5.7.

~~**807.5.1 General.** The following requirements shall apply to all occupancies:~~

~~1. Furnishings or decorative materials of an explosive or highly flammable character shall not be used.~~
~~2. Fire-retardant coatings in existing buildings shall be maintained so as to retain the effectiveness of the treatment under service conditions encountered in actual use.~~
~~3. Furnishings or other objects shall not be placed to obstruct *exits,* access thereto, egress there from or visibility thereof.~~

807.5.1 ~~**807.5.2**~~ **Group A.** In Group A occupancies, the requirements in Sections 807.5.2.1 through 807.5.2.4 shall apply to occupancies in Group A.

807.5.1.1 ~~**807.5.2.1**~~ **Foam plastics.** Exposed foam plastic materials and unprotected materials containing foam plastic used for decorative purposes or stage scenery or exhibit booths shall have a maximum heat release rate of 100 kW when tested in accordance with UL 1975, or when tested in accordance with NFPA 289 using the 20 kW ignition source.

Exceptions:

1. Individual foam plastic items or items containing foam plastic where the foam plastic does not exceed 1 pound (0.45 kg) in weight.
2. Cellular or foam plastic shall be allowed for trim in accordance with Section 804.2.

807.5.1.2 ~~**807.5.2.2**~~ **Motion Picture Screens.** The screens upon which motion pictures are projected in new and existing buildings shall either comply with Section 807.4 or shall comply with the requirements for a Class B interior finish in accordance with Section 803 of the *International Building Code*.

807.5.1.3 ~~**807.5.2.3**~~ **Wood use in places of religious worship.** In places of religious worship, wood used for ornamental purposes, trusses, paneling or chancel furnishing shall not be limited.

807.5.1.4 ~~**807.5.2.4**~~ **(IBC [F] 806.4) Pyroxylin plastic.** Imitation leather or other material consisting of or coated with a pyroxylin or similarly hazardous base shall not be used.

807.5.2 ~~**807.5.3**~~ **Group E.** Group E occupancies, shall comply with Sections the requirements in Sections 807.5.3.1 through 807.5.3.3

807.5.2.1 ~~**807.5.3.1**~~ **Storage in corridors and lobbies.** Clothing and personal effects shall not be stored in *corridors* and lobbies.

Exceptions:

1. *Corridors* protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.
2. *Corridors* protected by an *approved* fire alarm system installed in accordance with Section 907.
3. Storage in metal lockers, provided the minimum required egress width is maintained.

807.5.2.2 ~~**807.5.3.2**~~ **Artwork in corridors.** Artwork and teaching materials shall be limited on the walls of *corridors* to not more than 20 percent of the wall area.

807.5.2.3 ~~**807.5.3.3**~~ **Artwork in classrooms.** Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached.

807.5.3 ~~**807.5.4**~~ **Group I-4, day care facilities.** Group I-4 occupancies shall comply with, the requirements in Sections 807.5.4.1 through 807.5.4.2 .

807.5.3.1 ~~**807.5.4.1**~~ **Storage in corridors and lobbies.** Clothing and personal effects shall not be stored in *corridors* and lobbies.

Exceptions:

1. *Corridors* protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.
2. *Corridors* protected by an *approved* fire alarm system installed in accordance with Section 907.
3. Storage in metal lockers, provided the minimum required egress width is maintained.

807.5.3.2 ~~**807.5.4.2**~~ **Artwork in corridors.** Artwork and teaching materials shall be limited on the walls of *corridors* to not more than 20 percent of the wall area.

807.5.3.3 ~~807.5.4.3~~ Artwork in classrooms. Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached.

807.5.4 ~~807.5.5~~ Dormitories in Group R-2. In Group R-2 dormitories, within sleeping units and dwelling units, the combustible decorative materials, shall be of limited quantities such that a hazard of fire development or spread is not present. *(relocated and revised from Section 807.1, exception 2)*

807.5.5 ~~807.5.6~~ Groups I-1 and I-2. In Groups I-1 and I-2 occupancies, combustible *decorative materials* shall be of such limited quantities that a hazard of fire development or spread is not present.*(relocated from Section 807.1)*

807.5.6 ~~807.5.7~~ Group I-3. In Group I-3, combustible *decorative materials* are prohibited. *(relocated from Section 807.1)*

Committee Reason: This proposal was seen as a good clarification and organization of the requirements in Section 807. A modification was presented that combined elements from F110-13 and made some additional adjustments to clarify the proposal. Section 807.2 in the modification was relocated from the proposed location 807.5.1. Section 807.2 was relocated into item 4 in the new section 807.2. Other revisions related to the appropriate application of NFPA 701 and the addition of NFPA 289 as a viable test for decorative materials.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment 1:

Dave Frable, representing U.S. General Services Administration, requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

807.1 (IBC [F]806.1) General. Combustible decorative materials, other than decorative vegetation, shall comply with Section 807.2 through 807.5.

Exception: The provisions of Section 807 shall not apply to Group F, R-2 other than dormitories, R-3, S and U Occupancies.

807.3 (IBC [F] 806.3) Combustible decorative materials. In other than Group I-3, curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall comply with Section 807.4 and shall not exceed 10 percent of the specific wall or ceiling area to which they are attached. See Section 807.5.6 for the requirements for Group I-3 occupancies.

Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered *interior finish,* shall comply with Section 803 and shall not be considered *decorative materials* or furnishings. *(relocated from Section 807.1)*

Exceptions:

1. In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall not exceed 75 percent of the aggregate wall area 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 803.11 of the *International Building Code.*
2. n Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and other similar decorative materials suspended from walls or ceiling shall not exceed 50 percent of the aggregate wall areas where the building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1. *(relocated and revised from Section 807.1, exception 1)*
3. In Group B and M occupancies, the amount of combustible fabric partitions suspended from the ceiling and not supported by the floor shall comply with Section 807.4 and shall not be limited.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: This proposal narrows down the applicability of these provisions. This is consistent to how the occupancies were regulated previously. R-2 dormitories were regulated previously but not R-2 occupancies in general. Additionally, as currently written it would apply to individual apartment units. Occupancies such as F and S are locations where the public is not likely to be present unlike Group M or A occupancies. The reference to the Group I-3 restrictions are necessary as they may be easily missed where currently placed in the new section 807.5.6.

Public Comment 2:

John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee, request Approval as Modified by this Public Comment.

Further modify the proposal as follows:

IFC 807.5.3 Groups I-1 and I-2. In Groups I-1 and I-2 occupancies, combustible *decorative materials* shall comply with Sections 807.5.3.1 through 807.5.3.4.

IFC 807.5.3.1 Group I-1 and Group I-2 Condition 1 within sleeping units and dwelling units. In Group I-1 and Group I-2 Condition 1 occupancies, equipped throughout by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1, within sleeping units and dwelling units, combustible decorative materials are limited to not more than 50 percent of the aggregate wall area.

IFC 807.5.3.2 In Group I-1 and Group I-2 Condition 1 for areas other than within sleeping units and dwelling units. In Group I-1 and Group I-2 Condition 1 occupancies, equipped throughout by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1, combustible decorative materials in areas other than within sleeping units and dwelling units are limited to not more than 30 percent of the aggregate wall area.

IFC 807.5.3.3 In Group I-2 Condition 2. In Group I-2 Condition 2 occupancies, equipped throughout by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1, the combustible decorative materials are limited to not more than 30 percent of the aggregate wall area.

IFC 807.5.3.4 Other areas in Groups I-1 and I-2. In Group I-1 and I-2 occupancies, in areas not equipped throughout by an *approved automatic sprinkler system*, the combustible decorative materials, shall be of such limited quantities that a hazard of fire development or spread is not present.

~~**807.5.5 Groups I-1 and I-2.** In Groups I-1 and I-2 occupancies, combustible *decorative materials* shall be of such limited quantities that a hazard of fire development or spread is not present.~~

807.5.4 ~~807.5.6~~ Group I-3. *(No change to text)*

807.5.5 ~~807.5.3~~ Group I-4, day care facilities. *(No change to text)*

807.5.5.1 ~~807.5.3.1~~ Storage in corridors and lobbies. *(No change to text)*

807.5.5.2 ~~807.5.3.2~~ Artwork in corridors. *(No change to text)*

807.5.5.3 ~~807.5.3.3~~ Artwork in classrooms. *(No change to text)*

807.5.6 ~~807.5.4~~ Dormitories in Group R-2. *(No change to text)*

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: The renumbering is to put the groups addressed in alphabetical order for ease of use.
Code change F109 was approved as modified as part of a coordination effort between F109 and F110. This is a good cleanup of the section and is indicated below as it will appear in the 2015 IBC. This change, along with the approval of F3, addressed the issues in F111 with the exception of the allowance for paper in assisted living facilities, nursing homes and hospitals.

The committee did not really express any reasons for not approving the percentages recommended. There was a floor modification that attempted to coordinate F111 with the coordination work being done with F109 and F110 which appeared to confuse the issue.

Section 807.5.5, dealing with Group I-2, while a relocation of existing language, is very open for interpretation and/or unenforceable. This proposal for Section 807.5.3, replaces Section 807.5.5, and pulls the more exact language in F111 to put it here to address situations in Group I-1 and I-2 facilities such as assisted living, nursing homes and hospitals.

SECTION 807 (IBC [F] 806)
DECORATIVE MATERIALS OTHER THAN DECORATIVE VEGETATION IN NEW AND EXISTING BUILDINGS

807.1 (IBC [F]806.1) General. Combustible decorative materials, other than decorative vegetation, shall comply with Section 807.2 through 807.5.

807.2 (IBC [F]806.2) General. The following requirements shall apply to all occupancies:

1. Furnishings or decorative materials of an explosive or highly flammable character shall not be used.
2. Fire-retardant coatings in existing buildings shall be maintained so as to retain the effectiveness of the treatment under service conditions encountered in actual use.
3. Furnishings or other objects shall not be placed to obstruct *exits,* access thereto, egress there from or visibility thereof.
4. The permissible amount of noncombustible decorative materials shall not be limited.

807.3 (IBC [F] 806.3) Combustible decorative materials. In other than Group I-3, curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall comply with Section 807.4 and shall not exceed 10 percent of the specific wall or ceiling area to which they are attached.

Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered *interior finish* shall comply with Section 803 and shall not be considered *decorative materials* or furnishings.

Exceptions:

1. In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall not exceed 75 percent of the aggregate wall area 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 803.11 of the *International Building Code.*
2. In Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and other similar decorative materials suspended from walls or ceiling shall not exceed 50 percent of the aggregate wall areas where the building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.
3. In Group B and M occupancies, the amount of combustible fabric partitions suspended from the ceiling and not supported by the floor shall comply with Section 807.4 and shall not be limited.

807.4 (IBC [F] 806.4) Acceptance criteria and reports. Where required to exhibit improved fire performance, curtains, draperies, fabric hangings and other similar combustible decorative materials suspended from walls or ceilings shall be tested by an *approved* agency and meet the flame propagation performance criteria of Test 1 or Test 2, as appropriate of NFPA 701 or exhibit a maximum rate of heat release of 100kW when tested in accordance with NFPA 289, using the 20 kW ignition source. Reports of test results shall be prepared in accordance with the test method used and furnished to the *fire code official* upon request.

807.5 Occupancy-based requirements. In occupancies, combustible decorative materials not complying with Section 807.3 shall comply with Sections 807.5.1 through 807.5.7.

807.5.1 Group A. In Group A occupancies, the requirements in Sections 807.5.2.1 through 807.5.2.4 shall apply to occupancies in Group A.

807.5.1.1 Foam plastics. Exposed foam plastic materials and unprotected materials containing foam plastic used for decorative purposes or stage scenery or exhibit booths shall have a maximum heat release rate of 100 kW when tested in accordance with UL 1975, or when tested in accordance with NFPA 289 using the 20 kW ignition source.

Exceptions:

1. Individual foam plastic items or items containing foam plastic where the foam plastic does not exceed 1 pound (0.45 kg) in weight.
2. Cellular or foam plastic shall be allowed for trim in accordance with Section 804.2.

807.5.1.2 Motion Picture Screens. The screens upon which motion pictures are projected in new and existing buildings shall either comply with Section 807.4 or shall comply with the requirements for a Class B interior finish in accordance with Section 803 of the *International Building Code*.

807.5.1.3 Wood use in places of religious worship. In places of religious worship, wood used for ornamental purposes, trusses, paneling or chancel furnishing shall not be limited.

807.5.1.4 Pyroxylin plastic. Imitation leather or other material consisting of or coated with a pyroxylin or similarly hazardous base shall not be used.

807.5.2 Group E. Group E occupancies, shall comply with Sections the requirements in Sections 807.5.3.1 through 807.5.3.3

807.5.2.1 Storage in corridors and lobbies. Clothing and personal effects shall not be stored in *corridors* and lobbies.

Exceptions:

1. *Corridors* protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.
2. *Corridors* protected by an *approved* fire alarm system installed in accordance with Section 907.
3. Storage in metal lockers, provided the minimum required egress width is maintained.

807.5.2.2 Artwork in corridors. Artwork and teaching materials shall be limited on the walls of *corridors* to not more than 20 percent of the wall area.

807.5.2.3 Artwork in classrooms. Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached.

807.5.3 Group I-4, day care facilities. Group I-4 occupancies shall comply with, the requirements in Sections 807.5.4.1 through 807.5.4.2 .

807.5.3.1 Storage in corridors and lobbies. Clothing and personal effects shall not be stored in *corridors* and lobbies.

Exceptions:

1. *Corridors* protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.
2. *Corridors* protected by an *approved* fire alarm system installed in accordance with Section 907.
3. Storage in metal lockers, provided the minimum required egress width is maintained.

807.5.3.2 Artwork in corridors. Artwork and teaching materials shall be limited on the walls of *corridors* to not more than 20 percent of the wall area.

807.5.3.3 Artwork in classrooms. Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached.

807.5.4 Dormitories in Group R-2. In Group R-2 dormitories, within sleeping units and dwelling units, the combustible decorative materials, shall be of limited quantities such that a hazard of fire development or spread is not present.

807.5.5 Groups I-1 and I-2. In Groups I-1 and I-2 occupancies, combustible *decorative materials* shall be of such limited quantities that a hazard of fire development or spread is not present.

807.5.6 Group I-3. In Group I-3, combustible *decorative materials* are prohibited.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

This proposal is being co-sponsored by the ICC Code Technology Committee. The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The 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/CTC/Pages/default.aspx. Since its inception in April/2005, the CTC has held twenty five meetings - all open to the public.

Public Comment 3:

Marcelo M. Hirschler, (GBH International), requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

807.5.3 Groups I-1 and I-2. In Groups I-1 and I-2 occupancies, combustible *decorative materials* shall comply with Sections 807.5.3.1 through 807.5.3.4.

807.5.3.1 Group I-1 and Group I-2 Condition 1 within units. In Group I-1 and Group I-2 Condition 1 occupancies, equipped throughout by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1, within sleeping units and

dwelling units, combustible decorative materials placed on walls shall be limited to not more than 50 percent of the wall area to which they are attached.

807.5.3.2 In Group I-1 and Group I-2 Condition 1 for areas other than within units. In Group I-1 and Group I-2 Condition 1 occupancies, equipped throughout by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1, combustible decorative materials placed on walls in areas other than within dwelling and sleeping units shall be limited to not more than 30 percent of the wall area to which they are attached.

807.5.3.3 In Group I-2 Condition 2. In Group I-2 Condition 2 occupancies, equipped throughout by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1, combustible decorative materials placed on walls shall be limited to not more than 30 percent of the wall area to which they are attached.

807.5.3.4 Other areas in Groups I-1 and I-2. In Group I-1 and I-2 occupancies, in areas not equipped throughout by an *approved automatic sprinkler system*, combustible decorative materials shall be of such limited quantities that a hazard of fire development or spread is not present.

~~**807.5.5 Groups I-1 and I-2.** In Groups I-1 and I-2 occupancies, combustible *decorative materials* shall be of such limited quantities that a hazard of fire development or spread is not present.~~

807.5.4 ~~807.5.6~~ Group I-3. *(No change to text)*

807.5.5 ~~807.5.3~~ Group I-4, day care facilities. *(No change to text)*

807.5.5.1 ~~807.5.3.1~~ Storage in corridors and lobbies. *(No change to text)*

807.5.5.2 ~~807.5.3.2~~ Artwork in corridors. *(No change to text)*

807.5.5.3 ~~807.5.3.3~~ Artwork in classrooms. *(No change to text)*

807.5.6 ~~807.5.4~~ Dormitories in Group R-2. *(No change to text)*

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: This comment proposes to integrate the proposed additional requirements (with sprinkler trade-offs) for Group I-1 and Group I-2 Condition 1 occupancies, as proposed by F111, within the accepted language of proposal F109. The proposed language would replace section 807.5.5 from the approved as modified version of proposal F109 by the new language in Section 807.5.3 . The renumbering is consistent with the alphabetical order of the occupancies.. The only other minor added changes made to the proposed language in F111 are the use of the words "decorative materials placed on walls" (because it is not possible to measure decorative materials placed other than on walls) and basing the limitation on the walls to which the decorative materials are attached because that provides added safety.

F109-13
Final Action: AS AM AMPC____ D

F112-13

808.1, 808.2, 5003.8.7.1, 5003.9.10, 5005.1.10, 5704.3.2.1.1, 5705.2.4, Chapter 80

Proposed Change as Submitted

Proponent: Glen Carter, Justrite Manufacturing Company LLC

Revise as follows:

808.1 Wastebaskets and linen containers in Group I-1, I-2 and I-3 occupancies. Wastebaskets, linen containers and other waste containers, including their lids, located in Group I-1, I-2 and I-3 occupancies shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m2 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 or approved in accordance with FM 6921 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121

L) shall be stored in an area classified as a waste and linen collection room and constructed in accordance with Table 509 of the International Building Code.

808.2 Waste containers with a capacity of 20 gallons or more in Group R-2 college and university dormitories. Waste containers, including their lids, located in Group R-2 college and university dormitories, and with a capacity of 20 gallons (75.7 L) or more, shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m2 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 or approved in accordance with FM 6921 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121 L) shall be stored in an area classified as a waste and linen collection room constructed in accordance

5003.8.7.1 Construction. The interior of cabinets shall be treated, coated or constructed of materials that are nonreactive with the hazardous material stored. Such treatment, coating or construction shall include the entire interior of the cabinet. Cabinets shall either be listed in accordance with UL 1275 or approved in accordance to FM 6050 as suitable for the intended storage or constructed in accordance with the following: with Table 509 of the International Building Code.

5003.9.10 Safety cans. Safety cans shall be listed in accordance with UL 30, UL 1313, or approved in accordance with FM 6051 and FM 6052 when used to increase the maximum allowable quantities per control area of flammable or combustible liquids in accordance with Table 5003.1.1(1). ~~Safety cans listed in accordance with UL 1313 are allowed for flammable and combustible liquids when not used to increase the maximum allowable quantities per control area and for other hazardous material liquids in accordance with the listing.~~

5005.1.10 Liquid transfer. Liquids having a hazard ranking of 3 or 4 in accordance with NFPA 704 shall be transferred by one of the following methods:

1. From safety cans complying with UL 30, UL 1313 or with FM 6051 and FM 6052.

2 through 5 *(No change to current text)*

5704.3.2.1.1 Materials. Cabinets shall be listed in accordance with UL 1275, or approved in accordance to FM 6050, or constructed of approved wood or metal in accordance with the following:

5705.2.4 Class I, II and III liquids. Class I liquids or when heated to or above their flash points, Class II and Class III liquids shall be transferred by one of the following methods:

1. From safety cans complying with UL 30, UL 1313 or with FM 6051 and FM 6052

2 through 5 *(No change to current text)*

Add standards to Chapter 80 as follows:

FM

6050-96	Approval Standard for Storage Cabinets (Flammable and Combustible Liquids
6051 and 6052-76	Approval Standard for Safety Containers and Filling, Supply and Disposal Containers
6921-04	Approval Standard for Cabinets for Combustible Waste

Reason:

1) For those proposals adding the appropriate FM Approval standard: FM Approvals is a nationally and globally recognized laboratory who just like UL has construction specifications these safety products have to be built to, performance specification these safety products are tested to before an approval is issued.

FM Approvals publish an approval guide that lists all the products they have approved. And FM Approvals conducts periodic quality assurance audits to assure the approved products are manufactured to the same standards as those products and designs

that were submitted for evaluation. All design changes are submitted to FM Approvals for their approval prior to those changes being allowed. The fire tests conducted by both organizations (UL & FM) on these products are to the same time temperature curve.

It is in this spirit that FM Approvals should be included in the IFC as a nationally & globally recognized approval laboratory.

2) For those proposals 5003.9.10, 5005.1.10, and 5705.2.4 I am proposing adding UL 1313 for Non-metallic Safety Cans. Non-metallic safety cans are tested the same way as metallic safety cans and are as safe or safer than the metallic safety cans. If you had ever seen a non-metallic safety can in a fire test you would no longer be a skeptical.

   a) Intuitively, it is hard to imagine a safety san made of polyethylene surviving a fire test. I was curious about this concept until I witnessed our non-metallic safety can in a fire test conducted at UL. In the fire test, the safety can performed very admirably in the way the design met its goals, in not contributing to the spread of fire. Our non-metallic safety can vented on cue. As the vented vapors were being consumed by fire, the level of the liquid fuel lowered in the can. In turn the polyethylene started to melt but, only in the void above the fluid level. The liquid fuel level was protecting the can from melting further by absorbing the heat. As the fluid level went down the safety can's walls melted inward and further down the height of the can above the fuel level. This continued until all the fuel inside the safety can had been consumed while contained within the safety can's walls. There was no spew of fuel; no rupture of the safety can spreading fuel all over the area. That is exactly the intended result of a well-designed safety can. I believe once anyone has witnessed this test and understood the consequences they would be compelled to agree too.
   b) There are numerous flammable and combustible liquids that are incompatible with metallic safety cans. As an example, isopropyl alcohol will begin to pit a metallic safety can until micro leaks begin to occur. The only safe and compatible solution for storage of this liquid and others is a non-metallic safety can.
   c) A non-metallic safety can is definitely more robust during a drop test; our non-metallic safety can designs will rebound undamaged because of its superior thick wall strength. The metallic safety can in a drop test will result in a dented and crumpled shell. Both meet the criteria of a safety can but you cannot top the strength and resilience of the poly can.
   d) Metallic and non-metallic safety cans both benefit work place safety and each are recognized by many local, state, and federal laws. Non-metallic safety cans would be a loss to the safety community if it is not recognized. It is hard to picture what legal & safe alternative will be available to those whose processes that currently requiring non-metallic safety cans. Non-metallic safety cans have long provided a safe solution over makeshift consumer gasoline cans or glass/plastic carboys etc...

Note: The FM 6051 and 6052 are a combined specification covering metallic and non-metallic safety cans.

3) I am proposing the deletion illustrated in section 5003.9.10 to allow non-metallic safety cans to be used to allow the increase of MAQs in a control area for those reasons described in 2 a), b), c), & d) above.

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

Analysis: A review of the standards proposed for inclusion in the code, FM 6050-96, FM 6051 and 6052-76 and FM 6921-04 , with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28), will be posted on the ICC website on or before April 1, 2013. The standard UL 1313 is currently referenced within the IFC.

F112-808.1-F-CARTER

Committee Action Hearing Results

The following is an errata that was not posted to the ICC website.

The bolded current text was not printed with the original proposal:

808.2 Waste containers with a capacity of 20 gallons or more in Group R-2 college and university dormitories. Waste containers, including their lids, located in Group R-2 college and university dormitories, and with a capacity of 20 gallons (75.7 L) or more, shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m2 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 or approved in accordance with FM 6921 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121 L) shall be stored in an area classified as a waste and linen collection room constructed in accordance **with Table 509 of the *International Building Code***.

(Portions of proposal not shown remain unchanged)

For staff analysis of the content of FM 6050-96, FM 6051 and 6052-76 and FM 6921-04 relative to CP#28, Section 3.6, please visit: http://www.iccsafe.org/cs/codes/Documents/2012-2014Cycle/Proposed-B/ProposedStandards.pdf

Committee Action: Disapproved

Committee Reason: The proposal was not ready for implementation. One particular concern was that Section 5705.2.4 addresses heated liquids, which is outside the scope of the proposed referenced standard UL1313. Also there was confusion with the term "approved" as it is used differently within the proposal than as defined in Section 202. There was also concern that

materials other than metal were being addressed in a section only dealing with metal containers.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee, request Approval as Modified by this Public Comment.

Modify the proposal as follows:

808.1 Wastebaskets and linen containers in Group I-1, I-2 and I-3 occupancies. Wastebaskets, linen containers and other waste containers, including their lids, located in Group I-1, I-2 and I-3 occupancies shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m2 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 or ~~approved in accordance with~~ FM 6921 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121 L) shall be stored in an area classified as a waste and linen collection room and constructed in accordance with Table 509 of the International Building Code.

> **Exception:** Portable containers complying with FM6921 and limited to clean waste recycling or disposal of patient records and does not exceed 96 gallons (363 L) shall not be required to be stored in an area classified as a waste and linen collection room.

(Portions of proposal not shown remain unchanged.)

Reason: This allows for the option of compliance with FM6921 and addresses the committees concern over the "approved" language. The scope of this public comment is limited to concerns with Group I-2 concerns and their 'green' recycling initiatives and patient privacy with regard to proper disposal of medical records.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

This proposal is being co-sponsored by the ICC Code Technology Committee. The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The 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/CTC/Pages/default.aspx. Since its inception in April/2005, the CTC has held twenty five meetings - all open to the public.

F112-13
Final Action: AS AM AMPC____ D

F218-13
1103.4.1

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care (john.williams@doh.wa.gov)

Revise as follows:

IFC 1103.4.1 Group I occupancies. In Group I occupancies, interior vertical openings connecting two or more stories shall be protected with 1-hour fire-resistance-rated construction.

Exceptions:

1. In Group I-2 Condition 2 equipped throughout with an automatic sprinkler system, vertical opening connecting two or more stories need not be protected with 1-hour fire-resistance-rated construction where both of the following conditions are met:
   1.1. The atrium volume is accounted for in the design of a smoke control system in accordance with Section 909.
   1.2 The floor levels within the vertical opening shall contain only low or ordinary fire hazard uses.
2. In Group I-2 Condition 2, where an automatic sprlnkler system is installed in accordance with Section 404.6 of the *International Building Code,* glass walls shall be considered to be equivalent to 1-hour fire-resistance-rated construction for purposes of this section. Where glass doors are provided in the glass wall, they shall be either self-closing or automatic-closing.
3. In Group I-2 Condition 2, 1-hour fire-resistance-rated construction is not required where a glass-block wall assembly complying with Section 2110 of the *International Building Code* and having a ¾-hour fire protection rating is provided.

Reason: The intent of this code change is to make the IFC consistent with federal standards that are in place for the maintenance of Group I-2 Condition 2 (hospitals) and to clarify the allowable use and construction of atria in hospitals. This adds language to clarify the fire hazard class allowed in the existing atrium (no higher than ordinary), as opposed to only low hazard class in new. A smoke control system is also acknowledged as a factor when it comes to separation of the atrium, and clarifies that the smoke control system's engineering analysis must account for any spaces open to it.

Glass walls points back to the language in IBC Section 404.6 in an attempt to set that as a minimum, retroactive standard. It is far simpler to address a potential deficiency with addition of a smoke control system or properly installed sprinklers at the glass, rather than reconstructing the walls themselves.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has held 5 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx

Cost impact: This proposal would make the IFC consistent with federal standards that are in place for the maintenance of hospitals, and therefore would not represent an increase in cost.

907.2.6-F-WILLIAMS-ADHOC

Committee Action Hearing Results

Committee Action: **Disapproved**

Committee Reason: The disapproval was based on the committee's concern that the exceptions in the proposal do not exactly mirror Section 404.6 of the IBC which it felt should be the minimum standard. The automatic sprinkler requirements are also not coordinated with regard to complete protection of the building or only protection in the Group I-2 fire area.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment 1:

John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee, requests Approval as Modified by this Public Comment.

Replace the proposal as follows:

IFC 1103.4.1 Group I occupancies. In Group I occupancies, interior vertical openings connecting two or more stories shall be protected with 1-hour fire-resistance-rated construction.

Exceptions:

1. In Group I-2, unenclosed vertical openings not exceeding two connected stories and not concealed within the building construction shall be permitted as follows:
   - 1.1 The unenclosed vertical openings shall be separated from other unenclosed vertical openings serving other floors by a smoke barrier.
   - 1.2 The unenclosed vertical openings shall be separated from corridors by smoke partitions.
   - 1.3 The unenclosed vertical openings shall be separated from other fire or smoke compartments on the same floors by a smoke barrier.
   - 1.4 On other than the lowest level, the unenclosed vertical openings shall not serve as a required means of egress.
2. In Group I-2, atriums connecting three or more stories shall not require a 1-hour fire resistance rated construction when the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3, and all of the following conditions are met:
   - 2.1. For other than existing approved atriums with a smoke control system, where the atrium was constructed and is maintained in accordance with the code in effect at the time the atrium was created, the atrium shall have a smoke control system that is in compliance with Section 909; and,
   - 2.2. Glass walls forming a smoke partition or a glass-block wall assembly shall be permitted when in compliance with 2.2.1 or 2.2.2:
     - 2.2.1. Glass walls forming a smoke partition shall be permitted where all of the following conditions are met:
       1. Automatic Sprinklers are provided along both sides of the separation wall and doors, or on the room side only if there is not a walkway or occupied space on the atrium side.
       2. The sprinklers shall not be more than 12 inches away from the face of the glass and at intervals along the glass of not greater than 72 inches.
       3. Windows in the glass wall shall be non-operating type.
       4. The glass wall and windows shall be installed in a gasket frame in a manner that the framing system deflects without breaking (loading) the glass before the sprinkler system operates.
       5. The sprinkler system shall be designed so that the entire surface of the glass is wet upon activation of the sprinkler system without obstruction.
     - 2.2.2. A fire barrier is not required where a glass-block wall assembly complying with Section 2110 of the International Building Code and having a 3/4-hour fire protection rating is provided.
   - 2.3. Where doors are provided in the glass wall, they shall be either self-closing or automatic-closing and shall be constructed to resist the passage of smoke.

Commenter's Reason: Based on the input from the committee and interested parties, the AHC and CTC present the revised proposal above. The intent of this change is to appropriately address floor openings in existing construction. Today a conflict exists in the code, the building code would allow you to construction a floor opening without a 1 hour fire barrier in certain specific cases. The fire code would then tell you that approval is void and unilaterally require a 1 hour rating around all openings. This also impacts all historical non-rated floor openings that have been reviewed, approved and maintained. Practically we believe that this is not being enforced today and may be a reason why many jurisdictions do not adopt this chapter of the IFC. To set an appropriate retroactive standard, we believe the code should consider the historical context of the model codes. Unrated vertical openings have been allowed in hospitals and nursing homes previously. Atriums have been installed with various types of smoke venting and removal systems over the past few decades. The AHC has attempted to determine the general requirements that have been broadly used through these versions of codes. If we set the requirements based on the current version of the IBC, the facilities will constantly be tearing out existing, compliant construction to upgrade to new requirements. The federal regulations governing hospitals and nursing homes have used a retroactive standard similar to the one above for the past 10 years. Through our experiences with facilities during that period of time, we believe that the requirements listed above are reasonably consistent with that action.

In regards to the sprinkler question, currently all Group I-2 fire areas are required to have sprinklers retroactively per Chapter 11 of this Code. In Dallas, a code change was accepted to provide sprinkler protection throughout the building by a date certain

provided by the adopting jurisdiction. The code change here was modified to state that the atrium option can be used if the “building is equipped throughout”.

Public Comment 2:

Robert J Davidson, Davidson Code Concepts, LLC, representing self, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

IFC 1103.4.1 Group I occupancies. In Group I and I-3 occupancies, interior vertical openings connecting two or more stories shall be protected with 1-hour fire-resistance-rated construction.

Exception ~~Exceptions:~~ Atriums constructed in accordance with the code in effect at the time the atrium was created and which include automatic fire suppression, fire detection, alarm notification, and smoke control system protection. The atrium shall have been maintained in accordance with manufacturer’s instructions and in accordance with the fire code in effect during occupancy of the atrium.

~~1. In Group I-2 Condition 2 equipped throughout with an automatic sprinkler system, vertical opening connecting two or more stories need not be protected with 1-hour fire-resistance-rated construction where both of the following conditions are met:~~
~~1.1. The atrium volume is accounted for in the design of a smoke control system in accordance with Section 909.~~
~~1.2. The floor levels within the vertical opening shall contain only low or ordinary fire hazard uses.~~
~~2. In Group I-2 Condition 2, where an automatic sprinkler system is installed in accordance with Section 404.6 of the *International Building Code*, glass walls shall be considered to be equivalent to 1-hour fire-resistance-rated construction for purposes of this section. Where glass doors are provided in the glass wall, they shall be either self-closing or automatic-closing.~~
~~3. In Group I-2 Condition 2, 1-hour fire-resistance-rated construction is not required where a glass-block wall assembly complying with Section 2110 of the *International Building Code* and having a ¾-hour fire protection rating is provided.~~

Commenter’s Reason: Though testimony on the floor and the committee reason statement point to the acceptable level of protection being the current requirements for atriums in Section 404.0 of the International Building Code; the intent of Chapter 11 of the fire code is to be applied to buildings not in compliance with the International Building Code.

Since the target is an existing atrium, the atrium may have been designed and constructed to earlier editions of the International Building Code or in accordance with one of the legacy codes. The suggested replacement wording will provide for recognition of an atrium regardless of which code it was constructed under as long as it has been properly maintained during the life of the atrium.

When atriums were introduced as a design feature in the legacy codes, the fire protection required included automatic fire suppression systems, fire detection systems, alarm notification appliances, smoke control systems and separation from connecting floors that were not provided for in the design of the smoke control system. Those protection features are included in this proposal to make it clear they must not only be present, but must have been properly maintained as well. The intent is also to make it clear that you cannot take what was once considered an "open well" under legacy codes and rename it an atrium for application of this exception. To apply this exception the atrium would have had to have been designed and constructed pursuant to all of the requirements for an atrium after the design feature was added to the legacy codes and contain all of the listed fire protection features.

Section 1103.4.1 has been modified by the addition of the I-3 group designation to be consistent with F217 approved by the committee.

Public Comment 3:

Vickie Lovell, Intercode, Inc., representing Fire Safe North America, formerly known as Alliance For Fire and Smoke Containment and Control, requests Disapproval.

Commenter’s Reason: In Dallas, there was much testimony from the floor pointing out the serious flaws with this proposal. The proposal seeks to grandfather existing atrium spaces, but it does it so by cherry-picking some of the atrium requirements that have historically applied as a whole package. This proposal allows compliance with only a small portion of the requirements found with current and legacy codes.

Testimony on the floor and the comments from the International Fire Code Committee members regarding Exception #1 coalesced around a simply reference to Section 404.0 Atriums in the International Building Code as the appropriate level of protection. However, from a practical standpoint, even that solution would not work for an exception to the fire code requirement for a 1 hour fire resistance rated construction. A review of the legacy codes versus the current IBC will document that the requirements for the installation of smoke control systems in older buildings have vast differences from systems designed to the current IBC 909 requirements. Existing smoke control systems designed and installed in accordance with some legacy codes would require completely new designs and major upgrades that will present practical difficulties, therefore making exception #1 impractical and effectively useless as a code requirement. Some of the same practical difficulties would also be presented for those older atrium spaces without smoke control systems that this proposed exception would apply to.

If the building and smoke control system are not designed to work together as a building system, there will be practical difficulty installing required exhaust inlets and ductwork, make-up air inlets and openings, locating exhaust fans, load carrying capability of the structure, capability of the building power supply including the available emergency power to handle the load of the newly installed or increased number of fans in an older building. Specialists in the smoke control field know that if the design is not correct or the design is not properly followed in a newly constructed building, problems with the smoke control system discovered near the end of the job are very difficult to correct due to practical issues.

Exception #2 is a woefully inadequate description of the correct use of sprinklers in combination with a glass wall as an alternative to a 1-hour fire rated assembly. ICC ES recently reissued revised acceptance criteria (AC385 - Acceptance Criteria for Special-purpose Sprinkler Heads Used with Fixed Glazed Assemblies to Provide a Fire-resistance-rated Wall Assembly) for the use of sprinklers and glazed assemblies. The acceptance criteria contain a detailed description of how the glass assembly is to be constructed and how the sprinklers are to be placed. It also clarifies some of the limitations as to the appropriate use of this type of assembly as an alternative (not an equivalent) to a fire resistance rated assembly. This exception applies everywhere and anywhere in I-2 Condition 2 facilities, which is not consistent with AC 385.

As an interested party, I monitored the discussion of the ICC Ad Hoc on Health Care on the public comment, and was not satisfied that the public comment would adequately resolve these concerns. The proposed exceptions in this proposal, including the further modifications by the proponent, are completely inadequate. A reference to Section 404.0 Atriums as a solution will introduce complexity and difficulties that cannot be overcome in most if not all cases. The committee decision to disapprove should be upheld.

F218-13

Final Action: AS AM AMPC____ D

F54-13

604.1.2 (New) (IBC [F] 2702.1.2), Chapter 80

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care (john.williams@doh.wa.gov)

Add new text as follows:

604.1.1(IBC [F] 2702.1.1) Stationary generators. Stationary emergency and standby power generators required by this code shall be *listed* in accordance with UL 2200

604.1.2 (IBC [F] 2702.1.2) Group I-2 Occupancies. In Group I-2 occupancies, where an essential electrical system is located in flood hazard areas established in Section 1612.3 of the *International Building Code*, the system shall be located and installed in accordance with ASCE 24.

Add new standard to Chapter 80 as follows:

ASCE 24-05	Flood Resistant Design and Construction	604.1.2

Reason: This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has held 5 open meetings and over 80 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

There is no way to get to the requirements or limitations regarding generator placement for healthcare facilities that are in the standard if the code text for the specific code section does not take you there.

The Adhoc committee on healthcare identified this coordination oversight as it has been identified in healthcare facilities and that generators are being installed in areas subject to flooding, and although they were designed to meet the structural loads for the flooding, they would operationally fail.

There is no cost impact for these requirements because the compliance with ASCE 24 is required for these facilities; specific reference to ASCE for coordination of requirements applicable to healthcare facilities that require emergency or standby power systems per federal, state and licensing agency requirements and references. Also, both this section and this proposal are not intended to be retroactive in application. The AHC has a separate code change that would require facilities to do a risk assessment of existing installations.

It is an installation construction requirement that is not specifically addressed in the code; emergency and standby power by generators is necessary for life safety and preservation for healthcare and for other occupancies and uses as specified in 2702.

Note that G80-12 added requirements for essential electrical systems in I-2 occupancies. This is simply a continuation of that concept. This proposal is furthering the reliability of the essential electrical systems when they will be needed most by specifically referencing to ASCE 24. The additional language referencing Section 1612.3 is similar to that used in Section 3001.2 for elevators.

Cost impact: The code change proposal should not increase the cost of construction because compliance is already required by facility licensure requirements.

Analysis: The standard proposed for inclusion in the code, ASCE 24-05, is currently referenced in the IBC. An update in the year edition of that standard will be accomplished by an administrative standards update code change to be heard by the ADM Code Development Committee.

604.1.2 (NEW)-F-WILLIAMS-ADHOC

Committee Action Hearing Results

For staff analysis of the content of ASCE/SEI 24-05 relative to CP#28, Section 3.6, please visit: http://www.iccsafe.org/cs/codes/Documents/2012-2014Cycle/Proposed-B/ProposedStandards.pdf

Committee Action: **Approved as Modified**

Modify the proposal as follows:

604.1.2 (IBC [F] 2702.1.2) Group I-2 Occupancies. In Group I-2 occupancies, in new construction or where the building is substantially damaged, where an essential electrical system is located in flood hazard areas established in Section 1612.3 of the *International Building Code*, the system shall be located and installed in accordance with ASCE 24.

(Portions of proposal not shown remain unchanged.)

Committee Reason: The committee approved the code change based on the proponent's reason statement and agreed that the proposal provides for important protection for critical systems. The modification clarifies that the applicability of the section would be to existing buildings only when they sustain substantial damage such as from the recent east coast hurricane.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care, requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

604.1.2 (IBC [F] 2702.1.2) Group I-2 Occupancies. In Group I-2 occupancies~~, in new construction or where the building is substantially damaged~~, where an essential electrical system is located in flood hazard areas established in Section 1612.3 of the *International Building Code*, and where new or replacement essential electrical system generators are installed, the system shall be located and installed in accordance with ASCE 24.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: The Adhoc committee recommends that generators be protected from floods sooner than when a building is substantially damaged. However, the Adhoc committee did not feel that generators should have to be protected if a flood plane was revised and no alterations were planned at that time. This modification will work with the hospital hazard vulnerability analysis and risk assessments. We believe that this proposal would require modifications when a substantial change is contemplated the trigger being the generator.

F54-13

Final Action: AS AM AMPC____ D

F295-13
5003.9, 5003.9.11 (New)

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care (john.williams@doh.wa.gov)

Revise as follows:

5003.9 General safety precautions. General precautions for the safe storage, handling or care of hazardous materials shall be in accordance with Sections 5003.9.1 through ~~5003.9.10~~ 5003.9.11.

5003.9.11 Emergency showers and eyewash stations. In Group I-2 Condition 2, where the eyes or body of any person are at risk for exposure to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use. The emergency showers and eyewash stations shall be installed in accordance with the *International Plumbing Code*.

Reason: This proposal addresses KTag K134. The IPC already provides the installation requirements but the requirements are not called up in the IFC. This proposal uses verbiage from OSHA with some minor revisions to remove permissive language. The focus is only on corrosive materials which are defined in the IFC. The scope of this change is limited to Group I-2 condition 2 due to the scoping limitations of the Ad Hoc Healthcare Committee.

Source of verbiage (no copyright issues):

OSHA
1910.151(c)
Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.

For Reference:

International Plumbing Code 2012

SECTION 411
EMERGENCY SHOWERS AND EYEWASH STATIONS

411.1 Approval. Emergency showers and eyewash stations shall conform to ISEA Z358.1.

411.2 Waste connection. Waste connections shall not be required for emergency showers and eyewash stations.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April, 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx

Cost impact:

5003.9-F-WILLIAMS-ADHOC

Committee Action Hearing Results

Committee Action: **Disapproved**

Committee Reason: The disapproval was based on the committee's judgment that the language of the proposal is vague and ambiguous and could lead to inconsistent enforcement. The committee also felt that including OSHA-type worker safety requirements in the code is inconsistent with the scope of the code and could lead to conflicts with OSHA regulations.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

5003.9 General safety precautions. General precautions for the safe storage, handling or care of hazardous materials shall be in accordance with Sections 5003.9.1 through 5003.9.11.

5003.9.11 Emergency showers and eyewash stations. In Group I-2 Condition 2, where the eyes or body of ~~any~~ a person ~~are~~ is at risk for exposure to ~~injurious~~ corrosive materials, ~~suitable facilities for quick drenching or flushing of the eyes and body~~ emergency showers or eyewash stations shall be provided within the work area for immediate emergency use. The emergency showers and eyewash stations shall be installed in accordance with the *International Plumbing Code*.

Commenter's Reason: How to install these systems is already in the IPC. The IFC does address hazards, so this trigger should be in the IFC. The modification is striking language that could be considered subjective.

F295-13
Final Action: AS AM AMPC____ D

F59-13, Part I

604 (IBC [F] 2702) among others; 907.5.2.2.5 (IBC [F] 907.5.2.2.5); IMC [F] 513.11, [F]513.11.1 (New); IWUIC 404.10.3; IEBC 805.4.5

Proposed Change as Submitted

Proponent: Adolf Zubia. Chairman IAFC Fire and Life Safety Section, representing ICC Fire Code Action Committee (azubiamia@yahoo.com)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IFC COMMITTEE AND PART II WILL BE HEARD BY THE IEBC COMMITTEE AS TWO SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDER FOR THOSE COMMITTEES.

PART I – INTERNATIONAL FIRE CODE

EMERGENCY VOICE/ALARM COMMUNICATION SYSTEMS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 402.7.3 Emergency ~~Standby~~ power. *Covered mall buildings* greater than 50,000 square feet (4645 m2) in area and *open mall buildings* greater than 50,000 square feet (4645 m2) within the established perimeter line shall be provided with ~~standby~~ emergency power ~~systems~~ that is ~~are~~ capable of operating the *emergency voice/alarm communication system* in accordance with Section 2702.

[F] 907.5.2.2.5 Emergency power. Emergency voice/alarm communications systems shall be provided with ~~an *approved*~~ emergency power ~~source~~ in accordance with Section 2702. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

[F] ~~2702.2.1 Group A occupancies.~~ ~~Emergency power shall be provided for emergency voice/alarm communication systems in Group A occupancies in accordance with Section 907.5.2.2.4.~~

[F] ~~2702.2.14 Covered and open mall buildings.~~ ~~Standby power shall be provided for voice/alarm communication systems in *covered and open mall buildings* in accordance with Section 402.7.3.~~

[F] 2702.2.1 Emergency voice/alarm communication systems. Emergency power shall be provided for emergency voice/alarm communication systems as required in Section 907.5.2.2.5. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

Revise the IFC as follows:

~~604.2.1 Group A occupancies.~~ ~~Emergency power shall be provided for emergency voice/alarm communication systems in Group A occupancies in accordance with Section 907.2.1.1.~~

~~604.2.13 Covered and open mall buildings.~~ ~~Covered mall buildings exceeding 50,000 square feet (4645 m2) and open mall buildings exceeding 50,000 square feet (4645 m2) within the established perimeter line shall be provided with standby power systems that are capable of operating the emergency voice/alarm communication system.~~

604.2.1 Emergency voice/alarm communication systems. Emergency power shall be provided for emergency voice/alarm communication systems as required in Section 907.5.2.2.5. 5. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

907.5.2.2.5 Emergency power. Emergency voice/alarm communications systems shall be provided with ~~an *approved*~~ emergency power ~~source~~ in accordance with Section 604. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

SMOKE CONTROL SYSTEMS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 404.7 Standby power. Equipment required to provide smoke control shall be provided with standby power in accordance with ~~connected to a standby power system in accordance with~~ Section 909.11.

[F] 909.11 Standby power ~~Power systems.~~ ~~The s~~Smoke control systems shall be provided with standby power in accordance with Section 2702. ~~shall be supplied with two sources of power. Primary power shall be from the normal building power systems. Secondary power shall be from an approved standby source complying with Chapter 27 of this code.~~

[F] 909.11.1 Equipment room. The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gears 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 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. ~~The transfer to full standby power shall be automatic and within 60 seconds of failure of the primary power.~~

909.20.6.2 Standby power. Mechanical vestibule and *stair* shaft ventilation systems and automatic fire detection systems shall be provided with ~~powered by an *approved*~~ standby power in accordance with Section 2702. ~~system conforming to Section 403.4.8 and Chapter 27.~~

909.21.5 Standby power. The pressurization system shall be provided with standby power in accordance with Section 2702. ~~from the same source as other required emergency systems for the building.~~

[F] 2702.2.2 Smoke control systems. Standby power shall be provided for smoke control systems as required in ~~in accordance with~~ Sections 404.7, 909.11, 909.20.6.2, and 909.21.5.

[F] ~~2702.2.20 Smokeproof enclosures.~~ ~~Standby power shall be provided for smokeproof enclosures as required by~~ in ~~Section 909.20.6.2.~~

Revise the IFC as follows:

604.2.2 Smoke control systems. Standby power shall be provided for smoke control systems as required in ~~in accordance with~~ Section 909.11.

909.11 Standby power ~~Power systems.~~ ~~The~~ ~~s~~Smoke control systems shall be provided with standby power in accordance with Section 2702. ~~shall be supplied with two sources of power. Primary power shall be from the normal building power systems. Secondary power shall be from an approved standby source complying with Chapter 27 of this code.~~

909.11.1 Equipment room. The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gears 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 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. ~~The transfer to full standby power shall be automatic and within 60 seconds of failure of the primary power.~~

Revise the IMC as follows:

[F] 513.11 Power systems. ~~The s~~Smoke control system shall be supplied with standby power in accordance with Section 2702 of the International Building Code. ~~two sources of power. Primary power shall be the normal building power systems. Secondary power shall be from an *approved* standby source complying with Chapter 27 of the *International Building Code*.~~

[F] 513.11.1 Equipment room. 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-resistance rated fire barriers constructed in accordance with Section 707 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 NFPA 70.~~

EXIT SIGNS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 2702.2.3 Exit signs. Emergency power shall be provided for *exit* signs as required in ~~in accordance with~~ Section 1011.6.3. The system shall be capable of powering the required load for a duration of not less than 90 minutes.

Revise the IFC as follows:

604.2.3 Exit signs. Emergency power shall be provided for *exit* signs as required in ~~in accordance with~~ Section 1011.6.3. The system shall be capable of powering the required load for a duration of not less than 90 minutes.

MEANS OF EGRESS ILLUMINATION

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 2702.2.4 Means of egress illumination. Emergency power shall be provided for *means of egress* illumination as required in ~~in accordance with~~ Section 1006.3. The system shall be capable of powering the required load for a duration of not less than 90 minutes.

Revise the IFC as follows:

604.2.4 Means of egress illumination. Emergency power shall be provided for *means of egress* illumination in accordance with Sections 1006.3 and 1104.5.1.

1104.5.1 Emergency power duration and installation. Emergency power for means of egress illumination shall be provided in accordance with Section 604. In other than Group I-2, ~~the~~ emergency power ~~system shall provide power~~ shall be provided 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~~ shall be provided 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.~~

ELEVATORS AND PLATFORM LIFTS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 2702.2.5 Elevators and platform lifts. Standby power shall be provided for elevators and platform lifts as required in Sections 1007.4, 1007.5, 3003.1, 3007.9 and 3008.9.

[F] ~~2702.2.5 Accessible means of egress elevators.~~ ~~Standby power shall be provided for elevators that are part of an *accessible means of egress* in accordance with Section 1007.4.~~

[F] ~~2702.2.6 Accessible means of egress platform lifts.~~ ~~Standby power in accordance with this section or ASME A 18.1 shall be provided for platform lifts that are part of an *accessible means of egress* in accordance with Section 1007.5.~~

[F] ~~2702.2.19 Elevators.~~ ~~Standby power for elevators shall be provided as set forth in Sections 3003.1, 3007.9 and 3008.9.~~

Revise the IFC as follows:

~~604.2.5 Accessible means of egress elevators.~~ ~~Standby power shall be provided for elevators that are part of an accessible *means of egress* in accordance with Section 1007.4.~~

~~604.2.6 Accessible means of egress platform lifts.~~ ~~Standby power in accordance with this section or ASME A18.1 shall be provided for platform lifts that are part of an accessible *means of egress* in accordance with Section 1007.5.~~

604.2.18 Elevators and platform lifts. Standby power shall be provided for elevators and platform lifts as required in Sections 607.2, 1007.4, and 1007.5.

Relocate IFC sections and renumber the remaining sections.

607.2 Standby power. ~~604.2.18 Elevators.~~ In buildings and structures where standby power is required or furnished to operate an elevator, standby power shall be provided in accordance with Section 604. ~~the o~~Operation of the system shall be in accordance with Sections ~~604.2.18.1 through 604.2.18.4~~ 607.2.1 through 607.2.4.

607.2.1 ~~604.2.18.1~~ Manual transfer. (No change to current text.)

607.2.2 ~~604.2.18.2~~ One elevator. (No change to current text.)

607.2.3 ~~604.2.18.3~~ Two or more elevators. (No change to current text.)

607.2.4 ~~604.2.18.4~~ Machine room ventilation. (No change to current text.)

HORIZONTAL SLIDING DOORS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 2702.2.7 Horizontal sliding doors. Standby power shall be provided for horizontal sliding doors as required in ~~in accordance with~~ Section 1008.1.4.3. The standby power supply shall have a capacity to operate a minimum of 50 closing cycles of the door.

Revise the IFC as follows:

604.2.7 Horizontal sliding doors. Standby power shall be provided for horizontal sliding doors as required in ~~in accordance with~~ Section 1008.1.4.3. The standby power supply shall have a capacity to operate a minimum of 50 closing cycles of the door.

MEMBRANE STRUCTURES

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 2702.2.9 Membrane structures. Standby power shall be provided for auxiliary inflation systems in permanent membrane structures as required in ~~in accordance with~~ Section 3102.8.2. Standby power shall be provided for a duration of not less than four hours. Auxiliary inflation systems in temporary air-supported and air-inflated membrane structures shall be provided in accordance with Section 3103.10.4 of ~~Emergency power shall be provided for *exit* signs in temporary tents and membrane structures in accordance with~~ the *International Fire Code*.

Revise the IFC as follows:

604.2.9 Membrane structures. ~~Emergency power shall be provided for *exit* signs in temporary tents and membrane structures in accordance with Section 3103.12.6.1.~~
Standby power shall be provided for auxiliary inflation systems in permanent membrane structures in accordance with Section 2702 of the *International Building Code*. Auxiliary inflation systems shall be provided in temporary air-supported and air-inflated membrane structures in accordance with Section 3103.10.4.

3103.10.4 Auxiliary inflation systems ~~power~~. Places of public assembly for more than 200 persons shall be furnished with an auxiliary inflation system capable of powering a blower with the capacity to maintain full inflation pressure with normal leakage in accordance with Section 3103.10.3 for a minimum duration of four hours. The auxiliary inflation system can be either a fully automatic auxiliary engine-generator set ~~capable of powering one blower continuously for 4 hours,~~ or a supplementary blower powered by an internal combustion engine which shall be automatic in operation. The system shall be capable of automatically operating the required blowers at full power within 60 seconds of a commercial power failure.

SEMICONDUCTOR FABRICATION FACILITIES

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 415.10.10 Emergency power system. An emergency power system shall be provided in Group H-5 occupancies in accordance with Section 2702. ~~where required in Section 415.10.10.1.~~ The emergency power system shall ~~be designed to~~ supply power automatically to ~~required~~ the electrical systems specified in Section 415.10.10.1 when the normal electrical supply system is interrupted.

[F] 415.10.10.1 Required electrical systems. Emergency power shall be provided for electrically operated equipment and connected control circuits for the following systems:

1. through 6. (No change to current text.)
7. Manual and automatic *fire alarm* systems.
8. through 11. (No change to current text.)

[F] 2702.2.8 Semiconductor fabrication facilities. Emergency power shall be provided for semiconductor fabrication facilities as required in ~~in accordance with~~ Section 415.10.10.

Revise the IFC as follows:

604.2.8 Semiconductor fabrication facilities. Emergency power shall be provided for semiconductor fabrication facilities as required in ~~in accordance with~~ Section 2703.15.

2703.15 Emergency power system. An emergency power system shall be provided in Group H-5 occupancies in accordance with ~~where required by~~ Section 604. The emergency power system shall ~~be designed to~~ supply power automatically to ~~required~~ the electrical systems specified in Section 2703.15.1 when the normal supply system is interrupted.

HAZARDOUS MATERIALS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 414.5.3 Emergency or standby power. Where mechanical *ventilation*, treatment systems, temperature control, alarm, detection or other electrically operated systems are required by the *International Fire Code* or this code, such systems shall be provided with ~~an~~ emergency or standby power ~~system~~ in accordance with Section 2702 ~~Chapter 27~~.**Exceptions:** ~~1.~~

[F] 414.5.3.1 Exempt applications. Emergency or standby power are not required for ~~the following storage areas: 1.1. M~~ mechanical ventilation systems provided *for:*

1. S~~s~~torage of Class IB and Class IC flammable and combustible liquids in closed containers not exceeding 6.5 gallons (25 L) capacity.
   ~~1.2~~1.1. Storage ~~areas for~~ of Class 1 and 2 oxidizers.
   ~~1.3~~1.2. Storage ~~areas for~~ of Class II, III, IV and V organic peroxides.
   ~~1.4~~1.3. Storage~~, use and handling areas for~~ of asphyxiant, irritant and radioactive gases.
   ~~1.5. For storage, use and handling areas for highly toxic or toxic materials, see Sections 6004.2.2.8 and 6004.3.4.2 of the *International Fire Code*.~~

[F] 414.5.3.2 Fail-safe engineered systems. 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] 421.8 Standby power. Mechanical *ventilation* and gas detection systems shall be ~~connected to a~~ provided with standby power ~~system~~ in accordance with Section 2702. ~~Chapter 27.~~

[F] 2702.2.10 Hazardous materials. Emergency or standby power shall be provided in occupancies with hazardous materials as required in ~~in accordance with~~ Sections 414.5.3 and 421.8 and the *International Fire Code*.

Revise the IFC as follows:

604.2.10 Hazardous materials. Emergency ~~or standby~~ power shall be provided in occupancies with hazardous materials as required in the following ~~in accordance with~~ sections ~~5004.7 and 5005.1.5.~~:

Hazardous materials – 5001.3.3.10
Highly toxic and toxic gases - 6004.2.2.8, 6004.3.4.2
Organic peroxides - 6204.1.11

5004.7 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~~:

5004.7.1 Exempt applications. Standby or emergency power is not required for ~~M~~mechanical ventilation systems provided for:

1. Storage of Class IB and Class IC flammable and *combustible liquids* in closed containers not exceeding 61/2 gallons (25 L) capacity.
2. Storage ~~areas for~~ of Class 1 and 2 oxidizers.
3. Storage ~~areas for~~ of Class II, III, IV and V organic peroxides.
4. Storage ~~areas for~~ of asphyxiant, irritant and radioactive gases.
5. ~~For storage areas for highly toxic or toxic materials, see Sections 6004.2.2.8 and 6004.3.4.2.~~

5004.7.2 Fail-safe engineered systems. ~~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.

5005.1.5 Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, manual alarm, detection or other electrically operated systems are required in this code, such systems shall be provided with ~~an~~ emergency or standby power ~~system~~ in accordance with ~~NFPA 70 and~~ Section 604.

~~Exceptions:~~ ~~1.~~

5005.1.5.1 Exempt applications. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an *approved* fail-safe engineered system is installed.

~~2. Systems for highly toxic or toxic gases shall be provided with emergency power in accordance with Sections 6004.2.2.8 and 6004.3.4.2.~~

6004.2.2.8 Emergency power. Emergency power shall be provided for the following systems in accordance with the Section 604~~. and NFPA 70 shall be provided in lieu of standby power where any of the following systems are required~~:

1. through 7. *(No change to current text.)*

6004.2.2.8.1 Fail-safe engineered systems. ~~Exception:~~ Emergency power ~~is~~ shall not be required for mechanical exhaust ventilation, treatment systems and temperature control systems where *approved* fail-safe engineered systems are installed.

6204.1.11 Standby power. Standby power ~~in accordance with Section 604 shall be provided for storage areas of Class I and unclassified detonable organic peroxide.~~ shall be provided in accordance with Section 604 for the following systems used to protect Class I and unclassified detonable organic peroxide:

1. through 7. *(No change to current text.)*

6204.1.11.1 Fail-safe engineered systems. ~~Exception:~~ Standby power shall not be required for mechanical exhaust ventilation, treatment systems and temperature control systems where *approved* fail-safe engineered systems are installed.

HIGH RISE BUILDINGS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 403.4.8 Standby and emergency power. A standby power system complying with Section 2702 ~~Chapter 27~~ and Section 3003 shall be provided for the standby power loads specified in 403.4.8.2. An emergency power system complying with Section 2702 shall be provided for the emergency power loads specified in Section 403.4.8.3.~~Where elevators are provided in a *high-rise building* for *accessible means of egress*, fire service access or occupant self-evacuation, the standby power system shall also comply with Sections 1007.4, 3007 or 3008, as applicable.~~

[F] 403.4.8.1 Equipment room. ~~Special requirements for standby power systems.~~ If the standby or emergency power system includes ~~is~~ a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. System supervision with manual start and transfer features shall be provided at the *fire command center*.

[F] 403.4.8.2 Standby power loads. The following are classified as standby power loads:

1. Power and lighting for the *fire command center* required by Section 403.4.6;
2. *Ventilation* and automatic fire detection equipment for *smokeproof enclosures*; and
3. Elevators.
4. Where elevators are provided in a *high-rise building* for *accessible means of egress*, fire service access or occupant self-evacuation, the standby power system shall also comply with Sections 1007.4, 3007 or 3008, as applicable.

[F] ~~403.4.9 Emergency power systems.~~ ~~An emergency power system complying with Chapter 27 shall be provided for emergency power loads specified in Section 403.4.9.1.~~

[F] ~~403.4.9.1~~ 403.4.8.3 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;
5. *Fire alarm* systems; and
6. Electrically powered fire pumps.

[F] 2702.2.15 High-rise buildings. Emergency and standby power systems shall be provided in high-rise buildings as required in ~~in accordance with~~ Section~~s~~ 403.4.8~~ and 403.4.9~~.

Revise the IFC as follows:

604.2.14 High-rise buildings. Standby power and emergency power ~~, light and emergency systems in high-rise buildings~~ shall be provided as required in Section 403 of the International Building Code, and shall be in accordance with Section 604. ~~comply with the requirements of Sections 604.2.14.1 through 604.2.14.3.~~

~~**604.2.14.1 Standby power.** A standby power system shall be provided. Where the standby system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or *horizontal assemblies* constructed in accordance with Section 711 of the *International Building Code*, or both. System supervision with manual start and transfer features shall be provided at the *fire command center*.~~

~~**604.2.14.1.1 Fuel supply.** An on-premises fuel supply, sufficient for not less than 2-hour full-demand operation of the system, shall be provided.~~
~~**Exception:** When *approved*, the system shall be allowed to be supplied by natural gas pipelines.~~

~~**604.2.14.1.2 Capacity.** The standby system shall have a capacity and rating that supplies all equipment required to be operational at the same time. The generating capacity is not required to be sized to operate all of the connected electrical equipment simultaneously.~~

~~**604.2.14.1.3 Connected facilities.** Power and lighting facilities for the *fire command center* and elevators specified in Sections 403.4.8.2 and 403.6 of the *International Building Code*, as applicable, 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.~~

~~**604.2.14.2 Separate circuits and luminaires.** Separate lighting circuits and luminaires shall be required to provide sufficient light with an intensity of not less than 1 footcandle (11 lux) measured at floor level in all *means of egress corridors*, *stairways*, smokeproof enclosures, elevator cars and lobbies, and other areas that are clearly a part of the escape route.~~

~~**604.2.14.2.1 Other circuits.** Circuits supplying lighting for the *fire command center* and mechanical equipment rooms shall be transferable to the standby source.~~

~~**604.2.14.3 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.~~

UNDERGROUND BUILDINGS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 405.8 Standby <u>and emergency</u> power. A standby power system complying with <u>Section 2702</u> ~~Chapter 27~~ shall be provided <u>for the</u> standby power loads specified in Section 405.8.1. <u>An emergency power system complying with Section 2702 shall be provided for the emergency power loads specified in Section 405.8.2.</u>

[F] 405.8.1 Standby power loads. The following loads are classified as standby power loads:

1. Smoke control system.
2. *Ventilation* and automatic fire detection equipment for *smokeproof enclosures.*
3. Fire pumps.
4. ~~Standby power shall be provided for e~~<u>E</u>levators<u>, as required in</u> ~~in accordance with~~ Section 3003.

[F] ~~405.8.2 Pick-up time.~~ ~~The standby power system shall pick up its connected loads within 60 seconds of failure of the normal power supply.~~

[F] ~~405.9 Emergency power.~~ ~~An emergency power system complying with Chapter 27 shall be provided for emergency power loads specified in Section 405.9.1.~~

[F] ~~405.9.1~~ 405.8.2 Emergency power loads. The following loads are classified as emergency power loads:

1. through 5. *(No change to current text.)*

[F] 2702.2.16 Underground buildings. Emergency and standby power shall be provided in underground buildings as required in ~~in accordance with~~ Sections 405.~~8 and 405.9~~.

Revise the IFC as follows:

604.2.15 Underground buildings. Emergency and standby power ~~systems~~ shall be provided in underground buildings ~~covered~~ as required in ~~Chapter 4~~ Section 405 of the *International Building Code* ~~shall comply with Sections 604.2.15.1 and 604.2.15.2.~~ and shall be in accordance with Section 604.

~~**604.2.15.1 Standby power.** A standby power system complying with this section and NFPA 70 shall be provided for standby power loads as specified in Section 604.2.15.1.1.~~

~~**604.2.15.1.1 Standby power loads.** The following loads are classified as standby power loads:~~

~~1. Smoke control system.~~
~~2. Ventilation and automatic fire detection equipment for smokeproof enclosures.~~
~~3. Fire pumps.~~
~~4. Standby power shall be provided for elevators in accordance with Section 3003 of the *International Building Code*.~~

~~**604.2.15.1.2 Pickup time.** The standby power system shall pick up its connected loads within 60 seconds of failure of the normal power supply.~~

~~**604.2.15.2 Emergency power.** An emergency power system complying with this code and NFPA 70 shall be provided for emergency power loads as specified in Section 604.2.15.2.1.~~

~~**604.2.15.2.1 Emergency power loads.** The following loads are classified as emergency power loads:~~

~~1. Emergency voice/alarm communication systems.~~
~~2. Fire alarm systems.~~
~~3. Automatic fire detection systems.~~
~~4. Elevator car lighting.~~
~~5. *Means of egress* lighting and *exit* sign illumination as required by Chapter 10.~~

GROUP I-3 OCCUPANCY DOOR LOCKS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part. See Part XX for this subject in the IEBC.*

Revise the IBC as follows:

[F] 408.4.2 Power-operated doors and locks. Power-operated sliding doors or power-operated locks for swinging doors shall be operable by a manual release mechanism at the door. Emergency power shall be provided for the doors and locks in accordance with Section 2702. ~~and either emergency power or a remote mechanical operating release shall be provided.~~

Exceptions:

1. Emergency power is not required in facilities with 10 or fewer locks complying with the exception to Section 408.4.1.
2. Emergency power is not required when remote mechanical operating releases are provided.

[F] 2702.2.17 Group I-3 occupancies. Emergency power shall be provided for power operated doors and locks in Group I-3 occupancies as required in ~~in accordance with~~ Section 408.4.2.

Revise the IFC as follows:

604.2.16 Group I-3 occupancies. Power-operated sliding doors or power-operated locks for swinging doors shall be operable by a manual release mechanism at the door. Emergency power shall be provided for the doors and locks in accordance with Section 604. ~~and either emergency power or a remote mechanical operating release shall be provided.~~

Exceptions:

1. Emergency power is not required in facilities with 10 or fewer locks complying with the exception to Section 408.4.1.
2. Emergency power is not required when remote mechanical operating releases are provided.

AIRPORT TRAFFIC CONTROL TOWERS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

~~**[F] 2702.2.18 Airport traffic control towers.** Standby power shall be provided in airport traffic control towers in accordance with Section 412.3.4.~~

~~**[F] 412.3.4 Standby power.** A standby power system that conforms to Chapter 27 shall be provided in airport traffic control towers more than 65 feet (19 812 mm) in height. Power shall be provided to the following equipment:~~

~~1. Pressurization equipment, mechanical equipment and lighting.~~
~~2. Elevator operating equipment.~~
~~3. *Fire alarm* and smoke detection systems.~~

Revise the IFC as follows:

~~**604.2.17 Airport traffic control towers.** A standby power system shall be provided in airport traffic control towers more than 65 feet (19 812 mm) in height. Power shall be provided to the following equipment:~~

~~1. Pressurization equipment, mechanical equipment and lighting.~~
~~2. Elevator operating equipment.~~
~~3. Fire alarm and smoke detection systems.~~

SMOKE ALARMS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 907.2.11.4 Power source. In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system in accordance with Section 2702. 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 not required to be equipped with battery backup where they are connected to an emergency electrical system that complies with Section 2702.

Revise the IFC as follows:

907.2.11.4 Power source. In new construction, required smoke alarms shall receive their primary power from the building wiring where 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 in accordance with Section 604. 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 not required to be equipped with battery backup where they are connected to an emergency electrical system that complies with Section 604.

EMERGENCY ALARM SYSTEMS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Revise the IBC as follows:

[F] 414.7.4 Emergency alarm systems. *Emergency alarm systems* shall be provided with emergency power in accordance with Section 2702.

[F] 2702.2.21 Emergency alarm systems. Emergency power shall be provided for emergency alarm systems as required by Section 414.7.4.

Revise the IFC as follows:

604.2.19 Emergency alarm systems. Emergency power shall be provided for emergency alarm systems as required by Section 414 of the International Building Code.

EMERGENCY RESPONDER RADIO COVERAGE SYSTEMS

NOTE: *The normal convention for portraying code changes to duplicated texts is by showing the parallel section numbers (e.g., "**907.5.2 (IBC [F] 907.5.2)**" or "**1011.6.3 (IFC [B] 1011.6.3**"). In this code change, however, for improved clarity, duplicate texts are shown for each code in this part.*

Add a new Section 2702.2.21 to the IBC as follows:

[F] 2702.2.21 Emergency responder radio coverage systems. Standby power shall be provided for emergency responder radio coverage systems required in Section 915 and the *International Fire Code*. The standby power supply shall be capable of operating the emergency responder radio coverage system for a duration of not less than 24 hours.

Revise the IFC as follows:

510.4.2.3 Standby power. ~~Secondary power~~. Emergency responder radio coverage systems shall be provided with ~~an *approved* secondary source of~~ standby power in accordance with Section 604. The ~~secondary~~ standby power supply shall be capable of operating the emergency responder radio coverage system for a ~~period of at least~~ duration of not less than 24 hours. ~~When primary power is lost, the power supply to the emergency responder radio coverage system shall automatically transfer to the secondary power supply.~~

604.2.19 Emergency responder radio coverage systems. Standby power shall be provided for emergency responder radio coverage systems as required in Section 510.4.2.3. The standby power supply shall be capable of operating the emergency responder radio coverage system for a duration of not less than 24 hours.

FLARING SYSTEMS FOR MECHANICAL REFRIGERATION

Revise the IFC as follows:

606.12.5 Flaring systems. Flaring systems for incineration of flammable refrigerants shall be designed to incinerate the entire discharge. The products of refrigerant incineration shall not pose health or environmental hazards. Incineration shall be automatic upon initiation of discharge, shall be designed to prevent blowback and shall not expose structures or materials to threat of fire. Standby fuel, such as LP gas, and standby power shall have the capacity to operate for one and one-half the required time for complete incineration of refrigerant in the system. Standby electrical power, where required to complete the incineration process, shall be in accordance with Section 604.

WATER SUPPLY POWER

Revise the IWUIC as follows:

404.10.3 Standby power. Standby power shall be provided to pumps, controllers and related electrical equipment so that ~~S~~stationary water supply facilities within the *wildland-urban interface area* that are dependent on electrical power can provide the required ~~to meet adequate~~ water supply. The standby power system shall be ~~demands shall provide standby power systems~~ in accordance with Section 2702 ~~Chapter 27~~ of the *International Building Code*~~,~~ and Section 604 of the *International Fire Code.* ~~and NFPA 70 to ensure that an uninterrupted water supply is maintained.~~ The standby power source shall be capable of providing power for a minimum of two hours.

Exceptions: *(No change to current text.)*

Reason: This proposal is submitted by the ICC Fire Code Action Committee (FCAC). This ICC committee was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the Fire-CAC has held 6 open meetings and numerous Regional Work Group and Task Group meetings and conference calls which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the FAC website at: http://www.iccsafe.org/cs/CAC/Pages/default.aspx.
This proposal is part of a comprehensive rewrite of the I-Codes emergency and standby power requirements. Some edits are made to provide consistency in how standby power is referenced in the codes.

Part I - INTERNATIONAL FIRE CODE

Emergency voice/alarm communication systems: Emergency voice/alarm communication systems are required to include an emergency power source in IBC/IFC Section 907.5.2.2.5. A reference to these systems has been added to IBC 2702.2 and IFC 604.2. With the addition of this requirement it is no longer necessary to indicate that these systems are required in covered malls and Group A occupancies, which are just two of the many occupancies and building types that require emergency voice/alarm communication systems.

All reference in the IFC and IBC to emergency voice/alarm communication systems requires them to be provided with a source of emergency power, except for IBC Section 402.7.3. This oversight was corrected.

Smoke control systems: Smoke control systems are required to include a standby power source in IBC/IFC Section 909.11. In addition the IBC requires standby power to be provided for smoke control systems or components of the systems in Sections 404.7, 909.20.6.2, and 909.21.5. A reference to these section have been added to IBC 2702.2.
By referencing section 909.20.6.2 in Section 2702.2.2, it is no longer necessary to include Section 2702.2.20 smokeproof enclosure reference.
IBC/IFC 909.11and IMC 513.11 were rather lengthy and included requirements for standby power equipment rooms. These were broken off and put in Section 909.11.1 and 513.11.1. The reference to automatically transferring to standby power within 60 seconds is included in a separate code proposal for Sections 2702.1 and 604.1, and does not need to be repeated here.

Exit signs: The proposal updates references to emergency power requirements by including the appropriate IFC and IBC code sections that specify requirements for emergency power supply and operation of Exit Signs.

Means of egress illumination: Details on system components in 1006.3.1 have been eliminated because these are covered in the revised IFC Section 604.1 and IBC Section 2702.1 requirements. The last part of IFC Section 1006.3 was renumbered 1006.3.1 to match the format used in the equivalent IBC requirements.

Elevators and platform lifts: In IBC Section 2702.2 and IFC Section 604.2, references to three types of elevators or platform lifts were consolidated into a single reference to elevators and platform lifts.
Requirements for the specific rating of the standby systems required in 3007.9 and 3008.9 were removed since they are covered under another comprehensive rewrite of IBC Section 2702.1 and IFC Section 604.1.
Elevator requirements in IFC Section 604.2.18 were relocated to IFC Section 607, which covers similar elevator requirements.

Horizontal sliding doors: The requirement for the standby power supply to have a capacity to operate a minimum of 50 opening and closing cycles of the door is based on requirements in NFPA 80, Section 9.4.2.2.2.

Membrane structures: The IBC and IFC require auxiliary inflation systems to be provided for air-supported and air-inflated membrane structures. (The IBC covers permanent membrane structures and the IFC covers temporary membrane structures). The differences are that permanent air-inflated membrane structures include standby power as covered by Section 2702 of the IBC. Temporary air-inflated membrane structures are required to include an automatic engine-generator set or a blower powered by an internal combustion engine to serve as an auxiliary inflation system in the event of a commercial power failure. These are not required to be permanently installed.

Semiconductor fabrication facilities: Automatic fire alarm systems are required to be provided with emergency power, which is consistent with NFPA 72.

Hazardous materials: Reference in Section 2702 of the IBC for emergency power for pyrophoric materials to be provided in accordance with the IFC was removed since backup power is not required in IFC Chapter 64.
IBC Section 414.5.3 and IFC Section 5004.7 were reformatted with no substantive changes to the systems that do not require emergency or standby power and fail-safe engineered systems.
In IBC Section 414.5.3 the requirements to provide emergency power for ventilation systems required by the IBC (or this code) were removed. This eliminates the need to provide emergency power for normal building ventilation systems as required by Section 1203.
In looking at the hazardous material related systems that require a secondary power source, they all fall under the definition of emergency power system as included in NFPA 110. Therefore reference to standby power was removed from this section.
References for emergency power were added to Sections 53, 54, 55, 57, 61 and 63 since these sections include requirements for system that require emergency power per Section 5001.3.3.10.

High rise buildings: The scope of IFC Section 604 covers emergency and standby power system, and yet sections 604.2.14.1 through 604.2.14.3 either duplicated requirements in revised Section 604.1, (covered under a separate proposal), or covered electrical system components that are not part of the standby or emergency power system. These requirements were eliminated. If the desire is to include these systems in the IFC they should be placed in a more appropriate location.

Underground buildings: Sections 604.2.15.1 through 604.2.15.2.1 duplicate some, but not all of the IBC requirements for underground buildings, and were therefore eliminated. If the desire is to include these details in the IFC they should be added in their entirety.

Group I-3 occupancy door locks: The proposal updates references to emergency power requirements by including the appropriate IFC and IFC code sections that specify requirements for emergency power supply and operation of power-operated door locks.

Airport traffic control towers: There is no reason to call out emergency and standby power requirements for aircraft traffic control towers. These requirements are specified for the types of electrical systems that will be provided, such as exit signs, egress illumination, elevators, smoke control, etc. In addition there is an error in some of the criteria since emergency power is required for fire alarm and smoke detection equipment and lighting of the means of egress. If the desire is to include a list of all possible emergency and standby power loads that can be included in these towers that can be done.

Smoke alarms: The proposal updates references to emergency power requirements by including the appropriate IFC and IBC code sections that specify requirements for emergency power supply and operation of Smoke Alarms.

Emergency alarms systems: Emergency power for emergency alarm systems is not currently required in either the IBC or the IFC, but it should be, based on the proposed definition of emergency power system.

Emergency responder radio coverage systems: Reference to standby power for emergency responder radio coverage systems was inadvertently left out of IBC Section 2702 and IFC Section 604.

Flaring systems for mechanical refrigeration: The proposal updates references to emergency power requirements by including the appropriate IFC code sections that specify requirements for emergency power supply and operation of flaring systems for mechanical refrigeration.

Clothes dryer exhaust systems: The proposal updates IMC references to stand-by power requirements by including the appropriate IBC code sections that specify requirements for stand-by power supply and operation of clothes dryer exhaust systems.

Water supply power: The proposal updates IWUI references to stand-by power requirements for pumps, controllers and related electrical equipment so that stationary water supply facilities within the *wildland-urban interface* by including the appropriate IFC and IBC code sections that specify requirements for stand-by power supply and operation of specified water supply equipment.

Cost Impact: This code change will increase the cost of construction

604.2.1(NEW)-F-ZUBIA-FCAC

Committee Action Hearing Results

PART I – IFC
Committee Action: **Approved as Modified**

Modify the proposal as follows:

HIGH-RISE BUILDINGS

IBC [F] 403.4.8.1 Equipment room. If the standby or emergency power system includes a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. System supervision with manual start and transfer features shall be provided at the *fire command center*.

> **Exception:** In Group I-2 Condition 2, manual start and transfer features for the critical branch of the emergency power are not required to be provided at the fire command center.

(Portions of the proposal not shown remain unchanged.)

Committee Reason: The committee approved the code change based on the proponent's reason statement and agreed that the proposal accomplishes much needed revisions and clarifications to the emergency and standby power system requirements. The modification leaves the control of critical circuits in the hands of the hospital engineers.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

Adolf Zubia. Chairman IAFC Fire and Life Safety Section, representing ICC Fire Code Action Committee, requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

[F] 414.5.3 Emergency or standby power. Where required by the International Fire Code or this code mechanical *ventilation*, treatment systems, temperature control, alarm, detection or other electrically operated systems ~~are required by the *International Fire Code* or this code, such systems~~ shall be provided with an emergency or standby power system in accordance with Section 2702.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: This proposal is submitted by the ICC Fire Code Action Committee (FCAC). This ICC committee was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the Fire-CAC has held 6 open meetings and numerous Regional Work Group and Task Group meetings and conference calls which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the FAC website at: http://www.iccsafe.org/cs/CAC/Pages/default.aspx.

This public comment clarifies that mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are only to be provided with an emergency or standby power system where required by the IFC or elsewhere in the IBC.

F59-13, Part I

Final Action: AS AM AMPC____ D

F59-13, Part II

604 (IBC [F] 2702) among others; 907.5.2.2.5 (IBC [F] 907.5.2.2.5); IMC [F] 513.11, [F]513.11.1 (New); IWUIC 404.10.3; IEBC 805.4.5

Proposed Change as Submitted

Proponent: Adolf Zubia. Chairman IAFC Fire and Life Safety Section, representing ICC Fire Code Action Committee (azubiamia@yahoo.com)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IFC COMMITTEE AND PART II WILL BE HEARD BY THE IEBC COMMITTEE AS TWO SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDER FOR THOSE COMMITTEES.

PART II - INTERNATIONAL EXISTING BUILDING CODE

GROUP I-3 OCCUPANCY DOOR LOCKS

Revise the IEBC as follows:

IEBC 805.4.5 Emergency power source in Group I-3. Power-operated sliding doors or power-operated locks for swinging doors shall be operable by a manual release mechanism at the door. Emergency power shall be provided for the doors and locks in accordance with Section 2702 of the International Building Code.

Exceptions:

1. Emergency power is not required in facilities with 10 or fewer locks complying with the exception to Section 408.4.1.
2. Emergency power is not required where remote mechanical operating releases are provided.

~~Work areas in buildings of Group I-3 occupancy having remote power unlocking capability for more than 10 locks shall be provided with an emergency power source for such locks. Power shall be arranged to operate automatically upon failure of normal power within 10 seconds and for a duration of not less than 1 hour.~~

Reason: This proposal is submitted by the ICC Fire Code Action Committee (FCAC). This ICC committee was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This

includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the Fire-CAC has held 6 open meetings and numerous Regional Work Group and Task Group meetings and conference calls which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the FAC website at: http://www.iccsafe.org/cs/CAC/Pages/default.aspx.
This proposal is part of a comprehensive rewrite of the I-Codes emergency and standby power requirements. Some edits are made to provide consistency in how standby power is referenced in the codes.

Part II - INTERNATIONAL EXISTING BUILDING CODE

Group I-3 occupancy door locks in the IEBC: The IEBC format was revised to more closely correlate with the IBC and IFC.

Cost Impact: This code change will increase the cost of construction

604.2.1(NEW)-F-ZUBIA-FCAC

Committee Action Hearing Results

PART II – IEBC
This code change was heard by the IEBC code development committee.

Committee Action: **Disapproved**

Committee Reason: This proposal was disapproved primarily related to concerns with references to sections not found in the IEBC. Specifically, exception 1 references Section 408.4.1 which is not found in the IEBC.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

Adolf Zubia. Chairman IAFC Fire and Life Safety Section, representing ICC Fire Code Action Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

IEBC 805.4.5 Emergency power source in Group I-3. Power-operated sliding doors or power-operated locks for swinging doors shall be operable by a manual release mechanism at the door. Emergency power shall be provided for the doors and locks in accordance with Section 2702 of the International Building Code.

Exceptions:

1. Emergency power is not required in facilities with 10 or fewer locks complying with the exception to Section 408.4.1 of the International Building code.
2. Emergency power is not required where remote mechanical operating releases are provided.

Commenter's Reason: This proposal is submitted by the ICC Fire Code Action Committee (FCAC). This ICC committee was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the Fire-CAC has held 6 open meetings and numerous Regional Work Group and Task Group meetings and conference calls which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the FAC website at: http://www.iccsafe.org/cs/CAC/Pages/default.aspx.

The original proposal for F59, Part II was correctly disapproved because reference to the IBC was not included in Exception 1. This has been corrected in this public comment, which accomplishes the following:

1. Correlates the requirements for how emergency and standby power throughout the family of I-Codes so they are treated in a consistent manner.
2. Correlates the requirements for providing emergency power for power operated sliding doors or power operated locks for swinging doors with the requirements in IBC section 408.4.2, which was revised as part of proposal F59-13.

F59-13, Part II
Final Action: AS AM AMPC____ D

EB26-13
803.6 (NEW)

Proposed Change as Submitted

Proponent: Robert J. Davidson, Davidson Code Concepts, LLC, representing self (rjd@davidsoncodeconcepts.com) and David S. Collins, FAIA, The Preview Group, Inc. (dcollins@preview-group.com), representing The American Institute of Architects

Add new text as follows:

803.6 Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable fire protection requirements of Chapter 9 of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Reason: The topic of allowing the ability to apply sprinkler protection trade-offs that exist in the current code has been a matter of discussion in the code development arena for some time. How to apply the allowance for a potential reduction in fire-resistance ratings and in what code they belong have been discussed without a consensus.

The concept is that once a building without sprinkler protection has been sprinklered throughout, whether due to renovations or retroactive code application, the designer should be permitted to allow the same fire resistance rating provisions for new construction in an existing sprinklered building. The issue is how to provide for that application of code and ensure a proper review by the building code official is performed to ensure there are no impediments to granting an approval that may result in the reduction of existing levels of protection.

This proposal attempts to provide for that process by adding a new section to the IEBC under Section 806 Building Elements and Materials. The suggested language provides that once an existing building is sprinklered throughout and meets the other fire protection requirements of Chapter 9 of the IBC, plans, investigation and evaluation reports, and other data can be submitted seeking approval of the code official for the assignment of the new fire-resistance ratings which might me a reduction, or potentially an increase.

The suggested language also requires that any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted. This is to ensure special conditions are identified that may prevent a reduction in fire-resistance ratings.

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

803.6 (NEW)-EB-DAVIDSON.doc

Committee Action Hearing Results

Committee Action: **Approved as Modified**

Modify the proposal as follows:

803.6 Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable fire protection requirements of Chapter 9 of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Committee Reason: The proposal was approved based upon the fact that it provides flexibility in existing buildings and encourages the installation of sprinkler systems. The proposal was preferred to F212 Part II. It was noted that it would be more consistent if this method was also allowed for the other compliance methods found in the IEBC. The modification simply recognizes this allowance for both NFPA 13 and NFPA 13R systems.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment 1:

Tony Crimi, A.C. Consulting Solutions Inc, representing International Firestop Council (IFC), requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

803.6 Fire-resistance ratings. Where approved by the building code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building Code* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code provided, the building ~~is required to meet~~ also complies with the other applicable fire protection requirements of Chapter 9 and Chapter 10 of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Commenter's Reason: This modification adds a critical element that is lacking in the current proposal. The proponents have indicated, the proposed change is intended to add minimum requirements for existing hospitals (Group I-2, Condition 2) into Chapter 11. However, as a revision to Chapter 8 of the IEBC, this proposal will in fact apply to all buildings undergoing Level 2 alterations.

The current proposal as modified by the Committee would permit all of the sprinkler tradeoffs permitted for new construction in the IBC, even though the means of egress of the existing building have not been evaluated. If a building falls short of the IBC's requirements for means of egress (IBC Chapter 10), allowing that building to then take all of the IBC's sprinkler trade-offs and cease maintenance of fire safety features that would be traded away for sprinklers will result in reducing the level of fire safety of that

existing building well below its current levels, and well below the level envisioned by the IBC. The minimum requirements of the IBC for means of egress are clearly stipulated in Chapter 10. These minimums are assumed to be in place and thus required before the sprinkler tradeoff provisions are permitted in other sections of the Code. The IBC goes as far as to state the following:

> **"1001.2 Minimum requirements.** It shall be unlawful to alter a building or structure in a manner that will reduce the number of *exits* or the capacity of the *means of egress* to less than required by this code."

By attempting to take advantage of all of the permitted reductions in fire-resistance ratings permitted by the IBC under these assumptions, this proposal needs to ensure that the base level of fire safety is also maintained. A fully adequate (safe) means of egress is an absolute bare minimum requirement. With a building already having egress deficiencies as compared to the current IBC, there should not be a possibility to further reduce fire safety features in that building.

As just one example, if an existing building had egress stairs that were narrower than the current IBC would allow, then allowing existing fire-rated egress corridors to lose their fire resistance rating could be a very detrimental loss of an essential fire safety feature for the evacuating occupants, who could be forced to wait much longer in the corridors before being able to enter the stairway.

An additional part of this Code Change Comment clarifies that the responsibility for reviewing these evaluations, which are based solely on the new construction requirements of the IBC, rests with the Building Official rather than the Fire Code Official. It is the building officials that have the training and experience to review a building for compliance to the IBC. It cannot be assumed that all Fire Official have the required knowledge of the IBC to critically evaluate a building against IBC requirements.

Public Comment 2:

William E. Koffel, P.E., Koffel Associates, Inc. representing Firestop Contractors International Association (FCIA), requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

803.6 Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable ~~fire protection~~ requirements ~~of Chapter 9~~ of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features including fire resistance rated assemblies and smoke resistive assemblies, conditions of occupancy, means of egress conditions, fire code deficiencies, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Commenter's Reason: Referring solely to Chapter 9 is problematic in that in one sense it is limiting and can infer that other provisions of the IBC need not be considered. In a similar manner, there may be requirements in Chapter 9 that are not relevant to the construction feature being evaluated. In lieu of creating a laundry list of code requirements to be met, the proposed language relies on the evaluation report addressing the issues to be considered and evaluated.

With respect to fire code deficiencies, the IEBC requires compliance with the IFC. However, as an existing building there may be some deficiencies that are existing but part of plan for correction. These should be included in the evaluation reports.

Public Comment 3:

Vickie Lovell, InterCode Inc, representing Fire Safe North America, formerly known as Alliance for Fire and Smoke Containment and Control requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

803.6 Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the International Building has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable fire and smoke features in Chapter 7, the fire protection requirements of Chapter 9, and the means of egress requirements in Chapter 10 of the *International Building Code* as determined by a registered design professional.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials,

design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Commenter's Reason: The current proposal as modified by the committee is very limited as to how the requirements of Chapter 9 are to be applied, and very non-specific about who decides which requirements of Chapter 9 are to be applied. This modification clarifies that neither the owner nor a code or fire official can arbitrarily determine what provisions of the code should apply, but that a design professional should make the determination. The code official approves the design. It also requires that the relevant information in Chapter 7 for fire and smoke containment features and also the essential components of the means of egress in chapter 10 be considered. It is not intended to require that ALL requirements in these chapter should apply; only what is appropriate and applicable as determine by a design professional.

Public Comment 4:

Maureen Traxler, City of Seattle Department of Planning & Development, requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

301.3 ~~803.6~~ Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable fire protection requirements of Chapter 9 of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Commenter's Reason: This modification would move the language of the proposal to Chapter 3 where it would apply to all three of the IEBC's compliance methods. The rationale for the proposal is not specific to the work area method, and we can see no reason it should not apply to the prescriptive and performance methods.

Public Comment 5:

John Williams, ICC Ad Hoc Committee on Health Care, requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

803.6 Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. ~~The building is required to meet the other applicable fire protection requirements of Chapter 9 of the *International Building Code*.~~

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Reason: While the AdHoc Healthcare (AHC) committee supports this change, The AHC believes the language in the 1st paragraph needs clarification. Fire protection is addressed in IEBC Section 804. IEBC Section 803 deals with building elements and materials, a reference to Chapter 9 may be out of place here. A reference to IBC Chapter 9 could be interpreted to require pressurized stairways, fire command centers, or smoke control in other parts of the building – which have little or no effect on the fire-resistance ratings of building elements. The plans, investigation and evaluation reports required in the second in the second paragraph will provide the code official with the information needed to determine where it is reasonable to consider the requirements of the new building code.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and

conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

Public Comment 6:

Thomas S. Zaremba, Roetzel & Andress, representing Alliance of Primary Fire Rated Glazing Manufacturers, requests Approval as Modified by this Public Comment.

Further modify the proposal as follows:

803.6 Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building Code* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable fire protection requirements of Chapter 9 of the *International Building Code* and such other provisions of the current building code as required by the code official.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted. Such evaluation reports shall be submitted by the applicant and the code official is authorized, without charge to the jurisdiction, to require such evaluation reports to be prepared by, or adopted by, and bear the stamp of, a registered design professional.

Commenter's Reason: Three modifications to the proposal are being added to the modification made by the Committee in order to provide the code official with greater flexibility and control over the outcome of alterations involving sprinkler retrofits of existing buildings.

The first change, simply, adds the word "Code" in the first paragraph since it appears to have been inadvertently left out in the original proposal.

Second, while the original proposal provides that the "building is required to meet "the other applicable fire protection requirements of Chapter 9 of the *International Building Code*," there are provisions in other Chapters of the current building code that the code official may want the building to comply with as a condition of allowing fire-resistance ratings to meet current code. For example, although sprinklered throughout, the existing building may not be in compliance with a variety of means of egress requirements found in Chapter 10 of the current code. Without including the additional language proposed in paragraph 1, the code official would have no basis to require compliance with provisions of Chapter 10.

Third, the second paragraph of the proposal requires supporting "plans, investigation and evaluation reports and other data" to be submitted to the code official. The code official should have the option, under this paragraph, to require those supporting evaluation reports to be prepared or adopted by a registered design professional. Otherwise, the code official is tasked with verifying the accuracy and quality of the supporting evaluation reports. While there may be cases where the code official is willing to do that, the proposed modification provides the code official with the option of requiring the involvement of a registered design professional in the application process. (References to the use of registered design professionals in connection with evaluation reports such as these can be found throughout the International Codes. For example, *see* sections 104.2.1.1 and 106.1 of the *International Existing Building Code*; section 104.7.2 of the *International Fire Code*; and *section 107.3.4 of* the *International Building Code*).

I urge you to vote against the standing motion to approve as modified by the Committee, and to vote in favor of approving this proposal as modified by this Public Comment.

EB26-13
Final Action: AS AM AMPC____ D

F212-13, Part I
1103.1, 1104.1

Proposed Change as Submitted

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IFC CODE DEVELOPMENT COMMITTEE AND PART II WILL BE HEARD BY THE IEBC CODE DEVELOPMENT COMMITTEE AS SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMMITTEES.

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care (john.williams@doh.wa.gov)

PART I – INTERNATIONAL FIRE CODE

.

Revise as follows:

SECTION 1103
FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDING

1103.1 Required construction. Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through 1103.9.

The provisions of this chapter 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 accordance with previously adopted codes.

Exceptions:

1. Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.
2. Group U occupancies.

SECTION 1104
MEANS OF EGRESS FOR EXISTING BUILDINGS

1104.1 General. *Means of egress* in existing buildings shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.23, and the building code that applied at the time of construction. Where the provisions of this chapter conflict with the building code that applied at the time of construction, 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 1103.1 as further enumerated in Sections 1104.2 through 1104.24.

Exception: Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.

Reason: The changes provide tradeoffs for installation of automatic sprinkler systems consistent with those allowed for new construction and also with those allowed by CMS. In many editions of the legacy codes and the ICC Codes dating from the 1980s and even before, the same or similar tradeoffs were allowed when a facility elected to provide sprinkler protection. The AD Hoc Committee on Health Care is proposing requiring retrofit of sprinklers in Hospitals that we feel provide the best protection available and feel because of this the tradeoffs are justified in existing facilities as has been vetted and justified in new construction for many years. These requirements are part of a package of retrofit requirements that provide a minimum level of safety considered necessary for patients, staff and first responders in an environment in which patients are in many instances not capable of self preservation and must be protected in place. Automatic sprinkler protection is key to any plan for protecting residents in place and for the safety of those responding to emergencies by providing the extra time needed to respond. The requirements are also consistent with current CMS standards that apply to all hospitals nationwide receiving Medicare/Medicaid funding and would not add additional requirements to those facilities beyond current nationwide Federal requirements but would allow the facilities to better meet those requirements without possible costly conflicts in other codes.

If this proposal is successful and the proposal for a new Section 1105 is also approved, the Adhoc Health Care committee will bring forward a corresponding exception to be applicable for the new Section 1105.1 as follows:

SECTION 1105
CONSTRUCTION REQUIREMENTS FOR EXISTING GROUP I-2

1105.1 General. Existing Group I-2 shall meet the following requirements:

1. The minimum fire safety requirements in Section 1103, and
2. The minimum egress requirements in Section 1104, and
3. The additional egress and construction requirements in Sections 1105.2 through 1105.7.5.2.

Where the provisions of this chapter conflict with the construction requirements that applied at the time of construction, the most restrictive provision shall apply.

> **Exception:** Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where a sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protective, penetrations and joints are not required in new construction for sprinklered buildings.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

Cost Impact: None

1103.1-F-WILLIAMS-ADHOC

Committee Action Hearing Results

PART I – IFC
Committee Action: **Disapproved**

Committee Reason: The disapproval was based on the committee's concerns that the proposal needs to be well-correlated with code change EB26-13 which is related. It was also unclear as to why the exception should be limited to Group I-2 Condition 2 only when other occupancies would likely want to take advantage of it. The proposal also does not take into account alternative methods that may have been previously granted. Record keeping and documentation of reduced fire resistance ratings would be a major challenge as would trying to determine rating reductions by visual inspection.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment 1:

John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee, request Approval as Modified by this Public Comment.

Replace the proposal as follows:

SECTION 1103
FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDING

1103.1 Required construction. Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through 1103.9.

~~The provisions of this chapter 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 accordance with previously adopted codes.~~

Exception: Group U occupancies.

1103.1.1 Existing construction. The provisions of this chapter 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 accordance with previously adopted codes.

Exception: Where approved by the fire code official, in Group I-2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the fire code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Reason: This code change responds to the committee's questions regarding the original proposal while keeping true to its original purpose. The Adhoc Healthcare Committee (AHC) firmly believes that all hospital buildings should be retroactively sprinklered throughout. This code change provides incentives for facilities to do that. It also addresses a common question. As code officials, we are often faced with existing building stock that has been upgraded by adding a sprinkler system. This code change and EB 26 were intended to provide the code official with a means, written in code, to accommodate the relatively common practice of reconsidering the value of SOME existing passive systems when sprinklered are installed.

To be clear, this code change is only the incentive. During the Group A hearing the Fire Code committee passed a proposal from AHC to REQUIRE mandatory retroactive sprinklering throughout the building. This change provides the incentive for hospital administrator's move to this requirement sooner. As mentioned in the committee's reason statement, EB 26 was a more comprehensive, better crafted code change. The AHC listened and based this public comment entirely on the language from EB-26. The committee questioned why this code change solely focused on Group I-2 when EB-26 broadly applied to all occupancies. While the AHC might agree with that point, our scope is limited to Group I-2 facilities and any change that addressed other occupancies would be out of scope. The fire code committee asked whether this change would take into account the previous alternative methods. This change would not invalidate the ability of a code official to consider ANY alternative means or method available to them. We are not touching any section that would allow a code that deals with alternative methods. In fact, this change supports the concept that the decision belongs in the hands of the code official. The committee's last statement furthers that idea. The committee was concerned that record keeping for decisions and any reduced fire ratings would be problematic. The revised language taken straight from EB 26 the burden for identifying existing conditions, documenting changes and providing evaluation reports squarely on the shoulders of the applicant. Foe comparison, the approved language of EB-26 is shown below:

EB26-13 AM

803.6 Fire-resistance ratings. Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 and 903.3.1.2 of the International Building has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable fire protection requirements of Chapter 9 of the International Building Code.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

The AHCs proposal is different from EB 26 in two specific ways. The scope of the AHCs work (along with co-proponent ICC Code Technology Committee) is Group I-2. In EB 26, the existing building code committee approved the same concept for all occupancy types. Since the scope of this change is limited to I-2, the reference to a residential sprinkler system per 903.3.1.2 is not appropriate and was deleted. The AHC is also recommending to delete the reference to Chapter 9. While this reference would provide an additional pointer to the sprinkler requirements, it would also pick requirements for things like smoke control or pressurized stairs. We believe these have little relation to fire resistance ratings. In addition, the AHC has already sponsored a comprehensive set of code changes for minimum existing fire protection rating in the committee approved changes for Section 1105. In these changes, the committee approved sweeping retroactive minimum standards that address concepts like corridor construction, structural fire protection ratings, retroactive smoke compartmentation and many other changes. These changes go way beyond what is required by the current "maintain it under the code from which it was constructed" logic of chapter 7. They can be found in F236 through F243. We believe these fundamental increases to chapter 11, along with the committee's preferred language from EB 26 is comprehensive package.

Public Comment 2:

Tony Crimi, A.C. Consulting Solutions Inc., representing International Firestop Council (IFC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 1103
FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDING

1103.1 Required construction. Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through 1103.9.

The provisions of this chapter 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 accordance with previously adopted codes.

Exceptions:

1. Where approved by the building code official in Group I-2, Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building Code* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code provided the building also complies with the other applicable fire protection requirements of Chapter 9 and Chapter 10 of the *International Building Code*.

   Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

   ~~Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.~~
2. Group U occupancies.

SECTION 1104
MEANS OF EGRESS FOR EXISTING BUILDINGS

1104.1 General. *Means of egress* in existing buildings shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.23, and the building code that applied at the time of construction. Where the provisions of this chapter conflict with the building code that applied at the time of construction, 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 1103.1 as further enumerated in Sections 1104.2 through 1104.24.

Exception: Where approved by the building code official in Group I-2, Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building Code* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code provided the building also complies with the other applicable fire protection requirements of Chapter 9 and Chapter 10 of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

~~Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.~~

Commenter's Reason: This modification makes the language in this proposal consistent with the language approved in EB26-13, but also adds a critical element that is lacking in the current proposal.

The current proposal as modified by the Committee would permit all of the sprinkler tradeoffs permitted for new construction in the IBC, even though the means of egress of the existing building have not been evaluated. If a building falls short of the IBC's requirements for means of egress (IBC Chapter 10), allowing that building to then take all of the IBC's sprinkler trade-offs and cease maintenance of fire safety features that would be traded away for sprinklers will result in reducing the level of fire safety of that existing building well below its current levels, and well below the level envisioned by the IBC. The minimum requirements of the IBC

for means of egress are clearly stipulated in Chapter 10. These minimums are assumed to be in place and thus required before the sprinkler tradeoff provisions are permitted in other sections of the Code. The IBC goes as far as to state the following:

> **"1001.2 Minimum requirements.** It shall be unlawful to alter a building or structure in a manner that will reduce the number of *exits* or the capacity of the *means of egress* to less than required by this code."

By attempting to take advantage of all of the permitted reductions in fire-resistance ratings permitted by the IBC under these assumptions, this proposal needs to ensure that the base level of fire safety is also maintained. A fully adequate (safe) means of egress is an absolute bare minimum requirement. With a building already having egress deficiencies as compared to the current IBC, there should not be a possibility to further reduce fire safety features in that building.

As just one example, if an existing building had egress stairs that were narrower than the current IBC would allow, then allowing existing fire-rated egress corridors to lose their fire resistance rating could be a very detrimental loss of an essential fire safety feature for the evacuating occupants, who could be forced to wait much longer in the corridors before being able to enter the stairway.

This proposal attempts to outline the process for a proper review to be performed by the building code official to ensure there are no impediments to granting an approval that may result in the reduction of existing levels of protection. The suggested language provides that once an existing building is sprinklered throughout and meets the other fire protection requirements of Chapter 9 and Chapter 10 of the IBC, plans, investigation and evaluation reports, and other data can be submitted seeking approval of the code official for the assignment of the new fire-resistance ratings which might me a reduction, or potentially an increase. The suggested language also requires that any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted. This is to ensure special conditions are identified that may prevent a reduction in fire-resistance ratings.

An additional part of this Code Change Comment clarifies that the responsibility for reviewing these evaluations, which are based solely on the new construction requirements of the IBC, rests with the Building Official rather than the Fire Code Official. It is the building officials that have the training and experience to review a building for compliance to the IBC. It cannot be assumed that all Fire Official have the required knowledge of the IBC to critically evaluate a building against IBC requirements.

Public Comment 3:

Robert J Davidson, Davidson Code Concepts, LLC, representing self, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 1103
FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDING

1103.1 Required construction. Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through 1103.9.

The provisions of this chapter 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 accordance with previously adopted codes.

Exceptions:

1. Where a change in fire resistance rating has been approved in accordance with Section 803.6 of the International Existing Building Code. ~~Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.~~
2. Group U occupancies.

Commenter's Reason: In response to the committee reason statement this proposal coordinates the IFC with the new language added to the IEBC by EB26-13 with a direct reference to the new language.

This puts into place a process for what is currently happening. Jurisdictions are granting approvals for passive fire protection reduction without clear guidance from the family of I-Codes. In some cases the reductions can be haphazardly approved and when buildings are not provided with an automatic fire suppression system throughout. The requirement is for the entire building to be sprinklered before this evaluation is considered and the pointer to the new Section 803.6 affirms that requirement and provides for a thorough review of the passive protection the applicant is seeking to obtain approval for reduction. This will have the added benefit of stopping the reduction in passive protections for projects to individual work areas or smoke compartments. The building would have to be considered as a whole.

EB26 is included here for reference.

EB26-13 AM

803.6 Fire-resistance ratings. *Where approved by the code official, buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 and 903.3.1.2 of the International Building has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable fire protection requirements of Chapter 9 of the International Building Code.*

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Public Comment 4:

William E. Koffel, P.E., Koffel Associates, Inc., representing Firestop Contractors International Association (FCIA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 1103
FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDING

1103.1 Required construction. Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through 1103.9.

The provisions of this chapter 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 accordance with previously adopted codes.

Exceptions:

1. ~~Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.~~
   Where approved by the code official, in Group I-2, Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable requirements of the *International Building Code*.
   Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features including fire resistance rated assemblies and smoke resistive assemblies, conditions of occupancy, means of egress conditions, fire code deficiencies, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

2. Group U occupancies.

SECTION 1104
MEANS OF EGRESS FOR EXISTING BUILDINGS

1104.1 General. *Means of egress* in existing buildings shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.23, and the building code that applied at the time of construction. Where the provisions of this chapter conflict with the building code that applied at the time of construction, 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 1103.1 as further enumerated in Sections 1104.2 through 1104.24.

Exception: ~~Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.~~

Where approved by the code official, in Group I-2, Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable requirements of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features including fire resistance rated assemblies and smoke resistive assemblies, conditions of occupancy, means of egress conditions, fire code deficiencies, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

Commenter's Reason: As suggested by the Code Development Committee, the proposal uses language similar to EB26 as the basis for the exception originally proposed for Sections 1103.1 and 1104.1. The differences between the language proposed and EB26 are as follows:

- The application is limited to Group I-2, Condition 2 as originally proposed in F212.
- The use of NFPA 13R sprinkler systems (903.3.1.2). NFPA 13R systems are not appropriate for Group I-2, Condition 2 occupancies.
- The reference to Chapter 9 was deleted since it implies that Chapter 9 requirements are the only ones that need to be considered. A similar Public Comment has been submitted on EB26.

The list of items to be considered has been expanded to include rated assemblies, means of egress assemblies, and fire code deficiencies. It is understood that this is in the IFC but it also recognizes that existing buildings may have deficiencies that still need to be addressed through a plan of correction. A similar Public Comment has been submitted on EB26.

Public Comment 5:

William E. Koffel, P.E., Koffel Associates, Inc., representing Firestop Contractors International Association (FCIA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 1103
FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDING

1103.1 Required construction. Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through 1103.9.

The provisions of this chapter 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 accordance with previously adopted codes.

Exceptions:

1 ~~Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.~~

Where approved by the code official, in Group I-2, Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable requirements of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features including fire resistance rated assemblies and smoke resistive assemblies, conditions of occupancy, means of egress conditions, fire code deficiencies, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted. Where required by the code official, the plans and evaluation reports submitted to the code official shall be prepared by a registered design professional.

2. Group U occupancies.

SECTION 1104
MEANS OF EGRESS FOR EXISTING BUILDINGS

1104.1 General. *Means of egress* in existing buildings shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.23, and the building code that applied at the time of construction. Where the provisions of this chapter conflict with the building code that applied at the time of construction, 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 1103.1 as further enumerated in Sections 1104.2 through 1104.24.

Exception: ~~Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.~~ Where approved by the code official, in Group I-2, Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the *International Building* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code. The building is required to meet the other applicable requirements of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features including fire resistance rated assemblies and smoke resistive assemblies, conditions of occupancy, means of egress conditions, fire code deficiencies, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted. Where required by the code official, the plans and evaluation reports submitted to the code official shall be prepared by a registered design professional.

Commenter's Reason: As suggested by the Code Development Committee, the proposal uses language similar to EB26 as the basis for the exception originally proposed for Sections 1103.1 and 1104.1. The differences between the language proposed and EB26 are as follows:

- The application is limited to Group I-2, Condition 2 as originally proposed in F212.
- The use of NFPA 13R sprinkler systems (903.3.1.2). NFPA 13R systems are not appropriate for Group I-2, Condition 2 occupancies.
- The reference to Chapter 9 was deleted since it implies that Chapter 9 requirements are the only ones that need to be considered. A similar Public Comment has been submitted on EB26.
- The list of items to be considered has been expanded to include rated assemblies, means of egress assemblies, and fire code deficiencies. It is understood that this is in the IFC but it also recognizes that existing buildings may have deficiencies that still need to be addressed through a plan of correction. A similar Public Comment has been submitted on EB26.

This verbiage differs from our similar Public Comment in that it provides an additional provision that the Code Official may require the plans and evaluation reports to be prepared by a registered design professional. There may be some instances in would be appropriate to have a registered design professional prepare the evaluation to determine which requirements from the IBC should be applicable.

Public Comment 6:

Steve Thomas, Colorado Code Consulting, LLC, representing Colorado Chapter ICC, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 1103
FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDING

1103.1 Required construction. Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through 1103.9.

The provisions of this chapter 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 accordance with previously adopted codes.

Exceptions:

1. Where approved in accordance with Section 102.4, ~~in Group I-2 Condition 2~~ buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.
2. Group U occupancies.

SECTION 1104
MEANS OF EGRESS FOR EXISTING BUILDINGS

1104.1 General. *Means of egress* in existing buildings shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.23, and the building code that applied at the time of construction. Where the provisions of this chapter conflict with the building code that applied at the time of construction, 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 1103.1 as further enumerated in Sections 1104.2 through 1104.24.

Exception: Where approved in accordance with Section 102.4, ~~in Group I-2 Condition 2~~ buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.1.2 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for sprinklered buildings.

Commenter's Reason: This proposal should not just apply to Group I-2 occupancies. When the ad hoc committee worked on this issue, they were limited in scope to just I-2 occupancies. Therefore, they could not propose a change that would be applicable to other occupancies. Therefore, this public comment expands the scope of the provision to all occupancies.

If an owner of an existing building chooses to install an automatic fire sprinkler system, they should be able to take advantage of all of the modifications permitted by the current codes. They should not be penalized if a complete fire sprinkler system is installed.

Public Comment 7:

Vickie Lovell, Intercode, Inc., representing Fire Safe North America, formerly known as Alliance For Fire and Smoke Containment and Control, requests Disapproval.

Commenter's Reason: The committee succinctly identified numerous concerns related to the implementation of this poorly written proposal. The decision making process of determining which assemblies and features would be eliminated or reduced is distilled into one sentence. This proposal, if approved, would give unlimited decision making power to an unidentified person(s) to arbitrarily determine what becomes obsolete and what stays functioning without any defined qualifications.

Granted, a hospital may have access to advanced health care facilities engineering to determine what fire protection features are relevant in a sprinklered building. However, the committee rightfully posed the questions as to why the exception should be limited to Group I-2 Condition 2 only when other occupancies would likely want to take advantage of such a broad, sweeping exception to Section 1103 if it were to be approved. If every occupancy and use group were afforded the opportunity to reduce the ratings throughout without any accountability or qualifications, the International Fire Code would likely become irrelevant.

The recommendation for disapproval is merited, and the committee correctly identified EB26 as having improved language, but still needing further modifications.

F212-13, Part I
Final Action: AS AM AMPC____ D

F212-13, Part II
IEBC 804.2.2.2 (NEW)

Proposed Change as Submitted

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IFC CODE DEVELOPMENT COMMITTEE AND PART II WILL BE HEARD BY THE IEBC CODE DEVELOPMENT COMMITTEE AS SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMMITTEES.

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care (john.williams@doh.wa.gov)

PART II – INTERNATIONAL EXISTING BUILDING CODE

Add new text as follows:

804.2.2.2 Group I-2. Where approved, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the *International Building Code* has been added and the building is now equipped throughout with an automatic sprinkler system, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for buildings equipped throughout with an automatic sprinkler system.

Reason: The changes provide tradeoffs for installation of automatic sprinkler systems consistent with those allowed for new construction and also with those allowed by CMS. In many editions of the legacy codes and the ICC Codes dating from the 1980s and even before, the same or similar tradeoffs were allowed when a facility elected to provide sprinkler protection. The AD Hoc Committee on Health Care is proposing requiring retrofit of sprinklers in Hospitals that we feel provide the best protection available and feel because of this the tradeoffs are justified in existing facilities as has been vetted and justified in new construction for many years. These requirements are part of a package of retrofit requirements that provide a minimum level of safety considered necessary for patients, staff and first responders in an environment in which patients are in many instances not capable of self preservation and must be protected in place. Automatic sprinkler protection is key to any plan for protecting residents in place and for the safety of those responding to emergencies by providing the extra time needed to respond. The requirements are also consistent with current CMS standards that apply to all hospitals nationwide receiving Medicare/Medicaid funding and would not add additional requirements to those facilities beyond current nationwide Federal requirements but would allow the facilities to better meet those requirements without possible costly conflicts in other codes.

If this proposal is successful and the proposal for a new Section 1105 is also approved, the Adhoc Health Care committee will bring forward a corresponding exception to be applicable for the new Section 1105.1 as follows:

SECTION 1105
CONSTRUCTION REQUIREMENTS FOR EXISTING GROUP I-2

1105.1 General. Existing Group I-2 shall meet the following requirements:

1. The minimum fire safety requirements in Section 1103, and
2. The minimum egress requirements in Section 1104, and
3. The additional egress and construction requirements in Sections 1105.2 through 1105.7.5.2.

Where the provisions of this chapter conflict with the construction requirements that applied at the time of construction, the most restrictive provision shall apply.

> **Exception:** Where approved in accordance with Section 102.4, in Group I-2 Condition 2 buildings where a sprinkler system installed in accordance with Section 903.3.1.1 has been added and the building is now sprinklered throughout, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protective, penetrations and joints are not required in new construction for sprinklered buildings.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

Cost Impact: None

1103.1-F-WILLIAMS-ADHOC

Committee Action Hearing Results

PART II – IEBC
This code change was heard by the IEBC code development committee.

Committee Action: **Disapproved**

Committee Reason: The committee disapproved this proposal in favor of the action taken on EB26-13 and by the request of the proponent.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment 1:

Tony Crimi, A.C. Consulting Solutions Inc., representing International Firestop Council (IFC), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

804.2.2.2 Group I-2. Where approved by the building code official in Group I-2, Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building Code* has been added, and the building is now sprinklered throughout, the required fire-resistance ratings of building elements and materials shall be permitted to meet the requirements of the current building code provided the building also complies with the other applicable fire protection requirements of Chapter 9 and Chapter 10 of the *International Building Code*.

Plans, investigation and evaluation reports, and other data shall be submitted indicating which building elements and materials the applicant is requesting the code official to review and approve for determination of applying the current building code fire-resistance ratings. Any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted.

~~Where approved, in Group I-2 Condition 2 buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the *International Building Code* has been added and the building is now equipped throughout with an automatic sprinkler system, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for buildings equipped throughout with an automatic sprinkler system.~~

Commenter's Reason: This modification makes the language in this proposal consistent with the language approved in EB26-13, but also adds a critical element that is lacking in the current proposal.

The current proposal as modified by the Committee would permit all of the sprinkler tradeoffs permitted for new construction in the IBC, even though the means of egress of the existing building have not been evaluated. If a building falls short of the IBC's requirements for means of egress (IBC Chapter 10), allowing that building to then take all of the IBC's sprinkler trade-offs and cease maintenance of fire safety features that would be traded away for sprinklers will result in reducing the level of fire safety of that existing building well below its current levels, and well below the level envisioned by the IBC. The minimum requirements of the IBC for means of egress are clearly stipulated in Chapter 10. These minimums are assumed to be in place and thus required before the sprinkler tradeoff provisions are permitted in other sections of the Code. The IBC goes as far as to state the following:

> **"1001.2 Minimum requirements.** It shall be unlawful to alter a building or structure in a manner that will reduce the number of *exits* or the capacity of the *means of egress* to less than required by this code."

By attempting to take advantage of all of the permitted reductions in fire-resistance ratings permitted by the IBC under these assumptions, this proposal needs to ensure that the base level of fire safety is also maintained. A fully adequate (safe) means of egress is an absolute bare minimum requirement. With a building already having egress deficiencies as compared to the current IBC, there should not be a possibility to further reduce fire safety features in that building.

As just one example, if an existing building had egress stairs that were narrower than the current IBC would allow, then allowing existing fire-rated egress corridors to lose their fire resistance rating could be a very detrimental loss of an essential fire safety feature for the evacuating occupants, who could be forced to wait much longer in the corridors before being able to enter the stairway.

This proposal attempts to outline the process for a proper review to be performed by the building code official to ensure there are no impediments to granting an approval that may result in the reduction of existing levels of protection. The suggested language provides that once an existing building is sprinklered throughout and meets the other fire protection requirements of Chapter 9 and Chapter 10 of the IBC, plans, investigation and evaluation reports, and other data can be submitted seeking approval of the code official for the assignment of the new fire-resistance ratings which might me a reduction, or potentially an increase. The suggested language also requires that any special construction features, conditions of occupancy, approved modifications or approved alternative materials, design and methods of construction, and equipment applying to the building that impact required fire-resistance ratings shall be identified in the evaluation reports submitted. This is to ensure special conditions are identified that may prevent a reduction in fire-resistance ratings.

An additional part of this Code Change Comment clarifies that the responsibility for reviewing these evaluations, which are based solely on the new construction requirements of the IBC, rests with the Building Official rather than the Fire Code Official. It is the building officials that have the training and experience to review a building for compliance to the IBC. It cannot be assumed that all Fire Official have the required knowledge of the IBC to critically evaluate a building against IBC requirements.

Public Comment 2:

Steve Thomas, Colorado Code Consulting, LLC, representing Colorado Chapter ICC, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

804.2.2.2 ~~Group I-2~~ Sprinklered Buildings. Where approved, ~~in Group I-2 Condition 2~~ buildings where an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.1.1.2 of the *International Building Code* has been added and the building is now equipped throughout with an automatic sprinkler system, the existing fire resistance ratings, opening protectives, penetrations and joints in assemblies are not required to be maintained where such fire resistance ratings, opening protectives, penetrations and joints are not required in new construction for buildings equipped throughout with an automatic sprinkler system.

Commenter's Reason: This proposal should not just apply to Group I-2 occupancies. When the ad hoc committee worked on this issue, they were limited in scope to just I-2 occupancies. Therefore, they could not propose a change that would be applicable to other occupancies. Therefore, this public comment expands the scope of the provision to all occupancies.

If an owner of an existing building chooses to install an automatic fire sprinkler system, they should be able to take advantage of all of the modifications permitted by the current codes. They should not be penalized if a complete fire sprinkler system is installed.

Public Comment 3:

Vickie Lovell, Intercode, Inc., representing Fire Safe North America, formerly known as Alliance For Fire and Smoke Containment and Control, requests Disapproval.

Commenter's Reason: The committee succinctly identified numerous concerns related to the implementation of this poorly written proposal. The decision making process of determining which assemblies and features would be eliminated or reduced is distilled into one sentence. This proposal, if approved, would give unlimited decision making power to an unidentified person(s) to arbitrarily determine what becomes obsolete and what stays functioning without any defined qualifications.

Granted, a hospital may have access to advanced health care facilities engineering to determine what fire protection features are relevant in a sprinklered building. However, the committee rightfully posed the questions as to why the exception should be limited to Group I-2 Condition 2 only when other occupancies would likely want to take advantage of such a broad, sweeping exception to Section 1103 if it were to be approved. If every occupancy and use group were afforded the opportunity to reduce the ratings throughout without any accountability or qualifications, the International Fire Code would likely become irrelevant.

The recommendation for disapproval is merited, and the committee correctly identified EB26 as having improved language, but still needing further modifications.

F212-13, Part II
Final Action: AS AM AMPC____ D

F239-13

1105.3 (New); 202 (New)

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care (john.williams@doh.wa.gov) and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee (cbaldassarra@RJAGroup.com)

Add new text as follows:

IFC SECTION 1105
CONSTRUCTION REQUIREMENTS FOR EXISTING GROUP I-2

1105.3 Corridor construction. In Group I-2, in areas housing patient sleeping or care rooms, corridor walls and the opening protectives therein shall provide a barrier designed to resist the passage of smoke in accordance with Sections 1105.3.1 through 1105.3.7.

1105.3.1 Materials. The walls shall be of materials permitted by the building type of construction.

1105.3.2 Fire-resistance rating. Unless required elsewhere in the code, corridor walls are not required to have a fire-resistance rating.

1105.3.3 Corridor Walls Continuity. Corridor walls shall extend from the top of the foundation or floor below to one of the following:

1. The underside of the floor or roof sheathing, deck or slab above.
2. The underside of a ceiling above where the ceiling membrane is constructed to limit the passage of smoke.
3. The underside of a lay-in ceiling system where the ceiling tiles weigh at least one pound per square foot of tile.

1105.3.4 Openings in corridor walls. Openings in corridor walls shall provide protection in accordance with 1105.3.4.1 through 1105.3.4.3.

1105.3.4.1 Windows. Windows in corridor walls shall be sealed to limit the passage of smoke, or the window shall be automatic closing upon detection of smoke, or the window opening shall be protected by an automatic closing device that closes upon detection of smoke.

Exception: In smoke compartments not containing patient sleeping rooms, pass-through windows or similar openings shall be permitted in accordance with Section 1105.3.4.3.

1105.3.4.2 Doors. Doors in corridor walls shall comply with Sections 1105.3.4.2.1 through 1105.3.4.2.3.

1105.3.4.2.1 Louvers. Doors in corridor walls shall not include louvers, transfer grills or similar openings. **Exception:** Doors shall be permitted to have louvers, transfer grills or similar openings at toilet rooms or bathrooms; storage rooms that do not contain storage of flammable or combustible material; and storage rooms that are not required to be separated as incidental uses.

1105.3.4.2.2 Corridor doors. Doors in corridor walls shall limit the transfer of smoke by complying with the following:

1. Doors shall be constructed of not less than 1-3/4 inch (44 mm) thick solid bonded core wood or capable of resisting fire for a minimum of 1/3 hours.
   Exception: Corridor doors in buildings equipped throughout with an automatic sprinkler system.

2. Frames for side hinged swinging doors shall have stops on the sides and top to limit transfer of smoke.
3. Where provided, vision panels in doors shall be a fixed glass window assembly installed to limit the passage of smoke.Existing wired glass panels with steel frames shall be permitted to remain in place.
4. Doors undercuts shall not exceed 1 inch (25 mm).
5. Doors shall be positive latching with devices that resist not less than 5 pounds (22.2 N). Roller latches are prohibited.
6. Mail slots or similar openings shall be permitted in accordance with Section 1105.3.4.3.

1105.3.4.2.3 Dutch doors. Where provided, dutch doors shall comply with Section 1105.3.4.2.2. In addition, dutch doors shall be equipped with latching devices on either the top or bottom leaf to allow leaves to latch together. The space between the leaves shall be protected with devices such as astragals to limit the passage of smoke.

1105.3.4.2.4 Self- or automatic-closing doors. Where self- or automatic-closing doors are required, closers shall be maintained in operational condition.

1105.3.4.3 Openings in corridor walls and doors. Mail slots, pass through windows or similar openings shall not be required to be protected where the aggregate area of the openings between the corridor and a room are not greater than 80 square inches (51 613 mm^2) and are located with the top edge of any opening no higher than 48 inches above the floor.

1105.3.5 Penetrations. The space around penetrating items shall be filled with an *approved* material to limit the passage of smoke.

1105.3.6 Joints. Joints shall be filled with an *approved* material to limit the passage of smoke.

1105.3.7 Ducts and air transfer openings. The space around a duct penetrating a smoke partition shall be filled with an *approved* material to limit the passage of smoke. Air transfer openings in smoke partitions shall be provided with a *smoke damper* complying with Section 717.3.2.2 of the International Building Code.

Exception: Where the installation of a *smoke damper* will interfere with the operation of a required smoke control system in accordance with Section 909, *approved* alternative protection shall be utilized.

1104.17 Corridors construction. 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 kept closed or be self closing. In Group I-2, corridors in areas housing patient sleeping or care rooms shall comply with Section 1105.3.

Exceptions:

1. Corridors in occupancies other than in Group H ~~and I-2,~~ 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. 2. 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. 3. Corridors that are in accordance with the *International Building Code*.

SECTION 202
GENERAL DEFINITIONS

DUTCH DOOR. A door divided horizontally so that the top can be operated independently from the bottom.

Reason: This change adds minimum requirements for existing Group I-2 into Chapter 11 by adding specific retrofit requirements. This change will move the existing retrofit requirements for corridors in I-2 occupancies to proposed new section 1105.3 and add more detailed specific requirements. The intent is to increase the bare minimum safety requirements due to the fragile and sensitive populations within these facilities. These requirements are meant to be applied retroactively. This is not a new concept for these facilities as it aligns with the current approach by the Center for Medicaid and Medicare Services (CMS), the federal authority having jurisdiction. Hospitals are now required by CMS to have a life safety survey on a regular basis. If the facility does not meet certain life safety minimums, they are required to upgrade their existing facility. These retroactive requirements are added to assist code officials and surveyors during the ongoing regular inspection of hospital facilities and are consistent with the inspections required by federal laws for certification and reimbursement. The requirements consider the minimum previously approved construction methods. These requirements will provide jurisdictions the ability to adopt minimum retroactive provisions that provide a more uniform level of safety and eliminate many of the current code conflicts for existing facilities.

We looked at several sources to determine what the appropriate minimum bar should be, including the current building and fire code, current CMS guidelines, and previous versions of the ICC and model codes. On all issues, enforcement agencies and the regulated facilities weighed in to ensure that these changes are both necessary and achievable.

These provisions are written specifically for hospitals (Group I-2, Condition 2). These are retrofit requirements that provide a minimum level of safety considered necessary for patients, staff and first responders in an environment in which patients are in many instances not capable of self preservation and must be protected in place. The changes also provide tradeoffs for automatic sprinkler systems consistent with those allowed for new construction and also with those allowed by CMS. In no way does this affect

the existing requirement that existing, approved construction must be maintained in the manner that it was approved. It simply provides a tool for evaluating historical construction techniques.

Specific points include:

- Existing corridor construction should primarily be evaluated for it's ability to resist or limit the transfer of smoke, regardless of the code at the time of construction.. Corridor walls, even if they were built 60 years ago, should be regularly assessed confirm that they minimize the transfer of smoke. This section describes some criteria by which this can be assessed.
- The requirements clearly indicate that portions of corridor walls required to have a fire resistance ratings by other code provisions must meet those provisions. This addresses where a corridor wall also happens to be a smoke barrier, incidental use area separation, etc.
- The Ad Hoc Committee added a specific section on dutch doors. Dutch doors have been used in health care facilities for many years for various necessary operational reasons. While existing language in the IBC does not specifically speak of dutch doors, their use is not prohibited but if used must meet the requirements contained in Section 407.3 including positive latching and limiting the transfer of smoke. This change will provide clarity for existing installations by giving specific guidance on the minimum acceptable requirements including positive latching and smoke transfer for their use in corridor walls. A definition is provided for additional clarity.
- The Ad Hoc committee also proposes similar detail for doors, windows, louvers and other potential penetrations or openings in corridor walls in an attempt to add clarity to the intent of the code on limiting the transfer of smoke. These proposals are consistent with current CMS standards.
- There are exceptions that deal with existing mail slot, pass-through and similar openings that are commonly found in hospitals. These are needed for privacy, medication security and other operational needs. Our proposal places restrictions on these existing openings similar to the current federal requirements.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

This proposal is being co-sponsored by the ICC Code Technology Committee. The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The 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/CTC/Pages/default.aspx. Since its inception in April/2005, the CTC has held twenty five meetings - all open to the public.

Cost Impact: None

1105.3 (NEW)-F-BALDASSARRA-WILLIAMS-ADHOC

Committee Action Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: The committee agreed with the proponent that the code change reflects an important and needed coordination effort to correlate the IFC with Federal Center for Medicaid and Medicare Services (CMS) healthcare regulations with which all facilities must now comply and that it will eliminate costly conflicting requirements among different codes applicable to such facilities.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment 1:

Aaron Johnson representing Patient Fire Safety Coalition, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1105.3.2 Fire-resistance rating. ~~Unless required elsewhere in the code, corridor walls are not required to have a fire-resistance rating.~~ Unless otherwise approved, corridor walls that were installed as fire-resistance rated assemblies in accordance with the applicable codes under which the building was constructed, remodeled, or altered shall be maintained as such, but shall at no time be permitted to be less than 1/2 hour rated.

1105.3.4.1 Windows. Windows in corridor walls shall be sealed to resist the free passage of smoke, or the window shall be automatic closing upon detection of smoke, or the window opening shall be protected by an automatic closing device that closes upon detection of smoke.

> **Exception:** In smoke compartments not containing patient sleeping rooms, unprotected pass-through windows or similar openings shall not be ~~permitted in accordance with Section 1105.3.4.3~~ required to be protected where the openings are not greater than 80 square inches (51 613 mm).

~~**1105.3.4.3 Openings in corridor walls and doors.** Mail slots, pass through windows or similar openings shall not be required to be protected where the aggregate area of the openings between the corridor and a room are not greater than 80 square inches (51 613 mm) and are located with the top edge of any opening no higher than 48 inches above the floor.~~

1105.3.5 Penetrations. The space around penetrating items shall be filled with an *approved* material to limit the free passage of smoke. Where the corridor wall is being maintained as a fire-resistance-rated assembly, penetrations shall be firestopped in accordance with Section 714 of the *International Building Code*.

1105.3.6 Joints. Joints shall be filled with an *approved* material to limit the free passage of smoke.

1105.3.7 Ducts and air transfer openings. The space around a duct penetrating a smoke partition shall be filled with an *approved* material to limit the free passage of smoke. Air transfer openings in smoke partitions shall be provided with a *smoke damper* complying with Section 717.3.2.2 of the International Building Code.

> **Exception:** Where the installation of a *smoke damper* will interfere with the operation of a required smoke control system in accordance with Section 909, *approved* alternative protection shall be utilized.

(Portions of proposal not shown remain unchanged.)

Commenter's Reason: The proposed requirement in 1105.3.2 for corridor walls that were mandated to be fire resistance rated at the time of original construction to have their fire rating maintained is consistent with other sections of this code (e.g. 107.1, 701.2). The relaxation to allow the fire resistance rating to be as low as ½ hour is consistent with NFPA 101 (19.3.6.2.2), which would therefore aid in the harmonization with the Life Safety Code that the AdHoc Healthcare Committee has been seeking. The additional new text relating to fire-rated corridors will help ensure that the code official does not overlook the need for possible fire ratings where the building was built or renovated with such rated walls.

Where the corridor walls do have a fire resistance rating, maintain their ability to stop the passage of fire and smoke despite having numerous penetrations for utilities and other through-penetrations would require those penetrations to be suitably sealed. Thus, 1105.3.5 is modified to point the user to the International Building Code, where detailed requirements are provided for the proper sealing of those penetrations.

The AdHoc Committee for Healthcare has stated that they are bringing forth these proposals to more closely align with CMS requirements. However, as CMS conducts life safety inspections based on NFPA codes and standards this change is not consistent with their stated desired alignment. NFPA 101:19.3.6.2.3 states, "Corridor walls shall form a barrier to limit the transfer of smoke." Other relevant sections of NFPA 101 restrict the usage of louvers in corridor doors and limit the clearance at the bottom of the doors to a maximum of 1 inch. The proposed unprotected 80 square inch unprotected openings are completely inconsistent with the NFPA 101 measures designed to keep smoke from traveling unimpeded between corridors and patient rooms.

Public Comment 2:

William E. Koffel, P.E., Koffel Associates, Inc., representing Firestop Contractors International Association (FCIA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1105.3.3 Corridor Walls Continuity. Corridor walls shall extend from the top of the foundation or floor below to one of the following:

1. The underside of the floor or roof sheathing, deck or slab above.
2. The underside of a ceiling above where the ceiling membrane is constructed to limit the passage of smoke.
3. The underside of a lay-in ceiling system where the ceiling system is constructed to limit the passage of smoke and where the ceiling tiles weigh at least one pound per square foot of tile.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The intent is that the ceiling system, either the ceiling membrane (Item 2) or the lay-in ceiling system (Item 3), is required to limit the passage of smoke. The proposed revision merely clarifies that some type of open ceiling tile that happens to weigh one pound per square foot is not acceptable. Likewise, a ceiling system with openings serving a plenum would not be acceptable, even if the ceiling tiles weighed one pound per square foot.

Public Comment 3:

William E. Koffel, P.E., Koffel Associates, Inc., representing Firestop Contractors International Association (FCIA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1105.3.2 Fire-resistance rating. Unless required by Sections 1103 and 1104 ~~elsewhere in the code~~, corridor walls are not required to have a fire-resistance rating.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The intent is to provide a more specific reference for the user of the Code as to where one might find requirements for a fire-resistance rating for a corridor in a Group I-2 occupancy. Sections 1103 and 1104 both contain language regarding maintaining fire resistance ratings for corridors when the building was originally constructed with corridors having a fire resistance rating.

Public Comment 4:

William E. Koffel, P.E., Koffel Associates, Inc., representing Firestop Contractors International Association (FCIA), requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1105.3.4.3 Openings in corridor walls and doors. In other than smoke compartments containing patient sleeping rooms, m~~M~~ail slots, pass through windows or similar openings shall not be required to be protected where the aggregate area of the openings between the corridor and a room are not greater than 80 square inches (51 613 mm^2) and are located with the top edge of any opening no higher than 48 inches above the floor.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: A similar provision existing in NFPA 101, *Life Safety Code*, and is based upon computer calculations of smoke flow through an opening. The calculations assumed a fire in a room adjacent to the corridor and the quantity of smoke that might flow into a corridor. The NFPA Life Safety Technical Committee on Health Care Occupancies did not consider the scenario where smoke may be in the corridor and the openings may allow the smoke to migrate into adjacent patient sleeping rooms. Using the "defend in place" philosophy, allowing such openings in a corridor wall could result in the need to evacuate or relocate more patients than anticipated and that relocation would be through a corridor in which there is considerable smoke. The smoke resistant separation between the corridor and the patient sleeping room should be maintained.

Public Comment 5:

Vickie Lovell, Intercode, Inc., representing Fire Safe North America, formerly known as Alliance For Fire and Smoke Containment and Control, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1105.3.2 Fire-resistance rating. Unless required ~~elsewhere in the~~ by Section 1104 of this code, or required by a previously approved code, corridor walls are not required to have a fire-resistance rating.

(Portions of proposal not shown remain unchanged)

Commenter's Reason: The intent of this code change is a useful addition to the fire code because it attempts to address very old building hospital designs that did not recognize the importance of containing smoke migration to a limited area, and leaves paths of egress such as corridors unprotected.

Although the current fire code does not require existing corridors to have a fire rating (only to limit smoke), legacy building codes did. There are a significant number of hospitals that are not sprinklered that maintain fire rated corridors.

The flaw with the proposal as currently written is that it could be interpreted to mean that ALL corridors (rated and non rated) in existing hospitals (sprinklered and un-sprinklered) can be modified to simply limit smoke.

Although Section 703.1 of the fire code could prevent an incorrect interpretation from occurring, this modification to the proposal clarifies that existing I-2s would continue to maintain the integrity of the fire resistance ratings of the corridors IF such ratings were required under this code or an older code to which the hospital was built. A public comment is submitted on F98 that fortifies the requirement for the maintenance provision of existing fire rated assemblies and fire protection ratings.

Public Comment 6:

John Valiulis, Hilti, Inc., requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1105.3 Corridor construction. In Group I-2, in areas housing patient sleeping or care rooms, corridor walls and the opening protectives therein shall provide a barrier designed to resist the passage of smoke in accordance with Sections 1105.3.1 through 1105.3.7. Where the provisions of this section conflict with the construction requirements that applied at the time of construction, the most restrictive provision shall apply.

1105.3.1 Materials. The walls shall be of materials permitted by the building type of construction.

1105.3.2 Fire-resistance rating. ~~Unless required elsewhere in the code, corridor walls are not required to have a fire-resistance rating.~~ Corridor walls shall be maintained to provide the fire resistance rating that was provided at the time of construction, unless approved otherwise.

(Portions of proposal not shown remain unchanged)

Commenter's Reason:

Fire code should be just as clear and easy to apply to all buildings, sprinklered and unsprinklered

~40% of hospitals are estimated to be unsprinklered
The latest statistics published by the NFPA (Fires in Healthcare Facilities, Ahrens, M., Nov 2012), covering the period 2006-2010, indicate that sprinklers were present in 55% of reported healthcare fires. Making the simplifying assumption that fires occur at about the same frequency in sprinklered and non-sprinklered buildings, this would mean that roughly 45% of hospitals are unsprinklered. Even with progress on sprinklering between 2010 and 2013 (which may have been minimal due to the recession), the percentage of unsprinklered hospitals can be safely assumed to be in the range of about 40%.

Since the Fire Code applies to existing buildings, it must be written to allow clear and correct application of code mandates for buildings as they exist today. The wording developed for code change proposal F239, which only ever requires smoke resistance, and not fire resistance, therefore suitably covers the topic of corridor walls only if all hospitals were built with sprinklers. The provision of smoke resistance alone, without fire resistance, was never accepted by any of the legacy codes for corridor walls in unsprinklered healthcare facilities. Thus, the originally proposed wording for F239 did a disservice to the hope of proper code enforcement in existing hospitals, since the inspectors are likely to be dealing with unsprinklered hospitals about 40% of the time, and need some code sections to clearly and unambiguously allow them to enforce corridor fire resistance requirements (when applicable) for existing non-sprinklered hospitals.

1105.3.2 is revised to default to fire rating equal to that mandated at time of construction
Section 1105.3.2 therefore needs to provide some minimal guidelines to ensure that the corridor walls in non-spriinklered healthcare facilities are suitably verified to have the required fire resistance rating. The three legacy codes, plus NFPA 101, all required 1-hour rated corridors in unsprinklered hospitals for several decades prior to the advent of the IBC. It does a disservice to the novice fire inspector to start with the assumption in 1105.3.2 that "corridor walls are not required to have a fire resistance rating", which would likely be correct only about 60% of the time. Rather, the starting point would much more accurately be that the fire resistance of the corridor wall in an existing building will be as it was required to be in the code under which the building was built. Thus, 1105.3.2 is proposed to be revised to more broadly start with that statement, which would then be true for 100% of the corridor walls. If there was no building code or fire code requiring corridor fire resistance at the time of construction, then the various provisions listed here for smoke resistance would be the ones setting the minimum performance requirements.

New text at the end of Section 1105.3 makes it clear that original construction requirements are not superseded by the lower requirements here
The other revision proposed for F239 is the addition of a new sentence for the entire section 1105.3 on corridors, to state that where any of the numerous minimum construction requirements listed here (e.g. for doors, openings, penetrations, joints, ducts) conflict with the requirements that were in effect when the walls were originally built, that the most restrictive provision shall apply. This would then adequately cover the ~40% of healthcare facilities that are not sprinkler protected, and likely had some fire resistance requirements to meet within the corridor walls. This wording provides the language that the fire official needs to be able to reference in order to enforce the maintenance of the building to the level of fire safety that it was

constructed, making it clear that the code requirements listed in this section do not create a new lower minimum level of performance for the existing construction. As is typical for the Fire Code, the provisions listed here provide minimum requirements to which a building would need to be upgraded if it had not already met the more stringent requirements of a previous code.

Many of the other articles proposed in code change proposal F239 could also benefit from a revision to indicate what the minimum requirements would be in the case where the corridor wall was built to comply with a fire resistance rating. However, the over-arching new text in Section 1105.3 avoids the need to do that, as it's a blanket statement that would apply to all of this proposed new section's requirements.

It may be argued that dealing with the corridor construction requirements for unsprinklered hospitals is unnecessary, as all hospitals are supposed to be sprinklered, and even if they are not today, that they all will be some year soon. With a substantial portion of hospitals not being sprinklered today, it certainly makes sense to include clear and consistent guidance for how to enforce fire code requirements for those buildings. However, if the percent unsprinklered ever dwindles to some insignificant percent in the future, then the fire code articles dealing with unsprinklered buildings could be proposed for removal from the IFC at that time.

Public Comment 7:

Tony Crimi, A.C. Consulting Solutions Inc., representing International Firestop Council (IFC), requests Disapproval.

Commenter's Reason: This proposal seeks to carve out a separate set of provisions for Group I-2 Hospitals that differs from how other occupancies are treated under Chapter 11. This proposal appears to assume that the Group I-2 fire area is sprinklered, and therefore it offers design alternatives that are sprinkler tradeoffs in the IBC whether the facility is sprinklered or not. This is highlighted in the proponents supporting statement, which indicates the following:

> "The changes also provide tradeoffs for automatic sprinkler systems consistent with those allowed for new construction and also with those allowed by CMS. **In no way does this affect the existing requirement that existing, approved construction must be maintained in the manner that it was approved.** It simply provides a tool for evaluating historical construction techniques."

According to the NFPA "Report on Fires in Health Care Facilities" published November 2012, between 2006 and 2010, Sprinklers were present in only 55% of reported health care fires[1]. The fact remains that many existing I-2 occupancies are not sprinklered throughout.

But, nowhere in this code section does it ever state that the building mist be sprinklered for this section to apply. Without a precondition that the facility be sprinklered before any of these design alternatives can be acceptable, this becomes an unprecedented reduction of hospital fire safety features.

This substantiation is not consistent with the proposed changes. As indicated in the preceding sentence, in this proposal, tradeoffs for automatic sprinkler systems consistent with those allowed for new construction and with those allowed by CMS are provided even if sprinklers are not installed. This is in conflict with the IBC and CMS requirements and would produce a level of protection that is clearly different than "the manner that it was approved". The proponents do not provide the Technical justification for many of these relaxations, and do not provide a review of other complimentary required features that would be omitted here, but required in new construction. Instead, the proponents cite a coordination effort to correlate the IFC with Federal Center for Medicaid and Medicare Services (CMS) healthcare regulations.

In addition, the requirements are too vague to allow consistent compliance and enforcement. Some examples are as follows:

1105.3.3 Corridor Walls - How does the Fire Official determine the weight of the ceiling tiles? Will he be measuring each tile on site? Also, the 1 lbs/sq. ft. minimum weight requirement comes from requirements for Fire Resistance Rated assemblies. No evidence has been provided that this bears any relationship to limiting the passage of smoke. According to industry representatives, the majority of Class A ceiling tiles sold in the US today would not meet the 1 lbs/sq. ft. threshold.

1105.3.4.2.2 Corridor doors - Item (1) indicates that doors may be "capable of resisting fire for a minimum of 1/3 hours". "Resisting fire" is not an enforceable term that would connect to any specific fire resistance or fire protection test. Does that mean they need a 1/3h fire protection rating per the IBC, or a 1/3 hour fire resistance rating, or is an adhoc onsite "match test" sufficient?

1105.3.4.3 Openings in corridor walls and doors - There is no justification provided for permitting 80 square inch unprotected openings for every single patient room for mail slots, pass through windows, or other similar openings. Hospital corridors have needed to be fire partitions per the legacy codes in unsprinklered facilities, and corridors are required to be smoke partitions in the IBC, capable of restricting the movement of smoke between patient rooms and the corridors. Allowing unprotected holes up to 80 square inches to exist in every single room's corridor wall would completely invalidate the effectiveness of either fire partition walls or smoke partition walls for the corridors. There has been no substation provided to show that the condition would be safe, nor has there been any effort to show some overwhelming need for such large, frequent and unprotected holes that would trump the need for fire safety.

Contrary to the tone of the proponents supporting statement, statistics show that fires do occur in Group I occupancies on a regular basis. According to the NFPA "Report on Fires in Health Care Facilities" published November 2012, between 2006 and 2010, U.S. fire departments responded to an estimated average of 6,240 structure fires in or on health care properties per year.

These fires caused an average of six civilian deaths, 171 civilian injuries and $52.1 million in direct property damage annually. Almost half (46%) were at nursing homes, and almost one-quarter (23%) were in hospitals or hospices. To put these numbers into a larger perspective, during 2006-2010, the 6,240 **fires in health care properties accounted for 1.2% of the 506,400 structure fires in the US[1].**

[1] Source: NFPA "Fires in Health Care Facilities" Author: Marty Ahrens Issued: November 2012, National Fire Protection Association Fire Analysis and Research Division

Public Comment 8:

Aaron Johnson, representing Patient Fire Safety Coalition, requests Disapproval.

Commenter's Reason: Two primary portions of this proposal that are in direct conflict with the goals of fire and life safety are sections 1105.3.2 and 1105.3.4.3.

Section **1105.3.2** states that "unless required elsewhere in *this* code, corridor walls are not required to have a fire-resistance rating." The IFC never actually requires any specific wall to have a given fire rating, therefore, this requirement essentially points to nothing at all. As this proposal, also, is not predicated on sprinkler protection or anything else, the easiest and most common interpretation of this code will be that "no corridor needs a fire rating."

There are no fire-resistance ratings specifically mandated within the IFC, for sprinklered occupancies or non-sprinklered. Only the IBC sets requirements for fire-resistance rated corridors, and in fact, the IBC presupposes that I-2 occupancies are sprinklered so no rated corridor is called out. Rated corridors are only called out in the legacy codes which applied at the time of new construction.

The building codes which applied at the time of construction are what required these fire rated corridors, not this fire code. On what basis can these corridors now be blindly abandoned? It is unknown what provisions were made, or local standards applied at the time of original construction.

Nowhere in this proposal does it point back to IFC 701.2 or 107.1, which state that any required fire resistant components are to be maintained to the codes to which the building was originally built, remodeled, or altered too. Based on my own nearly 10 years of experience as a municipal inspector, I would conclude that it is highly likely that the intent of 1105.3.2 will surely be misinterpreted by local officials to mean that "no corridor needs a fire rating", thus creating an unsafe condition.

Section **1105.3.4.3** allows for completely unprotected slots and pass-through openings in corridor walls and doors. The openings are not required to have any type of closure, neither automatic nor manual, and can be permanently open The code works as a system. Whether a given corridor wall is a fire partition, due to construction under a legacy code, or is a smoke partition, that egress corridor wall is part of a system. A hospital corridor wallis always designed to limit the spread of fire or smoke. To henceforth allow 80 square inch unprotected holes in the corridor wall at every patient room is in disagreement with IFC 703.1.3 that states that all fire walls, barriers, and partitions shall be maintained to prevent the passage of fire, and is in disagreement with 703.1.2 that states that all smoke partitions shall be maintained to prevent the passage of smoke. Allowing these openings will enhance the spread of fire and smoke, naturally seeking the path of least resistance, throughout the facility.

The AdHoc Committee for Healthcare has stated that they are bringing forth these proposals to more closely align with CMS requirements. However, as CMS conducts life safety inspections based on NFPA codes and standards this change is not consistent with their stated desired alignment. NFPA 101:19.3.6.2.3 states, "Corridor walls shall form a barrier to limit the transfer of smoke." Other relevant sections of NFPA 101 restrict the usage of louvers in corridor doors and limit the clearance at the bottom of the doors to a maximum of 1 inch. The proposed unprotected 80 square inch unprotected openings are completely inconsistent with the NFPA 101 measures designed to keep smoke from traveling unimpeded between corridors and patient rooms.

F239-13
Final Action: AS AM AMPC____ D

F241-13
1105.5 (New)

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care (john.williams@doh.wa.gov)

Add new text as follows:

SECTION 1105

CONSTRUCTION REQUIREMENTS FOR EXISTING GROUP I-2

1105.5 Smoke compartments. Smoke compartments shall be provided in existing Group I-2 Condition 2, in accordance with Sections 1105.5.1 through 1105.5.4.

1105.5.1 Design. Smoke barriers shall be provided to subdivide each story used for patients sleeping with an occupant load of more than 30 patients into no fewer than two smoke compartments.

1105.5.1.1 Refuge areas. Refuge areas shall be provided within each smoke compartment. The size of the refuge area shall accommodate the occupants and care recipients from the adjoining smoke compartment. Where a smoke compartment is adjoined by two or more smoke compartments, the minimum area of the refuge area shall accommodate the largest occupant load of the adjoining compartments.

The size of the refuge area shall provide the following:

1. Not less than 30 net square feet (2.8 m^2) for each care recipient confined to bed or stretcher.
2. Not less than 15 square feet (1.4 m^2) for each resident in a Group I-2 using mobility assistance devices.
3. Not less than 6 square feet (0.56 m^2) for each occupant not addressed in Items 1 and 2.

Areas of spaces permitted to be included in the calculation of the refuge area of corridors, sleeping areas, treatment rooms, lounge or dining areas and other low-hazard areas.

1105.5.2 Smoke barriers. Smoke barriers shall be constructed in accordance with Section 709 of the *International Building Code*.

Exceptions:

1. Existing smoke barriers with a minimum of 1/2 –hour fire-resistance rating are permitted to remain.
2. Smoke barriers shall be permitted to terminate at an atrium enclosure in accordance with Section 404.6 of the *International Building Code.*

1105.5.3 Opening protectives. Openings in smoke barriers shall be protected in accordance with Section 716 of the *International Building Code*. Opening protectives shall have a with a minimum fire-protection-rating of 1/3 hours.

Exception: Wired glass vision panels in doors shall be permitted to remain.

1105.5.4 Duct and air transfer openings. Penetrations in a smoke barrier by duct and air transfer openings shall comply with Section 717 of the *International Building Code*.

Exception: Where existing duct and air transfer openings in smoke barriers exist without smoke dampers, they shall be permitted to remain. Any changes to existing smoke dampers shall be submitted for review and approved in accordance with IBC Section 717 of the *International Building Code*.

Reason: This change adds minimum requirements for existing hospitals (Group I-2, Condition 2) into Chapter 11. The intent is to increase the bare minimum safety requirements due to the fragile and sensitive populations within these facilities. These requirements are meant to be applied retroactively. This is not a new concept for these facilities – it aligns with the current approach by the Center for Medicaid and Medicare Services (CMS), the federal authority having jurisdiction. Hospitals are now required by CMS to have a life safety survey on a regular basis. If the facility does not meet certain life safety minimums, they are required to upgrade their existing facility. This code change will align the Fire Code with those CMS minimum requirements and will hopefully lead to industry consolidation. These retroactive requirements are added to assist code officials and surveyors during the ongoing regular inspection of hospital facilities and are consistent with the inspections required by federal laws for certification and reimbursement. The requirements consider the minimum previously approved construction methods. These requirements will

provide jurisdictions the ability to adopt minimum retroactive provisions that have been vetted by the industry as well as code officials and that are consistent with current national standards used by the Federal Government providing a more uniform level of safety and eliminating many of the current code conflicts for existing facilities.
We looked at several sources to determine what the appropriate minimum bar should be, including the current building and fire code, current CMS guidelines, and previous versions of the ICC and model codes. On all issues, enforcement agencies and the regulated facilities weighed in to ensure that these changes are both necessary and achievable.

This provision is written in regard to the design, construction and application of smoke compartments for Group I-2 hospital facilities. Smoke compartments are a key component of the defend in place strategy, a strategy where victims are protected from fire without relocation, used in healthcare facilities to limit the movement of smoke. These compartments act as safe locations for patients by preventing the spread of smoke. Through compartmentalization, patients may remain safely in their rooms as fire suppression systems and fire responders extinguish the fire. Under severe fire conditions that threaten the immediate compartment area, patients may be evacuated horizontally to the safety of an adjacent compartment on the same floor. Being able to do this is critical since due to the health status of many patients their evacuation from the building might put them in grave danger. The proper design, construction and application of smoke compartments will provide added protection, buy valuable time and save lives of critically ill patients before a total evacuation may become necessary.

These retroactive requirements are added to assist code officials and surveyors during the ongoing regular inspection of hospital facilities. These inspections are required by federal laws for certification and reimbursement. This requirement considers the minimum previously approved construction methods. This is consistent with the federal requirements that these facilities are currently held too. Specific concepts include:

- 1105.5 Smoke compartments – The defend-in-place concept is a basic minimum level of safety for these facilities. Every facility should be equipped at least two smoke compartments for temporary relocation of patients.
- 1105.5.1 Design - This section addresses existing acceptable configuration of smoke barrier walls and smoke barriers for existing hospitals in areas with sleeping rooms.
- 1105.5.1.1 Refuge area – Addresses adequate sizing of refuge areas. IBC 407.5.1 also includes requirements for independent egress and horizontal assemblies.
- 1105.5.2 Smoke barriers – The intent is to bring noncompliant smoke barriers to at least ½ hour fire resistance rating. Previously approved smoke barriers are not intended to be reduced to ½. Chapter 7 of the IFC would require maintenance of approved construction.
- 1105.5.3 Opening protectives - Address doors in smoke barriers in existing Group I-2 occupancies. Reference to 716 is so you that don't loose other requirements.
- 1105.5.4, Guides the inspector of existing facilities on how they would look at opening protectives. Smoke dampers have not always been required in hospitals, and the 2015 IBC would not require them. Therefore, in those hospitals that were originally approved without smoke dampers required, that condition is allowed to remain in place. Any modification of existing smoke dampers would have to go throught he normal process for making an alteration to existing construction.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

Cost Impact: None

1105.5 (NEW)-F-WILLIAMS-ADHOC

EB33-13
804.4.1.3

Proposed Change as Submitted

Proponent: John Williams, CBO, Chair, ICC Ad Hoc Committee on Healthcare (John.Williams@DOH.WA.GOV) and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee (cbaldassarra@rjagroup.com)

Revise as follows:

804.4.1 Occupancy requirements. A fire alarm system shall be installed in accordance with Sections 804.4.1.1 through 804.4.1.7. Existing alarm-notification appliances shall be automatically activated

throughout the building. Where the building is not equipped with a fire alarm system, alarm-notification appliances within the *work area* shall be provided and automatically activated.

Exceptions:

1. Occupancies with an existing, previously approved fire alarm system.
2. Where selective notification is permitted, alarm notification appliances shall be automatically activated in the areas selected.

804.4.1.3 Group I-2. A fire alarm system shall be installed in work areas of Group I-2 occupancies as required by the International Fire Code for ~~existing~~ new Group I-2 occupancies.

Reason: This proposed change is a joint proposal from the ICC Ad Hoc Committee on Healthcare (AHC) and the Code Technology Committee (CTC). The scope of the AHC deals with Group I-2 hospitals (now Group I-2 Condition 2 as a result of approved code change G257-12) and the scope of the CTC's investigation of the area of study entitled "Care Facilities" addresses Group I-1 and Group I-2 Condition 1 (nursing homes).

This section in the IEBC refers you to the IFC for fire alarm requirements in existing buildings undergoing a Level 2 Alteration. Section 1103.7.3 of the IFC refers back to the new construction requirements of Section 907.2.6.2. This proposal removes the circuitous references by stipulating that the fire alarm system needs to be installed as required for new construction.

This is a joint proposal submitted by the ICC Ad Hoc Committee for Healthcare and the ICC Code Technology Committee.

The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. This proposal is submitted by the ICC Code Technology Committee. The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The 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/CTC/Pages/default.aspx. Since its inception in April/2005, the CTC has held twenty-five meetings - all open to the public. In 2012, three of the 25 face-to face meetings were held. In addition to the CTC meetings, the CTC established Study Groups (SG) of interested parties for each of the areas of study. These SG's are responsible for reviewing the available information and making recommendations to the CTC. All totaled, the SG's held over 70 conference calls in 2012.

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

804.4.1.3-EB-BALDASSARRA-WILLIAMS-ADHOC.doc

Committee Action Hearing Results

Committee Action: **Disapproved**

Committee Reason: This proposal was felt to conflict with the IFC for existing Group I-2 occupancies. Other concerns related to the fact that this provision should be dealt with in the change of occupancy requirements for new installations.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee, request Approval as Modified by this Public Comment.

Replace the proposal as follows:

804.4.1 Occupancy requirements. A fire alarm system shall be installed in accordance with Sections 804.4.1.1 through 804.4.1.7. Existing alarm-notification appliances shall be automatically activated throughout the building. Where the building is not equipped with a fire alarm system, alarm-notification appliances within the *work area* shall be provided and automatically activated.

Exceptions:

1. Occupancies with an existing, previously approved fire alarm system.
2. Where selective notification is permitted, alarm notification appliances shall be automatically activated in the areas selected.

804.4.1.3 Group I-2. A fire alarm system shall be installed ~~in work areas of~~ throughout Group I-2 occupancies as required by the International Fire Code ~~for existing Group I-2 occupancies~~.

Commenter's Reason: The proposal was not intended to address new vs. existing occupancies. The intent is to send the designer to the correct location for fire alarms as required in IFC and maintaining correlation in the codes. Section 804.4.1 could be confusing for designers. Fire Codes and CMS require fire alarms throughout a Group I-2 already. See IFC Section 907.2.6.2 reprinted below. By virtue of this reference the difference is that you will pick up manual fire alarm pull stations. Note that the existing requirements in Section 1103.7 would permit a previously approved fire alarm system to remain. Whereas, this proposed language would require the fire alarm system to be upgraded to new standards based on rehabilitation work.

907.2.6.2 Group I-2. An automatic smoke detection system shall be installed in *corridors* in nursing homes, long-term care facilities, detoxification facilities and spaces permitted to be open to the *corridors* by Section 407.2 of the *International Building Code*. The system shall be activated in accordance with Section 907.5. Hospitals shall be equipped with smoke detection as required in Section 407 of the *International Building Code*.

Exceptions:

1. *Corridor* smoke detection is not required in smoke compartments that contain *sleeping units* where such units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the *corridor* side of each *sleeping unit* and shall provide an audible and visual alarm at the care provider station attending each unit.
2. *Corridor* smoke detection is not required in smoke compartments that contain *sleeping units* where *sleeping unit* doors are equipped with automatic door-closing devices with integral smoke detectors on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.

EB33-13
Final Action: AS AM AMPC____ D

EB46-13
902.2, 902.2.1

Proposed Change as Submitted

Proponent: Carl Baldassarra, P.E., Chair, ICC Code Technology Committee

Revise as follows:

902.2 Boiler and furnace equipment rooms. Boiler and furnace equipment rooms adjacent to or within Groups I-1, I-2, I-4, R-1, R-2 and R-4 occupancies ~~the following facilities~~ shall be enclosed by 1-hour fire-resistance-rated construction: ~~day nurseries, children's shelter facilities, residential childcare facilities, and similar facilities with children below the age of 21/2 years or that are classified as Group I-2 occupancies, shelter facilities, residences for the developmentally disabled, group homes, teaching family homes, transitional living homes, rooming and boarding houses, hotels, and multiple dwellings~~ .

Exceptions:

1. ~~Furnace and~~ Steam boiler equipment ~~of low-pressure type,~~ operating at pressures of 15 pounds per square inch gauge (psig) (103.4 KPa) or less ~~for steam equipment or~~ is not required to be enclosed.
2. Hot water boilers operating at pressures of 170 psig (1171 KPa) or less ~~for hot water equipment, when installed in accordance with manufacturer recommendations~~ are not required to be enclosed.
3. ~~2.~~ Furnace and boiler equipment ~~of residential R-3 type~~ with ~~200,000~~ 400,000 British thermal units (Btu) (~~2.11~~ 4.22 × 108 J) per hour input rating or less is not required to be enclosed.
4. ~~3.~~ Furnace rooms protected with automatic ~~sprinkler protection~~ fire-extinguishing system are not required to be enclosed.

~~**902.2.1 Emergency controls.** Emergency controls for boilers and furnace equipment shall be provided in accordance with the *International Mechanical Code* in all buildings classified as day nurseries, children's shelter facilities, residential childcare facilities, and similar facilities with children below the age of 21/2 years or that are classified as Group I-2 occupancies, and in group homes, teaching family homes, and supervised transitional living homes in accordance with the following:~~

1. ~~Emergency shutoff switches for furnaces and boilers in basements shall be located at the top of the stairs leading to the basement; and~~
2. ~~Emergency shutoff switches for furnaces and boilers in other enclosed rooms shall be located outside of such room.~~

Reason: The list of occupancies is outdated and unclear in both Section 902.2 and 902.2.1. The exceptions in 902.2 should be consistent with IBC Table 508.2.5 for new construction, not have a much lower threshold for renovations versus new. The remainder of the revisions is a clarification of the existing language. Emergency controls for boilers and furnace equipment is never required in the IMC, so Section 902.2.1 should be deleted.

The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The 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/CTC/Pages/default.aspx. Since its inception in April/2005, the CTC has held twenty five meetings - all open to the public.

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

902.2-EB-BALDASSARRA-CTC.doc

Committee Action Hearing Results

Committee Action: **Approved as Submitted**

Committee Reason: This proposal was approved as it fixes out dated descriptions of occupancies that are now clearly addressed by the IBC. These revisions were felt to make application of the I-Codes more consistent.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment:

Jeffrey M. Hugo, CBO, National Fire Sprinkler Association, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

902.2 Boiler and furnace equipment rooms. Boiler and furnace equipment rooms adjacent to or within Groups I-1, I-2, I-4, R-1, R-2 and R-4 occupancies shall be enclosed by 1-hour fire-resistance-rated construction:

Exceptions:

1. Steam boiler equipment operating at pressures of 15 pounds per square inch gauge (psig) (103.4 KPa) or less or is not required to be enclosed.
2. Hot water boilers operating at pressures of 170 psig (1171 KPa) or less are not required to be enclosed.
3. Furnace and boiler equipment of with 400,000 British thermal units (Btu) (4.22 × 108 J) per hour input rating or less is not required to be enclosed.
4. Furnace rooms protected with an automatic sprinkler ~~fire-extinguishing~~ system are not required to be enclosed.

Commenter's Reason: The term "automatic sprinkler system" is consistent with Table 509 (or Table 508.2 in 2009 IBC).

EB46-13
Final Action: AS AM AMPC____ D

F360-13
908.7 (IBC [F]908.7) through 908.7.7 (IBC [F]908.7.7) (New); 1103.9; 202

Proposed Change as Submitted

Proponent: Adolf Zubia. Chairman IAFC Fire and Life Safety Section, representing ICC Fire Code Action Committee (azubiamia@yahoo.com)

Delete Sections 908.7 (IBC [F]908.7) and 908.7.1 (IBC [F]908.7.1) in their entirety and substitute as follows:

~~**908.7 (IBC [F]908.7) Carbon monoxide alarms.** Group I or R occupancies located in a building containing a fuel-burning appliance or in a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in Chapter 2 of the *International Building Code*, or an enclosed parking garage ventilated in accordance with Section 404 of the *International Mechanical Code* shall not be considered an attached garage.~~

~~**Exception:** *Sleeping units* or *dwelling units* which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:~~

1. ~~The *sleeping unit* or *dwelling unit* is located more than one story above or below any story which contains a fuel-burning appliance or an attached garage;~~
2. ~~The *sleeping unit* or *dwelling unit* is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and~~
3. ~~The building is equipped with a common area carbon monoxide alarm system.~~

~~**908.7.1 (IBC [F]908.7.1) Carbon monoxide detection systems.** Carbon monoxide detection systems, which include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be *listed* as complying with UL 2075.~~

908.7 (IBC [F]908.7) Carbon monoxide alarms. Carbon monoxide alarms shall be installed in new buildings in accordance with Sections 908.7.1 through 908.7.7. Carbon monoxide alarms shall be installed in existing buildings in accordance with Section 1103.9.

908.7.1 (IBC [F]908.7.1) Where required. Carbon monoxide alarms shall be provided in Group I-1, I-4, and R occupancies in the locations specified in 908.7.2 where any of the conditions in Sections 908.7.1.1 through 908.7.1.4 exist.

908.7.1.1 (IBC [F]908.7.1.1) Fuel-burning appliances and fuel burning fireplaces. Carbon monoxide alarms shall be provided in dwelling units and sleeping units that contain a fuel-burning appliance or a fuel burning fireplace.

908.7.1.2 (IBC [F]908.7.1.2) Forced air furnaces. Carbon monoxide alarms shall be provided in dwelling units and sleeping units served by a fuel-burning, forced air furnace.

908.7.1.3 (IBC [F]908.7.1.3) Fuel burning appliances outside of dwelling units and sleeping units. Carbon monoxide alarms shall be provided in dwelling units and sleeping units located in buildings that contain fuel-burning appliances or fuel burning fireplaces.

Exception:

1. Carbon monoxide alarms shall not be required in dwelling units and sleeping units if there are no communicating openings between the fuel-burning appliance or fuel burning fireplace and the dwelling unit or sleeping unit.
2. Carbon monoxide alarms shall not be required in dwelling units and sleeping units if a carbon monoxide alarm is provided:
   2.1 In an approved location between the fuel burning appliance or fuel burning fireplace and the dwelling unit or sleeping unit, or
   2.2 On the ceiling of the room containing the fuel burning appliance or fuel burning fireplace.

908.7.1.4 (IBC [F]908.7.1.4) Private garages. Carbon monoxide alarms shall be provided in dwelling units and sleeping units in buildings with attached private garages.

Exceptions:

1. Carbon monoxide alarms shall not be required if there are no communicating openings between the private garage and the dwelling unit or sleeping unit.
2. Carbon monoxide alarms shall not be required in dwelling units and sleeping units located more than one story above or below a private garage.
3. Carbon monoxide alarm shall not be required if the private garage connects to the building through an open-ended corridor.

908.7.1.4.1 (IBC [F]908.7.1.4.1) Exempt garages. For determining compliance with Section 908.7.1.4, an *open parking garage*, complying with Section 406.5 of the *International Building Code*, or an *enclosed parking garage* complying with Section 406.6 of the *International Building Code* shall not be considered a private garage.

908.7.2 (IBC [F]908.7.2) Locations. Where required by Section 908.7.1, carbon monoxide alarms shall be installed in the locations specified in Sections 908.7.2.1 through 908.7.2.2.

908.7.2.1 (IBC [F]908.7.2.1) Dwelling units. Carbon monoxide alarms shall be installed in dwelling units outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

908.7.2.2 (IBC [F]908.7.2.2) Sleeping units. Carbon monoxide alarms shall be installed in sleeping units.

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

908.7.3 (IBC [F]908.7.3) Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exception: Where installed in buildings without commercial power, battery powered carbon monoxide alarms shall be an acceptable alternative.

908.7.4 (IBC [F]908.7.4) Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034.

908.7.5 (IBC [F]908.7.5) Combination alarms. Combination carbon monoxide/smoke alarms shall be an acceptable alternative to carbon monoxide alarms. Combination carbon monoxide/smoke alarms shall be listed in accordance with UL 2034 and UL 217.

908.7.6 (IBC [F]908.7.6) Carbon monoxide detection systems. Carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide alarms and shall comply with Sections 908.7.6.1 through 908.7.6.3.

908.7.6.1 (IBC [F]908.7.6.1) General. Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.

908.7.6.2 (IBC [F]908.7.6.2) Locations. Carbon monoxide detectors shall be installed in the locations specified in Section 908.7.2. These locations supersede the locations specified in NFPA 720.

908.7.6.3 (IBC [F]908.7.6.3) Combination detectors. Combination carbon monoxide/smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors, provided they are listed in accordance with UL 2075 and UL 268.

908.7.7 Maintenance. Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end-of-life signals shall be replaced.

Add new text as follows:

SECTION 202
GENERAL DEFINITIONS

[B] PRIVATE GARAGE. A building or portion of a building in which motor vehicles used by the tenants of the building or buildings on the premises are stored or kept, without provisions for repairing or servicing such vehicles for profit

Revise as follows:

1103.9 Carbon monoxide alarms. Existing Group ~~I~~ I-1, I-4 and ~~or~~ R occupancies ~~located in a building containing a fuel-burning appliance or a building which has an attached garage~~ shall be provided with ~~be equipped with single-station~~ carbon monoxide alarms in accordance with Section 908.7, except that the carbon monoxide alarms shall be allowed to be solely battery powered.

Reason: This proposal is submitted by the ICC Fire Code Action Committee (FCAC). This ICC committee was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This

includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the Fire-CAC has held 6 open meetings and numerous Regional Work Group and Task Group meetings and conference calls which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the FAC website at: http://www.iccsafe.org/cs/CAC/Pages/default.aspx.

This proposal clarifies the requirements for carbon monoxide alarm installations. The intent is to provide protection for occupants of dwelling units and sleeping units within Group I-1, I-4, and R occupancies, which are locations where occupants are likely to be sleeping. Protection is provided from carbon monoxide that may be generated from faulty fuel burning appliance both inside and outside of the dwelling unit or sleeping unit, or from motor vehicle exhaust emanating from vehicles in attached private garages. It is assumed that a fuel burning appliance also includes a fuel burning fireplace. Specific details on the proposal are as follows.

1. The definition of PRIVATE GARAGE is identical to the IBC definition that was approved as part of proposal G59-12.
2. The entire section was reformatted to provide requirements in a more logical order.
3. Section 908.7 clarifies that the section only applies to new constructions, and that Section 1103.9 applies to existing occupancies.
4. Section 908.7.1 now only requires CO alarms are to be provided in Group I-1, I-4 and R occupancies, not all Group I occupancies as required in the existing code. It was felt that CO alarms were not warranted in Group I-2 and I-3 occupancies.
5. The code currently requires CO alarms to be provided in buildings that contain fuel burning appliances, with no additional details. Sections 908.7.1.1 through 908.7.1.3 describe the specific conditions when CO alarms are and are not required with regard to fuel-burning appliances.
6. Section 908.7.1.3 covers situations where dwelling units and sleeping units do not contain a fuel burning appliance, but such an appliance is included in a common area of the building. A good example of this is a multistory hotel that has all electric HVAC in the sleeping units, but perhaps a fireplace in the lobby, forced air heating in the common area, and a boiler in an equipment room. In these situations it is not reasonable to provide CO alarms in every sleeping room on every floor of the hotel, where there are no sources of carbon monoxide. Having a few strategically located Co alarms in common areas will provide a reasonable level of protection for the sleeping units and dwelling units.

   Exception 1 to this section covers situations where CO emanating from the fuel burning appliance has no direct path to a dwelling unit or sleeping unit, such as a water heater in an equipment room that only has access from the exterior of the building, and no openings through which the CO can get to dwelling units or sleeping units. An interior door, between this equipment room and a dwelling unit, even if it is self-closing, would not allow this exception to be used.

   Exception 2 to this section requires the installation of a one or more CO alarms in approved locations between fuel burning appliances and the nearest dwelling unit or sleeping unit, or on the ceiling of the room in which a fuel burning appliance is located. CO alarms are only required where there are communicating openings including ducts, concealed spaces, interior hallways, stairs and spaces between the fuel-burning appliance or fuel burning fireplace and the dwelling unit or sleeping unit where air can flow from the appliance to the dwelling unit or sleeping unit.

7. The code currently requires CO alarms to be provided when the building has an attached garage, other than an open parking garages or enclosed parking garages that contain mechanical ventilation systems. The proposal keeps these basic concepts, but clarifies that CO alarms are required when the building has an attached private garage (which is defined in section 406.3 of the IBC). The proposal also does not require CO alarms to be provided when the private garage is attached to the building by an open ended corridor (a term used in the IBC and IFC, which is commonly called a breeze way).
8. The code currently deferred to NFPA 720 for identifying where CO alarms are to be located. In order to make the code more user friendly, Section 908.7.2 now describes the locations where CO alarms are to be provided. In some cases this differs from NFPA 720 required locations, but again is intended to provide protection for CO emanating from motor vehicles in attached private garages or from faulty fuel-burning appliances located either inside or outside of the dwelling unit or sleeping unit. .
9. Section 908.7.3 clarifies that CO alarms are required to be hard wired into building power, similar to smoke alarms, with one exception.
10. Section 908.7.5 addresses combination CO/smoke alarms, which are listed and readily available.
11. Section 908.7.6 includes more comprehensive requirements for CO detection systems as compared to the current code requirements. It requires these systems to comply with NFPA 720, but clarifies that detectors must be installed in the locations specified in Section 908.7.2 (not as specified in NFPA 720). It also allows combination CO/smoke detectors to be used.
12. Section 908.7.7 covers maintenance of devices and requires inoperative and end-of-life CO alarms to be replaced.
13. Section 1103.9 was revised to avoid duplicating section 908.7 requirements, and to allow battery powered CO alarms to be used to retrofit existing buildings, which is consistent with the retrofit provisions in the IRC.

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

908.7 (NEW)-F-ZUBIA-FCAC

Committee Action Hearing Results

Committee Action: **Approved as Modified**

Modify proposal as follows:

908.7 (IBC [F] 908.7) Carbon monoxide alarms. Carbon monoxide alarms shall be installed in new buildings in accordance with Sections 908.7.1 through 908.7.7. Carbon monoxide alarms shall be installed in existing buildings in accordance with Section 1103.9.

908.7.1 (IBC [F] 908.7.1) Where required. Carbon monoxide alarms shall be provided in Group I-1, I-2, I-4, and R occupancies in the locations specified in 908.7.2 where any of the conditions in Sections 908.7.1.1 through 908.7.1.4 exist.

908.7.1.1 (IBC [F] 908.7.1.1) Fuel-burning appliances and fuel burning fireplaces. Carbon monoxide alarms shall be provided in dwelling units and sleeping units that contain a fuel-burning appliance or a fuel burning fireplace.

908.7.1.2 (IBC [F] 908.7.1.2) Forced air furnaces. Carbon monoxide alarms shall be provided in dwelling units and sleeping units served by a fuel-burning, forced air furnace.

908.7.1.3 (IBC [F] 908.7.1.3) Fuel burning appliances outside of dwelling units and sleeping units. Carbon monoxide alarms shall be provided in dwelling units and sleeping units located in buildings that contain fuel-burning appliances or fuel burning fireplaces.

Exception:

1. Carbon monoxide alarms shall not be required in dwelling units and sleeping units if there are no communicating openings between the fuel-burning appliance or fuel burning fireplace and the dwelling unit or sleeping unit.
2. Carbon monoxide alarms shall not be required in dwelling units and sleeping units if a carbon monoxide alarm is provided:
   2.1 In an approved location between the fuel burning appliance or fuel burning fireplace and the dwelling unit or sleeping unit, or
   2.2 On the ceiling of the room containing the fuel burning appliance or fuel burning fireplace.

908.7.1.4 (IBC [F]908.7.1.4) Private garages. Carbon monoxide alarms shall be provided in dwelling units and sleeping units in buildings with attached private garages.

Exceptions:

1. Carbon monoxide alarms shall not be required if there are no communicating openings between the private garage and the dwelling unit or sleeping unit.
2. Carbon monoxide alarms shall not be required in dwelling units and sleeping units located more than one story above or below a private garage.
3. Carbon monoxide alarm shall not be required if the private garage connects to the building through an open-ended corridor.

908.7.1.4.1 (IBC [F]908.7.1.4.1) Exempt garages. For determining compliance with Section 908.7.1.4, an *open parking garage*, complying with Section 406.5 of the *International Building Code*, or an *enclosed parking garage* complying with Section 406.6 of the *International Building Code* shall not be considered a private garage.

908.7.2 (IBC [F]908.7.2) Locations. Where required by Section 908.7.1, carbon monoxide alarms shall be installed in the locations specified in Sections 908.7.2.1 through 908.7.2.2.

908.7.2.1 (IBC [F]908.7.2.1) Dwelling units. Carbon monoxide alarms shall be installed in dwelling units outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

908.7.2.2 (IBC [F]908.7.2.2) Sleeping units. Carbon monoxide alarms shall be installed in sleeping units.

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

908.7.3 (IBC [F]908.7.3) Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exception: Where installed in buildings without commercial power, battery powered carbon monoxide alarms shall be an acceptable alternative.

908.7.4 (IBC [F]908.7.4) Listings. Carbon monoxide alarms shall be listed in accordance with UL 2034.

908.7.5 (IBC [F]908.7.5) Combination alarms. Combination carbon monoxide/smoke alarms shall be an acceptable alternative to carbon monoxide alarms. Combination carbon monoxide/smoke alarms shall be listed in accordance with UL 2034 and UL 217.

908.7.6 (IBC [F]908.7.6) Carbon monoxide detection systems. Carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide alarms and shall comply with Sections 908.7.6.1 through 908.7.6.3.

908.7.6.1 (IBC [F]908.7.6.1) General. Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.

908.7.6.2 (IBC [F]908.7.6.2) Locations. Carbon monoxide detectors shall be installed in the locations specified in Section 908.7.2. These locations supersede the locations specified in NFPA 720.

908.7.6.3 (IBC [F]908.7.6.3) Combination detectors. Combination carbon monoxide/smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors, provided they are listed in accordance with UL 2075 and UL 268.

908.7.7 Maintenance. Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end-of-life signals shall be replaced.

1103.9 Carbon monoxide alarms. Existing Group I-1, I-2, I-4 and R occupancies shall be provided with carbon monoxide alarms in accordance with Section 908.7, except that the carbon monoxide alarms shall be allowed to be solely battery powered.
Add new definition as follows:

SECTION 202
GENERAL DEFINITIONS

[B] PRIVATE GARAGE. A building or portion of a building in which motor vehicles used by the tenants of the building or buildings on the premises are stored or kept, without provisions for repairing or servicing such vehicles for profit

Committee Reason: The proposal was approved as the requirements associated with the more specific hazards within a building have been clarified. In addition, the placement of the CO alarms and CO detectors, where applicable, are more clearly specified. Previously the provisions were difficult to enforce. The modification simply added Group I-2 occupancies as it was requested that such occupancies be provided the same protection. The original provisions stated Group I occupancies which intended to address Group I-2.

Assembly Action: **None**

Individual Consideration Agenda

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

Public Comment 1:

Adolf Zubia. Chairman IAFC Fire and Life Safety Section, representing ICC Fire Code Action Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

SECTION 915
CARBON MONOXIDE DETECTION

~~**908.7**~~ **915.1 Carbon monoxide ~~alarms~~ detection.** Carbon monoxide ~~alarms~~ detection shall be installed in new buildings in accordance with Sections ~~908.7.1~~ 915.1.1 through ~~908.7.7~~ 915.6. Carbon monoxide ~~alarms~~ detection shall be installed in existing buildings in accordance with Section 1103.9.

~~**908.7.1**~~ **915.1.1 Where required**. Carbon monoxide ~~alarms~~ detection shall be provided in Group I-1, I-2, I-4, and R occupancies, and in classrooms in Group E occupancies in the locations specified in ~~908.7.2~~ 915.2 where any of the conditions in Sections ~~908.7.1.1~~ 915.1.2 through ~~908.7.1.4.1~~ 915.1.6 exist.

~~**908.7.1.1**~~ **915.1.2 Fuel-burning appliances and fuel burning fireplaces**. Carbon monoxide ~~alarms~~ detection shall be provided in dwelling units, ~~and~~ sleeping units and classrooms that contain a fuel-burning appliance or a fuel burning fireplace.

~~**908.7.1.2**~~ **915.1.3 Forced air furnaces.** Carbon monoxide ~~alarms~~ detection shall be provided in dwelling units, ~~and~~ sleeping units and classrooms served by a fuel-burning, forced air furnace.

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

~~**908.7.1.3**~~ **915.1.4 Fuel burning appliances outside of dwelling units, ~~and~~ sleeping units and classrooms.** Carbon monoxide ~~alarms~~ detection shall be provided in dwelling units, ~~and~~ sleeping units and classrooms located in buildings that contain fuel-burning appliances or fuel burning fireplaces.

Exceptions:

1. Carbon monoxide ~~alarms~~ detection shall not be required in dwelling units, ~~and~~ sleeping units and classrooms if there are no communicating openings between the fuel-burning appliance or fuel burning fireplace and the dwelling unit, ~~or~~ sleeping unit or classroom.
2. Carbon monoxide ~~alarms~~ detection shall not be required in dwelling units, ~~and~~ sleeping units and classrooms if carbon monoxide ~~alarms~~ detection is provided in one of the following locations:
   2.1 In an approved location between the fuel burning appliance or fuel burning fireplace and the dwelling unit, ~~or~~ sleeping unit or classroom, or
   2.2 On the ceiling of the room containing the fuel burning appliance or fuel burning fireplace.

~~**908.7.1.4**~~ **915.1.5 Private garages.** Carbon monoxide ~~alarms~~ detection shall be provided in dwelling units, ~~and~~ sleeping units, and classrooms in buildings with attached private garages.

Exceptions:

1. Carbon monoxide ~~alarms~~ detection shall not be required if there are no communicating openings between the private garage and the dwelling unit, ~~or~~ sleeping unit or classroom.
2. Carbon monoxide ~~alarms~~ detection shall not be required in dwelling units, ~~and~~ sleeping units and classrooms located more than one story above or below a private garage.
3. Carbon monoxide ~~alarms~~ detection shall not be required if the private garage connects to the building through an open-ended corridor.
4. Where carbon monoxide detection is provided in an approved location between openings to a private garage and dwelling units, sleeping units or classrooms, carbon monoxide detection shall not be required in the dwelling units, sleeping units or classrooms.

~~**908.7.1.4.1**~~ **915.1.6 Exempt garages**. For determining compliance with Section ~~908.7.1.4~~ 915.1.5, an *open parking garage*, complying with Section 406.5 of the *International Building Code*, or an *enclosed parking garage* complying with Section 406.6 of the *International Building Code* shall not be considered a private garage.

~~**908.7.2**~~ **915.2 Locations.** Where required by Section ~~908.7.1~~ 915.1.1, carbon monoxide ~~alarms~~ detection shall be installed in the locations specified in Sections ~~908.7.2.1~~ 915.2.1 through 915.2.3.

~~**908.7.2.1**~~ **915.2.1 Dwelling units.** Carbon monoxide ~~alarms~~ detection shall be installed in dwelling units outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, ~~a~~ carbon monoxide ~~alarm~~ detection shall be installed within the bedroom.

~~**908.7.2.2**~~ **915.2.2 Sleeping units.** Carbon monoxide ~~alarms~~ detection shall be installed in sleeping units.

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

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

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

915.3 Detection equipment. Carbon monoxide detection required by 915.1 through 915.2.3 shall be provided with carbon monoxide alarms complying with Section 915.4 or with carbon monoxide detection systems complying with Section 915.5.

915.4 Carbon monoxide alarms. Carbon monoxide alarms shall comply with Section 915.4.1 through 915.4.3.

~~**908.7.3**~~ **915.4.1 Power source.** Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exception: Where installed in buildings without commercial power, battery powered carbon monoxide alarms shall be an acceptable alternative.

~~908.7.4~~ **915.4.2 Listings.** Carbon monoxide alarms shall be listed in accordance with UL 2034.

~~908.7.5~~ **915.4.3 Combination alarms.** Combination carbon monoxide/smoke alarms shall be an acceptable alternative to carbon monoxide alarms. Combination carbon monoxide/smoke alarms shall be listed in accordance with UL 2034 and UL 217.

~~908.7.6~~ **915.5 Carbon monoxide detection systems.** Carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide alarms and shall comply with Sections ~~908.7.6.1~~ 915.5.1 through ~~908.7.6.3~~ 915.5.3.

~~908.7.6.1~~ **915.5.1 General**. Carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be listed in accordance with UL 2075.

~~908.7.6.2~~ **915.5.2 Locations.** Carbon monoxide detectors shall be installed in the locations specified in Section 915.2 ~~908.7.2~~. These locations supersede the locations specified in NFPA 720.

~~908.7.6.3~~ **915.5.3 Combination detectors.** Combination carbon monoxide/smoke detectors installed in carbon monoxide detection systems shall be an acceptable alternative to carbon monoxide detectors, provided they are listed in accordance with UL 2075 and UL 268.

~~908.7.7~~ **915.6 Maintenance.** Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end-of-life signals shall be replaced.

(portions of proposal not shown remain unchanged)

Commenter's Reason: This proposal is submitted by the ICC Fire Code Action Committee (FCAC). This ICC committee was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the Fire-CAC has held 6 open meetings and numerous Regional Work Group and Task Group meetings and conference calls which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the FAC website at: http://www.iccsafe.org/cs/CAC/Pages/default.aspx.

Proposals F180, F182, and F360 covered carbon monoxide alarms and were all approved in Dallas. F360 included requirements to protect occupants in dwelling units and sleeping unit from potential sources of carbon monoxide. F182 required CO detection in Group E occupancies, but differed from F360 in how the protection was to be provided.

This public comment was developed by the Fire Code Action Committee's carbon monoxide task group, which included a wide range of interested parties. It resolves conflicts between the proposals, and makes some editorial revisions to clarify the intent of the requirements, as follows:

- Changes references from "carbon monoxide alarm" to "carbon monoxide detection" in Sections 915.1, 915.2 and 1103.9 since detection can be provided by either carbon monoxide alarms or carbon monoxide detection systems.
- Maintains the same protection requirements for Group I-1, I-2, I-4, and R occupancies as approved in F360, and extends it to classrooms in Group E occupancies, except as noted below.
- For clarification, section 915.1.3 covers forced air furnaces that serve dwelling units, sleeping units or classrooms. This section only covers furnaces where a malfunction or crack in the heat exchange will cause CO to be spread from the combustion chamber to the ducts serving the building. This section does not apply to other heating systems such as boilers that circulate heated water to the building. An exception was added to 915.1.3 that allows carbon monoxide detection to be provided in the first room or area served by each main duct leaving the furnace, provided the carbon monoxide alarm signals are automatically transmitted to an approved location. Such an arrangement will detect carbon monoxide from the ducts and provide notification of the condition to an approved location, such as a reception area, engineering office, or central station. With this protection in place there is no need to provide carbon monoxide detection in each dwelling unit, sleeping unit or classroom served by the forced air furnace ducts.
- Section 915.2.3 requires carbon monoxide detection to be provided in classrooms in Group E occupancies, and not other rooms such as bathrooms, break rooms, interior hallways, gymnasiums, etc. The concept is to protect the students in rooms in which they spend a considerable amount of time in a relatively compact space. This is similar to the concept of only providing CO protection for sleeping units and dwelling units in Group I and R occupancies, and not rooms used for other purposes.
- F182 required carbon monoxide alarm signals In Group E occupancies to be automatically transmitted to a constantly attended on-site location. Proposed section 915.2.3 recognizes that many schools do not have a location that is constantly attended 24/7, requires carbon monoxide alarms to be automatically transmitted to an on-site location that is staffed by school personnel.
- Section 915.2.3 also includes an exception that does not require carbon monoxide alarms to be transmitted to an on-site location that is staffed by school personnel for very small schools with an occupant load of 30 or less. These occupancies may not have a location other than the classroom staffed by school personnel, and the carbon monoxide alarm in the classroom will provide the necessary alarm warning to the occupants. The trigger for 30 or less occupants corresponds with the fire alarm threshold for small Group E occupancies in 907.2.3.
- Section 915.3 was provided to clarify that protection can be provided by either carbon monoxide alarms or carbon monoxide detection systems, which are options recognized in F180, F360, and in the 2012 IFC.
- 915.1.5, Exception 4 was developed to provide an option for protecting against CO emanating from private garages by providing carbon monoxide detection in an approved location between openings to a private garage and dwelling units, sleeping

units or classrooms. This same protection method is allowed for similar situations involving fuel burning appliances located outside of dwelling units, sleeping units and classrooms in section 915.1.4 Exceptions 2.
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Suggested code commentary for these requirements is as follows:

The Fire Code Action Committee task group that developed the carbon monoxide (CO) detection requirements included not only industry and fire service, but also users whose facilities must include this protection, so providing effective protection in a cost effective manner was a key consideration. An explanation of the approach used to provide protection is as follows:

Protected areas (in I-1, I-2, I-4, R and E occupancies) – Dwelling units, sleeping units and classrooms are the only rooms in the building that require protection from sources of potential CO.

Sources of potential CO that require protection – CO detection is required for protected areas ONLY when there is a potential source of CO that can enter or build up in the protected area. This includes (1) a fuel burning appliance in the protected area, (2) a fuel burning appliance in the building but outside of the protected area, (3) a forced air, fuel burning furnace that serves the protected area (not a boiler type system or electric heat), or (4) a private garage attached to the building,. There are several exceptions in which CO detection is not required if it is unlikely for dangerous levels of CO to be transported to the protected areas, such as an open ended corridor between a private garage and the building.

Types of protection - The 2012 IFC and this proposal allow either single or multiple station CO alarms to be used to provide protection, or CO detection systems installed per NFPA 720. In some instances annunciation is required in certain approved locations, such as Group E occupancies. It is recognized that in many buildings, especially those that require fire alarm systems to be installed, a CO detection system will be the preferred design approach, since CO detectors or combination CO/smoke detectors can be connected to a required fire alarm system control unit.
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There are several scenarios for providing CO protection for protected areas, and it is rarely necessary to provide CO detection in every protected area, as shown in the following examples:

Fuel burning appliance in the protected area – Consider these examples:

(1) A dwelling unit with a solid fuel burning fireplace, or a school classroom containing a gas-fired wall heater – CO detection must be provided in these protected areas, providing detection outside of the dwelling unit or classroom makes no sense because the potential source of CO is within each unit. The CO alarm signal from the classroom must be transmitted to the school office.
(2) Apartment building with dwelling units that each contain a gas fireplace and gas fired water heater – CO detection must be provided in each dwelling unit. (This is likely to be a single or multiple station CO alarm).

Fuel burning appliance in the building but outside of the protected area – Consider these examples:

(1) A school building with a boiler providing heat to the classrooms, and a water heater in the same equipment room – A single CO detection unit can be provided in the equipment room, with annunciation of the CO alarm in the school office. o other CO detection is needed unless there are other sources of potential CO in the building.
(2) Hotel with a gas fireplace in the lobby and guest rooms on the same floor which are served by electric heat – A single CO detection unit can be installed on the lobby ceiling or in a location between the lobby fire place and the guest rooms. No other CO detection is needed unless there are other sources of potential CO in the building.
(3) Apartment building, with gas-fired pool heater for the indoor swimming pool, all electric heat and water heating in the dwelling units – A single CO detection unit can be installed in the pool equipment room.

Forced air, fuel burning furnace in the building – Consider this example.

(1) Patient rooms served by a forced air, fuel burning furnace – In this case providing CO detection on the furnace room ceiling does not necessarily provide protection for the patient rooms served by the furnace if, for example, the furnace has a cracked heat exchanger between the combustion chamber and the ducts serving the patient rooms, and it is pumping CO into those rooms. Protection can be provided by either (a) providing CO detection in all patient rooms served by the furnace (worst case condition) or (b) providing CO detection in the first room or area served by each main duct leaving the furnace, and a CO alarm signal that is automatically transmitted to an approved location, such as a nurses station or engineering office.

Private garage attached to a building – Consider these examples:

(1) Hotel with an attached private garage with entrances onto the first and second floor, no gas appliances – Provide CO detection in each corridor leading from the garage entrances, prior to the first guest room on each floor.
(2) Garden apartment with a breezeway attached to a private garage, no gas appliances – No CO detection is required to protect against CO emanating from the private garage.

Public Comment 2:

Adolf Zubia. Chairman IAFC Fire and Life Safety Section, representing ICC Fire Code Action Committee, requests Approval as Modified by this Public Comment.

Modify the proposal as follows:

1103.9 Carbon monoxide ~~alarms~~ detection. Existing Group I-1, I-2, I-4, ~~and~~ R and E occupancies shall be provided with carbon monoxide ~~alarms~~ detection in accordance with Section ~~908.7~~ 915.

Exceptions:

1. ~~except that the~~ Carbon monoxide alarms shall be allowed to be solely battery powered
2. Carbon monoxide alarm signals in Group E occupancies shall not be required to be transmitted to an on-site location that is staffed by school personnel.

Commenter's Reason: This proposal is submitted by the ICC Fire Code Action Committee (FCAC). This ICC committee was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the Fire-CAC has held 6 open meetings and numerous Regional Work Group and Task Group meetings and conference calls which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the FAC website at: http://www.iccsafe.org/cs/CAC/Pages/default.aspx.

Proposals F180, F182, and F360 covered carbon monoxide alarms and were all approved in Dallas. F360 included requirements to protect occupants in dwelling units and sleeping unit from potential sources of carbon monoxide. F182 required CO detection in Group E occupancies, but differed from F360 in how the protection was to be provided.

Two public comments were developed by the Fire Code Action Committee's carbon monoxide task group, which included a wide range of interested parties. They resolve conflicts between the proposals, and make some editorial revisions to clarify the intent of the requirements.

Section 1103.9 was revised to include an exception that carbon monoxide alarms in existing Group E occupancies can be solely battery powered, and that their alarm signals are not required to be transmitted to an on-site locationstaffed by school personnel. This is consistent with requirements for carbon monoxide alarms in existing Group I and R occupancies.

Public Comment 3:

John Williams, CBO, Chair, ICC Ad Hoc Committee on Health Care and Carl Baldassarra, P.E., FSFPE, Chair, ICC Code Technology Committee, request Approval as Modified by this Public Comment.

Further modify the proposal as follows:

908.7.1 (IBC [F] 908.7.1) Where required. Carbon monoxide alarms shall be provided in Group I-1, ~~I-2,~~ I-4, and R occupancies in the locations specified in 908.7.2 where any of the conditions in Sections 908.7.1.1 through 908.7.1.4 exist.

1103.9 Carbon monoxide alarms. Existing Group I-1, ~~I-2,~~ I-4 and R occupancies shall be provided with carbon monoxide alarms in accordance with Section 908.7, except that the carbon monoxide alarms shall be allowed to be solely battery powered.

(Portions of proposal not shown remain unchanged)

Reason: The committee added Group I-2 as a floor modification with no technical justification or materials presented. There have been no deaths in hospitals from carbon monoxide poisoning. A search for technical data for nursing homes was inconclusive. There is no identified need for these carbon monoxide detectors in these types of facilities.

This proposal is submitted by the ICC Ad Hoc Committee for Healthcare (AHC). The AHC was established by the ICC Board of Directors to evaluate and assess contemporary code issues relating to hospitals and ambulatory healthcare facilities. The AHC is composed of building code officials, fire code officials, hospital facility engineers, and state healthcare enforcement representatives. The goals of the committee are to ensure that the ICC family of codes appropriately addresses the fire and life safety concerns of a highly specialized and rapidly evolving healthcare delivery system. This process is part of a joint effort between ICC and the American Society for Healthcare Engineering, a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. Since its inception in April 2011, the AHC has held 8 open meetings and over 150 workgroup calls which included members of the AHC as well as any interested party to discuss and debate the proposed changes. All meeting materials and reports are posted on the AHC website at: http://www.iccsafe.org/cs/AHC/Pages/default.aspx.

This proposal is being co-sponsored by the ICC Code Technology Committee. The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The 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/CTC/Pages/default.aspx. Since its inception in April/2005, the CTC has held twenty five meetings - all open to the public.

Public Comment 3:

Thomas G. Daly, representing The Hospitality Security Consulting Group, LLC, requests Approval as Modified by the Code Committee as Published in the Report of the Committee Action Hearings.

Commenter's Reasons: The proposed revisions to Sec. 908.7 and 1103.9 focus the requirements for CO alarm warning equipment at the source of CO producing appliances/equipment thereby providing for the earliest possible alarm and response. The changes would also allow for the use of combination CO/smoke alarms and detectors improving the flexibility for end users. Battery operated CO alarms would be allowed in existing buildings making such installations cost effective.

Public Comment 4:

Stacy N. Welch representing Marriott International, Inc, requests Approval as Modified by the Code Committee as Published in the Report of the Committee Action Hearings.

Commenter's Reason: Marriott International, Inc. wishes to indicate its support for code change proposal F360 for the 2015 editions of the ICC's International Building and Fire Codes with respect to carbon monoxide alarm for various occupancies.

With responsibility for the safety of our guests and employees I 3,800 hotels in 74 countries, carbon monoxide presents a sizable risk. With the increased awareness around carbon monoxide, in 2004 Marriott established a carbon monoxide detection policy for existing and new hotels.

The proposed code change language is clearer for both end users and enforcement officials to understand and implement; removes undefined terms which are in the 2012 IBC & IFC code sections dealing with this subject; focuses CO detection and alarms at the source of potential leaks providing earlier warning and reaction time, which closely aligns with Marriott's long established policy.

F360-13

Final Action: AS AM AMPC____ D