2009-2010 ICC CODE DEVELOPMENT CYCLE

2010 CODE CORRELATION COMMITTEE ACTIONS

August 14, 2010

This document is a compilation of editorial changes made to the 2009 Codes that will appear in the 2012 I-Codes. These are generally correlation issues that needed to be resolved after the Final Action Hearings in May 2010. Additionally, the Code Correlation Committee identified needed revisions to some code provisions that became apparent during the 2009-2010 code change cycle.

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INTERNATIONAL BUILDING CODE – MEANS OF EGRESS

CCC 10 – #E1

E186-09/10

1109.6 Saunas and Steam Rooms. Where provided, saunas and steam rooms shall ~~comply with ICC A117.1~~ be accessible.

> **Exception:** Where saunas or steam rooms are clustered at a single location, ~~no more~~ at least ~~than~~ 5 percent of the saunas and steam rooms, but ~~no fewer~~ not less than one, of each type in each cluster shall be accessible ~~required to comply with ICC A117.1~~.

#E-1 Reason: This is a new section. Revisions to the main text are for coordination with E151 which eliminated the reference to A117.1 as a general reference since it is already stated in Section 1102.1. The exception is revised for consistency of language with clusters (Section 1109.2, Exp. 3)

CCC 10 – #E2

FS152-09/10, FS154-09/10

(FS152-09/10, FS154-09/10) 1013.8 ~~1405.13.2~~ Window sills. In Occupancy Groups R-2 and R-3, one- and two-family and multiple-family dwellings, where the ~~opening of~~ the sill ~~portion~~ of an operable window is located more than 72 inches (1829 mm) above the finished grade or other surface below, the lowest part of the clear opening of the window shall be at a height not less than 24 inches (610 mm) above the finished floor surface of the room in which the window is located. Glazing between the floor and a height of 24 inches (610 mm) shall be fixed or have openings through which a 4-inch (102 mm) diameter sphere cannot pass.

> **Exception:** ~~Openings that are~~ Operable windows where the sill is located more than 75 feet above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F 2006.

#E-2 Reason: E154 revised the exception. The purpose of the further revisions is to make the exception language consistent with the base paragraph text. With the clarification on just where the measurements will be taken (i.e., sill vs. entire opening) this will also allow for more consistent interpretation.

CCC 10 – #E4

E140-09/10 and E110-09/10

SECTION 1017
AISLES

(E24-09/10, E140-09/10, CCC) 1017.1 General. Aisles and aisle accessways serving as a portion of the exit access in the means of egress system shall comply with the requirements of this section. Aisles or aisle accessways shall be provided from all occupied portions of the exit access which contain seats, tables, furnishings, displays and similar fixtures or equipment. ~~Aisles serving a room or space used for assembly purposes areas shall comply with Section 1028.~~ The required width of aisles shall be unobstructed.

Exception: Encroachments complying with Section 1005.2.

(E140-09/10, CCC) 1017.2 Aisles in assembly spaces. Aisles serving a room or space used for assembly purposes shall comply with Section 1028.

1017.3 ~~1017.2~~ Aisles in Groups B and M. In Group B and M occupancies, the minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than 36 inches (914 mm).

Exception: Nonpublic aisles serving less than 50 people and not required to be accessible by Chapter 11 need not exceed 28 inches (711 mm) in width.

1017.4 ~~1017.3~~ Aisle accessways in Group M. An aisle accessway shall be provided on at least one side of each element within the merchandise pad. The minimum clear width for an aisle accessway not required to be accessible shall be 30 inches (762 mm). The required clear width of the aisle accessway shall be measured perpendicular to the elements and merchandise within the merchandise pad. The 30-inch (762 mm) minimum clear width shall be maintained to provide a path to an adjacent aisle or aisle accessway. The common path of travel shall not exceed 30 feet (9144 mm) from any point in the merchandise pad.

Exception: For areas serving not more than 50 occupants, the common path of travel shall not exceed 75 feet (22 880 mm).

(E140-09/10 relocated to 1028) 1017.4 Seating at tables.

(E140-09/10 relocated to 1028)1017.4.1 Aisle accessway for tables and seating

(E140-09/10 relocated to 1028)1017.4.2 Table and seating accessway width.

(E140-09/10 relocated to 1028)1017.4.3 Table and seating aisle accessway length.

(E110-09/10, CCC) 1017.5 Aisles in other than assembly spaces and Groups ~~A,~~ B and M. In other than rooms or spaces used for assembly purposes and Group ~~A,~~ B and M occupancies, the minimum clear aisle width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than 36 inches (914 mm).

#E-4 Reason: Highlighted sections are the revisions to be approved by CCC. The purpose is for better organizational flow of the entire section on aisles. E140 clarified that rooms and spaces used for assembly purposes must meet Section 1028, not just those spaces classified as Group A. All aisle and aisle accessway requirements for assembly type spaces have been moved to Section 1028. E110 added Section 1017.5. This section should be revised to coordinate with the language revisions for assembly spaces. The sentence dealing with assembly purposes in Section 1017.1 should be moved into a separate section so that the three types of spaces not addressed in 1017.5 are clearly delineated.

CCC 10 – #E5

Revised Section 1021

SECTION 1021
(E5-09/10) NUMBER OF EXITS AND EXIT CONFIGURATION

(E5-09/10) 1021.1 General. Each story and occupied roof shall have the minimum number of exits, or access to exits, as specified in this section. The required number of exits, or exit access stairways or ramps providing access to exits, from any story shall be maintained until arrival at grade or a public way. Exits or access to exits from any story shall be configured in accordance with this section. Each story above the second story of a building shall have a minimum of one interior or exterior exit stairway, or interior or exterior exit ramp. At each story above the second story that requires a minimum of three or more exits, or access to exits, a minimum of 50% of the required exits shall be interior or exterior exit stairways, or interior or exterior exit ramps.

Exceptions:

1. Interior exit stairways and interior exit ramps are not required in open parking garages where the means of egress serves only the open parking garage.
2. Interior exit stairways and interior exit ramps are not required in outdoor facilities where all portions of the means of egress are essentially open to the outside.

1020.1.1. Exits maintained. The required number of exits from any story shall be maintained until arrival at grade or the public way.

(E5/09/10, E119-09/10 (coord with E5), E120-09/10 (moved from 1021.1), E121-09/10 AM, E123-09/10, CCC) 1021.2 Exits from stories. Two exits, or exit access stairways or ramps providing access to exits, from any story or occupied roof shall be provided where one of the following conditions exists:

1. The occupant load or number of dwelling units exceeds one of the values in Table 1021.2(1) or 1021.2(2).
2. The exit access travel distance exceeds that specified in Table 1021.2(1) or 1021.2(2) as determined in accordance with the provisions of Section 1016.1.
3. Helistop landing areas located on buildings or structures shall be provided with two exits, or exit access stairways or ramps providing access to exits.

   Exceptions:

   1. Rooms, areas and spaces complying with Section 1015.1 with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit.
   2. Group R-3 occupancy buildings shall be permitted to have a one exit.
   3. Parking garages where vehicles are mechanically parked shall be permitted to have one exit,
   4. Air traffic control towers shall be provided with the minimum number of exits specified in Section 412.3.
   5. Individual dwelling units in compliance with Section 1021.2.3.
   6. Group R-3 and R-4 congregate residences shall be permitted to have one exit.
   7. Exits serving specific spaces or areas need not be accessed by the remainder of the story when all of the following are met:
      7.1 The number of exits from the entire story complies with Table 1021.1(1) or 1021.2(2);

7.2 The access to exits from each individual space in the story complies with Section 1015.1; and

7.3 All spaces within each portion of a story shall have access to the minimum number of approved independent exits as specified in Table 1021.1(1) or 1021.2(2). based on the occupant load of that portion of the story.

(E5-09/10, E121-09/10 AM, CCC) TABLE 1021.2(1)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
Basement, first, second or third story	R-2[a, b]	4 dwelling units	125 feet
Fourth story and above	NP	NA	NA

For SI: 1 foot = 3048 mm.
NP – Not Permitted
NA – Not Applicable

a. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1029.

b. This Table is used for R-2 occupancies consisting of dwelling units. For R-2 occupancies consisting of sleeping units, use Table 1021.2(2).

(E5-09/10, E121-09/10 AM, G16-09/10 AMPC 1, 2 & 3, G20-09/10 AMPC 1, 3, 4 & 5) TABLE 1021.2(2)

STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM OCCUPANTS STORY	MAXIMUM EXIT ACCESS TRAVE DISTANCE
First story or basement	A, B[b], E, F[b], M, U, S[b]	49 occupants	75 feet
	H-2, H-3	3 occupants	25 feet
	H-4, H-5, I, R-1, R-2[a,c], R-4	10 occupants	75 feet
	S	29 occupants	100 feet
Second story	B, F, M, S	29 occupants	75 feet
Third story and above	NP	NA	NA

For SI: 1 foot = 304.8 mm.
NP – Not Permitted
NA – Not Applicable

a. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1029.

b. Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum travel distance of 100 feet.

c. This Table is used for R-2 occupancies consisting of sleeping units. For R-2 occupancies consisting of dwelling units, use Table 1021.2(1).

(E5/09/10, E121-09/10, E123-09/10, CCC) 1021.2.1 Mixed occupancies. Where one exit, or exit access stairway or ramp providing access to exits at other stories, is permitted to serve individual stories, mixed occupancies shall be permitted to be served by single exits provided each individual occupancy complies with the applicable requirements of Table 1021.2(1) or Table 1021.2(2) for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1. ~~A basement provided with one exit shall not be located more than one story below grade plane.~~

~~Mixed occupancies shall be permitted to be served by single exits provided that each individual occupancy complies with the applicable requirements of Table 1021.2(1) or Table 1021.2(2) for that occupancy.~~ In each story of a mixed occupancy building, the maximum number of occupants served by a single exit shall be such that the sum of the ratios of the calculated number of occupants of the space divided by the allowable number of occupants for each occupancy does not exceed one.

(E5-09/10, E121-09/10, CCC) 1021.2.2 Basements. A basement provided with one exit shall not be located more than one story below grade plane.

(E119-09/10, CCC) 1021.2.3 Single-story or multi-story dwelling units. Individual single-story or multi-story dwelling units shall be permitted to have a single exit within and from the dwelling unit provided that all of the following criteria are met:

1. The dwelling unit complies with Section 1015.1 as a space with one means of egress and
2. Either the exit from the dwelling unit discharges directly to the exterior at the level of exit discharge, or the exit access outside the dwelling unit's entrance door provides access to not less than two approved independent exits.

   ~~**Exception:** Single exits designed in accordance with Section 1021.2~~

(E5-09/10) 1021.2.1 Three or more exits. Three exits, or exit access stairways or ramps providing access to exits at other stories, shall be provided from any story or occupied roof with an occupant load of 501-1,000. Four exits, or exit access stairways or ramps providing access to exits at other stories, shall be provided from any story or occupied roof with an occupant load greater than 1,000.

(E5-09/10) 1021.2.2 Additional exits. In buildings over 420 feet in height, additional exits shall be provided in accordance with Section 403.5.2.

(E5-09/10) 1021.3 Exit configuration ~~continuity~~. Exits, or exit access stairways or ramps providing access to exits at other stories, shall be arranged in accordance with the provisions of Section 1015.2 through 1015.2.2. Exits shall be continuous from the point of entry into the exit to the exit discharge.

(E5-09/10) 1021.3.1 Access to exits at adjacent levels. Access to exits at other levels shall be by stairways or ramps. Where access to exits occurs from adjacent building levels, the horizontal and vertical exit access travel distance to the closest exit shall not exceed that specified in Section 1016.1. Access to exits at other levels shall be from an adjacent story.

Exception: Landing platforms or roof areas for helistops that are less than 60 feet (18 288 mm) long, or less than 2,000 square feet (186 m^2) in area, shall be permitted to access the second exit by a fire escape, alternating tread device or ladder leading to the story or level below.

(E5-09/10) 1021.4 Vehicular ramps. Vehicular ramps shall not be considered as an exit access ramp unless pedestrian facilities are provided.

#E-5 Reason: Since this section was extensively rewritten by several different proponents, the entire section is shown here for clarity. The CCC is asked to respond to the highlighted revisions. Please review each item separately since they deal with different issues and different changes.
Section 1021.1 – A second table was created by E121 specific for exits for Group R-2 dwelling unit buildings. Add 2nd table in Items 1 and 2 and Exp. 7 for consistency.

Table 1021.2(1) and 1021.2(2) – The bottom row indicating when single exits could not be used was added to 1021.2(2) by E5. E121 created the new Table 1021.2(1). The bottom row should be in both tables for consistency.

Table 1021.2(1), footnote b – See Table 1021.2(2), footnote c, which was added by E121. Since a user might not look at the footnotes for both tables, the footnote should be on both for consistent interpretation of when each table is applicable. “Dwelling unit’ and ‘sleeping unit’ are both defined terms.

1021.2.1 – The first paragraph was part of E5 revision to Section 1021.2. The 2nd paragraph was added by E123. Both paragraphs are split from the main section so that there are not two paragraphs after a long series of items and exceptions. The first sentence of the 2nd paragraph is deleted as redundant.

1021.2.2 – The sentence about basements was part of E5 revision to Section 1021.2. It did not fit with the mixed occupancy criteria in the new Section 1021.2.1. It should be in a separate section as well.

1021.2.3 – The text was added by E119 to clarify when dwelling units could have one exit. Since a reference for single dwelling units was included by E5 as Section 1021.2 Exception 5 the exception in Section 1021.2.3 creates an infinite loop and should be deleted. Compliance with Section 1021.2.3 is already an alternative to Section 1021.2.

CCC 10 – #E6

Sections 1110.1 item 6 and 3411.8.1.2, change “unisex” to “family or assisted-use”.

Reason: The term “unisex” has been replaced by “family or assisted-use” throughout the rest of 2009 IBC Chapter 11.

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INTERNATIONAL BUILDING CODE – FIRE SAFETY

CCC 10 – #FS1

INTERNATIONAL BUILDING CODE

Section: 705.2.3

Revise as follows:

705.2.3 Combustible projections. Combustible projections extending to within 5 feet of the line used to determine the fire separation distance, or located where openings are not permitted, or where protection of some openings is required shall be of at least 1-hour fire-resistance-rated construction, Type IV construction, fire-retardant-treated wood or as required by Section 1406.3. **(FS12-09/10, FS13-09/10)**

> **Exception:** Type VB construction shall be allowed for combustible projections in R-3 and U occupancies with a fire separation distance greater than or equal to 5 ft. **(FS13-09/10)**

Reason: Approved **c**ode changes FS12 and FS13-09/10 revise the provisions to Section 705.2.3. The above language is proposed to combine the changes.

Supporting information:

FS12-09/10 – AMPC1
705.2.3 Combustible projections. Combustible projections extending to within 5 feet of the line used to determine the fire separation distance shall be of at least 1-hour fire-resistance-rated construction, Type IV construction, fire-retardant-treated wood or as required by Section 1406.3.

> **Exception:** Type V construction shall be allowed for R-3 occupancies.

FS13 – AMPC 1 and 2
Public comment No. 1
705.2.3 Combustible projections. Combustible projections located where openings are not permitted, or where protection of openings is required or where a combination of protected and unprotected openings are permitted shall be of at least 1-hour fire-resistance-rated construction, Type IV construction, *fire-retardant-treated wood* or as required by Section 1406.3.

> **Exception:** Type VB construction shall be allowed for combustible projections in R-3 and U occupancies with a fire separation distance greater than or equal to 5 ft.

Public comment No. 2
705.2.3 Combustible projections. Combustible projections located where openings are not permitted or where protection of some openings is shall be of at least 1-hour fire-resistance-rated construction, Type IV construction, fire-retardant-treated wood or as required by Section 1406.3.

> **Exception:** Type VB construction shall be allowed for combustible projections in R-3 occupancies with a fire separation distance greater than or equal to 5 ft (1524 mm).

CCC 10 – #FS2

INTERNATIONAL BUILDING CODE

Section: 710.4

Revise as follows:

710.4 Continuity. *Smoke barriers* shall form an effective membrane continuous from outside wall to outside wall and from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, deck or slab above, including continuity through concealed spaces, such as those found above suspended ceilings, and interstitial structural and mechanical spaces. The supporting construction shall be protected to afford the required *fire-resistance rating* of the wall or floor supported in buildings of other than Type IIB, IIIB or VB construction.

Exceptions:

1. Smoke-barrier walls are not required in interstitial spaces where such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to that provided by the smoke-barrier walls.
2. Smoke barriers used for elevator lobbies in accordance with Section 405.4.3, 3007.4.2 or 3008.11.2 are not required to not extend from outside wall to outside wall.
3. Smoke barriers used for areas of refuge in accordance with Section 1007.6.2 are not required to extend from outside wall to outside wall.

Reason: Approved **c**ode changes FS59, FS60 and FS61-09/10 all add exceptions to Section710.4. The language in FS61 is reflected above and is preferred as it appears to be the most concise.

Supporting information:

(FS59-09/10)
710.4 Continuity. Smoke barriers shall form an effective membrane continuous from outside wall to outside wall and
from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, deck or slab above, including continuity through concealed spaces, such as those found above suspended ceilings, and interstitial structural and mechanical spaces. The supporting construction shall be protected to afford the required fire-resistance rating of the wall or floor supported in buildings of other than Type IIB, IIIB or VB construction.

Exceptions:

1. Smoke-barrier walls are not required in interstitial spaces where such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to that provided by the smoke-barrier walls.
2. Smoke barrier walls enclosing areas of refuge shall not be required to be continuous from outside wall to outside wall.

FS60-09/10)
710.4 Continuity. *Smoke barriers* shall form an effective membrane continuous from outside wall to outside wall and from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, deck or slab above, including continuity through concealed spaces,

such as those found above suspended ceilings, and interstitial structural and mechanical spaces. The supporting construction shall be protected to afford the required *fire-resistance rating* of the wall or floor supported in buildings of other than Type IIB, IIIB or VB construction.

Exceptions:

1. Smoke-barrier walls are not required in interstitial spaces where such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to that provided by the smoke-barrier walls.
2. Smoke barriers enclosing fire service access elevator lobbies, as required by Section 3007.4.2, and occupant evacuation elevator lobbies, as required by Section 3008.11.2, are not required to extend from outside wall to outside wall.

CCC 10 – #FS3

INTERNATIONAL BUILDING CODE

Section: 803.11.1.1 (New)

Revise as follows:

(FS135-09/10)
803.11.1 Direct attachment and furred construction. Where walls and ceilings are required by any provision in this code to be of fire-resistance-rated or noncombustible construction, the *interior finish* material shall be applied directly against such construction or to furring strips not exceeding 1 ¾ inches (44 mm), applied directly against such surfaces.

803.11.1.1 Furred construction. If the interior finish material is applied to furring strips, the intervening spaces between such furring strips shall comply with one of the following:

1. Be filled with material that is inorganic or noncombustible;
2. Be filled with material that meets the requirements of a Class A material in accordance with Section 803.1.1 or 803.1.2; or
3. Be fireblocked at a maximum of 8 feet (2438 mm) in every direction in accordance with Section 717.

Reason: To provide a section title for 803.11.1.1 consistent with established code style.

CCC 10 – #FS4

INTERNATIONAL BUILDING CODE

Section: 804.4, 804.4.1, 804.4.2

Revise as follows:

804.4 Interior floor finish requirements. Interior floor covering materials shall comply with Sections 804.4.1 and 804.4.2 and interior floor finish materials shall comply with Section 804.4.2.

804.4.1 Test requirement. In all occupancies, interior floor covering materials shall comply with the requirements of the DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630) or with ASTM D 2859.

804.4.2 Minimum critical radiant flux. In all occupancies, interior floor finish and floor covering materials in exit enclosures, exit passageways, corridors and rooms or spaces not separated from corridors by partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux. The minimum critical radiant flux shall not be less than Class I in Groups I-1, I-2 and I-3 and not less than Class II in Groups A, B, E, H, I- 4, M, R-1, R-2 and S.

Exception: Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, Class II materials are permitted in any area where Class I materials are required and materials complying with DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630) or with ASTM D 2859 are permitted in any area where Class II materials are required.

Reason: Approved **c**ode changes FS137 and FS138-09/10 revise the provisions to Section804.4. The above language is proposed to combine the changes.

Supporting information:

(FS137-09/10)
804.4.1 Minimum critical radiant flux. Interior floor finish and floor covering materials in exit enclosures, exit passageways and corridors shall not be less than Class I in Groups I-1, I-2 and I-3 and not less than Class II in Groups A, B, E, H, I- 4, M, R-1, R-2 and S. In all areas, floor covering materials shall comply with the DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630) or with ASTM D 2859.

> **Exception:** Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, Class II materials are permitted in any area where Class I materials are required, and materials complying with DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630) or with ASTM D 2859 are permitted in any area where Class II materials are required.

(FS138-09/10)
804.4 Interior floor finish requirements. Interior floor covering materials shall comply with Sections 804.4.1 and 804.4.2 and interior floor finish materials shall comply with Section 804.4.2.

804.4.1 Pill test. In all occupancies, interior floor covering materials shall comply with the requirements of the DOC FF-1 "pill test" (CPSC 16 CFR, Part 1630).

804.4.2 Minimum critical radiant flux. In all occupancies, interior floor finish and floor covering materials in exit enclosures, exit passageways, corridors and rooms or spaces not separated from corridors by full-height partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux. The minimum critical radiant flux shall not be less than Class I in Groups I-1, I-2 and I-3 and not less than Class II in Groups A, B, E, H, I- 4, M, R-1, R-2 and S.

Exception: Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, Class II materials are permitted in any area where Class I materials are required and materials complying with DOC FF-1 “pill test” (CPSC 16 CFR, Part 1630)are permitted in any area where Class II materials are required.

INTERNATIONAL BUILDING CODE – GENERAL

CCC 10 – #G1

Revise as follows:

110.3.9 Special Inspections. For special inspections, see ~~Section 1704~~.Chapter 17.

Reason: Suggested by Phil Brazil. Special inspections are not limited to Section 1704. A broader reference is appropriate.

CCC 10 – #G2

REF: IBC 302.2(New), 304.2, 307.2, 308.2, 310.2, 402.1 (NEW), 402.2, 404.1.1, 406.2, 408.1.1, 410.2, 411.2, 415.2, 421.2, 423.2, 702.1, 721.1.1, 1602.1, 1609.2, 1612.2, 1613.2, 1614.2, 2102.1, 2112.1, 2113.1, 3102.1(NEW), 3102.2, 3105.1, 3109.2 and 3110.2

Revise as follows:

Move all definitions in IBC to Chapter 2.

In locations where definitions were located, list the defined terms. Using the following format example:

402.2 Definitions. The following terms are defined in Chapter 2:

ANCHOR BUILDING

COVERED MALL BUILDING

Mall

Open mall

Open mall building

FOOD COURT

GROSS LEASABLE AREA

REASON: Maureen Traxler has submitted a proposal to CCC to move all definitions in the IBC to Chapter 2. For this staff person that is the preferred action. This proposal is offered as an alternate approach for the committee's consideration. This proposal moves definitions to one section at the beginning of each chapter. Most of the IBC chapters that have definitions already have them concentrated in the "02" section. Chapters 3, 4, 16 and 31 have multiple definition sections. Chapters 7 and 21 have couple of strays that aren't in an available definition section.

There are over 700 definitions and sub-definitions in the 2009 IBC. There are more that have been approved for 2012. Less than 10% are actually in the Definition Chapter. Currently there are approximately 640 references out of Chapter 2 to definitions located 44 other locations. While many of the references missing in the 2006 edition have been remedied, at least 2 definitions are not referenced. An estimated 50% of the terms that are defined at locations other than Chapter are not limited in use to the Chapter in which they are defined.

With the 2009 code reintroducing the format of having defined terms in italic font, more code users are likely going to the definitions rather than relying on their assumption of the definition of a term. Someone reading chapter 5 and wants to know the definition of fire area would not find it in 502, would they then look in 202 they will be told it is in 902. Related definitions of Grade Plan, Building Height, Building Area, Basement are found in 502, but Story, and Story Above Grade Plane are in 202. Steep Slope which applies to roofs is in 202 but Roof Covering, Roof Deck, Roof Assembly are in 1502. Water Resistant Barrier is in 1402, but Vapor Permeable Membrane and Vapor Retarder Class are in 202. There are 14 definition sections that have only a single or at most 2 definitions. All this hunting around is a disservice to the code users. It requires considerable editorial work to make sure that are 640 scattered definitions are referenced and referenced properly. Most other I-Codes and Standards have all definitions in one location. The exceptions are IRC (4 locations), the IFC – many locations and the IFGC (2 or 3 locations).

During the Baltimore hearings one proponent in particular – the CTC felt possessed by definitions, revising definitions, renumbering sections, moving some – even taking one out of Chapter 2 and putting it in Chap 3 – although the main use of the term is in Chapter 4, 9 and 10.

During the Dallas hearings the membership approved at least one public comment whose sole purpose was to move a definition out a chapter a later chapter and into Chapter 2.

The number of definitions in 2009 IBC in each location area as follows:

202	60	
304.1.1	1	(Changed to 304.2 for 2012)
307.2	58	
308.3.1	4	(Changed to 308.2 for 2012)
310.2	6	
402.2	7	
404.1.1	1	
406.3	3	(Moved to 406.2 for 2012)
408.1.1	4	
410.2	6	
411.2	1	
412.2	5	
415.2	23	
421.2	2	
423.2	2	
502.1	7	
702.1	38	
721.1	10	
802.1	10	
902.1	55	
1002.1	46	
1102.1	23	
1202.1	2	
1402.1	14	
1502.1	23	
1602.1	30	
1609.2	2	
1612.2	20	
1613.2	8	
1614.2	2	
1702.1	14	
1802.1	5	
2102.1	76+	
2112.1	1	
2113.1	1	
2202.1	3	
2302.1	25	
2402.1	2	
2502.1	8	
2602.1	10	
3102.2	6	
3105.2	1	
3109.2	1	
3110.2	1	
3402.1	5	

Appendix Chapters have 34 definitions in 4 locations.

CCC 10 – #G3

IBC Sections: 1206.1, 1613.6.7

IFC Sections: 202, 1504.7.6, 2009.3, 2206.7.7.2, 2206.7.8.2.2, 2207.4, 3404.2.7.5.2, 3404.4.2, T3404.4.2, 3405.3.4, T3504.2.1, 3804.3, T3804.3, T4104.2.1, D104.3

IRC Sections: R201, P2903.9.1

IEBC Sections: 912.6.3, 501.2.1, 506.4.2

IFGC Section: 413.3.1

Revise as follows:

Part I – New changes.

Part 1.1 IBC

1206.1 General. This section shall apply to *yards* and *courts* adjacent to exterior openings that provide natural light or ventilation. Such *yards* and *courts* shall be on the same ~~property~~ lot as the building.

1613.6.7 Minimum distance for building separation. All buildings and structures shall be separated from adjoining structures. Separations shall allow for the maximum inelastic response displacement ($\square_M$). $\square_M$ shall be determined at critical locations with consideration for both translational and torsional displacements of the structure using Equation 16-44.
$\square$

(Equation 16-44)

where:
C_d = Deflection amplification factor in Table 12.2-1 of ASCE 7.
$\square_{max}$ = Maximum displacement defined in Section 12.8.4.3 of ASCE 7.
I = Importance factor in accordance with Section 11.5.1 of ASCE 7.

Adjacent buildings on the same ~~property~~ lot shall be separated by a distance not less than $\square_{MT}$, determined by Equation 16-45.

$\square$ **(Equation 16-45)**

where:
$\square_{M1}$, $\square_{M2}$ = The maximum inelastic response displacements of the adjacent buildings in accordance with Equation 16-44.

Where a structure adjoins a ~~property~~ lot line not common to a public way, the structure shall also be set back from the ~~property~~ lot line by not less than the maximum inelastic response displacement, $\square_M$, of that structure.

Exceptions:

1. Smaller separations or ~~property~~ lot line setbacks shall be permitted when justified by rational analyses.
2. Buildings and structures assigned to *Seismic Design Category* A, B or C.

Part 1.2 IFC

SECTION 202
[B] FIRE SEPARATION DISTANCE. The distance measured from the building face to one of the following:

1. The closest interior *lot line*;
2. To the centerline of a street, an alley or *public way*; or
3. To an imaginary line between two buildings on the ~~property~~ lot.

The distance shall be measured at right angles from the face of the wall.

1504.7.6 Termination point. The termination point for exhaust ducts discharging to the atmosphere shall not be less than the following distances:

1. Ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet (9144 mm) from the ~~property~~ lot line; 10 feet (3048 mm) from openings into the building; 6 feet (1829 mm) from exterior walls and roofs; 30 feet (9144 mm) from combustible walls or openings into the building that are in the direction of the exhaust discharge; 10 feet (3048 mm) above adjoining grade.
2. Other product-conveying outlets: 10 feet (3048 mm) from the ~~property~~ lot line; 3 feet (914 mm) from exterior walls and roofs; 10 feet (3048 mm) from openings into the building; 10 feet (3048 mm) above adjoining grade.

D104.3 Remoteness. Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the ~~property~~ lot or area to be served, measured in a straight line between accesses.

Part 1.3 IRC

IE201.1
ACCESSORY BUILDING. Any building or structure, or portion thereto, located on the same ~~property~~ lot as a *manufactured home* which does not qualify as a *manufactured home* as defined herein.

P2903.9.1 Service valve. Each *dwelling unit* shall be provided with an accessible main shutoff valve near the entrance of the water service. The valve shall be of a full-open type having nominal restriction to flow, with provision for drainage such as a bleed orifice or installation of a separate drain valve. Additionally, the water service shall be valved at the curb or ~~property~~ lot line in accordance with local requirements.

Part 1.4 IEBC

501.2.1 Location of exhaust outlets. The termination point of exhaust outlets and ducts discharging to the outdoors shall be located with the following minimum distances:

1. For ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet (9144 mm) from ~~property~~ lot lines; 10 feet (3048 mm) from operable openings into buildings; 6 feet (1829 mm) from exterior walls and roofs; 30 feet (9144 mm) from combustible walls and operable openings into buildings which are in the direction of the exhaust discharge; 10 feet (3048 mm) above adjoining grade.
2. For other product-conveying outlets: 10 feet (3048 mm) from the ~~property~~ lot lines; 3 feet (914 mm) from exterior walls and roofs; 10 feet (3048 mm) from operable openings into buildings; 10 feet (3048 mm) above adjoining grade.

3. For all *environmental air* exhaust: 3 feet (914 mm) from ~~property~~ lot lines; 3 feet (914 mm) from operable openings into buildings for all occupancies other than Group U, and 10 feet (3048 mm) from mechanical air intakes. Such exhaust shall not be considered hazardous or noxious.
4. Exhaust outlets serving structures in flood hazard areas shall be installed at or above the design flood level.
5. For specific systems see the following sections:
    5.1. Clothes dryer exhaust, Section 504.4.
    5.2. Kitchen hoods and other kitchen exhaust *equipment*, Sections 506.3.12, 506.4 and 506.5.
    5.3. Dust stock and refuse conveying systems, Section 511.12
    5.4. Subslab soil exhaust systems, Section 512.4
    5.5. Smoke control systems, Section 513.10.3
    5.6. Refrigerant discharge, Section1105.7
    5.7. Machinery room discharge, Section 1105.6.1

506.4.2 Type II terminations. Exhaust outlets serving Type II hoods shall terminate in accordance with the hood manufacturer's installation instructions and shall comply with all of the following:

1. Exhaust outlets shall terminate not less than 3 feet (914 mm) in any direction from openings into the building.
2. Outlets shall terminate not less than 10 feet (3048 mm)from ~~property~~ lot lines or buildings on the same lot.
3. Outlets shall terminate not less than 10 feet (3048 mm) above grade.
4. Outlets that terminate above a roof shall terminate not less than 30 inches (762 mm)above the roof surface.
5. Outlets shall terminate not less than 30 inches (762 mm) from exterior vertical walls
6. Outlets shall be protected against local weather conditions.
7. Outlets shall not be directed onto walkways.
8. Outlets shall meet the provisions for exterior wall opening protectives in accordance with the *International Building Code.*

912.6.3 Opening protectives. Openings in exterior walls shall be protected as required by the *International Building Code*. Where openings in the exterior walls are required to be protected because of their distance from the ~~property~~ lot line, the sum of the area of such openings shall not exceed 50 percent of the total area of the wall in each story.

Exceptions:

1. Where the *International Building Code* permits openings in excess of 50 percent.
2. Protected openings shall not be required in buildings of Group R occupancy that do not exceed three stories in height and that are located not less than 3 feet (914 mm) from the ~~property~~ lot line.
3. Where exterior opening protectives are required, an automatic sprinkler system throughout may be substituted for opening protection.
4. Exterior opening protectives are not required when the change of occupancy group is to an equal or lower hazard classification in accordance with Table 912.6

Part 2 – Undoing changes approved in IBC50-09 CCC

PART 2.1 - IFC:

2009.3 Tank vehicle. Tank car and tank vehicle loading and unloading stations for Class I liquids shall be separated from the processing area, other plant structures, nearest lot line of ~~lot~~ property that can be built upon or public thoroughfare by a minimum clear distance of 25 feet (7620 mm).

2206.7.7.2 Location. Remote pumps installed above grade, outside of buildings, shall be located not less than 10 feet (3048 mm) from lines of adjoining ~~lot~~ property that can be built upon and not less than 5 feet (1524 mm) from any building opening. Where an outside pump location is impractical, pumps are permitted to be installed inside buildings as provided for dispensers in Section 2201.4 and Chapter 34. Pumps shall be substantially anchored and protected against physical damage.

2206.7.9.2.2 Location. Vapor-processing equipment shall be located at or above grade. Sources of ignition shall be located not less than 50 feet (15 240 mm) from fuel-transfer areas and not less than 18 inches (457 mm) above tank fill openings and tops of dispenser islands. Vapor-processing units shall be located not less than 10 feet (3048 mm) from the nearest building or *lot line* of a ~~lot~~ property which can be built upon.

> **Exception:** Where the required distances to buildings, *lot lines* or fuel-transfer areas cannot be obtained, means shall be provided to protect equipment against fire exposure. Acceptable means shall include but not be limited to:
>
> 1. *Approved* protective enclosures, which extend at least 18 inches (457 mm) above the equipment, constructed of fire-resistant or noncombustible materials; or
> 2. Fire protection using an *approved* waterspray system.

Vapor-processing equipment shall be located a minimum of 20 feet (6096 mm) from dispensing devices. Processing equipment shall be protected against physical damage by guardrails, curbs, protective enclosures or fencing. Where *approved* protective enclosures are used, *approved* means shall be provided to ventilate the volume within the enclosure to prevent pocketing of flammable vapors.

Where a downslope exists toward the location of the vapor-processing unit from a fuel-transfer area, the *fire code official* is authorized to require additional separation by distance and height.

2207.4 Location of dispensing operations and equipment. In addition to the requirements of Section 2206.7, the point of transfer for LP-gas dispensing operations shall be 25 feet (7620 mm) or more from buildings having combustible exterior wall surfaces, buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly, or buildings having combustible overhangs, *lot lines* of ~~lot~~ property which could be built on, public streets, or sidewalks and railroads; and at least 10 feet (3048 mm) from driveways and buildings having noncombustible exterior wall surfaces that are part of a fire-resistance-rated assembly having a rating of 1 hour or more.

> **Exception:** The point of transfer for LP-gas dispensing operations need not be separated from canopies that are constructed in accordance with the *International Building Code* and which provide weather protection for the dispensing equipment.

LP-gas containers shall be located in accordance with Chapter 38. LP-gas storage and dispensing equipment shall be located outdoors and in accordance with Section 2206.7.

3404.2.7.5.2 Filling, emptying and vapor recovery connections. Filling, emptying and vapor recovery connections to tanks containing Class I, II or IIIA liquids shall be located outside of buildings in accordance with Section 3404.2.7.5.6 at a location free from sources of ignition and not less than 5 feet (1524 mm) away from building openings or *lot lines* of ~~lot~~ property that can be

built on. Such openings shall be properly identified and provided with a liquid-tight cap which shall be closed when not in use.

Filling and emptying connections to indoor tanks containing Class IIIB liquids and connected to fuel-burning equipment shall be located at a finished ground level location outside of buildings. Such openings shall be provided with a liquid-tight cap which shall be closed when not in use. A sign in accordance with Section 2703.6 that displays the following warning shall be permanently attached at the filling location:

3404.4.2 Location on ~~lot~~ property. Outdoor storage of liquids in containers and portable tanks shall be in accordance with Table 3404.4.2. Storage of liquids near buildings located on the same lot shall be in accordance with this section.

TABLE 3404.4.2
OUTDOOR LIQUID STORAGE IN CONTAINERS AND PORTABLE TANKS

CLASS OF LIQUID	CONTAINER STORAGE MAXIMUM PER PILE		PORTABLE TANK STORAGE MAXIMUM PER PILE			MINIMUM DISTANCE TO LOT LINE OF ~~lot~~ property THAT CAN BE BUILT UPON[c,d] (feet)	MINIMUM DISTANCE TO PUBLIC STREET, PUBLIC ALLEY OR PUBLIC WAY[d] (feet)
	Quantity[a, b] (gallons)	Height (feet)	Quantity[a, b] (gallons)	Height (feet)			

(Portions of table not shown remain unchanged)

3405.3.4 Location of processing vessels. Processing vessels shall be located with respect to distances to *lot lines* of adjoining ~~lot~~ property which can be built on, in accordance with Tables 3405.3.4(1) and 3405.3.4(2).

Exception: Where the exterior wall facing the adjoining *lot line* is a blank wall having a *fire-resistance rating* of not less than 4 hours, the *fire code official* is authorized to modify the distances. The distance shall not be less than that set forth in the *International Building Code*, and when Class IA or unstable liquids are involved, explosion control shall be provided in accordance with Section 911.

TABLE 3504.2.1
FLAMMABLE GASES—DISTANCE FROM STORAGE TO EXPOSURES

MAXIMUM AMOUNT PER STORAGE AREA (cubic feet)	MINIMUM DISTANCE BETWEEN STORAGE AREAS (feet)	MINIMUM DISTANCE TO LOT LINES OF ~~lot~~ property THAT CAN BE BUILT UPON (feet)a	MINIMUM DISTANCE TO PUBLIC STREETS, PUBLIC ALLEYS OR PUBLIC WAYS (feet)a	MINIMUM DISTANCE TO BUILDINGS ON THE SAME ~~PROPERTY~~ LOT		
				Nonrated construction or openings within 25 feet	2-hour construction and no openings within 25 feet	4-hour construction and no openings within 25 feet

(Portions of table not shown remain unchanged)

3804.3 Container location. LP-gas containers shall be located with respect to buildings, *public ways* and *lot lines* of adjoining ~~lot~~ property that can be built upon, in accordance with Table 3804.3.

TABLE 3804.3
LOCATION OF LP-GAS CONTAINERS

LP-GAS CONTAINER CAPACITY (water gallons)	MINIMUM SEPARATION BETWEEN LP-GAS CONTAINERS AND BUILDINGS, PUBLIC WAYS OR LOT LINES OF ADJOINING ~~lot~~ property THAT CAN BE BUILT UPON		MINIMUM SEPARATION BETWEEN LP-GAS CONTAINERS[b, c] (feet)
	Mounded or underground LP-gas containers[a] (feet)	Above-ground LP-gas containers[b] (feet)	

(Portions of table not shown remain unchanged)

TABLE 4104.2.1
PYROPHORIC GASES—DISTANCE FROM STORAGE TO EXPOSURES[a]

MAXIMUM AMOUNT PER STORAGE AREA (cubic feet)	MINIMUM DISTANCE BETWEEN STORAGE AREAS (feet)	MINIMUM DISTANCE TO LOT LINES OF ~~lot~~ property THAT CAN BE BUILT UPON (feet)	MINIMUM DISTANCE TO PUBLIC STREETS, PUBLIC ALLEYS OR PUBLIC WAYS (feet)	MINIMUM DISTANCE TO BUILDINGS ON THE SAME LOT		
				Nonrated construction or openings within 25 feet	Two-hour construction and no openings within 25 feet	Four-hour construction and no openings within 25 feet

(Portions of table not shown remain unchanged)

PART 2.1 - IFGC:

[F] 413.3.1 Location on property. In addition to the fuel-dispensing requirements of the *International Fire Code*, Compression, storage and dispensing *equipment* not located in vaults complying with the *International Fire Code* and other than residential fueling appliances shall not be installed:

1. *(No change to text.)*
2. Less than 10 feet (3048 mm) from the nearest building or ~~lot line~~ property that could be built on, public street, sidewalk or source of ignition.

3. through 5. *(No change to text.)*

REASON: In IBC50-09 CCC the committee approved changing 'property' to 'lot' and 'property lines' to 'lot lines' in 42 locations in 8 codes. Both lot and lot lines are the defined terms. Property and property lines are not. In reviewing the codes for 2012 publication, we found over 200 additional uses of the term 'property'. We explored whether additional changes consistent with IBC50 needed to be made.

The problem posed is that the term 'property' can be used in many different ways. The primary ones used in the codes are:

1. A specific parcel of land.
2. As a thing to own – as in property rights
3. As a generic term referring to large areas and to land owned by the public.
4. A concept of a good to be protected – as in 'harmful to life and property'.

Of these 4 things only #1 is indicative of the define term of 'lot'.

Therefore, this proposal contains 11 additional sections where 'lot' needs to be substituted for 'property' because the intent of the section is lot specific. These are found in Part 1 of the proposal.

Part 2 of the proposal contains 14 sections that had been changed in IBC50-09 but given the 4 categories above, they shouldn't have been changed. Therefore we are proposing to return them to the text of codes. The vast majority of these are in the IFC and most of them are locations where the phrase in the code is 'property that can be built on'. This phrase needs to be retained because changing it to 'lot that could be built on' could be construed to mean only one adjoining lot rather than all surrounding property.

Part 2.1 is an unusual case. The code says now says 'property lines that could be built on.' IBC50 changed it to 'lot lines that could be built on'. To be consistent with the many similar provisions in the IFC, the inclusion of 'lines' is inconsistent.

Finally IFC Sections 2209.3.2.5.1 and 3404.4.2 were changed by IBC50 to say "Location on lot". While this is probably accurate, it is not needed and there are some 20 sections in the IFC and

other codes that also say ‘Location on property’ that hadn’t been included in the IBC50 changes. We feel that ‘Location on property’ is more appropriate. As these are titles and considered editorial, these could have been changed by staff, but because they were included in IBC50 and specifically changed, we included them for clarifying action.

CCC 10 – #G4

REF: G905.3 - Highrise definition vs text

IBC Sections: 905.3.2, 907.2.13, 1024.1, 1026.2 and 1704.15; IFC sections 905.3.2, 907.2.13, 1024.1, 1026.2,

Revise as follows:

[F] 905.3.2 ((IFC 905.3.2)) Group A. Class I automatic wet standpipes shall be provided in nonsprinklered Group A buildings having an *occupant load* exceeding 1,000 persons.

Exceptions:

1. Open-air-seating spaces without enclosed spaces.
2. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings which are not high-rise buildings. ~~where the highest floor surface used for human occupancy is 75 feet (22 860 mm) or less above the lowest level of fire department vehicle access~~.

[F] 907.2.13 ((IFC 907.2.13)) High-rise buildings. High-rise buildings ~~with a floor used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access~~ shall be provided with an automatic smoke detection system in accordance with Section 907.2.13.1, a fire department communication system in accordance with Section 907.2.13.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

Exceptions: *No change in text*

1024.1 ([B] 1024.1) General. *Approved* luminous egress path markings delineating the exit path shall be provided in high-rise buildings of Groups A, B, E, I, M and R-1 occupancies ~~having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access~~ in accordance with Sections 1024.1 through 1024.5.

Exceptions: *No change in text*

1026.2 ([B] 1026.2) Use in a means of egress. *Exterior exit stairways* shall not be used as an element of a required *means of egress* for Group I-2 occupancies. For occupancies in other than Group I-2, *exterior exit ramps* and *stairways* shall be permitted as an element of a required *means of egress* for buildings not exceeding six stories above *grade plane* or which are not high-rise buildings. ~~having occupied floors more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.~~

1704.15 Fire-resistant penetrations and joints. In high-rise buildings ~~having occupied floors located more than 75 feet (22860 mm) above the lowest level of fire department vehicle access~~, special inspections for through penetrations, membrane penetration firestops, fire resistant joint systems, and perimeter fire barrier systems tested and listed in accordance with Sections 713.3.1.2, 713.4.1.2, 714.3 and 714.4 shall be in accordance with Sections 1704.15.1 or 1704.15.2.

International Fire Code

4604.23 Egress path markings. Existing high-rise buildings of Groups A, B, E, I, M and R-1 occupancies ~~having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access~~ shall be provided with luminous egress path markings in accordance with Section 1024.

Exception: Open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program.

Reason: Replaces the phrasing which is the definition of ‘high-rise’ with the term ‘High-rise’. Please note that a number of similar provisions were changed in other CCC action (F15-09 CCC)

CCC 10 – #G5

Chapter 3 full consistent format based on G20

IBC Sections 303.1, 303.1.1(NEW), 303.1.2 (NEW), 303.1.3 (NEW), 303.1.4 (NEW), 303.2 (NEW), 303.3 (NEW); 303.4(NEW), 303.5(New), 303.6 (NEW), 307.3, 307.3.1(new), 308.3.1(NEW), 308.3.2(NEW), 308.4.1(NEW), 310.3 (NEW), 310.4(NEW), 310.5(new), 310.5.1 (new) and 310.6 (new).

Revise as follows:

CHAPTER 3
USE AND OCCUPANCY CLASSIFICATION

SECTION 301
GENERAL

301.1 Scope. The provisions of this chapter shall control the classification of all buildings and structures as to use and occupancy.

SECTION 302
CLASSIFICATION

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

1. Assembly (see Section 303): Groups A-1, A-2, A-3, A-4 and A-5
2. Business (see Section 304): Group B
3. Educational (see Section 305): Group E
4. Factory and Industrial (see Section 306): Groups F-1 and F-2
5. High Hazard (see Section 307): Groups H-1, H-2, H-3, H-4 and H-5
6. Institutional (see Section 308): Groups I-1, I-2, I-3 and I-4
7. Mercantile (see Section 309): Group M
8. Residential (see Section 310): Groups R-1, R-2, R-3 and R-4
9. Storage (see Section 311): Groups S-1 and S-2
10. Utility and Miscellaneous (see Section 312): Group U

SECTION 303
ASSEMBLY GROUP A

303.1 Assembly Group A. Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption or awaiting transportation.

303.1.1 Small buildings and tenant spaces. A building or tenant space used for assembly purposes with an *occupant load* of less than 50 persons shall be classified as a Group B occupancy.

303.1.2 Small assembly spaces. The following rooms and spaces shall not be classified as Assembly Occupancies

1. A room or space used for assembly purposes with an *occupant load* of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.
2. A room or space used for assembly purposes that is less than 750 square feet (70m_2) in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

303.1.3 Associated with Group E occupancies. A room or space used for assembly purposes that are associated with a Group E occupancy are not considered separate occupancies.

303.1.4 Accessory with places of religious worship. Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100 are not considered separate occupancies.

~~Assembly occupancies shall include the following:~~

303.2 Assembly Group A-1 Assembly uses, usually with fixed seating, intended for the production and viewing of the performing arts or motion pictures including, but not limited to:

Motion picture theaters
Symphony and concert halls
Television and radio studios admitting an audience
Theaters

303.3 Assembly Group A-2 Assembly uses intended for food and/or drink consumption including, but not limited to:

Banquet halls
Casinos (gaming areas)
Night clubs
Restaurants , cafeterias and similar dining facilities (including associated commercial kitchens)
Taverns and bars

303.4 Assembly Group A-3 Assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to:

Amusement arcades
Art galleries
Bowling alleys
Community halls
Courtrooms
Dance halls (not including food or drink consumption)
Exhibition halls
Funeral parlors
Gymnasiums (without spectator seating)
Indoor swimming pools (without spectator seating)
Indoor tennis courts (without spectator seating)
Lecture halls
Libraries
Museums
Places of religious worship
Pool and billiard parlors

Waiting areas in transportation terminals

303.5 Assembly Group A-4 Assembly uses intended for viewing of indoor sporting events and activities with spectator seating including, but not limited to:

Arenas
Skating rinks
Swimming pools
Tennis courts

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

Amusement park structures
Bleachers
Grandstands
Stadiums

SECTION 304
BUSINESS GROUP B

304.1 Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

304.2 Definitions.

SECTION 305
EDUCATIONAL GROUP E

305.1 (IFC [B] 202) Educational Group E. Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade.

305.1.1 Accessory to places of worship. Religious educational rooms and religious auditoriums, which are accessory to *places of religious worship* in accordance with Section 303.1 and have *occupant loads* of less than 100, shall be classified as Group A-3 occupancies.

305.2 (IFC [B] 202) Group E, Day care facilities. This group includes buildings and structures or portions thereof occupied by more than five children older than 2-1/2 years of age who receive educational, supervision or *personal care services* for less than 24 hours per day.

305.2.1 Within places of worship. Rooms and spaces within places of worship providing such care during religious functions shall be classified as part of the primary occupancy.

305.2.2 Five or fewer children. A facility having five or fewer children receiving such care shall be classified as part of the primary occupancy.

305.2.3 Five or fewer children in a dwelling unit. A facility such as the above within a dwelling unit and having five or fewer children receiving such care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.

SECTION 306
FACTORY GROUP F

306.1 Factory Industrial Group F. Factory Industrial Group F occupancy includes, among others, the use of a building or structure, or a portion thereof, for assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair or processing operations that are not classified as a Group H hazardous or Group S storage occupancy.

306.2 Factory Industrial F-1 Moderate-hazard Occupancy. Factory industrial uses which are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:

306.3 Factory Industrial F-2 Low-hazard Occupancy. Factory industrial uses that involve the fabrication or manufacturing of noncombustible materials which during finishing, packing or processing do not involve a significant fire hazard shall be classified as F-2 occupancies and shall include, but not be limited to, the following:

SECTION 307
HIGH-HAZARD GROUP H

[F] 307.1 High-hazard Group H. High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in *control areas* complying with Section 414, based on the maximum allowable quantity limits for control areas set forth in Tables 307.1(1) and 307.1(2). Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this section, the requirements of Section 415 and the *International Fire Code*. Hazardous materials stored, or used on top of roofs or canopies shall be classified as outdoor storage or use and shall comply with the *International Fire Code*.

Exceptions: The following shall not be classified as Group H, but shall be classified as the occupancy that they most nearly resemble.

1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 and the *International Fire Code*.
2. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to the *International Fire Code*.
3. Closed piping system containing flammable or combustible liquids or gases utilized for the operation of machinery or equipment.
4. Cleaning establishments that utilize combustible liquid solvents having a flash point of 140°F (60°C) or higher in closed systems employing equipment *listed* by an *approved* testing agency, provided that this occupancy is separated from all other areas of the building by 1-hour *fire barriers* constructed in accordance with Section 707 or 1-hour *horizontal assemblies* constructed in accordance with Section 712, or both.
5. Cleaning establishments that utilize a liquid solvent having a flash point at or above 200°F (93°C).
6. Liquor stores and distributors without bulk storage.
7. Refrigeration systems.
8. The storage or utilization of materials for agricultural purposes on the premises.
9. Stationary batteries utilized for facility emergency power, uninterruptible power supply or telecommunication facilities, provided that the batteries are provided with safety venting caps and ventilation is provided in accordance with the *International Mechanical Code*.

10. Corrosives shall not include personal or household products in their original packaging used in retail display or commonly used building materials.
11. Buildings and structures occupied for aerosol storage shall be classified as Group S-1, provided that such buildings conform to the requirements of the *International Fire Code*.
12. Display and storage of nonflammable solid and nonflammable or noncombustible liquid hazardous materials in quantities not exceeding the maximum allowable quantity per *control area* in Group S occupancies complying with Section 414.2.5.
13. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in the *International Fire Code*.

[F] TABLE 307.1(1)
MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A PHYSICAL HAZARD

[F] TABLE 307.1(2)

307.1.1 Hazardous materials. Hazardous materials in any quantity shall conform to the requirements of this code, including Section 414, and the *International Fire Code*.

[F] 307.2 Definitions.

[F] 307.3 High-hazard Group H-1. Buildings and structures containing materials that pose a *detonation* hazard shall be classified as Group H-1. Such materials shall include, but not be limited to, the following:

Detonable pyrophoric materials
Explosives:
Division 1.1
Division 1.2
Division 1.3

~~**Exception:** Materials that are used and maintained in a form where either confinement or configuration will not elevate the hazard from a mass fire to mass explosion hazard shall be allowed in H-2 occupancies.~~

Division 1.4

~~**Exception:** Articles, including articles packaged for shipment, that are not regulated as an explosive under Bureau of Alcohol, Tobacco and Firearms regulations, or unpackaged articles used in process operations that do not propagate a *detonation* or deflagration between articles shall be allowed in H-3 occupancies.~~

Division 1.5
Division 1.6
Organic peroxides, unclassified detonable
Oxidizers, Class 4
Unstable (reactive) materials, Class 3 detonable and Class 4

307.3.1 Occupancies containing explosives not classified as H-1. The following occupancies containing explosive materials shall be classified as follows:

1. Division 1.3 explosive materials that are used and maintained in a form where either confinement or configuration will not elevate the hazard from a mass fire to mass explosion hazard shall be allowed in H-2 occupancies.

2. Articles, including articles packaged for shipment, that are not regulated as a Division 1.4 explosive under Bureau of Alcohol, Tobacco and Firearms regulations, or unpackaged articles used in process operations that do not propagate a *detonation* or deflagration between articles shall be allowed in H-3 occupancies.

[F] 307.4 High-hazard Group H-2. Buildings and structures containing materials that pose a deflagration hazard or a hazard from accelerated burning shall be classified as Group H-2. Such materials shall include, but not be limited to, the following:

[F] 307.5 High-hazard Group H-3. Buildings and structures containing materials that readily support combustion or that pose a physical hazard shall be classified as Group H-3. Such materials shall include, but not be limited to, the following:

[F] 307.6 High-hazard Group H-4. Buildings and structures which contain materials that are health hazards shall be classified as Group H-4. Such materials shall include, but not be limited to, the following:

[F] 307.7 High-hazard Group H-5 structures. Semiconductor fabrication facilities and comparable research and development areas in which hazardous production materials (HPM) are used and the aggregate quantity of materials is in excess of those listed in Tables 307.1(1) and 307.1(2) shall be classified as Group H-5. Such facilities and areas shall be designed and constructed in accordance with Section 415.8.

[F] 307.8 Multiple hazards. Buildings and structures containing a material or materials representing hazards that are classified in one or more of Groups H-1, H-2, H-3 and H-4 shall conform to the code requirements for each of the occupancies so classified.

SECTION 308
INSTITUTIONAL GROUP I

308.1 (IFC [B] 202) Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which care or supervision is provided to individuals who, are or are not capable of self preservation without physical assistance or in which people are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

308.2 Definitions.

308.3 (IFC [B] 202) Group I-1. This occupancy shall include buildings, structures or portions thereof for more than 16 persons who reside on a 24 hour basis in a supervised environment and receive custodial care. The occupants are capable of self preservation. This group shall include, but not be limited to, the following:

308.3.1 Five or fewer residents A facility such as the above with five or fewer residents shall be classified as a Group R-3 or shall comply with the *International Residential Code* provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code.*

308.3.2 Six to sixteen residents. A facility such as above, housing at least six and not more than 16 persons receiving such care, shall be classified as Group R-4.

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

308.4.1 Five or fewer residents. A facility such as the above with five or fewer residents shall be classified as Group R-3 or shall comply with the International Residential Code in accordance with Section 101.2 provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code.*

308.5 Group I-3. This occupancy shall include buildings and structures that are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated in Sections 308.5.1 through 308.5.5 (see Section 408.1).

308.5.1 Condition 1.

308.5.2 Condition 2.

308.5.3 Condition 3.

308.5.4 Condition 4.

308.5.5 Condition 5.

308.6 (IFC [B] 202) Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for less than 24 hours per day by individuals other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Adult day care
Child day care

308.6.1 Classification as Group E. A child day care facility that provides care for more than five but no more than 100 children 2½ years or less of age, where the rooms in which the children are cared for are located on a *level of exit discharge* serving such rooms and each of these child care rooms has an *exit* door directly to the exterior, shall be classified as Group E.

308.6.2 Within a place of worship. Rooms and spaces within places of worship providing such care during religious functions shall be classified as part of the primary occupancy.

308.6. 3 Five or fewer occupants receiving care. A facility having five or fewer persons receiving custodial care shall be classified as part of the primary occupancy.

308.6.4 Five or fewer occupants receiving care in a dwelling unit. A facility such as the above within a dwelling unit and having five or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.

SECTION 309
MERCANTILE GROUP M

309.1 Mercantile Group M. Mercantile Group M occupancy includes, among others, the use of a building or structure or a portion thereof, for the display and sale of merchandise and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to, the following:

309.2 Quantity of hazardous materials. The aggregate quantity of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored or displayed in a single *control area* of a Group M occupancy shall not exceed the quantities in Table 414.2.5(1).

SECTION 310
RESIDENTIAL GROUP R

310.1 Residential Group R. Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the *International Residential Code* in accordance with Section 101.2. ~~Residential occupancies shall include the following:~~

310.2 Definitions (*the definition section is already 310.2, but by virtue of numbering the rest of the Group R divisions, Section 310.2 will move forward.)*

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

Boarding houses (transient) with more than 10 occupants
Congregate living facilities (transient) with more than 10 occupants
Hotels (transient)
Motels (transient)

310.4 Residential Group R-2 Residential occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily permanent in nature, including:

Apartment houses
Boarding houses (nontransient) with more than 16 occupants
Congregate living facilities (nontransient) with more than 16 occupants
Convents
Dormitories
Fraternities and sororities
Hotels (nontransient)
Live/work units
Monasteries
Motels (nontransient)
Vacation timeshare properties

310.5 Residential Group R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

Buildings that do not contain more than two *dwelling units*.
Boarding houses (non-transient) with 16 or fewer occupants
Boarding houses (transient) with 10 or fewer occupants
Care facilities that provide accommodations for five or fewer persons.
Congregate living facilities (nontransient) with 16 or fewer occupants.
Congregate living facilities (transient) with 10 or few occupants

310.5.1 Care facilities within a dwelling. Care facilities for 5 or fewer individuals receiving care that are within a single-family dwellings are permitted to comply with the *International Residential* Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code*.

310.6 Residential Group R-4 This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24 hour

basis in a supervised environment and receive custodial care. The occupants are capable of self preservation. This group shall include, but not be limited to the following:

Alcohol and drug centers
Assisted living facilities
Congregate care facilities
Convalescent facilities
Group homes
Halfway houses
Residential board and custodial care facilities
Social rehabilitation facilities

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

SECTION 311
STORAGE GROUP S

311.1 Storage Group S. Storage Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

311.2 Moderate-hazard storage, Group S-1. Buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

311.3 Low-hazard storage, Group S-2. Includes, among others, buildings used for the storage of noncombustible materials such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products are permitted to have a negligible amount of plastic *trim*, such as knobs, handles or film rapping. Group S-2 storage uses shall include, but not be limited to, storage of the following:

SECTION 312
UTILITY AND MISCELLANEOUS GROUP U

312.1 General. Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

REASON: The purpose of this proposal is to establish a consistent numbering format throughout Chapter 3. (Text which hasn't been altered, or is not needed for illustration of the changes is not been included.) The move toward consistency was initiated by G15, G16, G20, G28?? and G65-09/10 changes as approved and as modified by successful public comments. But the approvals point out further areas for improvement.

What has been accomplished is:

1. Each definition section is now the .2 section of the occupancy listings. Specifically: 304.2, 307.2, 308.2 and 310.2

2. Sections in 306 for Education occupancies and 308 for Institutional occupancies were substantially reorganized, with terms clarified. But the changes also introduced a format by which special cases which fall out of the occupancy classification are now given their own section number and title which will make them easier to find for code users.

3. Section 310 lists of uses were significantly clarified so that each division (R-1, R-2, R-3, R-4) has a clear list rather than a series of interlocking texts.

The changes that resulted from the code change proposals listed above are shown in red font.

What is inconsistent?

1. Divisions of occupancies have their own sections in E, F, H, I, and S; but not in Group A or R.

2. While uses which are assigned to different occupancies have their own sections in Group E and I occupancies, similar provisions in A and H occupancies are not formatted as the same…

The changes which would accomplish a consistent are shown in blue font.

The title of Section 308.3.2 was revised to read: **Six to sixteen residents.**

CCC 10 – #G6

CCC IBC 303.1 - consistency of terms

IBC Sec. 202, 304.2, 308.1, 308.2, 308.3, 308.4, 308.6 and 310.1

Revise as follows:

202

PERSONAL CARE SERVICE. The care of ~~occupants~~ persons who do not require medical care. Personal care involves responsibility for the safety of the ~~occupants~~ persons while inside the building.

SECTION 303
ASSEMBLY GROUP A

303.1 Assembly Group A. Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption or awaiting transportation.

Exceptions:

1. A building or tenant space used for assembly purposes with an *occupant load* of less than 50 persons shall be classified as a Group B occupancy.
2. A room or space used for assembly purposes with an *occupant load* of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.
3. A room or space used for assembly purposes that is less than 750 square feet (70m_2) in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

#4 and #5 remain unchanged.

Balance of 303.1 is unchanged.

SECTION 304
BUSINESS GROUP B

304.1 Business Group B. *No change in text*

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

AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to ~~individuals~~ persons who are rendered incapable of self preservation by the services provided.

CLINIC-OUTPATIENT. Buildings or portions thereof used to provide medical care on less than a 24-hour basis to ~~individuals~~ persons who are not rendered incapable of self-preservation by the services provided.

SECTION 305
EDUCATIONAL GROUP E

305.1 (IFC [B]202) Educational Group E. Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade.

SECTION 308
INSTITUTIONAL GROUP I

308.1 (IFC [B] 202) Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which care or supervision is provided to ~~individuals~~ persons who, are or are not capable of self preservation without physical assistance or in which ~~people~~ persons are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

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

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

CUSTODIAL CARE. Assistance with day-to-day living tasks; such as assistance with cooking, taking medication, bathing, using toilet facilities and other tasks of daily living. Custodial care include ~~occupants~~ persons receiving care who evacuate at a slower rate and/or who have mental and psychiatric complications.

DETOXIFICATION FACILITIES. Facilities that provide treatment for substance abuse serving care recipients who are incapable of self-preservation or who are harmful to themselves or others.

FOSTER CARE FACILITIES. Facilities that provide care to more than five children, $2\frac{1}{2}$ years of age or less,

HOSPITALS AND PSYCHIATRIC HOSPITALS. Facilities that provide care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of inpatient care recipients that are incapable of self-preservation.

INCAPABLE OF SELF PRESERVATION. Persons because of age; physical limitations; mental limitations; chemical dependency; or medical treatment cannot respond as an individual to an emergency situation.

MEDICAL CARE. Care involving medical or surgical procedures, nursing or for psychiatric purposes.

NURSING HOMES. Facilities that provide care including both intermediate care facilities and skilled nursing facilities where any of the persons are incapable of self-preservation.

308.3 (IFC [B] 202) Group I-1. This occupancy shall include buildings, structures or portions thereof for more than 16 persons who reside on a 24 hour basis in a supervised environment and receive custodial care. The ~~occupants~~ persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living facilities
Congregate care facilities
Convalescent facilities

Group homes
Halfway houses
Residential board and custodial care facilities
Social rehabilitation facilities

A facility such as the above with five or fewer ~~residents~~ persons receiving such care shall be classified as a Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2 provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 and Section P2904 of the *International Residential Code.*

A facility such as above, housing at least six and not more than 16 persons receiving such care, shall be classified as Group R-4.

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

Foster care facilities
Detoxification facilities
Hospitals
Nursing homes
Psychiatric hospitals

A facility such as the above with five or fewer ~~residents~~ persons receiving such care shall be classified as Group R-3 or shall comply with the International Residential Code in accordance with Section 101.2 provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code.*

308.5 Group I-3. This occupancy shall include buildings and structures that are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

Correctional centers
Detention centers
Jails
Prerelease centers
Prisons
Reformatories

Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated in Sections 308.5.1 through 308.5.5 (see Section 408.1).

308.6 (IFC [B] 202) Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for less than 24 hours per day by ~~individuals~~ persons ~~-~~other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Adult day care
Child day care

308.6.1 Classification as Group E. *No change in text*

308.6.2 Within a place of worship. *No change in text*

308.6. 3 Five or fewer persons receiving care. A facility having five or fewer persons receiving custodial care shall be classified as part of the primary occupancy.

308.6.4 Five or fewer persons receiving care in a dwelling unit. A facility such as the above within a dwelling unit and having five or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.

SECTION 310
RESIDENTIAL GROUP R

310.1 Residential Group R. Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the *International Residential Code* in accordance with Section 101.2. Residential occupancies shall include the following:

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

Boarding houses (transient) with more than 10 occupants
Congregate living facilities (transient) with more than 10 occupants
Hotels (transient)
Motels (transient)

R-2 Residential occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily permanent in nature, including:

Apartment houses
Boarding houses (nontransient) with more than 16 occupants
Congregate living facilities (nontransient) with more than 16 occupants
Convents
Dormitories
Fraternities and sororities
Hotels (nontransient)
Live/work units
Monasteries
Motels (nontransient)
Vacation timeshare properties

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

Buildings that do not contain more than two *dwelling units*.
Boarding houses (non-transient) with 16 or fewer occupants
Boarding houses (transient) with 10 or fewer occupants
Care facilities that provide accommodations for five or fewer persons receiving care.
Congregate living facilities (nontransient) with 16 or fewer occupants.
Congregate living facilities (transient) with 10 or few occupants

Care facilities for 5 or fewer ~~individuals~~ persons receiving care that are within a single-family dwellings are permitted to comply with the *International Residential* Code provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code*.

R-4 This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24 hour basis in a supervised environment and receive custodial care. The ~~occupants~~ persons receiving care are capable of self preservation. This group shall include, but not be limited to the following:

Alcohol and drug centers
Assisted living facilities
Congregate care facilities
Convalescent facilities
Group homes
Halfway houses
Residential board and custodial care facilities
Social rehabilitation facilities

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

Reason: As a result of the CTC changes and some similar actions, the mishmash of terms referring to people in Chapter 3 have become massively jumbled and inconsistent.

The chapter bounces around between the following terms:

Occupants
Persons
Individuals
Residents
Care recipient (new term from CTC work)
Child, children

And

People

Except for 'child' and 'children' the use of all these terms in Chapter 3 are shown with highlights, above.

The summary of the proposals is to:

1. Replace 'individuals' and 'people' with 'persons'
2. Leave care recipient alone
3. Leave child and children alone
4. Use 'occupants' only in context of Group R – replace it elsewhere. More times than not 'occupant' is used to distinguish between someone living in a facility and the staff providing care.

There is also an interesting pattern of some places already saying that 'persons receiving such care' and others using other phrases – Therefore this cleans this inconsistency as well.

CCC 10 – #G7

Revise as follows:

SECTION 402
COVERED MALL AND OPEN MALL BUILDINGS

402.1 ~~Scope~~ Applicability. The provisions of this section shall apply to buildings or structures defined ~~herein~~ as *covered mall buildings* not exceeding three floor levels at any point nor more than three *stories above grade plane*. Except as specifically required by this section, *covered and open mall buildings* shall meet applicable provisions of this code.

Exceptions:

1. Foyers and lobbies of Groups B, R-1 and R-2 are not required to comply with this section.
2. Buildings need not comply with the provisions of this section when they totally comply with other applicable provisions of this code.

402.1.1 Open Space. A *covered mall building* and attached *anchor buildings* and parking garages shall be surrounded on all sides by a permanent open space of not less than 60 feet (18 288 mm). An open mall building and anchor buildings and parking garages adjoining the perimeter line shall be surrounded on all sides by a permanent open space of not less than 60 feet (18 288 mm),

~~**402.6.1 Reduced open space**~~**. Exception:** The permanent open space ~~of 60 feet (18 288 mm)~~ shall be permitted to be reduced to not less than 40 feet (12 192 mm), provided the following requirements are met:

1. The reduced open space shall not be allowed for more than 75 percent of the perimeter of the *covered or open mall building* and *anchor buildings*;
2. The *exterior wall* facing the reduced open space shall have a minimum *fire-resistance rating* of 3 hours;
3. Openings in the *exterior wall* facing the reduced open space shall have opening protectives with a minimum *fire protection rating* of 3 hours; and
4. Group E, H, I or R occupancies are not located within the *covered or open mall building* or *anchor stores*.

~~**402.2.1**~~ **402.1.2 Open mall building perimeter line**.

402.2 Definitions.

402.3 Lease plan.

402.4 Construction. The construction of covered and open mall buildings, anchor buildings and parking garages associated with a mall building shall comply with Sections 402.3.1 through 402.3.3.

~~**402.6**~~ **402.4.1 Area and types of construction.** The area of any covered mall building, including anchor buildings, of Type I, II, III or IV construction, shall not be limited provided ~~the covered mall building and the attached anchor buildings and parking garages are surrounded on all sides by a permanent open space not less than 60 feet and~~ the anchor buildings do not exceed three stories above grade plane. ~~The allowable height and area of anchor buildings greater than three stories above grade plane shall comply with Section 503, as modified by Sections 504 and 506.~~ The construction type of open parking garages and enclosed parking garages shall comply with Sections 406.3 and 406.4, respectively.

Exception: The allowable height and area of anchor buildings greater than three stories above grade plane shall comply with Section 503, as modified by Sections 504 and 506.

~~402.7~~ 402.4.2 **Fire-resistance-rated separation.**

~~402.7.2~~ 402.4.2.1 **Tenant separations.**

~~402.7.3~~ 402.4.2.2 **Anchor building separation.**

~~402.7.3.1~~ 402.4.2.2.1 **Openings between anchor building and mall.**

~~402.7.1~~ 402.4.2.3 **Attached garage.**

Exceptions: *No change in text.*

~~402.3.3~~ 402.4.3 **Open mall construction.** Floor assemblies in, and roof assemblies over, the open mall of an open mall building shall be open to the atmosphere for a minimum of 20 feet, measured perpendicular from the face of the tenant spaces on the lowest level, from edge of balcony to edge of balcony on upper floors ~~or~~ and from edge of roof line to edge of roof line. The opening within, or the unroofed area of, an open mall shall extend from the lowest/grade level of the open mall through the entire roof assembly. Balconies on upper levels of the mall shall not project into the required width of the opening.

~~402.3.3.1~~ 402.4.3.1 **Pedestrian walkways.** Pedestrian walkways connecting balconies in an open mall shall be located not less than 20 feet from any other pedestrian walkway.

~~402.9~~ 402.5 **Automatic sprinkler system.**

402.6 Interior finishes and features. Interior finishes within the mall and installations within the mall shall comply with Sections 402.6.1 through 402.6.4.

~~402.8~~ 402.6.1 **Interior finish.**

~~402.11~~ 402.6.2 **Kiosks.**

~~402.12~~ 402.6.3 **Children's playground structures.**

402.6.3.1 **Materials.**

402.6.3.2 **Fire protection.**

402.6.3.3 **Separation.**

402.6.3.4 **Area limits.**

~~402.16~~ 402.6.4 **Plastic signs.**

402.6.4.1 **Area.**

402.6.4.2 **Height and width.**

402.6.4.3 **Location.**

402.6.4.4 **Plastics other than foam plastics.**

402.6.4.4.1 **Encasement.**

402.6.4.5 **Foam plastics.**

402.6.4.5.1 Density.

402.6.4.5.2 Thickness.

402.7. Emergency systems. Covered and open mall buildings, anchor buildings and associated parking garages shall be provided with emergency systems complying with Sections 402.7.1 through 402.7.5.

~~**402.9.1**~~ **402.7.1 Standpipe system.**

~~**402.10**~~ **402.7.2 Smoke control.**

~~**402.14**~~ **402.7.3 Standby power.**

~~**402.15**~~ **402.7.4 Emergency voice/alarm communication system.**

~~**402.17**~~ **402.7.5 Fire department access to equipment.**

~~**402.4**~~ **402.8 Means of egress.** Each tenant space and the *covered mall building* shall be provided with *means of egress* as required by ~~this section~~ Sections 402.8.1 through 402.8.8 and this code. Where there is a conflict between the requirements of this code and the requirements of this section, the requirements of this section shall apply.

~~**402.5**~~ **402.8.1 Mall width.**

~~**402.5.1**~~ **402.8.1.1 Minimum width.**

~~**402.4.1**~~ **402.8.2 Determination of occupant load.**

402.8.2.1 Occupant formula.

402.8.2.2 OLF range.

402.8.2.3 Anchor buildings.

402.8.2.4 Food courts.

~~**402.4.2**~~ **402.8.3 Number of means of egress.**

~~**402.4.3**~~ **402.8.4 Arrangements of means of egress.**

402.8.4.1 Anchor building means of egress.

~~**402.4.4**~~ **402.8.5 Distance to exits.**

~~**402.4.5**~~ **402.8.6 Access to exits.**

~~**402.4.5.1**~~ **402.8.6.1 Exit passageways.**

~~**402.4.6**~~ **402.8.7 Service areas fronting on exit passageways.**

~~**402.13**~~ **402.8.8 Security grilles and doors.**

Reason: The 2009 IBC has 17 first tier subsections which after the Scope and Definition sections are in a relative random order. Changes approved for 2012 will increase that to 19. After similar expansion in the high-rise section (403), CCC approved a reorganization to 6 main sections. Those are:

403.1 Applicability
403.2 Construction
403.3 Automatic Sprinkler System
403.4 Emergency Systems
403.5 Means of egress
403.6 Elevators.

This proposal re-organizes the Covered and Open mall section in a similar way, while addressing some unique provisions for covered malls.

402.1 Applicability
402.2 Definitions
402.3 Lease Plan
402.4 Construction
402.5 Automatic Sprinkler system
402.6 Interior finishes and features
402.7 Emergency Systems
402.8 Means of Egress

Most of the proposal is a simple re-organization by renumbering the sections. The initial section of 402.4, 402.6, 402.7 and 402.8 are new 'directory' sections requiring compliance with subsequent sections.

There are changes that are not simple renumbering. These are:

New Sec.402.1.1: In the 2009 code, the code user has to get to Section 402.6 which is titled 'Types of construction', to learn that the mall/anchor building/parking garage complex needs to be surrounded by 60 feet of open space. This proposal moves the open space requirement up to the beginning as part of applicability. And moving that provision up requires moving 402.6.1 with it as it is an exception to allow smaller open space. This reduces 402.6 (now 402.4.1) to just discussing area and types of construction.

Sec. 402.4.1. In this section the change that is more than just renumbering entails moving the sentence regarding anchor buildings out of the paragraph and making it an exception.

Sec. 402.6: This section is proposed as a separate section to contain the construction requirements of finishes and installations within the mall. They could have been included in Section 402.3 – Construction – but their number and detail warranted separate placement.

2009 Code	**Section Title**	**2012 Code without reorganization**	Proposed 2012 Reorganization
402.1	**Scope**	**402.1**	**402.1 - Applicability**
402.2	**Definitions**	**402.2**	**402.1.1 Open Space**
	Perimeter Line	**402.2.1**	**402.1.2 Perimeter Line**
402.3	**Lease Plan**	**402.3**	**402.2 Definitions**
402.4	**Means of egress**	**402.4**	**402.3 Lease Plan**
402.4.1	**Deter. Occ. Load**	**402.4.1**	**402.4 Construction**
	Subsections not include		**402.4.1 – Areas & type of const.**
402.4.2	**No. of MOE**	**402.4.2**	**402.4.2 Fire resistance separated**
402.4.3	**Arrangement of MOE**	**402.4.3**	**402.4.2.1 tenant separations**
403.4.4	**Distance to exits**	**402.4.4**	**402.4.2.2 Anchor separations**
402.4.5	**Access to exits**	**402.4.5**	**402.4.2.3 Garages**
402.4.6	**Service areas fronting**	**402.4.6**	**402.4.3 Open malls**
402.5	**mall width**	**402.5**	**402.4.3.1 pedestrian walkways**
402.5.1	**minimum width**	**402.5.1**	**402.5 Sprinkler Systems**
402.5.2	~~**min width of open mall**~~		**402.6 Interior finishes & features**
	Open malls	**402.6**	**402.6.1 interior finishes**
	Pedestrian Walkways	**402.6.1**	**402.6.2 kiosks**
402.6	**type of construction**	**402.7**	**402.6.3 playground structures**
402.6.1	**reduced open space**	**402.7.1**	**402.6.4 plastic signs**
402.7	**fire resistance separation**	**402.8**	**402.7 – Emergency systems**
402.7.1	**Attached garage**	**402.8.1**	**402.7.1 Standpipes**
402.7.2	**tenant separation**	**402.8.2**	**402.7.2 smoke control**
402.7.3	**Anchor building sep.**	**402.8.3**	**402.7.3 Standby power**
402.8	**Interior finish**	**402.9**	**402.7.4 Emergency Voice alarm**
402.9	**Sprinkler system**	**402.10**	**402.7.5 Fire Dept access**
402.9.1	**Standpipe system**	**402.11**	**402.8 – Means of Egress**
402.10	**Smoke control**	**402.12**	**402.8.1 Mall width**

402.11	Kiosks	402.13	402.8.2 Deter Occ Load
402.12	Playground structures	402.14	402.8.3 No. of MOE
402.13	Security grills	402.15	402.8.4 Arrangement of MOE
402.14	Standby power	402.16	402.8.5 Distance to exits
402.15	Emergency voice alarm	402.17	402.8.6 Access to exits
402.16	Plastic signs	402.18	402.8.7 Services area on E/P
402.17	fire department access	402.19	402.8.8 Security Grilles

CCC 10 – #G8

CCC-IBC-G402.6.1

Section 402.6.1

Revise Item #4 as follows

402.6.1 Reduced open space. The permanent open space of 60 feet (18 288mm) shall be permitted to be reduced to not less than 40 feet (12 192 mm), provided the following requirements are met:

1 through 3 – *no change to text.*

4. Group E, H, I or R occupancies are not within the covered mall building or anchor ~~stores~~ buildings.

Reason: This seems to be a bit of legacy text from early covered mall provisions when anchor buildings were only large department stores.

CCC 10 – #G9

REF: G402.7

Section 402.7.1

Revise as follows

402.7.1 ~~Attached~~ Parking garages. An attached garage for the storage of passenger vehicles having a capacity of not more than nine persons and *open parking garages* shall be considered as a separate building where it is separated from the *covered mall building* or anchor building by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

~~Exceptions:~~

1. ~~Where an *open parking garage* or enclosed parking garage is separated from the *covered mall building* or *anchor building,* the provisions of Table 602 shall apply.~~ Parking garages, open or enclosed, which are separated from open mall buildings, covered mall buildings or anchor buildings shall comply with the provisions of Table 602.
2. ~~Pedestrian walkways and tunnels, that attach the *open parking garage* or enclosed parking garage to the *covered mall building* or *anchor building*~~ Pedestrian walkways and tunnels which connect garages to mall buildings or anchor buildings shall be constructed in accordance with Section 3104.

Reason: G35-09/10 approved in Baltimore hearings split the existing section of 402.7.1 into two exceptions as the topics of the 2 sentences are unrelated. What the separation into two exceptions points out is that exception number 2 isn't an exception but simply a reference. To analyze this further, the 2 exceptions address when parking garages aren't attached; which in the end, makes the title of Section 402.7.1 misleading.

Section 402.7.1 as approved for 2012.

402.7.1 Attached garage. An attached garage for the storage of passenger vehicles having a capacity of not more than nine persons and *open parking garages* shall be considered as a separate building where it is separated from the *covered mall building* or anchor building by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

Exceptions:

1. Where an *open parking garage* or enclosed parking garage is separated from the *covered mall building* or *anchor building,* the provisions of Table 602 shall apply.
2. Pedestrian walkways and tunnels, that attach the *open parking garage* or enclosed parking garage to the *covered mall building* or *anchor building* shall be constructed in accordance with Section 3104.

CCC 10 – #G10

CCC-IBC-G402.2-10 – Mall related

IBC Sections: 402.1, 402.2, 402.4.1.1, 402.11, 507.12, 709.1, 709.4, 716.5.4, 907.2.7, 907.2.20, 2603.3, 2603.4.1.12, 2611.1, 2702.2.14, 2903.2, 2902.3.3, 2902.5 and 3412.6.19;

IFC Sections 105.6.9, 314.3, 404.2, 408.11, 408.11.1, 604.2.13, T903.2.11.6, 905.4, 907.2.7, 907.2.20, 914.2, 914.2.1, 914.2.2, 914.2.3, and T4604.18.2;

IPC Sections 403.2.3, 403.3.3, and 403.3.5;

IEBC Sections 902.1 and 1301.6.19;

IMC Section 607.5.3;

Part I

Revise the following sections to include the IFC correlated sections to those changed by G31-00/10.

~~402.14~~ **[F]** <u>402.16</u> **[IFC 604.2.13] Covered and open mall buildings.** Covered mall buildings exceeding 50,000 square feet (4645 m^2) and open mall buildings exceeding 50,000 square feet within the established perimeter line shall be provided with standby power systems that are capable of operating the emergency voice/alarm communication system. **(G31-09/10)**

~~402.15~~ **[F]** <u>402.17</u> **[IFC 907.2.20 (IBC [F] 907.2.20) IFC 914.2.3] Emergency voice/alarm communication system.** Where the total floor area exceeds 50,000 square feet within either a covered mall building or within the perimeter line of an open mall building, an emergency voice/alarm communication system shall be provided. Emergency voice/alarm communication systems serving a mall, required or otherwise, shall be accessible to the fire department. The system shall be provided in accordance with Section 907.6.2.2. **(G31-09/10)**

[F] ~~402.9~~ <u>402.10</u> **[IFC 914.2.1] Automatic sprinkler system.** Covered and open mall buildings and buildings connected shall be protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, which shall comply with the all of the following:

1. The automatic sprinkler system shall be complete and operative throughout occupied space in the mall building prior to occupancy of any of the tenant spaces. Unoccupied tenant spaces shall be similarly protected unless provided with approved alternative protection.
2. Sprinkler protection for the mall of a covered mall building shall be independent from that provided for tenant spaces or anchor buildings.
3. Sprinkler protection for the tenant spaces of an open mall building shall be independent from that provided for anchor buildings.
4. Sprinkler protection shall be provided beneath exterior circulation balconies located adjacent to an open mall.
5. Where tenant spaces are supplied by the same system, they shall be independently controlled.

   Exception: An automatic sprinkler system shall not be required in spaces or areas of open parking garages separated from the covered or open mall in accordance with Section 402.7.1 of the *International Building Code* and constructed in accordance with Section 406.3 of the *International Building Code*. (G31-09/10)

~~402.9.1~~ **[F] 402.11 [IFC 914.2.2] Standpipe system.** The covered and open mall building shall be equipped throughout with a standpipe system as required by Section 905.3.3.

~~402.17~~ **[F] 402.19 [IFC914.2.4] Fire department access to equipment.** Rooms or areas containing controls for air-conditioning systems, automatic fire-extinguishing systems, automatic sprinkler systems or other detection, suppression or control elements shall be identified for use by the fire department. (**CCCIBC3-09)**

PART II
Revise the following sections to correlate the open mall phrasing in G31-09/10, as follows:

402.1 Scope. The provisions of this section shall apply to buildings or structures defined herein as *covered or open mall buildings* not exceeding three floor levels at any point nor more than three *stories above grade plane*. Except as specifically required by this section, *covered and open mall buildings* shall meet applicable provisions of this code.

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

ANCHOR BUILDING. An exterior perimeter building of a group other than H having direct access to a *covered or open mall building* but having required *means of egress* independent of the mall.

402.4.1.1 Occupant formula. In determining required *means of egress* of the mall, the number of occupants for whom *means of egress* are to be provided shall be based on gross leasable area of the *covered or open mall building* (excluding *anchor buildings*) and the *occupant load* factor as determined by the following equation.

OLF = (0.00007) (*GLA*) + 25 (**Equation 4-1)**

where:

OLF = The *occupant load* factor (square feet per person).
GLA = The gross leasable area (square feet).

Exception: Tenant spaces attached to a *covered or open mall building* but with a *means of egress* system that is totally independent of the open mall of an open mall building or of a *covered mall building* shall not be considered as gross leasable area for determining the required *means of egress* for the ~~*covered*~~ *mall building*.

[F] 402.11 Standpipe system. ~~The~~ *Covered and open mall buildings* shall be equipped throughout with a standpipe system as required by Section 905.3.3.

507.12 Covered and open mall buildings and anchor stores. The area of *covered and open mall buildings* and *anchor stores* not exceeding three *stories* in height that comply with Section 402.6 shall not be limited.

709.1 General. The following wall assemblies shall comply with this section.
1. Walls separating *dwelling units* in the same building as required by Section 420.2.
2. Walls separating *sleeping units* in the same building as required by Section 420.2.
3. Walls separating tenant spaces in *covered and open mall buildings* as required by Section 402.7.2.

709.4 Continuity. Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above or to the fire-resistance-rated floor/ceiling or roof/ceiling assembly above, and shall be securely attached thereto. If the partitions are not continuous to the sheathing, deck or slab, and where constructed of combustible construction, the space between the ceiling and the sheathing, deck or slab above shall be fireblocked or draftstopped in accordance with Sections 717.2 and 717.3 at the partition line. The supporting construction shall be protected to afford the required *fire-resistance rating* of the wall supported, except for walls separating tenant spaces in *covered* and open *mall buildings*, walls separating *dwelling units*, walls separating *sleeping units* and *corridor* walls in buildings of Type IIB, IIIB and VB construction.

Exceptions:

1 through 3 – *text unchanged.*

4. The fire partitions separating tenant spaces in a *covered* or open *mall building*, complying with Section 402.7.2, are not required to extend beyond the underside of a ceiling that is not part of a fire-resistance-rated assembly. A wall is not required in *attic* or ceiling spaces above tenant separation walls.

716.5.4 Fire partitions. Ducts and air transfer openings that penetrate *fire partitions* shall be protected with *listed fire dampers* installed in accordance with their listing.

Exceptions: In occupancies other than Group H, *fire dampers* are not required where any of the following apply:

1. Corridor walls in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and the duct is protected as a *through penetration* in accordance with Section 713.
2. Tenant partitions in *covered* and open *mall buildings* where the walls are not required by provisions elsewhere in the code to extend to the underside of the floor or roof sheathing, slab or deck above.

[F] 907.2.7 Group M. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group M occupancies where one of the following conditions exists:

1. The combined Group M *occupant load* of all floors is 500 or more persons.
2. The Group M *occupant load* is more than 100 persons above or below the lowest *level of exit discharge*.

Exceptions:

1. A manual fire alarm system is not required in *covered* or open *mall buildings* complying with Section 402.
2. Manual fire alarm boxes.

[F] 907.2.20 Covered and open mall buildings. *Covered mall buildings* exceeding 50,000 square feet (4645 m_2) in total floor area, and open mall buildings exceeding 50,000 square feet within the perimeter line, shall be provided with an emergency voice/alarm communication system. An emergency voice/alarm communication system serving a mall, required or otherwise, shall be accessible to the fire department. The system shall be provided in accordance with Section 907.5.2.

2603.3 Surface-burning characteristics. Unless otherwise indicated in this section, foam plastic insulation and foam plastic cores of manufactured assemblies shall have a flame spread index of not more than 75 and a smoke-developed index of not more than 450 where tested in the maximum thickness intended for use in accordance with ASTM E 84 or UL 723.

Loose fill-type foam plastic insulation shall be tested as board stock for the flame spread and smoke-developed indexes.

Exceptions:

1. through 4 are unchanged

5. Flame spread and smoke-developed indexes for foam plastic interior signs in *covered and open mall buildings* provided the signs comply with Section 402.15.

2603.4.1.12 Interior signs. Foam plastic used for interior signs in *covered and open mall buildings* in accordance with Section 402.16 shall be permitted without a thermal barrier.

Foam plastic signs that are not affixed to interior building surfaces shall comply with Chapter 8 of the *International Fire Code*.

2611.1 General. Light-transmitting plastic interior wall signs shall be limited as specified in Sections 2611.2 through 2611.4. Light-transmitting plastic interior wall signs in *covered and open mall buildings* shall comply with Section 402.16. Light-transmitting plastic interior signs shall also comply with Section 2606.

[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 402.14.

[P] 2902.3.2 (IPC 403.2.3) Location of toilet facilities in occupancies other than ~~covered~~ mall buildings. In occupancies other than *covered and open mall buildings*, the required public and employee toilet facilities shall be located not more than one *story* above or below the space required to be provided with toilet facilities and the path of travel to such facilities shall not exceed a distance of 500 feet (152 400 mm).

Exception: The location and maximum travel distances to required employee facilities in factory and industrial occupancies are permitted to exceed that required by this section, provided that the location and maximum travel distance are *approved*.

[P] 2902.3.3 (IPC 403.3.3) Location of toilet facilities in ~~covered~~ mall buildings. In *covered and open mall buildings*, the required public and employee toilet facilities shall be located not more than one *story* above or below the space required to be provided with toilet facilities, and the path of travel to such facilitie shall not exceed a distance of 300 feet (91 440 mm). In *~~covered~~ mall buildings*, the required facilities shall be based on total square footage within a covered mall building or within the perimeter line of an open mall building, and facilities shall be installed in each individual store or in a central toilet area located in accordance with this section. The maximum travel distance to the central toilet facilities in *~~covered~~ mall buildings* shall be measured from the main entrance of any store or tenant space. In *~~covered~~ mall buildings*, where employees' toilet facilities are not provided in the individual store, the maximum travel distance shall be measured from the employees' work area of the store or tenant space.

[P] 2902.5 ((IPC 403.3.5)) Drinking fountain location. Drinking fountains shall not be required to be located in individual tenant spaces provided that public drinking fountains are located within a travel distance of 500 feet of the most remote location in the tenant space and not more than one story above or below the tenant space. Where the tenant space is in a covered or open mall, such distance shall not exceed 300 feet. Drinking fountains shall be located on an accessible route.

3412.6.19 (IEBC 1301.6.19) Incidental uses. Evaluate the protection of incidental uses in accordance with Section 509. Do not include those where this code requires suppression throughout the buildings, including covered and open mall buildings, high-rise buildings, public garages and unlimited area buildings. Assign the lowest score from Table 3412.6.19 for the building or floor area being evaluated and enter that value into Table 3412.7 under Safety Parameter 3412.6.19, Incidental Accessory Occupancy,

for fire safety, *means of egress* and general safety. If there are no specific occupancy areas in the building or floor area being evaluated, the value shall be zero.

International Mechanical Code

[B] 607.5.3 Fire partitions. Ducts and air transfer openings that penetrate fire partitions shall be protected with *listed* fire dampers installed in accordance with their listing.

Exception: In occupancies other than Group H, fire dampers are not required where any of the following apply:

1. Corridor walls in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Building Code* and the duct is protected as a through penetration in accordance with Section 712 of the *International Building Code*.
2. The partitions are tenant partitions in covered and open mall buildings where the walls are not required by provisions elsewhere in the *International Building Code* to extend to the underside of the floor or roof sheathing, slab or deck above.
3. *No change in text.*

International Fire Code

105.6.9 Covered and open mall buildings. An operational permit is required for:

1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid- or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.

314.3 Highly combustible goods. The display of highly combustible goods, including but not limited to fireworks, flammable or *combustible liquids*, liquefied flammable gases, oxidizing materials, pyroxylin plastics and agricultural goods, in main *exit access aisles*, *corridors*, covered and open malls, or within 5 feet (1524 mm) of entrances to *exits* and exterior *exit* doors is prohibited when a fire involving such goods would rapidly prevent or obstruct egress.

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

1. Group A, other than Group A occupancies used exclusively for purposes of religious worship that have an *occupant load* less than 2,000.
2. Group B buildings having an *occupant load* of 500 or more *persons* or more than 100 *persons* above or below the lowest *level of exit discharge*.
3. Group E.
4. Group F buildings having an *occupant load* of 500 or more *persons* or more than 100 *persons* above or below the lowest *level of exit discharge*.
5. Group H.
6. Group I.
7. Group R-1.
8. Group R-2 college and university buildings.
9. Group R-4.
10. High-rise buildings.
11. Group M buildings having an *occupant load* of 500 or more *persons* or more than 100 *persons* above or below the lowest *level of exit discharge*.
12. Covered malls exceeding 50,000 square feet (4645 m_2) in aggregate floor area.
13. Open mall buildings exceeding 50,000 square feet (4645 m2) in aggregate area within perimeter line.

~~13~~.14 Underground buildings.
~~14~~. 15 Buildings with an atrium and having an occupancy in Group A, E or M.

408.11 Covered and open mall buildings. Covered and open mall buildings shall comply with the provisions of Sections 408.11.1 through 408.11.3.

408.11.1 Lease plan. A lease plan shall be prepared for each covered and open mall building. The plan shall include the following information in addition to that required by Section 404.3.2:

1. Each occupancy, including identification of tenant.
2. *Exits* from each tenant space.
3. Fire protection features, including the following:
   - 3.1. Fire department connections.
   - 3.2. *Fire command center*.
   - 3.3. Smoke management system controls.
   - 3.4. Elevators, elevator machine rooms and controls.
   - 3.5. Hose valve outlets.
   - 3.6. Sprinkler and standpipe control valves.
   - 3.7. Automatic fire-extinguishing system areas.
   - 3.8. Automatic fire detector zones.
   - 3.9. *Fire barriers*.

604.2.13 Covered and open mall buildings. Covered mall buildings exceeding 50,000 square feet (4645 m_2) and open mall buildings exceeding 50,000 square feet (4645 m2) within the perimeter line shall be provided with standby power systems which are capable of operating the emergency voice/alarm communication.

TABLE 903.2.11.6
ADDITIONAL REQUIRED FIRE SUPPRESSION SYSTEMS

SECTION	SUBJECT
914.2.1	Covered and open malls

905.4 Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1 – 3 – No change in text.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an *exit* passageway or *exit corridor* to the mall. In open mall buildings, adjacent to each public entrance to the mall at the perimeter line and adjacent to each entrance from an exit passageway or exit corridor to the mall.

5 and 6 – No change in text.

907.2.7 Group M. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group M occupancies where one of the following conditions exists:

1. The combined Group M *occupant load* of all floors is 500 or more *persons*.
2. The Group M *occupant load* is more than 100 *persons* above or below the lowest *level of exit discharge*.

Exceptions:

1. A manual fire alarm system is not required in covered or open mall buildings complying with Section 402 of the *International Building Code.*
2. Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will automatically activate throughout the notification zones upon sprinkler water flow.

907.2.20 Covered and open mall buildings. ~~Covered mall buildings exceeding 50,000 square feet (4645 m_2) in total floor area shall be provided with an emergency voice/alarm communication system.~~ Where the total floor area exceeds 50,000 square feet within either a covered mall building or within the perimeter line of an open mall building, an emergency voice/alarm communication system shall be provided. An emergency voice/alarm communication system serving a mall, required or otherwise, shall be accessible to the fire department. The system shall be provided in accordance with Section 907.6.2.2.

914.2 Covered and open mall buildings. Covered and open mall buildings shall comply with Sections 914.2.1 through 914.2.4.

914.2.1 Automatic sprinkler system. ~~The~~ Covered and open mall buildings and buildings connected shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.1.1, which shall comply with the following:

1. The *automatic sprinkler system* shall be complete and operative throughout occupied space in the covered or open mall building prior to occupancy of any of the tenant spaces. Unoccupied tenant spaces shall be similarly protected unless provided with *approved* alternate protection.
2. Sprinkler protection for the mall shall be independent from that provided for tenant spaces or anchors. Where tenant spaces are supplied by the same system, they shall be independently controlled.

   Exception: An *automatic sprinkler system* shall not be required in spaces or areas of open parking garages constructed in accordance with Section 406.2 of the *International Building Code*.

914.2.2 Standpipe system. ~~The~~ Covered and open mall buildings shall be equipped throughout with a standpipe system in accordance with Section 905.

914.2.3 Emergency voice/alarm communication system. ~~Covered mall buildings exceeding 50,000 square feet (4645 m_2) in total floor area shall be provided with an emergency voice/alarm communication system.~~ Where the total floor area exceeds 50,000 square feet within either a covered mall building or within the perimeter line of an open mall building, an emergency voice/alarm communication system shall be provided. Emergency voice/alarm communication systems serving a mall, required or otherwise, shall be accessible to the fire department. The system shall be provided in accordance with Section 907.6.2.2.

TABLE 4604.18.2
COMMON PATH, DEAD-END AND TRAVEL DISTANCE LIMITS (by occupancy)

Group M (Covered or open Mall)	75	100	50	50	200	400

International Existing Buildings Code

902.1 Compliance with the building code. Where the character or use of an *existing building* or part of an *existing building* is changed to one of the following special use or occupancy categories as defined in the *International Building Code*, the building shall comply with all of the applicable requirements of the *International Building Code*:

1. Covered and open mall buildings.
2. Atriums.
3. Motor vehicle-related occupancies.

4. Aircraft-related occupancies.
5. Motion picture projection rooms.
6. Stages and platforms.
7. Special amusement buildings.
8. Incidental use areas.
9. Hazardous materials.

Reason: G31-09/10 was approved As Modified by public comment at the Dallas hearings. It provides a series of amendments to Section 402 to provide clarity for open malls regarding the regulations originally written for covered malls. In order to make some of the provisions work, the concept of a perimeter line drawn to establish what was 'within' the open mall. G31 did amend Sections 905.3.3 and 905.4 for consistency, but the 30 or more sections in the IBC and other codes shown in this item were not addressed.

Part I of this proposal simply clarifies that 5 sections that were amended in 402 included the related sections in the IFC.

Part II of this proposal covers changes that would extend the wording contained in Sec. 402 to related provisions in the IBC and other codes.

In most instances the solution is simple – add 'and open' into the phrase – 'covered mall building'. In a few places it is actually clearer to eliminate 'covered' and take the phrase down to mall buildings. Where this latter approach is proposed, the full phrase is used at the beginning of the paragraph.

In locations which have a threshold of floor area before the regulation applies, it is necessary to provide the direction that for open mall buildings it is the area within the perimeter line.

Finally, the action taken in G31 results in the open mall concourse still be considered 'interior' for the purposes of the various regulations – as such, the sections from Chapter 26 are revised to indicate application to open malls.

Committee Action: Approved as Editorial; Approved as Submitted August 24, 2010

The committee directed that wherever the phrasing of covered and open mall is found that the order be covered then open and not the reverse. 3 or 4 locations have been fixed to address that concern. They have yellow highlights.

CCC 10 – #G11

IBC Section 406 All

Revise as follows

406.1 General. Motor vehicle related occupancies shall comply with Sections 406.1 through 406.8 and the *International Fire Code, International Mechanical Code* and *International Fuel Gas Code*.

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

406.3 Private garages and carports. ~~**406.3.1 General.**~~ Private garages and carports shall comply with Sections 406.3.1 through ~~406.3.6.~~ 406.3.5.

~~**406.3.2**~~ **406.3.1 Classification.**
~~**406.3.3**~~ **406.3.2 Area increase.**
~~**406.3.4**~~ **406.3.3 Garages and carports.**
~~**406.3.5**~~ **406.3.4 Separation**
~~**406.3.6**~~ **406.3.5 Automatic garage door openers.**

406.4 Public parking garages. ~~**406.4.1 General**~~. Parking garages, other than private parking garages, shall be classified as public parking garages and shall comply with the provisions of Sections ~~406.4.2~~ 406.4.1 through ~~406.4.9~~ 406.4.8 and shall be classified as either an open parking garage or an enclosed parking garage. Open parking garages as defined in Section 406.2 shall also comply with Section 406.5. Enclosed parking garages shall also comply with Section 406.6. Also see Section ~~509~~ 510 for special provisions for parking garages.

~~**406.4.2**~~ **406.4.1 Clear height.**
~~**406.4.3**~~ **406.4.2 Guards.**
~~**406.4.4**~~ **406.4.3 Vehicle barrier systems.**
~~**406.4.5**~~ **406.4.4 Ramps.**
~~**406.4.6**~~ **406.4.5 Floor surface.**
~~**406.4.7**~~ **406.4.6 Mixed occupancy separation.**
~~**406.4.8**~~ **406.4.7 Special hazards.**
~~**406.4.9**~~ **406.4.8 Attached to rooms.**

406.5. Open parking garages. ~~**406.5.1 General**~~ Open parking garages shall comply with Sections ~~406.5.2~~ 406.5.1 through 406.5.12.

~~**406.5.2**~~ **406.5.1 Construction.**
~~**406.5.3**~~ **406.5.2 Openings.**
~~**406.5.4**~~ **406.5.3 Uses.**
~~**406.5.5**~~ **406.5.4 Area and height.**

TABLE ~~406.5.5~~ 406.5.4 OPEN PARKING GARAGES AREA AND HEIGHT

~~**406.5.5.1**~~ **406.5.4.1 Single use.**
~~**406.5.6**~~ **406.5.5 Area and height increases.**
~~**406.5.7**~~ **406.5.6 Fire separation distance.**
~~**406.5.8**~~ **406.5.7 Means of egress.**
~~**406.5.9**~~ **406.5.8 Standpipes.**
~~**406.5.10**~~ **406.5.9 Sprinkler systems.**
~~**406.5.11**~~ **406.5.10 Enclosure of vertical openings.**
~~**406.5.12**~~ **406.5.11 Ventilation.**

~~406.5.13~~ 406.5.12 Prohibitions.

406.6 Enclosed parking garages. ~~406.6.1 General.~~ Enclosed parking garages shall comply with Sections 406.6.1 ~~through 406.6.3~~ and 406.6.2.

~~406.6.2~~ 406.6.1 Heights and areas.
~~406.6.3~~ 406.6.2 Ventilation.

406.7 Motor fuel-dispensing facilities. ~~406.7.1 General.~~ Motor fuel dispensing facilities shall be constructed in accordance comply with the *International Fire Code* and Sections 406.7.1 and 406.7.2 ~~through 406.7.3.~~
~~406.7.2~~ 406.7.1 Vehicle fueling pad.
~~406.7.3~~ 406.7.2 Canopies.
~~406.7.3.1~~ 406.7.2.1 Canopies used to support gaseous hydrogen systems.

406.8 Repair Garages. ~~406.8.1 General.~~ Repair garages shall be constructed in accordance with the International Fire Code and Sections 406.8.1 through ~~406.8.6~~ 406.8.5. The occupancy shall not include motor fuel-dispensing facilities as regulated by Section 406.7.

~~406.8.2~~ 406.8.1 Mixed uses.
~~406.8.3~~ 406.8.2 Ventilation.
~~406.8.4~~ 406.8.3 Floor surface.
~~406.8.5~~ 406.8.4 Heating equipment.
~~406.8.6~~ 406.8.5 Gas detection system.
~~406.8.6.1~~ 406.8.5.1 System design.
~~406.8.6.2~~ 406.8.5.2 Operation.
~~406.8.6.3~~ 406.8.5.3 Failure of the gas detection system.

Reason: G53-09/10, approved in Baltimore, reorganized Section 406 by providing an introductory section, moving definitions to the beginning of the section and then providing introductory sections to the 6 subcategories of garages. What it failed to do was to eliminate 6 locations were section numbers and titles were followed by No Text. As G53 did the heavy lifting, this change simply converts each 'General' section into the section following the title of each specific use type.

7/14/10

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

CCC 10 – #G12

REF IBC Sections: 202, 407.2, 407.2.1, 407.2.3, 407.3, 407.4(NEW), 1002.1, 1014.2.2, 1014.2.3, 1014.2.4 and 1015.1

Revise as follows:

SECTION 407
GROUP I-2

407.1 General. Occupancies in Group I-2 shall comply with the provisions of Sections 407.1 through ~~407.9~~ 407.10 and other applicable provisions of this code.

407.2 Corridor continuity and separation. *Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and separated from other areas in accordance with Section 407.3 except spaces conforming to Sections 407.2.1 through 407.2.4.

407.2.1 Waiting and similar areas. Waiting areas and similar spaces constructed as required for *corridors* shall be permitted to be open to a *corridor*, only where all of the following criteria are met:

1. The spaces are not occupied for care recipient's *sleeping units*, treatment rooms, hazardous or incidental ~~accessory occupancies~~ uses in accordance with Section ~~508.2~~ 509.

2. The open space is protected by an automatic fire detection system installed in accordance with Section 907.

3. The *corridors* onto which the spaces open, in the same smoke compartment, are protected by an automatic fire detection system installed in accordance with Section 907, or the smoke compartment in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.

4. The space is arranged so as not to obstruct access to the required *exits*.

407.2.2 Care providers' stations. Spaces for care providers', supervisory staff, doctors' and nurses' charting, communications and related clerical areas shall be permitted to be open to the *corridor*, when such spaces are constructed as required for *corridors*.

407.2.3 Psychiatric treatment areas. Areas wherein psychiatric care recipients who are not capable of self-preservation are housed, or group meeting or multipurpose therapeutic spaces other than incidental ~~accessory occupancies~~ uses in accordance with Section ~~508.2.5~~ 509, under continuous supervision by facility staff, shall be permitted to be open to the *corridor*, where the following criteria are met: .

1. Each area does not exceed 1,500 square feet (140m^2).
2. The area is located to permit supervision by the facility staff.
3. The area is arranged so as not to obstruct any access to the required *exits*.
4. The area is equipped with an automatic fire detection system installed in accordance with Section 907.2.
5. Not more than one such space is permitted in any one smoke compartment.
6. The walls and ceilings of the space are constructed as required for *corridors*.

407.2.4 Gift shops. Gift shops and associated storage that are less than 500 square feet (46.5 m^2) in area shall be permitted to be open to the *corridor* when such spaces are constructed as required for corridors.

407.3 Corridor wall construction. *Corridor* walls shall be constructed as smoke partitions in accordance with Section 711.

407.3.1 Corridor doors. *Corridor* doors, other than those in a wall required to be rated by Section ~~508.2.5~~ 509 or for the enclosure of a vertical opening or an *exit*, shall not have a required *fire protection rating* and shall not be required to be equipped with self-closing or automatic-closing devices, but shall provide an effective barrier to limit the transfer of smoke and shall be equipped with positive latching. Roller latches are not permitted. Other doors shall conform to Section 715.4.

407.4 Means of Egress. Group I-2 occupancies shall be provided with means of egress complying with Chapter 10 and Sections 407.4.1 through 407.4.3

~~**1014.2.2 (IFC [B] 1014.2.2)**~~ **407.4.1** ~~**Group I-2.**~~ **Direct access to a corridor.** Habitable rooms in Group I-2 occupancies shall have an *exit access* door leading directly to a *corridor*.

Exceptions:

1. Rooms with *exit* doors opening directly to the outside at ground level.
2. Rooms arranged as care suites complying with Section ~~1014.2.4~~ 407.4.3

~~**407.3.2**~~ **407.4.1.1 Locking devices.** Locking devices that restrict access to the care recipient's room from the *corridor*, and that are operable only by staff from the *corridor* side, shall not restrict the *means of egress* from the care recipient's room except for patient rooms in mental health facilities.

Exceptions:
1. This section shall not apply to rooms in psychiatric treatment and similar care areas.
2. Locking arrangements in accordance with Section 1008.1.9.6.

~~**1014.2.3 (IFC [B]1014.2.3)**~~ **407.4.2 Travel distance.** The travel distance between any point in a Group I-2 occupancy sleeping room and an *exit access* door in that room shall not exceed 50 feet (15 240 mm).

~~**1014.2.4 (IFC [B] 1014.2.4)**~~ **407.4.3 Group I-2 care suites.** Care suites in Group I-2 shall comply with Section ~~1014.2.4.1~~ 407.4.3.1 through ~~1014.2.4.4~~ 407.4.3.4 and either Section ~~1014.2.4.5~~ 407.4.3.5 or ~~1014.2.4.6~~.407.4.3.6.

~~**1014.2.4.1 (IFC [B] 1014.2.4.1)**~~ **407.4.3.1 Exit access through care suites.** *Exit access* from all other portions of a building not classified as a care *suite* in shall not pass through a care *suite*. In a care suite required to have more than one exit, one exit access may pass through an adjacent care suite provided all of the other requirements of Section 1014.2 are satisfied.

~~**1014.2.4.2 (IFC [B] 1014.2.4.2)**~~ **407.4.3.2 Separation.** Care s*uites* shall be separated from other portions of the building by a *smoke partition* complying with Section 711.

~~**1014.2.4.3 (IFC [B] 1014.2.4.3)**~~ **407.4.3.3 One intervening room.** For rooms other than sleeping rooms located within a care suite, exit access travel from the care suite shall be permitted through one intervening room where the travel distance to the *exit access* door from the care suite is not greater than 100 feet (30 480 mm).

~~**1014.2.4.4 (IFC [B] 1014.2.4.4)**~~ **407.4.3.4 Two intervening rooms.** For rooms other than sleeping rooms located within a care *suite*, *exit access* travel within the care *suite* shall be permitted through two intervening rooms where the travel distance to the *exit access* door from the care suite is not greater than 50 feet (15 240 mm).

~~**1014.2.4.5 (IFC [B] 1014.2.4.5)**~~ **407.4.3.5 Care suites containing sleeping rooms areas.** Sleeping rooms shall be permitted to be grouped into care *suites* with one intervening room if one of the following conditions is met:

1. The intervening room within the care *suite* is not used as an *exit access* for more than eight care recipient beds.
2. The arrangement of the care *suite* allows for direct and constant visual supervision by care providers.

~~**1014.2.4.5.1 (IFC [B] 1014.2.4.5.1)**~~ **407.4.3.5.1 Area.** Care s*uites* containing ~~of~~ sleeping rooms shall not exceed 5,000 square feet (465 m^2).

~~**1014.2.4.5.2 (IFC [B] 1014.2.4.5.2)**~~ **407.4.3.5.2 Exit access.** Any sleeping room, or any care *suite* that contains sleeping rooms, of more than 1,000 square feet (93 m^2) shall have at least two *exit access* doors from the care suite located in accordance with Section 1015.2.

~~1014.2.4.5.3 (IFC [B] 1014.2.4.5.3~~ **407.4.3.5.3 Travel distance.** The travel distance between any point in a care *suite* containing sleeping rooms and an *exit access* door from that care *suite* shall not exceed 100 feet (30 480 mm).

~~1014.2.4.6 (IFC [B] 1014.2.4.6~~ **407.4.3.6 Care Suites not containing sleeping rooms.** Areas not containing sleeping rooms, but only treatment areas and the associated rooms, spaces or circulation space shall be permitted to be grouped into care suites and shall conform to the limitations in Section 1014.2.4.6.1 and 1014.4.6.2.

~~1014.2.4.6.1 (IFC [B] 1014.2.4.6.1)~~ **407.4.3.6.1 Area.** Care s*uites* of rooms, other than sleeping rooms, shall not exceed 10,000 square feet (929 m^2).

.

~~1014.2.4.6.2 (IFC [B] 1014.2.4.6.2)~~ **407.4.3.6.2 Exit access.** Care suites, other than sleeping rooms, of more than 2,500 square feet (232 m^2) shall have at least two *exit access* doors from the care suite located in accordance with Section 1015.2.

~~407.4~~ 407.5 Smoke barriers.

No change in text in this or subsequent sections.

~~407.4.1~~ 407.5.1 Refuge area.

~~407.4.2~~ 407.5.2 Independent egress.

~~407.4.3~~ 407.5.3 Horizontal assemblies.

~~407.5~~ 407.6 [F] Automatic sprinkler system. .

[F] ~~407.6~~ 407.7 Fire alarm system. .

[F] ~~407.7~~ 407.8 Automatic fire detection.

~~407.8~~ 407.9 Secured yards.

~~407.9~~ 407.10 Hyperbaric facilities.

Also:

202.1 Definitions Add the following:

CARE SUITE. A group of treatment rooms, care recipient sleeping rooms and their associated support rooms or spaces and circulation space within Group I-2 occupancies where staff are in attendance for supervision of all care recipients within the suite, and the suite is in conformance with the requirements of Section 407.4.

Also:

1002.1 (IFC [B] 1002.1) Definitions.

~~**CARE SUITE.** A group of treatment rooms, care recipient sleeping rooms and their associated support rooms or spaces and circulation space within Group I-2 occupancies where staff are in attendance for supervision of all care recipients within the suite, and the suite is in conformance with the requirements of Section 1014.2.2 through 1014.2.6.~~

Also:

Delete Sections 1014.2.2, 1014.2.3 and 1014.2.4 in their entirety from IBC and IFC.

Also – Revise 1015.1 ([B] 1015.1) as follows:

1015.1 (IFC [B] 1015.1) Exits or exit access doorways from spaces. Two *exits* or *exit access doorways* from any space shall be provided where one of the following conditions exists:

1. The *occupant load* of the space exceeds one of the values in Table 1015.1.

   Exceptions:

   1. In Group R-2 and R-3 occupancies, one *means of egress* is permitted within and from individual dwelling units with a maximum *occupant load* of 20 where the dwelling unit is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
   2. Care suites in Group I-2 occupancies complying with ~~Section 1014.2.2 through 1014.2.4.6.2.~~ Section 407.4.

2. The *common path of egress travel* exceeds one of the limitations of Section 1014.3.

3. Where required by Section 1015.3, 1015.4, 1015.5, 1015.6 or 1015.6.1.

Where a building contains mixed occupancies, each individual occupancy shall comply with the applicable requirements for that occupancy. Where applicable, cumulative *occupant loads* from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1.

REASON: Code Change E104-09/10 revised and clarified the I-2 occupancy suite egress provisions but maintained the location of the regulations in Chapter 10. The provisions of Sections 1014.2.2 through 1014.2.4 are unique and only apply to Group I-2 occupancies. Chapter 4 is the repository for Special Detailed Requirements Based on Use and Occupancy. That is exactly what these 3 sections of Chapter 10 are. Compared to other provisions and exceptions in Chapter 10 which may apply to one occupancy or another, this is a very discrete package of information as compared to an exception here or there that doesn't apply to Occupancy 'X' or is altered to only apply to Occupancy 'Y'. Chapter 4 is already the home of unique means of egress provisions that apply to Malls (402.4) High-rises (403.5), Atriums (404.9), I-3 (408.4) to name a few. In Baltimore the MOE committee approved consolidating the special egress provisions applicable to stages in Section 410 (G67-09/10) – also ending a conflict between Chapter 10 and Sec. 410. The MOE committee did not have a proposal to relocate these I-2 provisions presented to them.

This proposal places the provisions of Sec 1014.2 in Section 407 - after all of Sections 407.2 and after most of Section 407.3. It could be argued that the 407.2 and 407.3 se are also means of egress provisions. However, they are more specific than just the means of egress system in that they specify the relationship of one of the elements of the means of egress (corridors) to other portions of the building and also specify how the corridors are constructed.

The proposal provides titles that are more descriptive than the current titles which are too generic. Specifically:

407.2 – now labeled just 'Corridors' is more specific how corridors related to the rest of the building. The text of the section is about continuity and separation. The new title reflects that specificity.

407.3 – now labeled 'Corridor walls', is more specific about the corridor wall construction and the doors in that construction. The new title reflects the corridor wall construction focus of the 2 sections.

407.3.2 - now titled "Locking devices' is misplaced under a section on corridor wall construction as it is about the restriction of egress. It doesn't fit with 407.3, but fits into the relocated 1014.2.

In Chapter 10, Section 1014.2.2 is just titled I-2. By moving it to 407, it needs a more descriptive title – which is proposed to be: "Direct access to corridors' - reflecting the text. With that title, the provisions of 'Locking devises' which restrict that direct access to the corridors – makes sense as a subsection to the new 407.4.1

Finally, the new definition of care suite, no longer is appropriate for 1002 as the provisions would be in Chapter 4. There isn't a 407 definition section, but related definitions are either in Chapter 2 or 3.

CCC 10 – #G13

Section 412.3

Revise as follows

412.3 Aircraft traffic control towers ~~**412.3.1 General.**~~ The provisions of Sections 412.3.1 through ~~412.3.6~~ 412.3.5 shall apply to airport control towers not exceeding 1,500 square feet (140 m^2) per floor occupied only for the following uses:

1 through 5 – *no change in text.*

~~**412.3.2**~~ **412.3.1 Types of construction.**

Table ~~412.3.2~~ 412.3.1

~~**412.3.3**~~ **412.3.2 Egress**

~~**412.3.4**~~ **41.3.3 Automatic fire detection systems**

~~**412.3.5**~~ **412.3.4 Standby Power**

~~**412.3.6**~~ **412.3.5 Accessibility**

Reason: 412.3 is a title without text. As there is a General section provided in 412.3.1, the fix is simple.

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

CCC 10 – #G14

Revise as follows:

415.7 Special provisions for Groups H-2 and H-3 occupancies. Groups H-2 and H-3 occupancies containing quantities of hazardous materials in excess of those set forth in Table 415.5.2 shall be in detached buildings used for manufacturing, processing, dispensing, use or storage of hazardous materials. ~~**Exception:** The quantity of materials listed in Section 307.3 shall not exceed the maximum allowable quantity per control area in Table 307.1(1).~~ Materials listed for Group H-1 occupancies in Section 307.3 are permitted to be located within Group H-2 or H-3 detached buildings provided the amount of materials per control area do not exceed the maximum allowable quantity specified in Table 307.1(1).

REASON: When we began assembling Chapter 4 for publication, the new exception to 415.7 created by G74-09/10 was somewhat of a mystery.

First – it doesn't seem to be an exception to the requirement if follows. As written it looks like its adding a requirement. The new 415.7 is only about H-2 and H-3 being in a detached building when HazMat's exceed quantities in table 415.5.2 (and most of these are MAQ's).

The exception says – in part 'The quantity of materials listed in Sec 307.3 shall not be exceeded……' Section 307.3 does list materials but doesn't list any quantity of materials. If the sentence read 'For materials listed in Section 307.3, the quantity of materials found in Table 307.1(1) shall not be exceeded…" this would make a little more sense – but it doesn't

But now the mystery deepens. If I don't exceed the Table 307.1(1) MAQ's – then am I not some occupancy other than an H and therefore I won't be in Section 415 at all? The exception as written implies that H-1 materials not in excess of the MAQ's are by default either an H-2 or H-3. However, there is nothing in 307.4 or 307.5 which tells me that if a material listed for H-1 in 307.3 is below MAQ that it is now either an H-2 or H-3. For example – Class 4 oxidizers above MAQ is an H-1. In H-2 – you find Class 3 Oxidizers – but not class 4.

We contacted the proponents of G74 about our question and this was their response:

> The exception to 415.7 simply states that one can have H-1 materials up to the MAQ limit in a detached H2 or H3. One might argue that this is inherent in the requirements of 307.1 as if the MAQ were exceeded a detached H-1 building would otherwise be required. The exception in 415.7 does not change the requirements of 307.1, but simply restates the requirement applicable to the materials listed in 307.3.

Based in these comments, we believe the exception should be re-written as shown or deleted altogether.

Committee Action: Approved as Editorial; Approved as Modified
August 24, 2010

The committee amended the proposal to eliminate the 'Exception' for this text and merge it in to the primary paragraph.

CCC 10 – #G15

RE: IBC-415

To assist you in your reading:
1. Red font is for new or revised sections resulting from Baltimore/Dallas.
2. Sections 415.3 and 415.4 are new or relocated. As such all sections after 415.4 are renumbered. The renumbering is in green.
3. Blue font reflects work to get rid of text-less titles.

SECTION 415
GROUPS H-1, H-2, H-3, H-4 AND H-5

[F] 415.1 Scope. The provisions of Sections 415.1 through 415.10 shall apply to the storage and use of hazardous materials in excess of the maximum allowable quantities per *control area* listed in Section 307.1. Buildings and structures with an occupancy in Group H shall also comply with the applicable provisions of Section 414 and the *International Fire Code*.

[F] 415.2 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in the code, have the meanings shown herein.

No changes to text of definitions.

415.3 Automatic fire detection systems. Group H occupancies shall be provided with an automatic fire detection system in accordance with Section 907.2. **[F]**

415.4 Automatic sprinkler system. Group H occupancies shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.5. **[F]**

[F] 415.5 Fire separation distance. Group H occupancies shall be located on property in accordance with the other provisions of this chapter. In Groups H-2 and H-3, not less than 25 percent of the perimeter wall of the occupancy shall be an *exterior wall*.

Exceptions:

1 -3 – No change in text.

415.5.1 Group H occupancy minimum fire separation distance. Regardless of any other provisions, buildings containing Group H occupancies shall be set back to the minimum *fire separation distance* as set forth in ~~Items 1 through 4 below~~ in Sections 415.5.1.1 through 415.5.1.4. Distances shall be measured from the walls enclosing the occupancy to *lot lines*, including those on a *public way*. Distances to assumed *lot lines* established for the purpose of determining *exterior wall* and opening protection are not to be used to establish the minimum *fire separation distance* for buildings on sites where explosives are manufactured or used when separation is provided in accordance with the quantity distance tables specified for explosive materials in the *International Fire Code*.

415.5.1.1 Group H-1. Group H-1 occupancies shall be set back not less than 75 feet (22 860 mm) and not less than required by the *International Fire Code*.

Exception: Fireworks manufacturing buildings shall be separated in accordance with NFPA 1124.

415.5.1.2 Group H-2. Group H-2 occupancies shall be set back not less than 30 feet (9144 mm) where the area of the occupancy exceeds 1,000 square feet (93 m2) and it is not required to be located in a detached building.

415.5.1.3 Groups H-2 and H-3. Group H-2 and H-3 occupancies shall be set back not less than 50 feet (15 240 mm) where a detached building is required (see Table 415.5.2).

~~4. Groups H-2 and H-3~~ **415.5.1.4 Explosive materials.** Group H-2 and H-3 occupancies containing materials with explosive characteristics shall be separated as required by the *International Fire Code*. Where separations are not

specified, the distances required shall be determined by a technical report issued in accordance with Section 414.1.3. **[F]**

[F] 415.5.2 Detached buildings for Group H-1, H-2 or H-3 occupancy. The storage of hazardous materials in excess of those amounts listed in Table 415.5.2 shall be in accordance with the applicable provisions of Sections 415.6 and 415.7.

[F] 415.5.2.1 Wall and opening protection. Where a detached building is required by Table 415.5.2, there are no requirements for wall and opening protection based on *fire separation distance*.

[F] 415.6 Special provisions for Group H-1 occupancies. Group H-1 occupancies shall be in buildings used for no other purpose, shall not exceed one *story* in height and be without basements, crawl spaces or other under-floor spaces. Roofs shall be of lightweight construction with suitable thermal insulation to prevent sensitive material from reaching its decomposition temperature. Group H-1 occupancies containing materials that are in themselves both physical and health hazards in quantities exceeding the maximum allowable quantities per *control area* in Table 307.1(2) shall comply with requirements for both Group H-1 and H-4 occupancies.

[F] 415.6.1 Floors in storage rooms. Floors in storage areas for organic peroxides, pyrophoric materials and unstable (reactive) materials shall be of liquid-tight, noncombustible construction.

415.7 Special provisions for Groups H-2 and H-3 occupancies. Groups H-2 and H-3 occupancies containing quantities of hazardous materials in excess of those set forth in Table 415.5.2 shall be in detached buildings used for manufacturing, processing, dispensing, use or storage of hazardous materials.

Exception: The quantity of materials listed in Section 307.3 shall not exceed the maximum allowable quantity per control area in Table 307.1(1).

[F] 415.7.1 Detached buildings. Detached buildings shall not exceed one story in height and shall be without basements, crawl spaces or other under-floor spaces.

[F] 415.7.2 Multiple hazards. Group H-2 or H-3 occupancies containing materials which are in themselves both physical and health hazards in quantities exceeding the maximum allowable quantities per control area in Table 307.1(2) shall comply with requirements for Group H-2, H-3 or H-4 occupancies as applicable.

[F] 415.7.3 Separation of incompatible materials. Hazardous materials other than those listed in Table 415.5.2 shall be allowed in manufacturing, processing, dispensing, use or storage areas when separated from incompatible materials in accordance with the provisions of the *International Fire Code.* **[F]**

415.7.4 Water reactives. Groups H-2 and H-3 occupancies containing water-reactive materials shall be resistant to water penetration. Piping for conveying liquids shall not be over or through areas containing water reactives, unless isolated by *approved* liquid-tight construction.

> **Exception:** Fire protection piping shall be permitted over or through areas containing water reactives without isolating it with liquid tight construction. **[F]**

[F] 415.7.5 Floors in storage rooms. Floors in storage areas for organic peroxides, oxidizers, pyrophoric materials, unstable (reactive) materials and water-reactive solids and liquids shall be of liquid-tight, noncombustible construction.

[F] 415.7.6 Waterproof room. Rooms or areas used for the storage of water-reactive solids and liquids shall be constructed in a manner that resists the penetration of water through the use of waterproof materials. Piping carrying water for other than *approved* automatic fire sprinkler systems shall not be within such rooms or areas.

[F] 415.8 Group H-2. Occupancies in Group H-2 shall be constructed in accordance with Sections 415.8.1 through 415.8.4 and the *International Fire Code*.

[F] 415.8.1 Combustible dusts, grain processing and storage. The provisions of Sections 415.8.1.1 through 415.8.1.6 shall apply to buildings in which materials that produce combustible dusts are stored or handled. Buildings that store or handle combustible dusts shall comply with the applicable provisions of NFPA 61, NFPA 85, NFPA 120, NFPA 484, NFPA 654, NFPA 655 and NFPA 664, and the *International Fire Code*.

[F] 415.8.1.1 Type of construction and height exceptions. Buildings shall be constructed in compliance with the height and area limitations of Table 503 for Group H-2; except that where erected of Type I or II construction, the heights and areas of grain elevators and similar structures shall be unlimited, and where of Type IV construction, the maximum height shall be 65 feet (19 812 mm) and except further that, in isolated areas, the maximum height of Type IV structures shall be increased to 85 feet (25 908 mm).

[F] 415.8.1.2 Grinding rooms. Every room or space occupied for grinding or other operations that produce combustible dusts shall be enclosed with *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. The minimum *fire-resistance rating* shall be 2 hours where the area is not more than 3,000 square feet (279 m2), and 4 hours where the area is greater than 3,000 square feet (279 m2).

[F] 415.8.1.3 Conveyors. Conveyors, chutes, piping and similar equipment passing through the enclosures of rooms or spaces shall be constructed dirt tight and vapor tight, and be of *approved* noncombustible materials complying with Chapter 30.

[F] 415.8.1.4 Explosion control. Explosion control shall be provided as specified in the *International Fire Code*, or spaces shall be equipped with the equivalent mechanical ventilation complying with the *International Mechanical Code*.

[F] 415.8.1.5 Grain elevators. Grain elevators, malt houses and buildings for similar occupancies shall not be located within 30 feet (9144 mm) of interior *lot lines* or structures on the same lot, except where erected along a railroad right-of-way.

[F] 415.8.1.6 Coal pockets. Coal pockets located less than 30 feet (9144 mm) from interior *lot lines* or from structures on the same lot shall be constructed of not less than Type IB construction. Where more than 30 feet (9144 mm) from interior *lot lines*, or where erected along a railroad right-of-way, the minimum type of construction of such structures not more than 65 feet (19 812 mm) in *building height* shall be Type IV.

[F] 415.8.2 Flammable and combustible liquids. The storage, handling, processing and transporting of flammable and combustible liquids in Groups H-2 and H-3 occupancies shall be in accordance with Sections 415.8.2.1 through 415.8.2.9, the *International Mechanical Code* and the *International Fire Code*.

[F] 415.8.2.1 Mixed occupancies. Where the storage tank area is located in a building of two or more occupancies and the quantity of liquid exceeds the maximum allowable quantity for one *control area*, the use shall be completely separated from adjacent occupancies in accordance with the requirements of Section 508.4.

[F] 415.8.2.1.1 Height exception. Where storage tanks are located within a building no more than one *story above grade plane*, the height limitation of Section 503 shall not apply for Group H.

[F] 415.8.2.2 Tank protection. Storage tanks shall be noncombustible and protected from physical damage. *Fire barriers* or *horizontal assemblies* or both around the storage tank(s) shall be permitted as the method of protection from physical damage.

[F] 415.8.2.3 Tanks. Storage tanks shall be *approved* tanks conforming to the requirements of the *International Fire Code*.

[F] 415.8.2.4 Leakage containment. A liquid-tight containment area compatible with the stored liquid shall be provided. The method of spill control, drainage control and secondary containment shall be in accordance with the *International Fire Code*.

> **Exception:** Rooms where only double-wall storage tanks conforming to Section 415.8.2.3 are used to store Class I, II and IIIA flammable and combustible liquids shall not be required to have a leakage containment area.

[F] 415.8.2.5 Leakage alarm. An *approved* automatic alarm shall be provided to indicate a leak in a storage tank and room. The alarm shall sound an audible signal, 15 dBa above the ambient sound level, at every point of entry into the room in which the leaking storage tank is located. An *approved* sign shall be posted on every entry door to the tank storage room indicating the potential hazard of the interior room environment, or the sign shall state: WARNING, WHEN ALARM SOUNDS, THE ENVIRONMENT WITHIN THE ROOM MAY BE HAZARDOUS. The leakage alarm shall also be supervised in accordance with Chapter 9 to transmit a trouble signal.

[F] 415.5.2.6 Tank vent. Storage tank vents for Class I, II or IIIA liquids shall terminate to the outdoor air in accordance with the *International Fire Code*.

[F] 415.5.2.7 Room ventilation. Storage tank areas storing Class I, II or IIIA liquids shall be provided with mechanical ventilation. The mechanical ventilation system shall be in accordance with the *International Mechanical Code* and the *International Fire Code*.

[F] 415.8.2.8 Explosion venting. Where Class I liquids are being stored, explosion venting shall be provided in accordance with the *International Fire Code*.

[F] 415.8.2.9 Tank openings other than vents. Tank openings other than vents from tanks inside buildings shall be designed to ensure that liquids or vapor concentrations are not released inside the building.

[F] 415.8.3 Liquefied petroleum gas facilities. The construction and installation of liquefied petroleum gas facilities shall be in accordance with the requirements of this code, the *International Fire Code,* the *International Mechanical Code*, the *International Fuel Gas Code* and NFPA 58.

[F] 415.8.4 Dry cleaning plants. The construction and installation of dry cleaning plants shall be in accordance with the requirements of this code, the *International Mechanical Code*, the *International Plumbing Code* and NFPA32. Dry cleaning solvents and systems shall be classified in accordance with the *International Fire Code*.

[F] 415.9 Groups H-3 and H-4. Groups H-3 and H-4 shall be constructed in accordance with the applicable provisions of this code and the *International Fire Code*.

[F] 415.9.1 Flammable and combustible liquids. The storage, handling, processing and transporting of flammable and combustible liquids in Group H-3 occupancies shall be in accordance with Section 415.8.2.

[F] 415.9.2 Gas rooms. When gas rooms are provided, such rooms shall be separated from other areas by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

[F] 415.9.3 Floors in storage rooms. Floors in storage areas for corrosive liquids and *highly toxic* or *toxic* materials shall be of liquid-tight, noncombustible construction.

[F] 415.9.4 Separation—highly toxic solids and liquids. *Highly toxic* solids and liquids not stored in *approved* hazardous materials storage cabinets shall be isolated from other hazardous materials storage by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

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[F] 415.10 Group H-5. ~~[F] 415.10.1 General~~. In addition to the requirements set forth elsewhere in this code, Group H-5 shall comply with the provisions of Sections 415.10.1 through 415.10.11 and the *International Fire Code.*

~~[F] 415.10.2~~ 415.10.1 Fabrication areas. Fabrication areas shall comply with Sections 415.10.1.1 through 415.10.1.8.

[F] ~~415.10.2.1~~ 415.10.1.1 Hazardous materials ~~in fabrication areas.~~ Hazardous materials and hazardous production materials (HPM) shall comply with Sections 415.10.1.1.1 and 415.10.1.1.2.

[F] ~~415.10.2.1.1~~ 415.10.1.1.1 Aggregate quantities. The aggregate quantities of hazardous materials stored and used in a single fabrication area shall not exceed the quantities set forth in Table ~~415.10.2.1.1~~ 415.10.1.1.1.

> **Exception:** The quantity limitations for any hazard category in Table ~~415.10.2.1.1~~ 415.10.1.1.1 shall not apply where the fabrication area contains quantities of hazardous materials not exceeding the maximum allowable quantities per *control area* established by Tables 307.1(1) and 307.1(2).

[F] ~~415.10.2.1.2~~ 415.10.1.1.2 Hazardous production materials. The maximum quantities of hazardous production materials (HPM) stored in a single fabrication area shall not exceed the maximum allowable quantities per *control area* established by Tables 307.1(1) and 307.1(2).

[F] ~~415.10.2.2~~ 415.10.1.2 Separation. Fabrication areas, whose sizes are limited by the quantity of hazardous materials allowed by Table ~~415.10.2.1.1~~ 415.10.1.1.1, shall be separated from each other, from *corridors* and from

other parts of the building by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both.

Exceptions:

1. Doors within such *fire barrier* walls, including doors to *corridors*, shall be only self-closing *fire door assemblies* having a *fire protection rating* of not less than 3/4 hour.

2. Windows between fabrication areas and corridors are permitted to be fixed glazing *listed* and labeled for a *fire protection rating* of at least 3/4 hour in accordance with Section 715.

[F] ~~**415.10.2.3**~~ **415.10.1.3 Location of occupied levels.** Occupied levels of fabrication areas shall be located at or above the first *story above grade plane*.

[F] ~~**415.10.2.4**~~ **415.10.1.4 Floors.** Except for surfacing, floors within fabrication areas shall be of noncombustible construction.

Openings through floors of fabrication areas are permitted to be unprotected where the interconnected levels are used solely for mechanical equipment directly related to such fabrication areas (see also Section ~~415.10.2.5~~ 415.10.1.5).

Floors forming a part of an occupancy separation shall be liquid tight.

[F] ~~**415.10.2.5**~~ **415.10.1.5 Shafts and openings through floors.** Elevator shafts, vent shafts and other openings through floors shall be enclosed when required by Section 708. Mechanical, duct and piping penetrations within a fabrication area shall not extend through more than two floors. The *annular space* around penetrations for cables, cable trays, tubing, piping, conduit or ducts shall be sealed at the floor level to restrict the movement of air. The fabrication area, including the areas through which the ductwork and piping extend, shall be considered a single conditioned environment.

[F] ~~**415.10.2.6**~~ **415.10.1.6 Ventilation.** Mechanical exhaust ventilation at the rate of not less than 1 cubic foot per minute per square foot [0.0051m3/(s ·m2)] of floor area shall be provided throughout the portions of the fabrication area where HPM are used or stored. The exhaust air duct system of one fabrication area shall not connect to another duct system outside that fabrication area within the building.

A ventilation system shall be provided to capture and exhaust gases, fumes and vapors at workstations.

Two or more operations at a workstation shall not be connected to the same exhaust system where either one or the combination of the substances removed could constitute a fire, explosion or hazardous chemical reaction within the exhaust duct system.

Exhaust ducts penetrating occupancy separations shall be contained in a shaft of equivalent fire-resistance-rated construction. Exhaust ducts shall not penetrate *fire walls*.

Fire dampers shall not be installed in exhaust ducts.

[F] ~~**415.10.2.7**~~ **415.10.1.7 Transporting hazardous production materials to fabrication areas.** HPM shall be transported to fabrication areas through enclosed piping or tubing systems that comply with Section ~~415.10.6.1~~ 415.10.6, through service *corridors* complying with Section ~~415.10.4~~ 415.10.3, or in *corridors* as permitted in the exception to Section ~~415.10.3~~ 415.10.2. The handling or transporting of HPM within service *corridors* shall comply with the *International Fire Code*.

[F] ~~**415.10.2.8**~~ **415.10.1.8 Electrical.** ~~**[F] 415.10.2.8.1 General.**~~ Electrical equipment and devices within the fabrication area shall comply with NFPA 70. The requirements for hazardous locations need not be applied where the average air change is at least four times that set forth in Section ~~**415.10.2.6**~~ **415.10.1.6** and where the number of air changes at any location is not less than three times that required by Section ~~**415.10.2.6**~~ **415.10.1.6**. The use of recirculated air shall be permitted.

[F] ~~**415.10.2.8.2**~~ **415.10.1.8.1 Workstations.** Workstations shall not be energized without adequate exhaust ventilation. See Section ~~**415.10.2.6**~~ **415.10.1.6** for workstation exhaust ventilation requirements.

~~**415.10.3**~~ **415.10.2 Corridors.** *Corridors* shall comply with Chapter 10 and shall be separated from fabrication areas as specified in Section ~~**415.10.2.2**~~ **415.10.1.2**. *Corridors* shall not contain HPM and shall not be used for transporting

such materials in quantities greater than the maximum allowed quantity per control area, except through closed piping systems as provided in Section ~~415.10.6.3~~ 415.10.6. **[F]**

Exception: Where existing fabrication areas are altered or modified, HPM is allowed to be transported in existing *corridors,* subject to the following conditions:

1. ~~Corridors.~~ *Corridors* adjacent to the fabrication area where the *alteration* work is to be done shall comply with Section 1018 for a length determined as follows:
    1.1. The length of the common wall of the *corridor* and the fabrication area; and
    1.2. For the distance along the *corridor* to the point of entry of HPM into the *corridor* serving that fabrication area.

2. ~~Emergency alarm system.~~ There shall be an emergency telephone system, a local manual alarm station or other *approved* alarm-initiating device within *corridors* at not more than 150-foot (45 720 mm) intervals and at each *exit* and doorway. The signal shall be relayed to an *approved* central, proprietary or remote station service or the emergency control station and shall also initiate a local audible alarm.

3. ~~Pass-throughs~~. Self-closing doors having a *fire protection rating* of not less than 1 hour shall separate pass-throughs from existing *corridors*. Pass-throughs shall be constructed as required for the *corridors* and protected by an *approved* automatic sprinkler system.

[F] ~~415.10.4~~ 415.10.3 Service corridors. ~~**[F] 415.10.4.1 Occupancy.**~~ Service corridors ~~shall be classified as~~ within a Group H-5 occupancy shall comply with Sections 415.10.3.1 through 415.10.3.4.

[F] ~~415.10.4.2~~ 415.10.3.1 Use conditions. Service corridors shall be separated from *corridors* as required by Section 415.10.2.2. Service corridors shall not be used as a required *corridor*.

[F] ~~415.10.4.3~~ 415.10.3.2 Mechanical ventilation. Service corridors shall be mechanically ventilated as required by Section ~~415.10.2.6~~ 415.10.1.6 or at not less than six air changes per hour, whichever is greater.

[F] ~~415.10.4.4~~ 415.10.3.3 Means of egress. The maximum distance of travel from any point in a service corridor to an *exit*, *exit access corridor* or door into a fabrication area shall not exceed 75 feet (22 860 mm). Dead ends shall not exceed 4 feet (1219 mm) in length. There shall be not less than two *exits*, and not more than one-half of the required *means of egress* shall require travel into a fabrication area. Doors from service corridors shall swing in the direction of egress travel and shall be self-closing.

[F] ~~415.10.4.5~~ 415.10.3.4 Minimum width. The minimum clear width of a service corridor shall be 5 feet (1524 mm), or 33 inches (838 mm) wider than the widest cart or truck used in the corridor, whichever is greater.

[F] ~~415.10.4.6~~ 415.10.3.5 Emergency alarm system. Emergency alarm systems shall be provided in accordance with this section and Sections 414.7.1 and 414.7.2. The maximum allowable quantity per *control area* provisions shall not apply to emergency alarm systems required for HPM.

[F] ~~415.10.4.6.1~~ 415.10.3.5,1 Service corridors. An emergency alarm system shall be provided in service corridors, with at least one alarm device in each service corridor.

~~415.10.4.6.2~~ 415.10.3.5.2 Corridors and interior exit stairways and exit ramps. Emergency alarms for *corridors* and interior exit stairways and ramps and exit passageways shall comply with Section 414.7.2. **[F]**

[F] ~~415.10.4.6.3~~ 415.10.3.5.3 Liquid storage rooms, HPM rooms and gas rooms. Emergency alarms for liquid storage rooms, HPM rooms and gas rooms shall comply with Section 414.7.1.

[F] ~~415.10.4.6.4~~ 415.10.3.5,4 Alarm-initiating devices. An *approved* emergency telephone system, local alarm manual pull stations, or other *approved* alarm-initiating devices are allowed to be used as emergency alarm-initiating devices.

[F] ~~415.10.4.6.5~~ 415.10.3.5.5 Alarm signals. Activation of the emergency alarm system shall sound a local alarm and transmit a signal to the emergency control station.

[F] ~~415.10.5~~ 415.10.4 Storage of hazardous production materials. ~~**[F] 415.10.5.1 General.**~~ Storage of hazardous production materials (HPM) in fabrication areas shall be within *approved* or *listed* storage cabinets or gas cabinets or within a workstation. The storage of HPM in quantities greater than those listed in Section 1804.2 of the *International*

Fire Code shall be in liquid storage rooms, HPM rooms or gas rooms as appropriate for the materials stored. The storage of other hazardous materials shall be in accordance with other applicable provisions of this code and the *International Fire Code*.

[F] ~~415.10.5.2~~ **415.10.5 HPM rooms, gas rooms, liquid storage room construction.** HPM rooms, gas rooms and liquid storage rooms shall be in accordance with Sections 415.10.5.1 through 415.10.5.9.

[F] ~~415.10.5.2.1~~ **415.10.5.1 HPM rooms and gas rooms.** HPM rooms and gas rooms shall be separated from other areas by *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. The minimum *fire-resistance rating* shall be 2 hours where the area is 300 square feet (27.9 m2) or more and 1 hour where the area is less than 300 square feet (27.9 m2).

~~415.10.5.2.2~~ **415.10.5.2 Liquid storage rooms.** Liquid storage rooms shall be constructed in accordance with the following requirements:

1. Rooms in excess of 500 square feet (46.5 m2) shall have at least one exterior door *approved* for fire department access.

2. Rooms shall be separated from other areas by *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. The *fire-resistance rating* shall be not less than 1 hour for rooms up to 150 square feet (13.9m2) in area and not less than 2 hours where the room is more than 150 square feet (13.9 m2) in area.

3. Shelving, racks and wainscotting in such areas shall be of noncombustible construction or wood of not less than 1-inch (25 mm) nominal thickness or fire-retardant-treated wood complying with Section 2302.3.

4. Rooms used for the storage of Class I flammable liquids shall not be located in a basement. **[F]**

[F] ~~415.10.5.2.3~~ **415.10.5.3 Floors.** Except for surfacing, floors of HPM rooms and liquid storage rooms shall be of noncombustible liquid-tight construction. Raised grating over floors shall be of noncombustible materials.

[F] ~~415.10.5.3~~ **415.10.5.4 Location.** Where HPM rooms, liquid storage rooms and gas rooms are provided, they shall have at least one *exterior wall* and such wall shall be not less than 30 feet (9144 mm) from *lot lines*, including *lot lines* adjacent to *public ways*.

[F] ~~415.10.5.4~~ **415.10.5.5 Explosion control.** Explosion control shall be provided where required by Section 414.5.1.

[F] ~~415.10.5.5~~ **415.10.5.6 Exits.** Where two exits are required from HPM rooms, liquid storage rooms and gas rooms, one shall be directly to the outside of the building.

[F] ~~415.10.5.6~~ **415.10.5.7 Doors.** Doors in a *fire barrier* wall, including doors to *corridors*, shall be self-closing *fire door assemblies* having a *fire-protection rating* of not less than 3/4 hour.

[F] ~~415.10.5.7~~ **415.10.5.8 Ventilation.** Mechanical exhaust ventilation shall be provided in liquid storage rooms, HPM rooms and gas rooms at the rate of not less than 1 cubic foot per minute per square foot (0.044 L/s/m2) of floor area or six air changes per hour, whichever is greater, for categories of material.

Exhaust ventilation for gas rooms shall be designed to operate at a negative pressure in relation to the surrounding areas and direct the exhaust ventilation to an exhaust system.

[F] ~~415.10.5.8~~ **415.10.5.9 Emergency alarm system.** An *approved* emergency alarm system shall be provided for HPM rooms, liquid storage rooms and gas rooms.

Emergency alarm-initiating devices shall be installed outside of each interior exit door of such rooms.

Activation of an emergency alarm-initiating device shall sound a local alarm and transmit a signal to the emergency control station.

An *approved* emergency telephone system, local alarm manual pull stations or other *approved* alarm-initiating devices are allowed to be used as emergency alarm-initiating devices.

[F] 415.10.6 Piping and tubing. ~~**[F] 415.10.6.1 General.**~~ Hazardous production materials piping and tubing shall comply with ~~this section~~ Sections 415.10.6.1 through 415.10.6.5 and ASME B31.3.

~~**[F] 415.10.6.2 Supply piping and tubing.**~~

[F] ~~**415.10.6.2.1**~~ **415.10.6.1 HPM having a health-hazard ranking of 3 or 4.** Systems supplying HPM liquids or gases having a health-hazard ranking of 3 or 4 shall be welded throughout, except for connections, to the systems that are within a ventilated enclosure if the material is a gas, or an *approved* method of drainage or containment is provided for the connections if the material is a liquid.

[F] ~~**415.10.6.2.2**~~ **415.10.6.2 Location in service corridors.** Hazardous production materials supply piping or tubing in service corridors shall be exposed to view.

[F] ~~**415.10.6.2.3**~~ **415.10.6.3 Excess flow control.** Where HPM gases or liquids are carried in pressurized piping above 15 pounds per square inch gauge (psig) (103.4 kPa), excess flow control shall be provided. Where the piping originates from within a liquid storage room, HPM room or gas room, the excess flow control shall be located within the liquid storage room, HPM room or gas room. Where the piping originates from a bulk source, the excess flow control shall be located as close to the bulk source as practical.

[F] ~~**415.10.6.3**~~ **415.10.6.4 Installations in corridors and above other occupancies.** The installation of HPM piping and tubing within the space defined by the walls of *corridors* and the floor or roof above, or in concealed spaces above other occupancies, shall be in accordance with Section ~~**415.10.2.6**~~ **415.10.1.6** and the following conditions:

1. Automatic sprinklers shall be installed within the space unless the space is less than 6 inches (152 mm) in the least dimension.
2. Ventilation not less than six air changes per hour shall be provided. The space shall not be used to convey air from any other area.
3. Where the piping or tubing is used to transport HPM liquids, a receptor shall be installed below such piping or tubing. The receptor shall be designed to collect any discharge or leakage and drain it to an *approved* location. The 1-hour enclosure shall not be used as part of the receptor.
4. HPM supply piping and tubing and nonmetallic waste lines shall be separated from the *corridor* and from occupancies other than Group H-5 by *fire barriers* that have a *fire-resistance rating* of not less than 1 hour. Where gypsum wallboard is used, joints on the piping side of the enclosure are not required to be taped, provided the joints occur over framing members. Access openings into the enclosure shall be protected by *approved* fire protection- rated assemblies.
5. Readily accessible manual or automatic remotely activated fail-safe emergency shutoff valves shall be installed on piping and tubing other than waste lines at the following locations:
    5.1. At branch connections into the fabrication area.
    5.2. At entries into *corridors*.

Exception: Transverse crossings of the *corridors* by supply piping that is enclosed within a ferrous pipe or tube for the width of the *corridor* need not comply with Items 1 through 5.

[F] ~~**415.10.6.4**~~ **415.10.6.5 Identification.** Piping, tubing and HPM waste lines shall be identified in accordance with ANSI A13.1 to indicate the material being transported.

[F] 415.10.7 Continuous gas detection systems. A continuous gas detection system shall be provided for HPM gases when the physiological warning threshold level of the gas is at a higher level than the accepted PEL for the gas and for flammable gases in accordance with Sections 415.10.7.1 and 415.10.7.2.

[F] 415.10.7.1 Where required. A continuous gas detection system shall be provided in the areas identified in Sections 415.10.7.1.1 through 415.10.7.1.4.

[F] 415.10.7.1.1 Fabrication areas. A continuous gas detection system shall be provided in fabrication areas when gas is used in the fabrication area.

[F] 415.10.7.1.2 HPM rooms. A continuous gas detection system shall be provided in HPM rooms when gas is used in the room.

[F] 415.10.7.1.3 Gas cabinets, exhausted enclosures and gas rooms. A continuous gas detection system shall be provided in gas cabinets and exhausted enclosures. A continuous gas detection system shall be provided in gas rooms when gases are not located in gas cabinets or exhausted enclosures.

[F] 415.10.7.1.4 Corridors. When gases are transported in piping placed within the space defined by the walls of a *corridor* and the floor or roof above the *corridor*, a continuous gas detection system shall be provided where piping is located and in the *corridor*.

> **Exception:** A continuous gas detection system is not required for occasional transverse crossings of the corridors by supply piping that is enclosed in a ferrous pipe or tube for the width of the *corridor*.

[F] 415.10.7.2 Gas detection system operation. The continuous gas detection system shall be capable of monitoring the room, area or equipment in which the gas is located at or below all the following gas concentrations:

> 1. Immediately dangerous to life and health (IDLH) values when the monitoring point is within an exhausted enclosure, ventilated enclosure or gas cabinet.
> 2. Permissible exposure limit (PEL) levels when the monitoring point is in an area outside an exhausted enclosure, ventilated enclosure or gas cabinet.
> 3. For flammable gases, the monitoring detection threshold level shall be vapor concentrations in excess of 25 percent of the lower flammable limit (LFL) when the monitoring is within or outside an exhausted enclosure, ventilated enclosure or gas cabinet.
> 4. Except as noted in this section, monitoring for *highly toxic* and *toxic* gases shall also comply with Chapter 37 of the *International Fire Code*.

[F] 415.10.7.2.1 Alarms. The gas detection system shall initiate a local alarm and transmit a signal to the emergency control station when a short-term hazard condition is detected. The alarm shall be both visual and audible and shall provide warning both inside and outside the area where the gas is detected. The audible alarm shall be distinct from all other alarms.

[F] 415.10.7.2.2 Shutoff of gas supply. The gas detection system shall automatically close the shutoff valve at the source on gas supply piping and tubing related to the system being monitored for which gas is detected when a short-term hazard condition is detected. Automatic closure of shutoff valves shall comply with the following:

> 1. Where the gas detection sampling point initiating the gas detection system alarm is within a gas cabinet or exhausted enclosure, the shutoff valve in the gas cabinet or exhausted enclosure for the specific gas detected shall automatically close.
> 2. Where the gas detection sampling point initiating the gas detection system alarm is within a room and compressed gas containers are not in gas cabinets or an exhausted enclosure, the shutoff valves on all gas lines for the specific gas detected shall automatically close.
> 3. Where the gas detection sampling point initiating the gas detection system alarm is within a piping distribution manifold enclosure, the shutoff valve supplying the manifold for the compressed gas container of the specific gas detected shall automatically close.
>
> **Exception:** Where the gas detection sampling point initiating the gas detection system alarm is at the use location or within a gas valve enclosure of a branch line downstream of a piping distribution manifold, the shutoff valve for the branch line located in the piping distribution manifold enclosure shall automatically close.

[F] 415.10.8 Manual fire alarm system. An *approved* manual fire alarm system shall be provided throughout buildings containing Group H-5. Activation of the alarm system shall initiate a local alarm and transmit a signal to the emergency control station. The fire alarm system shall be designed and installed in accordance with Section 907.

[F] 415.10.9 Emergency control station. An emergency control station shall be provided in accordance with Sections 415.10.9.1 through 415.10.9.3.

[F] 415.10.9.1 Location. The emergency control station shall be located on the premises at an *approved* location outside the fabrication area.

[F] 415.10.9.2 Staffing. Trained personnel shall continuously staff the emergency control station.

[F] 415.10.9.3 Signals. The emergency control station shall receive signals from emergency equipment and alarm and detection systems. Such emergency equipment and alarm and detection systems shall include, but not be limited to, the following where such equipment or systems are required to be provided either in this chapter or elsewhere in this code:

1. *Automatic sprinkler system* alarm and monitoring systems.
2. Manual fire alarm systems.
3. Emergency alarm systems.
4. Continuous gas detection systems.
5. Smoke detection systems.
6. Emergency power system.
7. Automatic detection and alarm systems for pyrophoric liquids and Class 3 water-reactive liquids required in Section 1805.2.3.4 of the *International Fire Code*.
8. Exhaust ventilation flow alarm devices for pyrophoric liquids and Class 3 water-reactive liquids cabinet exhaust ventilation systems required in Section 1805.2.3.4 of the *International Fire Code*.

[F] 415.10.10 Emergency power system. An emergency power system shall be provided in Group H-5 occupancies where required in Section 415.10.10.1. The emergency power system shall be designed to supply power automatically to required electrical systems 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. HPM exhaust ventilation systems.
2. HPM gas cabinet ventilation systems.
3. HPM exhausted enclosure ventilation systems.
4. HPM gas room ventilation systems.
5. HPM gas detection systems.
6. Emergency alarm systems.
7. Manual fire alarm systems.
8. *Automatic sprinkler system* monitoring and alarm systems.
9. Automatic alarm and detection systems for pyrophoric liquids and Class 3 water-reactive liquids required in Section 1805.2.3.4 of the *International Fire Code*.
10. Flow alarm switches for pyrophoric liquids and Class 3 water-reactive liquids cabinet exhaust ventilation systems required in Section 1805.2.3.4 of the *International Fire Code*.
11. Electrically operated systems required elsewhere in this code or in the *International Fire Code* applicable to the use, storage or handling of HPM.

[F] 415.10.10.2 Exhaust ventilation systems. Exhaust ventilation systems are allowed to be designed to operate at not less than one-half the normal fan speed on the emergency power system where it is demonstrated that the level of exhaust will maintain a safe atmosphere.

[F] 415.10.11 Automatic sprinkler system protection in exhaust ducts for HPM. ~~**[F] 415.10.11.1 Exhaust ducts for HPM.**~~ An *approved automatic sprinkler system* shall be provided in exhaust ducts conveying gases, vapors, fumes, mists or dusts generated from HPM in accordance with ~~this section~~ Sections 415.10.11.1 through 415.10.11.3 and the *International Mechanical Code*.

[F] ~~415.10.11.2~~ 415.10.11.1 Metallic and noncombustible nonmetallic exhaust ducts. An *approved automatic sprinkler system* shall be provided in metallic and noncombustible nonmetallic exhaust ducts when all of the following conditions apply:

1. Where the largest cross-sectional diameter is equal to or greater than 10 inches (254 mm).
2. The ducts are within the building.
3. The ducts are conveying flammable gases, vapors or fumes.

[F] ~~415.10.11.3~~ 415.10.11.2 Combustible nonmetallic exhaust ducts. *Automatic sprinkler system* protection shall be provided in combustible nonmetallic exhaust ducts where the largest cross-sectional diameter of the duct is equal to or greater than 10 inches (254 mm).

Exceptions~~s~~: The following ducts are not required to be provided with automatic sprinkler systems installed within the ducts:
1. Ducts *listed* or *approved* for applications without automatic fire sprinkler system protection.
2. Ducts not more than 12 feet (3658 mm) in length installed below ceiling level.

[F] ~~415.10.11.4~~ 415.10.11.3 Automatic sprinkler locations. Sprinkler systems shall be installed at 12-foot (3658 mm) intervals in horizontal ducts and at changes in direction. In vertical ducts, sprinklers shall be installed at the top and at alternate floor levels.

REASON: Eliminate text-less titles.

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

There was an editorial fix in 415.10 – where 415.10.11 should not be struck.

CCC 10 – #G16

RE: 402.4.5 – incomplete exceptions

IBC Sections: 402.4.5, 405.1, 406.2.4, 407.3.2, 410.3.1, 411.1, 412.4.4, 413.2, 414.5.4, 414.6.1.3, 415.10.11.3, 508.4.3, 1204.1, 1208.2, 1208.3, 1210.2, 3002.7, 3004.1, 3102.5, 3104.2, 3302.1, 3310.2, and 3409.2

Revises as follows:

402.4.5 Access to exits. Where more than one *exit* is required, they shall be so arranged that it is possible to travel in either direction from any point in a mall to separate *exits*. The minimum width of an *exit passageway* or *corridor* from a mall shall be 66 inches (1676 mm).

> **Exception:** Access to exits are permitted by way of a dead end mall which does not exceed~~ing~~ a length equal to twice the width of the mall measured at the narrowest location within the dead-end portion of the mall.

405.1 General. The provisions of ~~this section~~ Section 405.1 through 405.11 apply to building spaces having a floor level used for human occupancy more than 30 feet (9144 mm) below the finished floor of the lowest *level of exit discharge*.

> ~~**Exceptions:**~~ **Exception:** The provisions of Section 405 are not applicable to the following buildings or portions of buildings:
>
> 1. One- and two-family *dwellings*, sprinklered in accordance with Section 903.3.1.3.
> 2. Parking garages provided with automatic sprinkler systems in compliance with Section 405.3.
> 3. Fixed guideway transit systems.
> 4. Grandstands, *bleachers*, stadiums, arenas and similar facilities.
> 5. Where the lowest *story* is the only *story* that would qualify the building as an underground building and has an area not exceeding 1,500 square feet (139 m_2) and has an *occupant load* less than 10.
> 6. Pumping stations and other similar mechanical spaces intended only for limited periodic use by service or maintenance personnel.

406.2.4 Vehicle barriers ~~systems.~~ Vehicle barriers ~~systems~~ not less than 2 feet 9 inches (835 mm) high shall be placed at the end of drive lanes, and at the end of parking spaces where the vertical distance to the ground or surface directly below is greater than 1 foot (305 mm). Vehicle barriers ~~systems~~ shall comply with the loading requirements of Section 1607.7.3.

> **Exception:** Vehicle barriers ~~systems~~ are not required in vehicle storage compartments in a mechanical access parking garage.

407.3.2 Locking devices. Locking devices that restrict access to the care recipient's room from the *corridor*, and that are operable only by staff from the *corridor* side, shall not restrict the *means of egress* from the care recipient's room except for patient rooms in mental health facilities.

> ~~**Exceptions:**~~
> ~~1.~~
> **Exception:** This section shall not apply to the following:
> 1. Rooms in psychiatric treatment and similar care areas.
> 2. Locking arrangements in accordance with Section 1008.1.9.6.

410.3.1 Stage construction. Stages shall be constructed of materials as required for floors for the type of construction of the building in which such stages are located.

> ~~**Exceptions:**~~**Exception:** Stages need not be constructed of the same materials as required for the type of construction provided the construction complies with one of the following:
>
> 1. Stages of Type IIB or IV construction with a nominal 2-inch (51 mm) wood deck, provided that the stage is separated from other areas in accordance with Section 410.3.4.
> 2. In buildings of Types IIA, IIIA and VA construction, a fire-resistance-rated floor is not required, provided the space below the stage is equipped with an automatic fire-extinguishing system in accordance with Section 903 or 904.
> 3. In all types of construction, the finished floor shall be constructed of wood or *approved* noncombustible materials. Openings through stage floors shall be equipped with tight-fitting, solid wood trap doors with *approved* safety locks.

411.1 General. Special *amusement buildings* having an *occupant load* of 50 or more shall comply with the requirements for the appropriate Group A occupancy and Sections 411.1 through 411.8. Amusement buildings having an *occupant load* of less than 50 shall comply with the requirements for a Group B occupancy and Sections 411.1 through 411.8.

> **Exception:** Amusement buildings or portions thereof that are without walls or a roof and constructed to prevent the accumulation of smoke need not comply with this section. For flammable *decorative materials*, see the *International Fire Code*.

412.4.4 Heating equipment. Heating equipment shall be placed in another room separated by 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. Entrance shall be from the outside or by means of a vestibule providing a two-doorway separation.

> **Exceptions:**
>
> 1. Unit heaters and vented infrared radiant heating equipment suspended at least 10 feet (3048 mm) above the upper surface of wings or engine enclosures of the highest aircraft that are permitted to be housed in the hangar need not located in a separate room provided they are mounted ~~and~~ at least 8 feet (2438 mm) above the floor in shops, offices and other sections of the hangar communicating with storage or service areas.
> 2. Entrance to the separated room shall be permitted by a single interior door ~~shall be allowed~~, provided the sources of ignition in the appliances are at least 18 inches (457 mm) above the floor.

413.2 Attic, under-floor and concealed spaces. *Attic*, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire-resistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1$_{3}$/$_{4}$ inch (45 mm) in thickness.

> ~~**Exceptions:**~~**Exception:** Fire resistant construction nor opening protectives are not required in any of the following locations:
>
> 1. Areas protected by *approved automatic sprinkler systems*.
> 2. Group R-3 and U occupancies.

[F] 414.5.4 Emergency or standby 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 Chapter 27.

Exceptions:

1. Emergency or standby power is not required for the following storage areas:
   1.1 Mechanical ventilation for storage of Class IB and Class IC flammable and combustible liquids in closed containers not exceeding 6.5 gallons (25 L) capacity.
   1.2. Storage areas for Class 1 and 2 oxidizers.
   1.3. Storage areas for Class II, III, IV and V organic peroxides.
   1.4. Storage, use and handling areas for asphyxiant, irritant and radioactive gases.
   1.5. For storage, use and handling areas for *highly toxic* or *toxic* materials, see Sections 3704.2.2.8 and 3704.3.4.2 of the *International Fire Code*.

~~6.~~2. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an *approved* fail-safe engineered system is installed.

[F] 414.6.1.3 Noncombustible construction. The overhead structure shall be of a*pproved* noncombustible construction with a maximum area of 1,500 square feet (140 m_2).

Exception: The ~~increases permitted by~~ maximum area is permitted to be increased as provided by Section 506 ~~apply~~.

[F] 415.10.11.3 Combustible nonmetallic exhaust ducts. *Automatic sprinkler system* protection shall be provided in combustible nonmetallic exhaust ducts where the largest cross-sectional diameter of the duct is equal to or greater than 10 inches (254 mm).

~~**Exceptions:**~~
Exception: Ducts need not be provided with sprinkler protection as follows:
1. Ducts *listed* or *approved* for applications without automatic fire sprinkler system protection.
2. Ducts not more than 12 feet (3658 mm) in length installed below ceiling level.

508.4.3 Allowable height. Each separated occupancy shall comply with the *building height* limitations based on the type of construction of the building in accordance with Section 503.1.

Exception: Special provisions permitted by Section 510 shall permit occupancies at building heights other than provided in Section 503.1.

1204.1 Equipment and systems. Interior spaces intended for human occupancy shall be provided with active or passive space-heating systems capable of maintaining a minimum indoor temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor on the design heating day.

Exception: Space heating systems are not required for Interior spaces where the primary purpose of the space is not associated with human comfort.

1208.2 Minimum ceiling heights. Occupiable spaces, *habitable spaces* and *corridors* shall have a ceiling height of not less than 7 feet 6 inches (2286 mm). Bathrooms, toilet rooms, kitchens, storage rooms and laundry rooms shall be permitted to have a ceiling height of not less than 7 feet (2134 mm).

Exceptions:

1. In one- and two-family *dwellings*, beams or girders spaced not less than 4 feet (1219 mm) on center ~~and projecting~~ shall be permitted to project not more than 6 inches (152 mm) below the required ceiling height.

2. If any room in a building has a sloped ceiling, the prescribed ceiling height for the room is required in one-half the area thereof. Any portion of the room measuring less than 5 feet (1524 mm) from the finished floor to the ceiling shall not be included in any computation of the minimum area thereof.
3. The height on mezzanines and below *mezzanines* ~~constructed~~ shall be in accordance with Section 505.1.

1208.3 Room area. Every *dwelling unit* shall have at least one room that shall have not less than 120 square feet (13.9 m_2) of *net floor area*. Other habitable rooms shall have a *net floor area* of not less than 70 square feet (6.5 m_2).

Exception: Kitchens are not required to be of a minimum area.

1210.2 Walls and partitions. Walls and partitions within 2 feet (610 mm) of urinals and water closets shall have a smooth, hard, nonabsorbent surface, to a height of 4 feet (1219 mm) above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by moisture.

~~**Exceptions:**~~**Exception:** This section does not apply to the following buildings and spaces:

1. *Dwelling units* and *sleeping units*.
2. Toilet rooms that are not accessible to the public and which have not more than one water closet.

Accessories such as grab bars, towel bars, paper dispensers and soap dishes, provided on or within walls, shall be installed and sealed to protect structural elements from moisture.

3002.7 Common enclosure with stairway. Elevators shall not be in a common shaft enclosure with a *stairway*.

Exception: Elevators within *open parking garages* *need not be separated from stairway enclosures.*

3004.1 Vents required. Hoistways of elevators and dumbwaiters penetrating more than three *stories* shall be provided with a means for venting smoke and hot gases to the outer air in case of fire.

~~**Exceptions:**~~**Exception:** Venting is not required for the following elevators and hoistways:

1. In occupancies of other than Groups R-1, R-2, I-1, I-2 and similar occupancies with overnight *sleeping units*, ~~venting of hoistways is not required~~ where the building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Sidewalk elevator hoistways ~~are not required to be vented~~.
3. Elevators contained within and serving *open parking garages* only.
4. Elevators within individual residential *dwelling units*.

3104.2 Separate structures. Connected buildings shall be considered to be separate structures.

Exceptions:
1. Buildings on the same lot in accordance with Section 503.1.2 shall be considered a single structure.

2. For purposes of calculating the number of Type B units required by Chapter 11, structurally connected buildings and buildings with multiple wings shall be considered one structure.

3109.4 Residential swimming pools. Residential swimming pools shall comply with Sections 3109.4.1 through 3109.4.3.

Exception: A swimming pool with a power safety cover or a spa with a safety cover complying with ASTM F 1346 need not comply with Section 3109.4.

3302.1 Remodeling and additions. Required *exits*, existing structural elements, fire protection devices and sanitary safeguards shall be maintained at all times during remodeling, *alterations*, repairs or *additions* to any building or structure.

Exceptions:

1. When such required elements or devices are being remodeled, altered or repaired, adequate substitute provisions shall be made.
2. Maintenance of such elements and devices is not required when the existing building is not occupied.

3310.2 Maintenance of means of egress. Required *means of egress* shall be maintained at all times during construction, demolition, remodeling or *alterations* and *additions* to my building.

Exception: Existing means of egress need not be maintained where a*pproved* temporary *means of egress* systems and facilities are provided.

3409.2 Flood hazard areas. Within flood hazard areas established in accordance with Section 1612.3, where the work proposed constitutes substantial improvement as defined in Section 1612.2, the building shall be brought into conformance with Section 1612.

Exception: *Historic buildings* need not be brought into compliance that are:

1. *Listed* or preliminarily determined to be eligible for listing in the National Register of Historic Places; or
2. Determined by the Secretary of the U.S. Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or
3. Designated as historic under a state or local historic preservation program that is *approved* by the Department of Interior.

REASON: The proposals simply are changing exceptions which are incomplete sentences or not specific to intent of the exception to being a complete provisions. The preferred action suggested in most places was to fix each exception so that each can stand alone. However, where there were multiple incomplete exceptions to the same section, a single lead in sentence was often the more efficient solution. These changes are only proposed for the chapters under the purview of the IBC General Code Development Committee.

Committee Action: Approved as Editorial; Approved as Modified
August 24, 2010

Modifications are noted above in yellow highlights.

CCC 10 – #G17

RE: IBC 415.8.7

IBC Section 415.8.7
IFC Section ???

Revise as follows

[F] 415.8.7 ((IFC ????)) Continuous gas detection systems. A continuous gas detection system shall be provided for HPM gases when the physiological warning threshold level of the gas is at a higher level than the accepted permissible exposure limit (PEL) for the gas and for flammable gases in accordance with Sections 415.8.7.1 and 415.8.7.2

Reason: This is an editorial fix in that currently Section 415.8.7 only states PEL now without explaining what PEL means. It is established in Item 2 of Section 415.8.7.2.

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

CCC 10 – #G18

RE: 419.2

Section 419.2

Revise as follows

419.2 Occupancies. Live/work units shall be classified as a Group R-2 occupancy. Separation requirements found in Sections 420 and 508 shall not apply within the live/work unit when the live/work unit is in compliance with Section 419. ~~High-hazard and storage occupancies~~ Nonresidential uses which would otherwise be classified as either a Group H or S occupancy shall not be permitted in a live/work unit.

Exception: Storage shall be permitted in the live/work unit provided the aggregate area of storage in the nonresidential portion of the live/work unit shall be limited to 10 percent of the space dedicated to nonresidential activities.

Reason: The provisions Section 419.2 are a bit circular. This was noted by Phil Brazil, but his suggested solution didn't resolve the issue. As it stands today, the section says that the live/work is classified as an R-2. Then it states that high-hazard and storage occupancies can't be in the live/work. But the first sentence just told you that the occupancy is R-2. If the intent is to prohibit what would be an S occupancy, then the last sentence is an exception allowing a limited amount of storage. Normally under Section 508.2.2 accessory occupancies (limited to 10% of a story) are classified according to their use – not the main occupancy. Outside of a live/work situation the accessory storage could be an S occupancy, thus the need for the last sentence to allow accessory storage – but not primary storage uses.

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

There was an editorial correction as noted by the highlighted text.

CCC 10 – #G19

Revise as follows:

TABLE 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)

OCCUPANCY	A, E		I-1, I-3, I-4		I-2		R[a]		F-2, S-2[b], U		B, F-1, M, S-1		H-1		H-2		H-3, H-4		H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A, E	N	N	1	~~NP~~2	2	NP	1	~~NP~~2	N	1	1	2	NP	NP	3	4	2	3	2	NP
I-1, I-3, I-4	---	---	N	N	2	NP	1	NP	1	~~NP~~2	1	~~NP~~2	NP	NP	3	NP	2	NP	2	NP
I-2	---	---	---	---	N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	2	NP	3	NP
R[a]	---	---	---	---	--	---	N	N	1[c]	~~NP~~ 2[c]	1	~~NP~~2	NP	NP	3	NP	2	NP	2	NP
F-2, S-2[b], U	---	---	---	---	--	---	--	---	N	N	1	2	NP	NP	3	4	2	3	2	NP
B, F-1, M,S-1	---	---	---	---	--	---	--	---	---	---	N	N	NP	NP	2	3	1	2	1	NP
H-1	---	---	---	---	--	---	--	---	---	---	---	---	N	NP	NP	NP	NP	NP	NP	NP
H-2	---	---	---	---	--	---	--	---	---	---	---	---	---	---	N	NP	1	NP	1	NP
H-3, H-4	---	---	---	---	--	---	--	---	---	---	---	---	---	---	---	---	1[d]	NP	1	NP
H-5	-	-	-	-	-	-	-	-	-	--	-	-	-	-	-	-	-	-	N	NP

For SI: 1 square foot = 0.0929 m2.
S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1
NS = Buildings not equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
N = No separation required
NP= Not permitted

a. See Section 420.
b. The required separation from areas used only for private or pleasure vehicles shall be reduced by 1 hour but to not less than one hour
c. See Section 406.1.4
d. Separation is not required between occupancies in the same classification

Reason: CCC-IBC??? Brought to you last year was in error. For something to be considered S-Sprinklered it has to be a full NFPA13 systems. Other types of sprinkler systems (13R and 13D) are considered NS – or non-sprinklered building. The previous CCC item made the assumption that a 13R sprinkler qualified and since all I's and all R's had to have one sprinkler system or another, the previous change moved everything in the NS columns to NP (not permitted). R occupancies can be sprinklered with other than a full NPFA 13 system. In addition Group I-1 can be sprinklered with a 13R systems (Section 903.2.6 – exception). This change replaces the NP with the 2-hour requirement found in the 2009 edition of Table 508.4.

However, there seems to be an inconsistency in the 2009 code at the cell at the intersection of I-1, I-3, I-4 row and the R – NS column (see green font). It is possible to get a non-sprinklered building here. But the NP resulted in G160-07/08. The action of G160 was to split the I-2 out of what had been a single column and row for all I occupancies. For all I occupancies the NP existed in the 2006 code. But it really should be a value – As there is now record for this version of the table for a value at that intersection, a code change should be processed by someone.

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

CCC 10 – #G20

RE: IBC-407.2.1 Incidental uses

IBC Sections 407.2.1, 407.2.3, 707.3.6, T903.2.11.6, 3412.6.19, T3412.7; IFC T903.2.11.5; IEBC – 1301.6.19, T1301.7.

Revise as follows:

407.2.1 Waiting and similar areas. Waiting areas and similar spaces constructed as required for *corridors* shall be permitted to be open to a *corridor*, only where all of the following criteria are met:

1. The spaces are not occupied for care recipient's sleeping units, treatment rooms, hazardous or incidental ~~accessory occupancies~~ uses in accordance with Section ~~508.2.~~509.
2. The open space is protected by an automatic fire detection system installed in accordance with Section 907.
3. The *corridors* onto which the spaces open, in the same smoke compartment, are protected by an automatic fire detection system installed in accordance with Section 907, or the smoke compartment in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
4. The space is arranged so as not to obstruct access to the required *exits*.

407.2.3 Psychiatric treatment areas. Areas wherein psychiatric care recipient's who are not capable of self-preservation are housed, or group meeting or multipurpose therapeutic spaces other than incidental ~~accessory occupancies~~ uses in accordance with Section ~~508.2.5~~ 509, under continuous supervision by facility staff, shall be permitted to be open to the *corridor*, where the following criteria are met:

1. Each area does not exceed 1,500 square feet (140m^2).
2. The area is located to permit supervision by the facility staff.
3. The area is arranged so as not to obstruct any access to the required *exits*.
4. The area is equipped with an automatic fire detection system installed in accordance with Section 907.2.
5. Not more than one such space is permitted in any one smoke compartment.
6. The walls and ceilings of the space are constructed as required for *corridors*.

707.3.6 Incidental ~~accessory occupancies~~ uses. The *fire barrier* separating incidental ~~accessory occupancies~~ uses from other spaces in the building shall have a *fire-resistance rating* of not less than that indicated in Table ~~508.2.5~~ 509.

[F] TABLE 903.2.11.6
ADDITIONAL REQUIRED SUPPRESSION SYSTEMS

SECTION	SUBJECT
402.8	Covered malls
403.2, 403.3	High-rise buildings
404.3	Atriums
405.3	Underground structures
407.5	Group I-2
410.6	Stages
411.4	Special amusement buildings
412.4.6, 412.4.6.1,412.6.5	Aircraft hangars
415.6.2.4	Group H-2
416.4	Flammable finishes
417.4	Drying rooms
507	Unlimited area buildings

~~508.2.5~~ 509	Incidental ~~accessory occupancies~~ uses
1028.6.2.3	Smoke-protected assembly seating
IFC	Sprinkler system requirements as set forth in Section 903.2.11.6 of the *International FireCode*

3412.6.19 Incidental ~~accessory occupancy~~ **uses.** Evaluate the protection of incidental ~~accessory occupancies~~ uses in accordance with Section ~~508.2.5~~ 509. Do not include those where this code requires suppression throughout the buildings, including covered mall buildings, high-rise buildings, public garages and unlimited area buildings. Assign the lowest score from Table 3412.6.19 for the building or floor area being evaluated and enter that value into Table 3412.7 under Safety Parameter 3412.6.19, Incidental ~~Accessory Occupancy~~ Use, for fire safety, means of egress and general safety. If there are no specific occupancy areas in the building or floor area being evaluated, the value shall be zero.

Table 3412.6.19
INCIDENTAL ~~ACCESSORY OCCUPANCY~~ USE AREA VALUES

Balance of table remains unchanged.

TABLE 3412.7
SUMMARY SHEET — BUILDING CODE

3412.6.16 Mixed Occupancies
3412.6.17 Automatic Sprinklers
3412.6.18 Standpipes
3412.6.19 Incidental ~~Accessory Occupancy~~ Use

Balance of table remains unchanged.

International Existing Buildings Code

902.1 Compliance with the building code. Where the character or use of an *existing building* or part of an *existing building* is changed to one of the following special use or occupancy categories as defined in the *International Building Code*, the building shall comply with all of the applicable requirements of the *International Building Code*:

1. Covered mall buildings.
2. Atriums.
3. Motor vehicle-related occupancies.
4. Aircraft-related occupancies.
5. Motion picture projection rooms.
6. Stages and platforms.
7. Special amusement buildings.
8. Incidental use areas.
9. Hazardous materials.

(Actually no change is needed as this never moved away from Incidental Use)

[B] 1301.6.19 Incidental ~~accessory occupancy~~ **uses.** Evaluate the protection of incidental ~~accessory occupancies~~ uses in accordance with Section ~~508.2.5~~ 509 of the *International Building Code*. Do not include those where this code requires suppression throughout the building including covered mall buildings, high-rise buildings, public garages and unlimited area buildings. Assign the lowest score from Table 1301.6.19 for the building or floor area being evaluated. If there are no specific occupancy areas in the building or floor area being evaluated, the value shall be zero.

TABLE 1301.6.19
INCIDENTAL ~~ACCESSORY OCCUPANCY~~ USE AREA VALUESa

Balance of table remains unchanged.

TABLE 1301.7
SUMMARY SHEET—BUILDING CODE

1301.7.16 Mixed Occupancies
1301.7.17 Automatic Sprinklers
1301.7.18 Standpipes
1301.7.19 Incidental ~~Accessory Occupancy~~ Use

Reason: Incidental Accessory Occupancies are now Incidental Uses per G107-09/10. In addition the regulations have moved from 508.2 to 509 in the IBC. These are the few provisions outside of Chapter 5 which references incidental uses.

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

CCC 10 – #G21

RE: IBC-507.7

Section 507.7

Revise as follows

507.7 Group A-3 buildings of Types III and IV construction. The area of a Group A-3 building of Type III or IV construction, with no more than one *story above grade plane*, and used as a *place of religious worship*, community hall, dance hall, exhibition hall, gymnasium, lecture hall, indoor swimming pool or tennis court ~~of Type III or IV construction~~, shall not be limited ~~when~~ provided all of the following criteria are met:

1 through 4 – *no change to text.*

Reason: Concept of this change suggested by Phil Brazil. The current structure of the sentence can be read that the construction type applies only to the tennis court. Moving the construction requirement to the beginning of the sentence and providing clearer conjunctions clarifies the sentence. Also we try to avoid the use of 'when' in the code as it denotes a time not a condition.

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

CCC 10 – #G22

Table 509

Revise as follows

TABLE 509
INCIDENTAL USES

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Furnace room where any piece of equipment is over 400,000 Btu per hour input	1 hour or provide automatic sprinkler system
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	1 hour or provide automatic sprinkler system
Refrigerant machinery room	1 hour or provide automatic sprinkler system
Hydrogen cutoff rooms, not classified as Group H	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.
Incinerator rooms	2 hours and automatic sprinkler system
Paint shops, not classified as Group H, located in occupancies other than Group F	2 hours; or 1 hour and provide automatic sprinkler system
Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy	1 hour or provide automatic sprinkler system
Laundry rooms over 100 square feet	1 hour or provide automatic sprinkler system
Group I-3 cells equipped with padded surfaces	1 hour
Waste and linen collection rooms located in either Group I-2 occupancies or ambulatory care facilities	1 hour
Waste and linen collection rooms over 100 square feet	1 hour or provide automatic sprinkler system
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons for flooded lead-acid, nickel cadmium or VRLA, or ~~a lithium-ion capacity of~~ more than1,000 pounds for lithium-ion and lithium metal polymer,used for facility standby power, emergency power or uninterruptible power supplies	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.

For SI: 1 square foot = 0.0929 m2, 1 pound per square inch (psi) = 6.9 kPa, 1 British thermal unit (Btu) per hour = 0.293 watts, 1 horsepower = 746

ALSO: Amended Section 608.1 of the IFC as follows:

608.1 Scope Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons for flooded lead-acid, nickel cadmium or VRLA, or more than1,000 pounds for lithium-ion and lithium metal polymer,used for facility standby power, emergency power or uninterruptible power supplies shall comply with this section and Table 608.1.

Reason: Concept of this change suggested by Phil Brazil. Without the change, the code implies on 1000 pound capacity batteries are of concern. Rather than those that were large. As the provisions for systems based on gallons – the intent is for larger systems

Committee Action: Approved as Editorial; Approved as Modified
August 24, 2010

The committee modified Table 509 to be consistent with Section 608.1 of the IFC. They also added a revision to Section 608.1 to be consistent with text in the table.

CCC 10 – #G23

Section 3008.7

Revise as follows

3008.7 ~~High-hazard content~~ Hazardous material areas. No building areas shall contain ~~high-hazard contents~~ hazardous materials exceeding the maximum allowable quantities per control area as addressed in Section 414.2.

Reason: Originally proposed as an erratum by Phil Brazil. It uses terms in consistent with the terminology of Sections 307 and 414.2. While Group H occupancies are considered to be High-hazard occupancies, the issue specified by the code is that it is not an H occupancy by limiting the hazardous materials to those allowed within a control area. The code turns on the limit of hazardous materials.

Committee Action: Approved as Editorial; Approved as Submitted.
August 24, 2010

CCC 10 – #G24

IBC – 3007/3008 reorg

SECTION 3007
FIRE SERVICE ACCESS ELEVATOR

3007.1 General. Where required by Section 403.6.1, every floor of the building shall be served by fire service access elevators complying with Sections 3007.1 through 3007.12. Except as modified in this section, fire service access elevators shall be installed in accordance with this chapter and ASME A17.1/CSA B44.

3007.2 Phase I Emergency recall operation. Actuation of any building fire alarm initiating device shall initiate Phase I emergency recall operation on all fire service access elevators in accordance with the requirements in ASME A17.1/CSA B44. All other elevators shall remain in normal service unless Phase I emergency recall operation is manually initiated by a separate, required three-position key-operated "Fire Recall" switch or automatically initiated by the associated elevator lobby, hoistway or elevator machine room smoke detectors. In addition, if the building also employs occupant evacuation elevators in accordance with Section 3008, an independent, three-position, key-operated "Fire Recall" switch conforming to the applicable requirements in ASME A17.1/CSA B44 shall be provided at the designated level for each fire service access elevator.

3007.3 Automatic sprinkler system. The building shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3007.3.1.

3007.3.1 Prohibited locations. Automatic sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoistways of fire service access elevators.

3007.3.2 Sprinkler system monitoring. The sprinkler system shall have a sprinkler control valve supervisory switch and waterflow-initiating device provided for each floor that is monitored by the building's fire alarm system.

~~**3007.5**~~ **3007.4 Water protection.** An *approved* method to prevent water from infiltrating into the hoistway enclosure from the operation of the automatic sprinkler system outside the enclosed fire service access elevator lobby shall be provided.

~~**3007.4**~~ **3007.5 Shunt trip.** Means for elevator shutdown in accordance with Section 3006.5 shall not be installed on elevator systems used for fire service access elevators.

3007.6 Hoistway enclosures ~~**protection.**~~ The fire service access elevator shall be located in a shaft enclosure complying with Section 708.

3007.6.1 Structural integrity of hoistway enclosures. The fire service access elevator hoistway shaft enclosure shall comply with Sections 403.2.3.1 through 403.2.3.4.

~~**3007.7**~~ **3007.6.2 Hoistway lighting.** When firefighters' emergency operation is active, the entire height of the hoistway shall be illuminated at not less than 1 foot-candle (11 lux) as measured from the top of the car of each fire service access elevator.

~~**3007.8**~~ **3007.7 Fire service access elevator lobby.** The fire service access elevator shall open into a fire service access elevator lobby in accordance with Sections 3007.7.1 through 3007.7.5.

Exception: Where a fire service access elevator has two entrances onto a floor, the second entrance shall be permitted to open into an elevator lobby in accordance with Section 708.14.1.

3007.7.1 Access. The fire service access elevator lobby shall have direct access to an ~~exit~~ enclosure for an interior exit stairway.

3007.7.2 Lobby enclosure. The fire service access elevator lobby shall be enclosed with a *smoke barrier* having a minimum 1-hour *fire-resistance rating*, except that lobby doorways shall comply with Section 3007.7.3.

Exception: Enclosed fire service access elevator lobbies are not required at the levels of exit discharge.

3007.7.3 Lobby doorways. Other than the door to the hoistway, each doorway to a fire service access elevator lobby shall be provided with a $^{3}/_{4}$-hour *fire door assembly* complying with Section 715.4. The *fire door assembly* shall also comply with the smoke and draft control door assembly requirements of Section 715.4.3.1 with the UL 1784 test conducted without the artificial bottom seal.

3007.7.4 Lobby size. Each enclosed fire service access elevator lobby shall be a minimum of 150 square feet (14m^2) in an area with a minimum dimension of 8 feet (2440 mm).

~~**3007.12**~~ **3007.7.5 Fire service access elevator symbol**. A pictorial symbol of a standardized design designating which elevators are fire service access elevators shall be installed on each side of the hoistway door frame on the portion of the frame at right angles to the fire service access elevator lobby. The fire service access elevator symbol shall be designed as shown in Figure 3007.7.5 and shall comply with the following:

1. The fire service access elevator symbol shall be a minimum of 3 inches (76 mm) in height.
2. The vertical center line of the fire service access elevator symbol shall be centered on the hoistway door frame. Each symbol shall not be less than 78 inches (1981 mm), and not more than 84 (2134 mm) inches above the finished floor at the threshold.

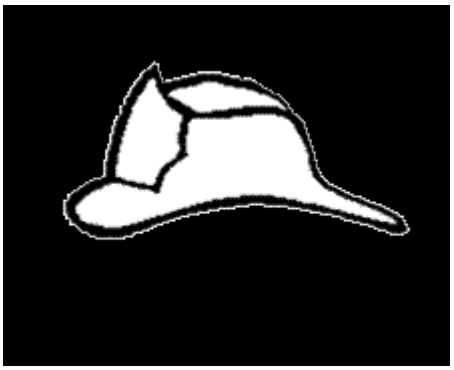

FIGURE 3007.7.5
FIRE SERVICE ACCESS ELEVATOR SYMBOL

~~**3007.10**~~ **3007.8 Elevator system monitoring.** The fire service access elevator shall be continuously monitored at the fire command center by a standard emergency service Interface system meeting the requirements of NFPA 72.

~~**3007.11**~~ **3007.9 Electrical power**. The following features serving each fire service access elevator shall be supplied by both normal power and Type 60/Class 2/Level 1 standby power:

1. Elevator equipment.

2. Elevator hoistway lighting.
3. Elevator machine room ventilation and cooling equipment.
4. Elevator controller cooling equipment.

~~3007.11.1~~ 3007.9.1 **Protection of wiring or cables.** Wires or cables that are located outside of the elevator hoistway and machine room and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to fire service access elevators shall be protected by construction having a minimum 2-hour fire-resistance rating or shall be circuit integrity cable having a minimum 2-hour fire resistance rating.

Exception: Wiring and cables to control signals are not required to be protected provided that wiring and cables do not serve Phase II emergency in-car operation.

~~3007.9~~ 3007.10 **Standpipe hose connection.** A Class I standpipe hose connection in accordance with Section 905 shall be provided in the interior exit stairway and ramp having direct access from the fire service access elevator lobby.

3007.10.1 **Access.** The *exit enclosure* containing the standpipe shall have access to the floor without passing through the fire service access elevator lobby.

SECTION 3008
OCCUPANT EVACUATION ELEVATORS

3008.1 General. Where elevators are to be used for occupant self-evacuation during fires, all passenger elevators for general public use shall comply with ~~this~~ Sections 3008.1 through 3008.16. Where other elevators are used for occupant self-evacuation, they shall also comply with these sections.

3008.1.1 Additional exit stairway. Where an additional means of egress is required in accordance with Section 403.5.2, an additional exit stairway shall not be required to be installed in buildings provided with occupant evacuation elevators complying with Section 3008.1.

~~3008.2~~ 3008.1.2 **Fire safety and evacuation plan.** The building shall have an *approved* fire safety and evacuation plan in accordance with the applicable requirements of Section 404 of the *International Fire Code*. The fire safety and evacuation plan shall incorporate specific procedures for the occupants using evacuation elevators.

~~3008.5~~ 3008.2 **Phase I Emergency recall operation**. An independent, three-position, key-operated “Fire Recall” switch complying with ASME A17.1/CSA B44 shall be provided at the designated level for each occupant evacuation elevator.

~~3008.4~~ 3008.2.1 **Operation.** The occupant evacuation elevators shall be used for occupant self-evacuation only in the normal elevator operating mode prior to Phase I Emergency Recall Operation in accordance with the requirements in ASME A17.1/CSA B44 and the building’s fire safety and evacuation plan.

~~3008.3~~ 3008.2.2 **Activation.** Occupant evacuation elevator systems shall be activated by any of the following:

1. The operation of an automatic sprinkler system complying with Section 3008.3;
2. Smoke detectors required by another provision of the code;
3. Approved manual controls.

~~3008.7~~ 3008.3 **Automatic sprinkler system.** The building shall be protected throughout by an *approved*, electrically-supervised automatic sprinkler system in accordance with Section

903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3008.6.1.

3008.3.1 Prohibited locations. Automatic sprinklers shall not be installed in elevator machine rooms and elevator machine spaces for occupant evacuation elevators.

3008.3.2 Sprinkler system monitoring. The sprinkler system shall have a sprinkler control valve supervisory switch and water flow initiating device provided for each floor that is monitored by the building's fire alarm system.

~~3008.11~~ **3008.4 Water protection.** An *approved* method to prevent water from infiltrating into the hoistway enclosure from the operation of the automatic sprinkler system outside the enclosed occupant evacuation elevator lobby shall be provided.

~~3008.9~~ **3008.5 Shunt trip.** Means for elevator shutdown in accordance with Section 3006.5 shall not be installed on elevator systems used for occupant evacuation elevators.

~~3008.10~~ **3008.6 Hoistway enclosure protection.** Occupant evacuation elevators hoistways shall be located in shaft enclosures complying with Section 708.

~~3008.10.1~~ **3008.6.1 Structural integrity of hoistway enclosures.** Occupant evacuation elevator hoistway shaft enclosures shall comply with Section 403.2.3.1 through 403.2.3.4.

~~3008.12~~ **3008.7 Occupant evacuation elevator lobby.** The occupant evacuation elevators shall open into an elevator lobby in accordance with Sections 3008.7.1 through 3008.7.7.

3008.7.1 Access. The occupant evacuation elevator lobby shall have direct access to an interior exit stairway or ramp.

3008.7.2 Lobby enclosure. The occupant evacuation elevator lobby shall be enclosed with a *smoke barrier* having a minimum 1-hour *fire-resistance rating*, except that lobby doorways shall comply with Section 3008.7.3.

Exception: Enclosed occupant evacuation elevator lobbies are not required at the level(s) of *exit discharge*.

3008.7.3 Lobby doorways. Other than the door to the hoistway, each doorway to an occupant evacuation elevator lobby shall be provided with a $^{3}/_{4}$-hour *fire door assembly* complying with Section 715.4. The fire door assembly shall also comply with the smoke and draft control assembly requirements of Section 715.4 3 1 with the UL 1784 test conducted without the artificial bottom seal.

3008.7.3.1 Vision panel. A vision panel shall be installed in each *fire door assembly* protecting the lobby doorway. The vision panel shall consist of fire protection-rated glazing and shall be located to furnish clear vision of the occupant evacuation elevator lobby.

3008.7.3.2 Door closing. Each *fire door assembly* protecting the lobby doorway shall be automatic closing upon receipt of any fire alarm signal from the emergency voice/alarm communication system serving the building.

3008.7.4 Lobby size. Each occupant evacuation elevator lobby shall have minimum floor area as follows:

1. The occupant evacuation elevator lobby floor area shall accommodate, at 3 square feet (0.28m2) per person, a minimum of 25 percent of the *occupant load* of the floor area served by the lobby.

2. The occupant evacuation elevator lobby floor area also shall accommodate one *wheelchair space* of 30 inches by 48 inches (760 mm by 1220 mm) for each 50 persons, or portion thereof, of the *occupant load* of the floor area served by the lobby.

   Exception: The size of lobbies serving multiple banks of elevators shall have the minimum floor area *approved* on an individual basis and shall be consistent with the building's fire safety and evacuation plan.

3008.7.5 Signage. An *approved* sign indicating elevators are suitable for occupant self-evacuation shall be posted on all floors adjacent to each elevator call station serving occupant evacuation elevators.

~~**3008.13**~~ **3008.7.6 Lobby status indicator.** Each occupant evacuation elevator lobby shall be equipped with a status indicator arranged to display all of the following information:

1. An illuminated green light and the message, "Elevators available for occupant evacuation" when the elevators are operating in normal service and the fire alarm system is indicating an alarm in the building.
2. An illuminated red light and the message, "Elevators out of service, use *exit stairs*" when the elevators are in Phase I emergency recall operation in accordance with the requirements in ASME A17.1/CSA B44.
3. No illuminated light or message when the elevators are operating in normal service.

~~**3008.14**~~ **3008.7.7 Two-way communication system.** A two-way communication system shall be provided in each occupant evacuation elevator lobby for the purpose of initiating communication with the fire command center or an alternate location *approved* by the fire department.

3008.7.7.1 Design and installation. The two-way communication system shall include audible and visible signals and shall be designed and installed in accordance with the requirements in ICC A117.1.

3008.7.7.2 Instructions. Instructions for the use of the two-way communication system along with the location of the station shall be permanently located adjacent to each station. Signage shall comply with the ICC A117.1 requirements for visual characters.

~~**3008.15**~~ **3008.8 Elevator system monitoring.** The occupant evacuation elevators shall be continuously monitored at the fire command center or a central control point *approved* by the fire department and arranged to display all of the following information:

1. Floor location of each elevator car.
2. Direction of travel of each elevator car.
3. Status of each elevator car with respect to whether it is occupied.
4. Status of normal power to the elevator equipment, elevator controller cooling equipment, and elevator machine room ventilation and cooling equipment.
5. Status of standby or emergency power system that provides backup power to the elevator equipment, elevator controller cooling equipment, and elevator machine room ventilation and cooling equipment.
6. Activation of any fire alarm initiating device in any elevator lobby, elevator machine room or machine space, or elevator hoistway.

3008.8.1 Elevator recall. The fire command center or an alternate location *approved* by the fire department shall be provided with the means to manually initiate a Phase I Emergency Recall of the occupant evacuation elevators in accordance with ASME A17.1/CSA B44.

~~**3008.16**~~ **3008.9 Electrical power.** The following features serving each occupant evacuation elevator shall be supplied by both normal power and Type 60/Class 2/Level 1 standby power:

1. Elevator equipment.
2. Elevator machine room ventilation and cooling equipment.
3. Elevator controller cooling equipment.

3008.9.1 Protection of wiring or cables. Wires or cables that are located outside of the elevator hoistway and machine room and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to fire service access elevators shall be protected by construction having a minimum 2-hour fire-resistance rating or shall be circuit integrity cable having a minimum 2-hour fire resistance rating.

Exception: Wiring and cables to control signals are not required to be protected provided that wiring and cables do not serve Phase II emergency in-car operation.

~~**3008.6**~~ **3008.10 Emergency voice/alarm communication system.** The building shall be provided with an emergency voice/alarm communication system. The emergency voice/alarm communication system shall be accessible to the fire department. The system shall be provided in accordance with Section 907.2.12.2.

3008.10.1 Notification appliances. A minimum of one audible and one visible notification appliance shall be installed within each occupant evacuation elevator lobby.

~~**3008.8**~~ **3008.11 High hazard content areas.** No building areas shall contain high hazard contents exceeding the maximum allowable quantities per *control area* as addressed in Section 414.2.

REASON: In the 2009 code while Sections 3007 and 3008 had many similar provisions, Section 3008 was significantly more detailed than 3007, containing 15 subsections compared to 7. But with the revisions and additions approved by the membership, the topics covered in 3007 and 3008 for the 2012 code will be nearly identical. There are 8 topic areas that are the same and only 1 unique topic for 3007 and 2 unique topics for 3008. With the nearly identical topics, it should help users of the code to find these provisions in roughly that same order. The order suggested is as follows:

.1 – General (including related provisions regarding when the system can be or should be used.
.2 – Emergency recall and other operations
.3 - Automatic sprinklers
.4 – Water protection
.5 – Shunt trip
.6 – Hoistway construction, protection, lighting
.7 – Lobbies
.8 – Elevator system monitoring
.9 – Emergency power

In 3007 this would be followed by its unique provisions – Standpipe connections. In 3008 this would be followed by unique provisions for occupant evacuation elevators – Emergency communications and the limits on hazardous materials.

While the details are somewhat different between 3007 and 3008, with this reorganization the code user will be able to find in, for example, the .3 sections the treatment of sprinklers.

This reorganization can be accomplished with just renumbering sections and one minor section title change. Otherwise there is no change to the text.

Committee Action: Approved as editorial; Approved as Submitted.
August 24, 2010.
The committee directed that the changes made in G23 be incorporated into G24 and not superseded by the text in this proposal in Section 3008.11 (new numbering.)

CCC 10 – #G25

IBC Sections: 3004.4, 3007.6.1, 3007.10.1

Part 1 – IBC 3004.4

Revises as follows:

3002.1 Hoistway enclosure protection. Elevator, dumbwaiter and other hoistway enclosures shall be shaft enclosures complying with Section 708.

3004.4 Plumbing and mechanical systems. Plumbing and mechanical systems shall not be located in an elevator ~~shaft~~ hoistway enclosure.

> **Exception:** Floor drains, sumps and sump pumps shall be permitted at the base of the ~~shaft~~ hoistway enclosure provided they are indirectly connected to the plumbing system.

Part 2 – IBC 3007.6, 3008.10

Revise as follows:

3007.6 Hoistway enclosures protection. The fire service access elevator shall be located in a shaft enclosure complying with Section 708.

3007.6.1 Structural integrity of hoistway enclosures. The fire service access elevator hoistway ~~shaft~~ enclosure shall comply with Sections 403.2.3.1 through 403.2.3.4.

3008.10 Hoistway enclosure protection. Occupant evacuation elevator~~s~~ hoistways shall be located in shaft enclosures complying with Section 708.

3008.10.1 Structural integrity of hoistway enclosures. Occupant evacuation elevator hoistway ~~shaft~~ enclosures shall comply with Section 403.2.3.1 through 403.2.3.4.

Reason:
When assembling Chapter 30 for 2012, a concern was raised regarding the use of the terms 'hoistway', 'enclosure' and 'shaft'. The elevator industry generally refers the enclosure through which an elevator travels as a hoistway. Looking at Chapter 30, it is actually fairly consistent in using the term 'hoistway' or 'hoistway enclosure'. Included above are 3 sections which each state that elevator hoistways shall be shaft enclosures complying with Section 708. The chapter is inconsistent in using 'hoistway' versus 'hoistway enclosure'. While it would be nice if the code always used the same term, make such changes are not proposed here. Four changes are proposed:

Part 1.
Sec. 3004.4 states 'elevator shaft' in 2 locations. While this is probably understood, for consistency with the rest of the chapter, it would be appropriate to change 'shaft' to 'hoistway' or 'hoistway enclosure' in these two locations.

Part 2.
Sections 3007.6.1 and 3007.10.1 both use the phrase 'hoistway shaft enclosure'. The phrase is probably redundant and may not lead to confusion, but as both sections follow sections saying that hoistways are shaft enclosures, repeating 'shaft' is not needed. In an extreme reading of the code, someone might try to interpret the code to say a hoistway shaft enclosure is something different than a hoistway or hoistway enclosure.

CCC 10 – #G27

Revise as follows:

3303.3 Means of egress. A ~~party wall balcony or~~ *horizontal exit* shall not be destroyed unless and until a substitute *means of egress* has been provided and *approved*.

Reason: We've been trying to figure out what a 'party wall balcony' is. The term was used in the 1999 BOCA National code (Sec. 3309.3.3). The commentary on that section doesn't explain the term either.

The phrase or term is not found anyplace else in the code. All other uses of the term party wall do not include balcony. As the section addresses the maintenance the means of egress during demolition, and Chapter 10 of the IBC does not contain any egress element similar to a 'party wall balcony'. Further, while a fire wall might have a horizontal exit through it; such an exit isn't permitted for a party wall. As the term is meaningless in the IBC, it should be deleted.

Committee Action: Approved as editorial; Approved as Submitted.
August 24, 2010.

CCC 10 – #G28

Part I - IBC Appendix I

Revise text as follows:

APPENDIX I
PATIO COVERS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION I101
GENERAL

I101.1 General. Patio covers shall be permitted to be detached from or attached to *dwelling units*. Patio covers shall be used only for recreational, outdoor living purposes and not as carports, garages, storage rooms or habitable rooms. ~~Openings shall be permitted to be enclosed with insect screening, approved translucent or transparent plastic not more that 0.125 inch (3.2 mm) in thickness, glass conforming to the provisions of Chapter 24 or any combination of the foregoing.~~

SECTION I102
DEFINITIONS

I102.1 General. The following word and term shall, for the purposes of this appendix, have the meaning shown herein.

PATIO COVER. A structure with open or glazed walls which is used for recreational, outdoor living purposes associated with a dwelling unit.

~~**PATIO COVERS.** One story structures not exceeding 12 feet (3657 mm) in height. Enclosure walls shall be permitted to be of any configuration, provided the open or glazed area of the longer wall and one additional wall is equal to at least 65 percent of the area below a minimum of 6 feet 8 inches (2032 mm) of each wall, measured from the~~ floor.

SECTION I103
EXTERIOR WALLS AND OPENINGS

I103.1 Enclosure walls. Enclosure walls shall be permitted to be of any configuration, provided the open or glazed area of the longer wall and one additional wall is equal to at least 65 percent of the area below a minimum of 6 feet 8 inches (2032 mm) of each wall, measured from the floor. Openings shall be permitted to be enclosed with insect screening, approved translucent or transparent plastic not more that 0.125 inch (3.2 mm) in thickness, glass conforming to the provisions of Chapter 24 or any combination of the foregoing.

~~**I103.1**~~ **I1032. Light, ventilation and emergency egress.** Exterior openings of the dwelling unit required for light and ventilation shall be permitted to open into a patio structure. However, the patio structure shall be unenclosed if such openings are serving as emergency egress or rescue openings from sleeping rooms. Where such exterior openings serve as an exit from the dwelling unit, the patio structure, unless unenclosed, shall be provided with exits conforming to the provision of Chapter 10.

SECTION I104
HEIGHT

I104.1 Height. Patio covers shall be limited to one story structures not exceeding 12 feet (3657 mm) in height.

SECTION ~~I104~~ I105

STRUCTURAL PROVISIONS

~~**I104.1**~~ **I105.1 Design loads.** Patio covers shall be designed and constructed to sustain, within the stress limits of this code, all dead loads plus a minimum vertical live load of 10 pounds per square foot (0.48 kN/m^2) except that snow loads shall be used where such snow loads exceed this minimum. Such patio covers shall be designed to resist the minimum wind and seismic loads set forth in this code.

~~**I104.2**~~ **I105.2 Footings.** In areas with a frost depth of zero, a patio cover shall be permitted to be supported on a concrete slab on grade without footings, provided the slab conforms to the provisions of Chapter 19 of this code, is not less than $3^1/_2$ inches (89 mm) thick and further provided that the columns do not support loads in excess of 750 pounds (3.36 kN) per column.

Part II - IRC Appendix H

Section AH107 will require renumbering. Add the following after Section AH105.2: (Renumber subsequent Sections).

Larry D. Franks, PE, CBO

Revise text as follows:

APPENDIX H
PATIO COVERS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION AH101
GENERAL

AH101.1 Scope. Patio covers shall conform to the requirements of ~~this appendix chapter~~ Sections AH101 through AH105.

AH101.2 Permitted uses. Patio covers shall be permitted to be detached from or attached to *dwelling units*. Patio covers shall be used only for recreational, outdoor living purposes and not as carports, garages, storage rooms or habitable rooms.

SECTION AH102
DEFINITIONS

AH102.1 General. The following word and term shall, for the purposes of this appendix, have the meaning shown herein.

PATIO COVER. A structure with open or glazed walls which is used for recreational, outdoor living purposes associated with a dwelling unit.

~~**PATIO COVERS.** One story structures not exceeding 12 feet (3657 mm) in height. Enclosure walls shall be permitted to be of any configuration, provided the open or glazed area of the longer wall and one additional wall is equal to at least 65 percent of the area below a minimum of 6 feet 8 inches (2032 mm) of each wall, measured from the floor. Openings shall be permitted to be enclosed with (1) insect screening, (2) *approved* translucent or transparent plastic not more than 0.125 inch (3.2 mm) in thickness, (3) glass conforming to the provisions of Section R308, or (4) any combination of the foregoing.~~

~~**SECTION AH103**~~
~~**PERMITTED USES**~~

~~**AH103.1 General.** Patio covers shall be permitted to be detached from or attached to *dwelling units*. Patio covers shall be used only for recreational, outdoor living purposes and not as carports, garages, storage rooms or habitable rooms.~~

~~**SECTION AH104**~~
~~**DESIGN LOADS**~~

~~**AH104.1 General.** Patio covers shall be designed and constructed to sustain, within the stress limits of this code, all dead loads plus a minimum vertical live load of 10 pounds per square foot (0.48 kN/m^2) except that snow loads shall be used where such snow loads exceed this minimum. Such covers shall be designed to resist the minimum wind loads set forth in Table R301.2(1).~~

SECTION AH103
EXTERIOR WALLS AND OPENINGS

AH 103.1 Enclosure walls. Enclosure walls shall be permitted to be of any configuration, provided the open or glazed area of the longer wall and one additional wall is equal to at least 65 percent of the area below a minimum of 6 feet 8 inches (2032 mm) of each wall, measured from the floor. Openings shall be permitted to be enclosed with the following:

1. Insect screening,
2. Approved translucent or transparent plastic not more than 0.125 inch (3.2 mm) in thickness,
3. Glass conforming to the provisions of Section R308, or
4. Any combination of the foregoing.

~~**SECTION AH105**~~
~~**LIGHT AND VENTILATION/EMERGENCY EGRESS**~~

~~**AH105.1 General.**~~ **AH103.2 Light, ventilation and emergency egress.** Exterior openings required for light and ventilation shall be permitted to open into a patio structure conforming to Section AH101, provided that the patio structure shall be unenclosed if such openings are serving as emergency egress or rescue openings from sleeping rooms. Where such exterior openings serve as an exit from the *dwelling unit*, the patio structure, unless unenclosed, shall be provided with exits conforming to the provisions of Section R310 of this code.

SECTION AH104
HEIGHT

AH104.1 Height. Patio covers are limited to one-story structures not exceeding 12 feet (3657 mm) in height.

SECTION AH105
STRUCTURAL PROVISIONS

~~**AH104.1 General.**~~ **AH 105.1 Design loads.** Patio covers shall be designed and constructed to sustain, within the stress limits of this code, all dead loads plus a minimum vertical live load of 10 pounds per square foot (0.48 kN/m^2) except that snow loads shall be used where such snow loads exceed this minimum. Such covers shall be designed to resist the minimum wind loads set forth in ~~Table R301.2(1)~~ Section R301.2.1.

~~**SECTION AH106**~~
~~**FOOTINGS**~~

~~**AH106.1 General.**~~ **AH 105.2 Footings.** In areas with a frostline depth of zero as specified in Table R301.2(1), a patio cover shall be permitted to be supported on a slab on *grade* without footings, provided

the slab conforms to the provisions of Section R506 of this code, is not less than 3.5 inches (89 mm) thick and the columns do not support live and dead loads in excess of 750 pounds (3.34 kN) per column.

(Renumber the subsequent sections)

Reason: G2-09/10 was proposed and was heard by the IBC Structural Committee and the IRC B/E committee in Baltimore. The primary intent of G2 was to move the definition of patio cover from the appendix chapters into the Chapter 2 of each code. What was lost in the decision not to move the definitions was editorial clarifications to both chapters. The key editorial issue with both appendices is that the definition of patio cover is loaded with requirements or limits to patio covers. Further the provisions regulating how the walls need to be constructed are spread through 3 different sections. The proposal moves requirements to be in the same order for both codes. It provides a distinct sections for Use, Walls, Height and Structural Provisions. There are distinct text differences between the existing appendices. This is mostly in the wording of the use provisions found in I101.1 and AH101.1 and AH101.2.

7/14/10

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010.

Section AH104.1 had been incomplete. The phrase highlighted in yellow is the same text as found in the IBC appendix provision.

CCC 10 – #G29

REF: IBC – 412.4.6.2 and IFC 914.8.2.2

Revise as follows:

IBC

412.4.6.2 Separation of maximum single fire areas. Maximum single *fire areas* established in accordance with hangar classification and construction type in Table 412.4.6 shall be separated by 2-hour *fire walls* constructed in accordance with Section 706. In determining the maximum single fire area as set forth in Table 412.4.6, ancillary uses which are separated from aircraft servicing areas by a minimum of a one-hour *fire barrier* constructed in accordance with Section 707 shall not be included in the area.

IFC

914.8.2.2 Separation of maximum single fire areas. Maximum single *fire areas* established in accordance with hangar classification and construction type in Table 914.8.2 shall be separated by 2-hour *fire walls* constructed in accordance with Section 706 of the *International Building Code.* In determining the maximum single fire area as set forth in Table 914.8.2, ancillary uses which are separated from aircraft servicing areas by a minimum of a one-hour *fire barrier* constructed in accordance with Section 707 of the *International Building Code* shall not be included in the area.

REASON: G71-09/10 was approved in this cycle. As approved it requires construction of not less than a one hour fire barrier. Our standard code editorial style is to then say 'constructed in accordance with Section 707'. This phrase was missing from the approved proposal.

Committee Action: Approved as Editorial; Approved as Submitted
August 24, 2010

CCC 10 – #S1

Revise column headings as shown:

TABLE 1504.8
MAXIMUM ALLOWABLE MEAN ROOF HEIGHT PERMITTED FORBUILDINGS WITH AGGREGATE ON THE ROOF IN AREASOUTSIDE A HURRICANE-PRONE REGION

~~V_{asd} determined in accordance with Section 1609.3.1~~ NOMINAL DESIGN WIND SPEED, V_{asd} [b] [d]	MAXIMUM MEAN ROOF HEIGHT (ft)a,c		
	Exposure category		
	B	C	D

d. V_{asd} shall be determined in accordance with Section 1609.3.1.

TABLE 1507.2.7.1(1)
CLASSIFICATION OF ASPHALT ROOF SHINGLES PER ASTM D 7158[a]

~~V_{asd} determined in accordance with Section 1609.3.1~~ NOMINAL DESIGN WIND SPEED, V_{asd}	CLASSIFICATION REQUIREMENT

TABLE 1507.2.7.1(2)
CLASSIFICATION OF ASPHALT SHINGLES PER ASTM D 3161

~~V_{asd} determined in accordance with Section 1609.3.1~~ NOMINAL DESIGN WIND SPEED, V_{asd}	CLASSIFICATION REQUIREMENT

TABLE 1507.3.7
CLAY AND CONCRETE TILE ATTACHMENT[a, b, c]

GENERAL — CLAY OR CONCRETE ROOF TILE				
Maximum ~~V_{asd} determined in accordance with Section 1609.3.1~~ NOMINAL DESIGN WIND SPEED, V_{asd}	Mean roof height (feet)	Roof slope up to < 3:12	Roof slope 3:12 and over	
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS[d, e] (Installations on spaced/solid sheathing with battens or spaced sheathing)				
Maximum ~~V_{asd} determined in accordance with Section 1609.3.1~~ NOMINAL DESIGN WIND SPEED, V_{asd}	Mean roof height (feet)	Roof slope up to <5:12	Roof slope 5:12 < 12:12	Roof slope 12:12 and over
INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS (Installations on solid sheathing without battens)				
Maximum ~~V_{asd} determined in accordance with Section 1609.3.1~~ NOMINAL DESIGN WIND SPEED, V_{asd}	Mean roof			

	height (feet)	**All roof slopes**

Reason: The column headings that were approved for these Chapter 15 tables [V_{asd} determined in accordance with Section 1609.3.1] by code change S84-09/10 provide a section reference rather than clearly identify the table entries in that column. The suggested language uses the term as it is stated in Section 1609.3.1 – see the following excerpt:

> **1609.3.1 Wind speed conversion.** When required, the ultimate design wind speeds of Figure 1609A, B and C shall be converted to nominal design wind speeds, V_{asd}, using Table 1609.3.1 or Equation 16-32. ……

If there are any concerns with not providing a cross reference to 1609.3.1 that could be done by adding a footnote.

CCC 10 – #S2

Revise footnote j of (also revise the same text of footnote j of IRC Table R301.5) Table 1607.1 as follows:

j. Uninhabitable attics with storage are those where the maximum clear height between the joists and rafters is 42 inches or greater, or where there are two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches in height by 24 inches in width, or greater, within the plane of the trusses.

The live load need only be applied to those portions of the joists or truss bottom chords where ~~all~~ both of the following conditions are met:

i. The attic area is accessible from an opening not less than 20 inches in width by 30 inches in length that is located where the clear height in the attic is a minimum of 30 inches; and

ii. The slopes of the joists or truss bottom chords are no greater than 2 units vertical to 12 units horizontal.

The remaining portions of the joists or truss bottom chords shall be designed for a uniformly distributed concurrent live load of not less than 10 lb/ft^2.

Reason: A committee modification to CCP S57-09/10 changed “both” to “all”. Since there are only 2 conditions “both” is more appropriate. In addition a floor modification changed the second condition to apply to “…joists or truss bottom chords…..” It is suggested that the word “truss” be added in the other references to joists and bottom chords.

CCC 10 – #S3

Revise Sections 1609.1.1 and 3108.1 as follows:

1609.1.1 Determination of wind loads. Wind loads on every building or structure shall be determined in accordance with Chapter 6 of ASCE 7 or provisions of the alternate all-heights method in Section 1609.6. The type of opening protection required, the basic wind speed and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.

Exceptions:

[Exceptions 1-4 & 6 are not shown for clarity]

5. Designs using TIA-222 for antenna-supporting structures and antennas, provided the horizontal extent of Topographic Category 2, escarpments, in Section 2.6.6.2 of TIA-222 shall ~~extend~~ be 16 times the height of the escarpment.

3108.1 General. Towers shall be designed and constructed in accordance with the provisions of TIA-222. In Section 2.6.6.2 of TIA-222, the horizontal extent of Topographic Category 2, escarpments, shall ~~extend~~ be at least 16 times the height of the escarpment.
[Exception not shown for clarity]

Reason: S85-09/10 added wording that is essentially a modification of a TIA-222 wind provision. The wording may be confusing [i.e. the *extent* of…..shall *extend* …….]. The following is an excerpt of that provision in the standard:

> 2.6.6.2 Topographic Categories
> The topographic category for a structure shall be assessed as being one of the following:
>
> [Items 1, and 3 – 5 are not shown for clarity]
>
> > 2. **Category 2:** Structures located at or near the crest of an escarpment. Wind speed-up shall be considered to occur in all directions. Structures located vertically on the lower half of an escarpment or horizontally beyond 8 times the height of the escarpment from its crest, shall be permitted to be considered as Topographic Category 1.

The proponent confirms that his intent is to essentially have the third sentence of item 2 read "Structures located vertically on the lower half of an escarpment or horizontally beyond 16 times the height of the escarpment from its crest, shall be permitted to be considered as Topographic Category 1." The suggested wording would convey that intent more directly.

CCC 10 – #S4

Revise Section 1704.2.1 as follows:

1704.2.1 Special inspector qualifications. ~~The *registered design professional in responsible charge* and engineers of record involved in the design of the project are permitted to act as the *approved agency* and their personnel are permitted to act as the special inspector for the work designed by them, provided they qualify as special inspectors.~~ The special inspector shall provide written documentation to the building official demonstrating his or her competence and relevant experience or training. Experience or training shall be considered relevant when the documented experience or training is related in complexity to the same type of *special inspection* activities for projects of similar complexity and material qualities. These qualifications are in addition to qualifications specified in other sections of this code.

The *registered design professional in responsible charge* and engineers of record involved in the design of the project are permitted to act as the *approved agency* and their personnel are permitted to act as the special inspector for the work designed by them, provided they qualify as special inspectors.

Reason: Formerly part of Section 1704.1 in 2009 IBC, this portion of that section has been relocated by S116-09/10 and revised further by S113-09/10. As revised by S113-09/10 the first sentence that now remains was originally included in the code as a clarification of the provision. It is suggested that this be moved into a separate paragraph as shown, which then leaves the requirements relating to special inspector qualifications in the first paragraph.

INTERNATIONAL RESIDENTIAL CODE - BUILDING

CCC 10 – #RB1

IRC -R613.2 Applicability limits #RB-1

Revise as follows:

R613.2 Applicability limits.
The provisions of this section shall control the construction of exterior structural insulated panel walls and interior load-bearing structural insulated panel walls for buildings not greater than 60 feet (18 288 mm) in length perpendicular to the joist or truss span, not greater than 40 feet (12 192 mm) in width parallel to the joist or truss span and not greater than two stories in height with each wall not greater than 10 feet (3048 mm) high. All exterior walls installed in accordance with the provisions of this section shall be considered as load-bearing walls. Structural insulated panel walls constructed in accordance with the provisions of this section shall be limited to sites subjected to a maximum design wind speed of ~~130~~ 120 miles per hour ~~(58 m/s)~~ (54 m/s) Exposure A or B or 110 miles per hour (49 m/s) Exposure C, and a maximum ground snow load of 70 pounds per foot (3.35 kPa), and Seismic Design Categories A, B, and C.

Reason: RB128-09/10 revised the design Tables R613.5 (1) and R613-5(2) to remove the 130 miles per hour for Exposures A, B and C and the 120 miles per hour for Exposure C.
The proposal failed to provide the corresponding text change to Section R613.2.
This revision will correlate the text of Section R613.2 with the revised Tables R613.5 (1) and R615.5 (2).

CCC 10 – #RB2

CCC IRC –R806.2 Minimum vent area.

RB158-09/10 and RB157-09/10

Section R806.2

The committee disapproved both code changes but at the final action both were AMPC. RB158 was approved first then RB157. The only technical change from RB158 is to limit the use of a vapor retarder to cold climates. The only technical change from RB 157 is to change the cross ventilation requirements. Both changes proposed a reorganization of the section. Staff recommends the following correlation to reflect the intent of both proposals.

R806.2 Minimum vent area. The minimum net free ventilating area shall be 1/150 of the area of the vented space.

Exception: The minimum net free ventilating area shall be 1/300 of the vented space provided one or more of the following conditions are met.

1. In climate zones 6, 7 and 8 a Class I or Class II vapor retarder is installed on the warm-in-winter side of the ceiling.

2. At least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located no more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet below the ridge or highest point of the space shall be permitted.

CCC 10 – #RB3

CCC IRC –R301.2.1.1 Design criteria. #RB-3

RB12-09/10, RB13-09/10 and RB14-09/10

Section R301.2.1.1

The committee approved all three code changes. The RB12 code change proposed a reorganization of the section. The technical issue in all three code changes is the trigger for where a high-wind speed design is required. The trigger in the 2009 IRC is "…*where the basic wind speed equal or exceed 100 mph in hurricane-prone regions or 110 miles per hour elsewhere*…". RB12 and RB 13 revise this trigger. RB 14 deletes this trigger and adds new Figure R301.2 (4) B to define regions where high wind design is required. Staff recommends the following correlation to reflect the intent of the proposals.

R301.2.1.1 Wind limitations and wind design required. The wind provisions of this code shall not apply to the design of buildings where wind design is required in accordance with Figure R301.2(4)B or where the basic wind speed shown on Figure R301.2(4)A equals or exceeds 110 miles per hour (49 m/s).

Exceptions:

1. For concrete construction, the wind provisions of this code shall apply in accordance with the limitations of Sections R404 and R611.
2. For structural insulated panels, the wind provisions of this code shall apply in accordance with the limitations of Section R614.

In regions where wind design is required in accordance with Figure R301.2(4)B or where the basic wind speed shown on Figure R301.2(4)A equals or exceeds 110 miles per hour (49 m/s), the design of buildings for wind loads shall be in accordance with one of the following methods.

1. American Forest and Paper Association (AF&PA) *Wood Frame Construction Manual for One- and Two-Family Dwellings* (WFCM);
2. International Code Council (ICC) *Standard for Residential Construction in High-Wind Regions* (ICC-600);
3. *Minimum Design Loads for Buildings and Other Structures* (ASCE-7);
4. American Iron and Steel Institute (AISI), *Standard for Cold-Formed Steel Framing—Prescriptive Method For One- and Two-Family Dwellings (AISI 230).*
5. *International Building Code*

The elements of design not addressed by the methods in Items 1 through 5 shall be in accordance with the provisions of this code.
When ASCE 7 or the *International Building Code* is used for the design of the building, the wind speed map and exposure category requirements as specified in ASCE 7 and the *International Building Code* shall be used.

RB12–09/10

R301.2.1, R301.2.1.1, R301.2.2.2.5, R301.2.2.4, R301.3

Proponent: Gary Ehrlich, P.E., National Association of Home Builders (NAHB)

Revise as follows:

R301.2.1 Wind design criteria ~~limitations~~. Buildings, and portions thereof, shall be constructed in accordance with the wind provisions of this code using the basic ~~limited by~~ wind speed~~, as defined~~ in Table R301.2(1)~~ and construction methods in accordance with this code. Basic wind speeds shall be~~ as determined from Figure R301.2(4). Where different construction methods and structural materials are used for various portions of a building, the applicable requirements of this section for each portion shall apply. Where ~~loads for wall coverings, curtain walls, roof coverings, exterior windows, skylights, garage doors and exterior doors are~~ not otherwise specified, the wind loads listed in Table R301.2(2) adjusted for height and exposure using Table R301.2(3) shall be used to determine design load performance requirements for wall coverings, curtain walls, roof coverings, exterior windows, skylights, garage doors and exterior doors. Asphalt shingles shall be designed for wind speeds in accordance with Section R905.2.6.

R301.2.1.1 Wind limitations ~~Design criteria~~. ~~In~~ The wind provisions of this code shall apply to the design of buildings ~~regions~~ where the basic wind speed~~s~~ from Figure R301.2(4) is less than ~~equal or exceed~~ 100 miles per hour (45 m/s) in *hurricane-prone regions*, or 110 miles per hour (49 m/s) elsewhere~~,~~ ~~the design of buildings shall be in accordance with one of the following methods. The elements of design not addressed by those documents in Items 1 through 4 shall be in accordance with this code~~.

Exceptions:

1. For concrete construction, the wind provisions of this code shall apply in accordance with the limitations of Sections R404 and R611.
2. For structural insulated panels, the wind provisions of this code shall apply in accordance with the limitations of Section R614.

Where the basic wind speed exceeds the limitations above, the design of buildings for wind resistance shall be in accordance with one or more of the following methods:

1. American Forest and Paper Association (AF&PA) *Wood Frame Construction Manual for One- and Two-Family Dwellings* (WFCM); ~~or~~
2. International Code Council (ICC) *Standard for Residential Construction in High-Wind Regions* (ICC-600); ~~or~~
3. *Minimum Design Loads for Buildings and Other Structures* (ASCE-7); ~~or~~
4. American Iron and Steel Institute (AISI), *Standard for Cold-Formed Steel Framing—Prescriptive Method For One- and Two-Family Dwellings (AISI 230).*
5. ~~Concrete construction shall be designed in accordance with the provisions of this code.~~
6. ~~Structural insulated panel (SIP) walls shall be designed in accordance with the provisions of this code.~~

The elements of design not addressed by the methods in Items 1 through 4 shall be in accordance with the provisions of this code.

R301.2.2.2.5 Irregular buildings. The seismic provisions of ~~Prescriptive construction as regulated by~~ this code shall not be used for irregular structures located in Seismic Design Categories C, D0, D1 and D2. Irregular portions of structures shall be designed in accordance with accepted engineering practice to the extent the irregular features affect the performance of the remaining structural system. When the forces associated with the irregularity are resisted by a structural system designed in accordance with accepted engineering practice, design of the remainder of the building shall be permitted using the provisions of this code. A building or portion of a building shall be considered to be irregular when one or more of the following conditions occur:

1. When exterior shear wall lines or *braced wall panels* are not in one plane vertically from the foundation to the uppermost *story* in which they are required.

   Exception: For wood light-frame construction, floors with cantilevers or setbacks not exceeding four times the nominal depth of the wood floor joists are permitted to support *braced wall panels* that are out of plane with *braced wall panels* below provided that:

   1. Floor joists are nominal 2 inches by 10 inches (51 mm by 254 mm) or larger and spaced not more than 16 inches (406 mm) on center.
   2. The ratio of the back span to the cantilever is at least 2 to 1.

3. Floor joists at ends of *braced wall panels* are doubled.
4. For wood-frame construction, a continuous rim joist is connected to ends of all cantilever joists. When spliced, the rim joists shall be spliced using a galvanized metal tie not less than 0.058 inch (1.5 mm) (16 gage) and 11/2 inches (38 mm) wide fastened with six 16d nails on each side of the splice or a block of the same size as the rim joist of sufficient length to fit securely between the joist space at which the splice occurs fastened with eight 16d nails on each side of the splice; and
5. Gravity loads carried at the end of cantilevered joists are limited to uniform wall and roof loads and the reactions from headers having a span of 8 feet (2438 mm) or less.

2. When a section of floor or roof is not laterally supported by shear walls or *braced wall lines* on all edges.

Exception: Portions of floors that do not support shear walls or *braced wall panels* above, or roofs, shall be permitted to extend no more than 6 feet (1829 mm) beyond a shear wall or *braced wall line*.

3. When the end of a *braced wall panel* occurs over an opening in the wall below and ends at a horizontal distance greater than 1 foot (305 mm) from the edge of the opening. This provision is applicable to shear walls and *braced wall panels* offset in plane and to *braced wall panels* offset out of plane as permitted by the exception to Item 1 above.

Exception: For wood light-frame wall construction, one end of a *braced wall panel* shall be permitted to extend more than 1 foot (305 mm) over an opening not more than 8 feet (2438 mm) wide in the wall below provided that the opening includes a header in accordance with the following:

1. The building width, loading condition and framing member species limitations of Table R502.5(1) shall apply; and
2. Not less than one 2 × 12 or two 2 × 10 for an opening not more than 4 feet (1219 mm) wide; or
3. Not less than two 2 × 12 or three 2 × 10 for an opening not more than 6 feet (1829 mm) wide; or
4. Not less than three 2 × 12 or four 2 × 10 for an opening not more than 8 feet (2438 mm) wide; and
5. The entire length of the *braced wall panel* does not occur over an opening in the wall below.

4. When an opening in a floor or roof exceeds the lesser of 12 feet (3658 mm) or 50 percent of the least floor or roof dimension.
5. When portions of a floor level are vertically offset.

Exceptions:

1. Framing supported directly by continuous foundations at the perimeter of the building.
2. For wood light-frame construction, floors shall be permitted to be vertically offset when the floor framing is lapped or tied together as required by Section R502.6.1.

6. When shear walls and *braced wall lines* do not occur in two perpendicular directions.
7. When stories above-*grade* partially or completely braced by wood wall framing in accordance with Section R602 or steel wall framing in accordance with Section R603 include masonry or concrete construction.

Exception: Fireplaces, chimneys and masonry veneer as permitted by this code. When this irregularity applies, the entire *story* shall be designed in accordance with accepted engineering practice.

R301.2.2.4 Seismic Design Category E. Buildings in Seismic Design Category E shall be designed to resist seismic loads in accordance with the *International Building Code*, except when the seismic design category is reclassified to a lower seismic design category in accordance with Section R301.2.2.1. Components of buildings not required to be designed to resist seismic loads shall be constructed in accordance with the provisions of this code.

R301.3 Story height. The wind and seismic provisions of this code shall apply to buildings with story heights not exceeding the following: ~~Buildings constructed in accordance with these provisions shall be limited to story heights of not more than the following:~~

1. For wood wall framing, the laterally unsupported bearing wall stud height permitted by Table R602.3(5) plus a height of floor framing not to exceed 16 inches (406 mm).

   Exception: For wood framed wall buildings with bracing in accordance with Tables R602.10.1.2(1) and
   R602.10.1.2(2), the wall stud clear height used to determine the maximum permitted *story height* may be
   increased to 12 feet (3658 mm) without requiring an engineered design for the building wind and seismic
   force resisting systems provided that the length of bracing required by Table R602.10.1.2(1) is increased
   by multiplying by a factor of 1.10 and the length of bracing required by Table R602.10.1.2(2) is increased
   by multiplying by a factor of 1.20. Wall studs are still subject to the requirements of this section.

2. For steel wall framing, a stud height of 10 feet (3048 mm), plus a height of floor framing not to exceed 16
   inches (406 mm).
3. For masonry walls, a maximum bearing wall clear height of 12 feet (3658 mm) plus a height of floor framing not to exceed 16 inches (406 mm).

   Exception: An additional 8 feet (2438 mm) is permitted for gable end walls.

4. For insulating concrete form walls, the maximum bearing wall height per *story* as permitted by Section R611
   tables plus a height of floor framing not to exceed 16 inches (406 mm).
5. For structural insulated panel (SIP) walls, the maximum bearing wall height per *story* as permitted by Section 614 tables shall not exceed 10 feet (3048 mm) plus a height of floor framing not to exceed 16 inches (406 mm).

Individual walls or walls studs shall be permitted to exceed these limits as permitted by Chapter 6 provisions, provided story heights are not exceeded. Floor framing height shall be permitted to exceed these limits provided the story height does not exceed 11 feet 7 inches (3531 mm). An engineered design shall be provided for the wall or wall framing members when they exceed the limits of Chapter 6. Where the story height limits of this section are exceeded, the design of the building, or the non-compliant portions thereof, to resist wind and seismic loads ~~an engineered design~~ shall be ~~provided~~ in accordance with the *International Building Code* ~~for the overall wind and seismic force resisting systems~~.

Reason: The purpose of this code proposal is to clarify the IRC limitations for wind and seismic design. Code users have expressed confusion over the current language of the wind limitations and other code limits on structural elements. Some builders and code officials believe that if a dwelling exceeds the wind limits of R301.2.1.1, the seismic limits of R301.2.2, or the story height limits of R301.3, the entire dwelling must be designed in accordance with the IBC, including the HVAC, electrical and plumbing systems and the provisions of the IBC for egress, fire rating, and other architectural elements.

This code proposal clarifies that it is only the structural design of the dwelling to resist wind loads or seismic loads, and the selection of certain critical components such as windows or roofing that is prone to wind damage, which must be performed in accordance with the IBC or the other alternate standards (e.g. the WFCM or the AISI standards). The remaining architectural, mechanical, electrical and plumbing provisions of the IRC still apply to the dwelling.

Section R301.2.1.1 is reorganized for better readability and flow. Its title is swapped with R301.2.1, since it is the larger paragraph above that actually provides design criteria and Section R301.2.1.1 that actually provides wind limitations. Section R301.3 is also revised as noted above to clarify it is the structural portions exceeding the story height limits that require an engineering design.

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

Public Hearing: Committee: AS AM D
Assembly: ASF AMF DF
ICCFILENAME: Ehrlich-RB-1-R301.2.1

RB13–09/10
R301.2.1.1

Proponent: Gary Ehrlich, P.E., National Association of Home Builders (NAHB)

Revise as follows:

R301.2.1.1 Design criteria. In regions where the basic wind speeds from Figure R301.2(4) equal or exceed ~~100 miles per hour (45 m/s) in *hurricane-prone regions*, or~~ 110 miles per hour (49m/s) ~~elsewhere~~, the design of buildings shall be in accordance with one of the following methods. The elements of design not addressed by those documents in Items 1 through 4 shall be in accordance with this code.

1. American Forest and Paper Association (AF&PA) *Wood Frame Construction Manual for One- and Two-Family Dwellings* (WFCM); or
2. International Code Council (ICC) *Standard for Residential Construction in High-Wind Regions* (ICC-600); or
3. *Minimum Design Loads for Buildings and Other Structures* (ASCE-7); or
4. American Iron and Steel Institute (AISI), *Standard for Cold-Formed Steel Framing—Prescriptive Method For One- and Two-Family Dwellings (AISI 230).*
5. Concrete construction shall be designed in accordance with the provisions of this code.
6. Structural insulated panel (SIP) walls shall be designed in accordance with the provisions of this code.

Reason: The purpose of this proposal is to restore the IRC scope limit for construction in high-wind areas to the original 110 miles per hour for all areas of the country. Without this revision, houses in areas along the Atlantic and Gulf coasts where the basic wind speed is 100 or 105 miles per hour will need to be engineered or designed to prescriptive requirements intended for areas at risk for Category 4 and 5 hurricanes.

As justification for the original code change made during the 2004-2005 Code Development Cycle (RB31-04/05) the Institute for Building and Home Safety (IBHS) cited four issues: roof sheathing nails, wind bracing requirements, toe-nailed uplift connections, and wall-to-wall connections at the floor line. In lieu of pursuing individual modifications to resolve these issues within the IRC, the proponent simply lowered the ceiling for using prescriptive design provisions along the Atlantic & Gulf coasts. We believe this is excessive and not supported by the observed performance of housing properly constructed to previous editions of the IRC in extreme wind events (hurricanes). At no time did the proponents ever provide documented evidence of failures of structures constructed to the previous IRC provisions. Nor did they provide technical justification in the form of engineering calculations or structural research to support their contentions. However, the 2004-2005 Code Development Cycle coincided with the four 2004 Florida hurricanes (Wilma, Ivan, Charley and Frances) and with Katrina and Rita in 2005. This led to significant political and emotional pressure on the code development community to increase the stringency of building codes, whether or not they were technically justified or appropriately targeted to the risk of severe wind events in those areas subject to the new provisions.

In the subsequent code development cycles, individual changes have been made to address all four issues raised by IBHS. The 2006 IRC increased the minimum roof sheathing nail size from 6d to 8d common nails for all roofs, and the gable and eave end zone nail spacing was tightened for dwellings in the 100mph region. The wall bracing provisions in the 2009 IRC have been reorganized, improved, and clarified and many new construction details provided. Most importantly, a new wind bracing table is provided which ties the required wall bracing for wind resistance to the wind loads determined using ASCE 7-05. Finally, a requirement for a continuous load path at the roof-to-wall, floor-to-floor, and floor-to-foundation connections at braced wall panels was added.

The 2009 IRC also provides requirements for wind resistance of exterior wood sheathing and for the installation of vinyl siding and foam sheathing. These new requirements further increase the resistance of structures built under the IRC to wind damage.

We question the age of the damaged structures used for justifying the code change reducing the IRC scope. The Federal Emergency Management Agency Summary Reports on Building Performance from the 2004 hurricane season and from Hurricane Katrina in 2005 indicated that structures built to the 2000 and 2003 IRC performed extremely well. The 2004 hurricane report stated (p.13), “no structural failures were observed to structures designed and constructed to the wind design requirements of…the 2000 IBC/IRC…” The Hurricane Katrina report stated (p.4-8), “Most structural failures observed…appeared to be the result of inadequate design and construction methods commonly used before IBC 2000 and IRC 2000 were adopted and enforced.” Finally, a study conducted by the Texas Windstorm Insurance Association after Hurricane Rita showed there was substantially less damage and substantially fewer insurance claims in those areas where the 2000 or 2003 IBC and IRC were adopted and enforced.

NAHB estimates show that complying with the ICC-600 Standard for Residential Construction in High Wind Regions or the AF&PA Wood Frame Construction Manual where required by the IRC can add as much as $10,000 to the cost of a home. We believe these additional requirements make it extremely difficult to construct affordable housing along the Atlantic and Gulf coasts and place an onerous burden on builders and homeowners, and particularly on first-time home buyers. This added cost of construction will have the effect of keeping residents of these areas in older homes which do not have the robust construction provided by the IRC prescriptive provisions and which will be substantially more susceptible to structural failures, water infiltration and damage to personal property in high wind events.

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

RB14–09/10

R202, R301.2.1, Figure R301.2(4), Figure R301.2(4)A (New), R301.2.1.1, Figure R301.2(4)B (New), R301.2.1.2, Figure R301.2(4)C, R301.2.1.4

Proponent: James Rossberg, Structural Engineering Institute of ASCE

1. Revise as follows:

BASIC WIND SPEED. Three-second gust speed at 33 feet (10 058 mm) above the ground in Exposure C (see Section R301.2.1) as given in Figure R301.2(4)A.

WIND BORNE DEBRIS REGION. Areas within hurricane-prone regions as designated in accordance with Figure R302.1(4)C ~~within one mile of the coastal mean high water line where the basic wind speed is 110 miles per hour (49 m/s) or greater; or where the basic wind speed is equal to or greater than 120 miles per hour (54 m/s); or Hawaii~~.

R301.2.1 Wind limitations. Buildings and portions thereof shall be limited by wind speed, as defined in TableR301.2(1) and construction methods in accordance with this code. Basic wind speeds shall be determined from Figure R301.2(4)A. The structural provisions of this code for wind loads are not permitted where wind design is required as specified in Section R301.2.1.1. Where different construction methods and structural materials are used for various portions of a building, the applicable requirements of this section for each portion shall apply. Where loads for wall coverings, curtain walls, roof coverings, exterior windows, skylights, garage doors and exterior doors are not otherwise specified, the loads listed in Table R301.2(2) adjusted for height and exposure using Table R301.2(3) shall be used to determine design load performance requirements for wall coverings, curtain walls, roof coverings, exterior windows, skylights, garage doors and exterior doors. Asphalt shingles shall be designed for wind speeds in accordance with Section R905.2.6.

2. Delete Figure R301.2(4) and replace as follows:

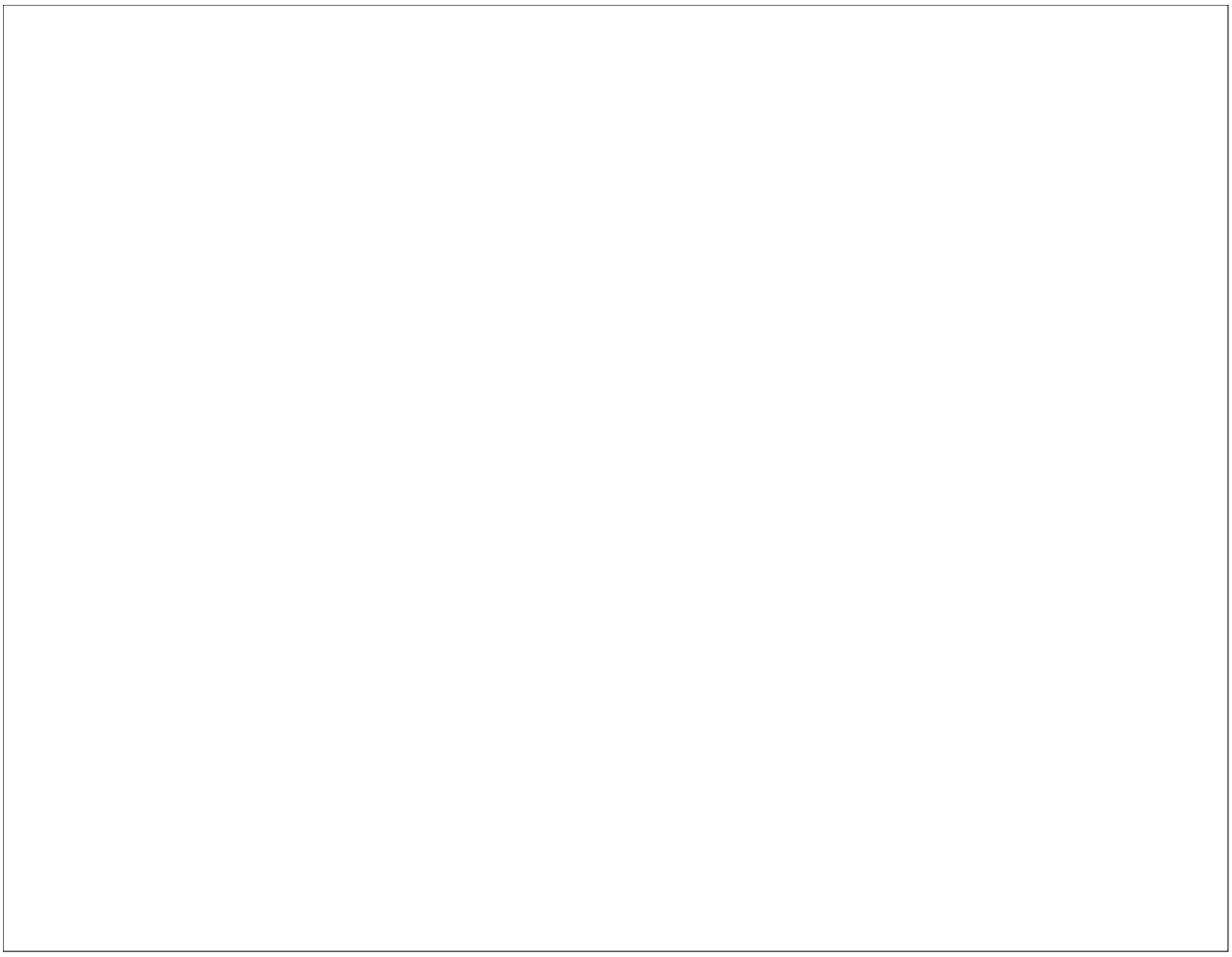

Figure R301.2(4)A
BASIC WIND SPEEDS

3. Revise as follows:

R301.2.1.1 Wind design required ~~Design criteria~~. In regions where wind design is required in accordance with ~~the basic wind speeds from~~ Figure R301.2(4)B ~~equal or exceed 100 miles per hour (45 m/s) in *hurricane-prone regions*, or 110 miles per hour (49 m/s) elsewhere~~, the design of buildings for wind loads shall be in accordance with one of the following methods. The elements of design not addressed by those documents in Items 1 through 4 shall be in accordance with this code.

1. American Forest and Paper Association (AF&PA) *Wood Frame Construction Manual for One- and Two-Family Dwellings* (WFCM); or
2. International Code Council (ICC) *Standard for Residential Construction in High Wind Regions* (ICC-600); or
3. *Minimum Design Loads for Buildings and Other Structures* (ASCE-7); or
4. American Iron and Steel Institute (AISI), *Standard for Cold-Formed Steel Framing—Prescriptive Method For One- and Two-Family Dwellings* (AISI S230).
5. Concrete construction shall be designed in accordance with the provisions of this code.
6. Structural insulated panel (SIP) walls shall be designed in accordance with the provisions of this code.
7. *International Building Code*

When ASCE 7 or the *International Building Code* is used for the design of the building, the wind speed map and exposure category requirements as specified in ASCE 7 and the *International Building Code* shall be used.

4. Add new figure as follows:

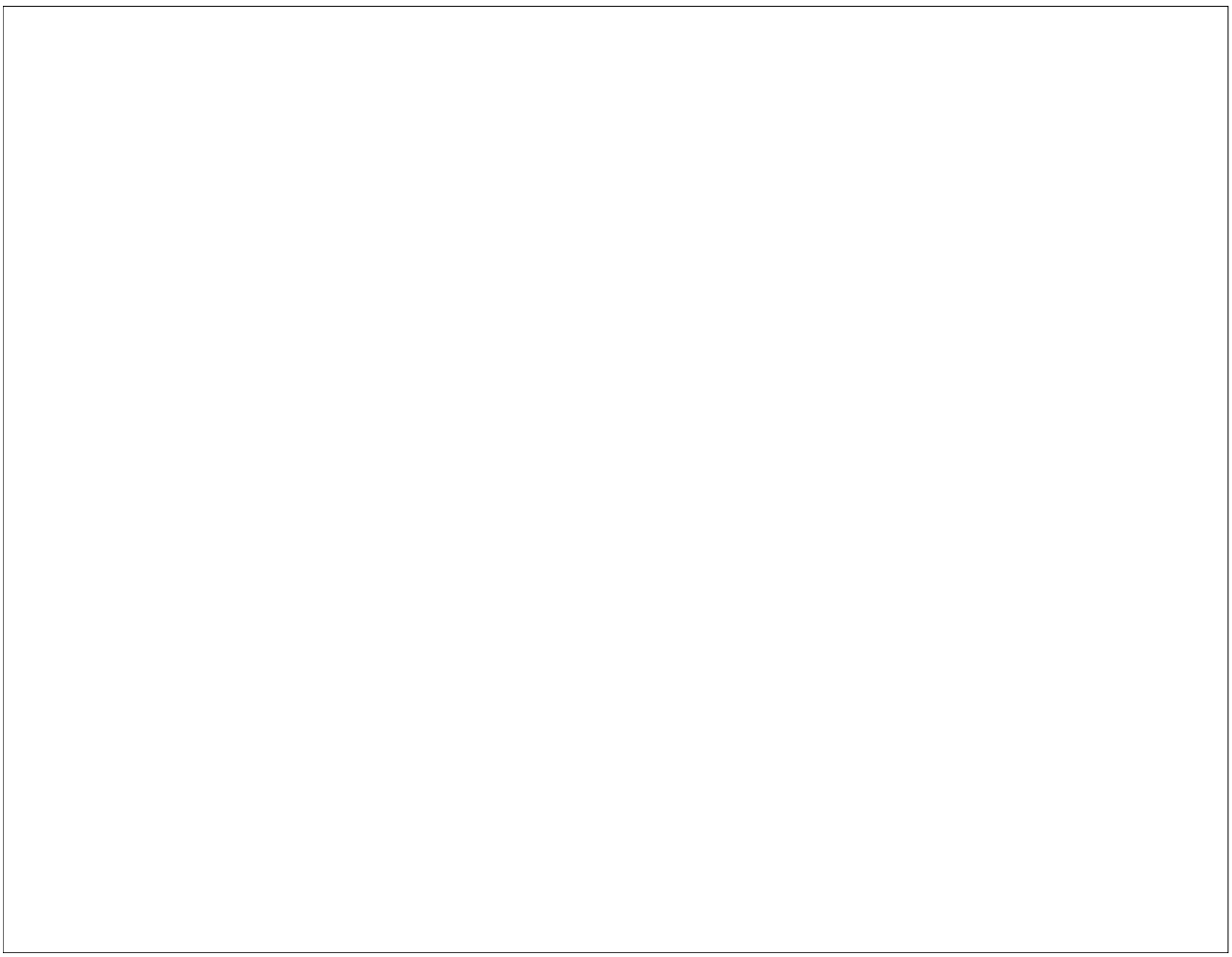

FIGURE R301.2(4)B
REGIONS WHERE WIND DESIGN IS REQUIRED

5. Revise as follows:

R301.2.1.2 Protection of openings. Glazing ~~Windows~~ in buildings located in windborne debris regions shall be ~~have glazed openings~~ protected from windborne debris. Glazed opening protection for windborne debris shall meet the requirements of the Large Missile Test of ASTM E 1996 and ASTM E 1886 referenced therein. The applicable wind zones for establishing missile types in ASTM E 1996 are shown on Figure R301.2(4)C. Garage door glazed opening protection for windborne debris shall meet the requirements of an *approved* impact resisting standard or ANSI/DASMA 115.

Exception: Wood structural panels with a minimum thickness of 7/16 inch (11 mm) and a maximum span of 8 feet (2438 mm) shall be permitted for opening protection in one- and two-story buildings. Panels shall be precut and attached to the framing surrounding the opening containing the product with the glazed opening. Panels shall be predrilled as required for the anchorage method and shall be secured with the attachment hardware provided. Attachments shall be designed to resist the component and cladding loads determined in accordance with either Table R301.2(2) or ASCE 7, with the permanent corrosion resistant attachment hardware provided and anchors permanently installed on the building. Attachment in accordance with Table R301.2.1.2 is permitted for buildings with a mean roof height of 33 feet (10 058 mm) or less where located in Wind Zones 1 and 2 in accordance with Figure R301.2(4)C ~~wind speeds do not exceed 130 miles per hour (58 m/s)~~.

5. Add new figure as follows:

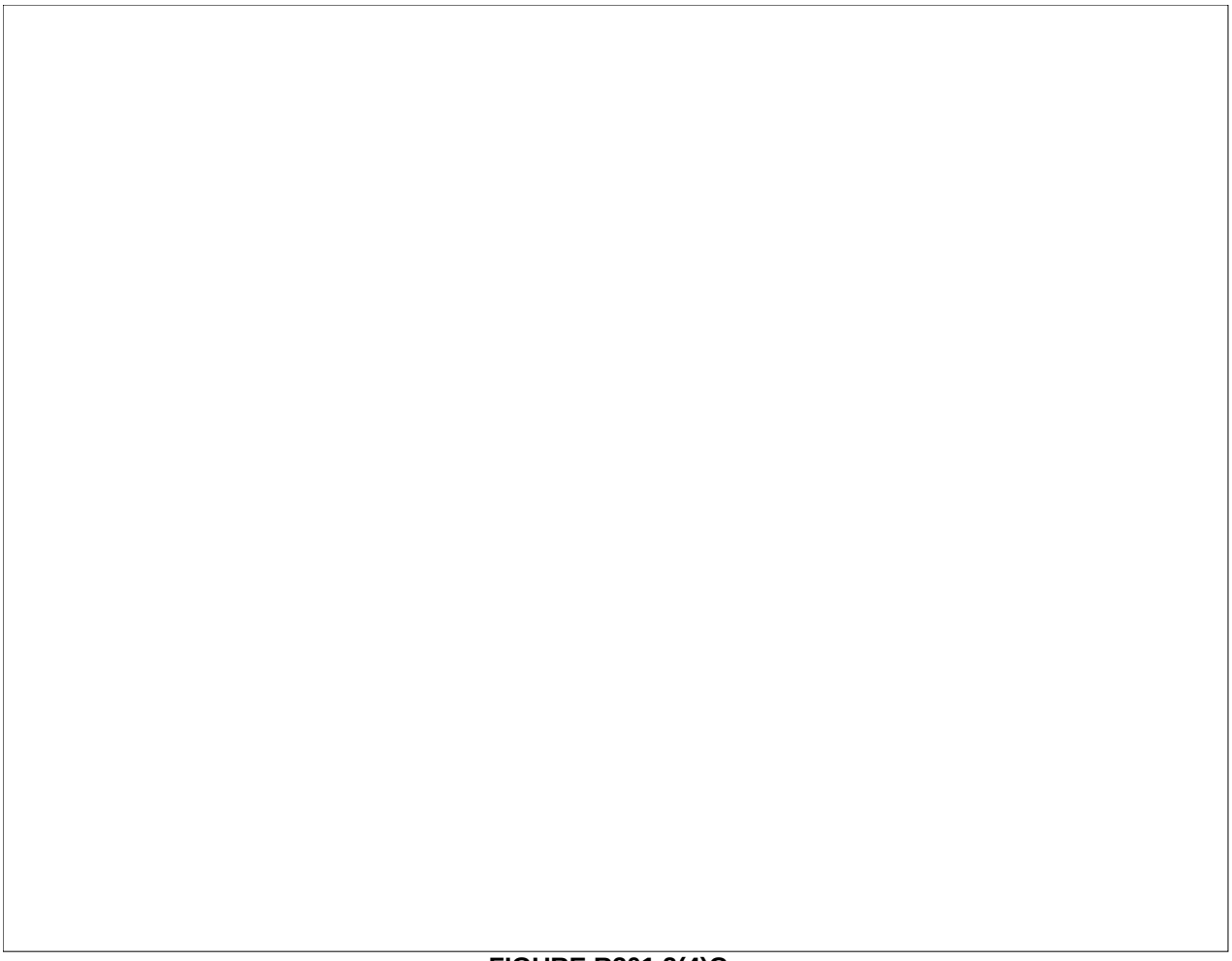

FIGURE R301.2(4)C
WIND-BORNE DEBRIS REGIONS

6. Revise as follows:

R301.2.1.4 Exposure category. For each wind direction considered, an exposure category that adequately reflects the characteristics of ground surface irregularities shall be determined for the site at which the building or structure is to be constructed. For a site located in the transition zone between categories, the category resulting in the largest wind forces shall apply. Account shall be taken of variations in ground surface roughness that arise from natural topography and vegetation as well as from constructed features. For a site where multiple detached one- and two-family dwellings, *townhouses* or other structures are to be constructed as part of a subdivision, master-planned community, or otherwise designated as a developed area by the authority having jurisdiction, the exposure category for an individual structure shall be based upon the site conditions that will exist at the time when all adjacent structures on the site have been constructed, provided their construction is expected to begin within one year of the start of construction for the structure for which the exposure category is determined. For any given wind direction, the exposure in which a specific building or other structure is sited shall be assessed as being one of the following categories:

1. Exposure A. Large city centers with at least 50 percent of the buildings having a height in excess of 70 feet (21 336 mm). Use of this exposure category shall be limited to those areas for which terrain representative of Exposure A prevails in the upwind direction for a distance of at least 0.5 mile (0.8 km) or 10 times the height of the building or other structure, whichever is greater. Possible channeling effects or increased velocity pressures due to the building or structure being located in the wake of adjacent buildings shall be taken into account.

2. Exposure B. Urban and suburban areas, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger. Exposure B shall be assumed unless the site meets the definition of another type exposure.

3. Exposure C. Open terrain with scattered obstructions, including surface undulations or other irregularities, having heights generally less than 30 feet (9144 mm) extending more than 1500 feet (457 m) from the building site in any quadrant. This exposure shall also apply to any building located within Exposure B type terrain where the building is directly adjacent to open areas of Exposure C type terrain in any quadrant for a distance of more than 600 feet (183 m). This category includes flat open country~~,~~ and grasslands ~~and shorelines in hurricane prone regions~~.

4. Exposure D. Flat, unobstructed areas exposed to wind flowing over open water ~~(excluding shorelines in hurricane prone regions)~~ for a distance of at least 1 mile (1.61 km). Shorelines in Exposure D include inland waterways, the Great Lakes, and coastal areas of California, Oregon, Washington and Alaska. This exposure shall apply only to those buildings and other structures exposed to the wind coming from over the water. Exposure D extends inland from the shoreline a distance of 1500 feet (457 m) or 10 times the height of the building or structure, whichever is greater.

Reason: The purpose of this proposal is to update and coordinate the provisions of the 2012 IRC with those of the 2010 edition of ASCE 7 for the determination of wind loads, specifically to incorporate the effect of the new wind speed maps that have been adopted into ASCE 7.

Over the past 10 years, new data and research has been performed that indicates that the hurricane wind speeds provided in the current maps of the IBC-09 and ASCE-05 are too conservative and needed to be adjusted downward. Significantly more hurricane data have become available thereby allowing for substantial improvements in the hurricane simulation model that is used to create the wind speed maps.

These new data have resulted in an improved representation of the hurricane wind field, including the modeling of the sea-land transition and the hurricane boundary layer height; new models for hurricane weakening after landfall; and an improved statistical model for the Holland *B* parameter which controls the wind pressure relationship. The new hurricane hazard model yields hurricane wind speeds that are lower than those given in ASCE 7-05 and IBC-09 even though the overall rate of intense storms (as defined by central pressure) produced by the new model is increased compared to those produced by the hurricane simulation model used to develop previous maps.

In preparing the new maps, the ASCE 7 standards committee decided to use multiple ultimate event or strength design maps, based on the different Occupancy Categories in conjunction with a wind load factor of 1.0 for strength design – for allowable stress design, the factor was reduced from 1.0 to 0.6. Several factors that are important to an accurate wind load standard led to this decision:

(i) An ultimate event or strength design wind speed map makes the overall approach consistent with that used in seismic design in that they both map ultimate events and use a load factor of 1.0 for strength design.

(ii) Utilizing different maps for the different Occupancy Categories eliminates the problems associated with using “importance factors” that vary with category. The difference in the importance factors in hurricane prone and non-hurricane prone regions for Category I structures prompted many questions and have been removed from ASCE 7-10.

(iii) The use of multiple maps eliminates the confusion associated with the recurrence interval associated with the existing map - the map was not a uniform fifty year return period map. This therefore created a situation where the level of safety provided for within the overall design was not consistent along the hurricane coast.

Because of the prescriptive nature of the IRC and the considerable number of embedded wind speed triggers throughout the code, integrating the new wind speed map into the IRC necessitated a different approach than the change proposed for the IBC. For ease of the users of the IRC, it was decided to scale down the ultimate map or strength design map to a nominal or design level basic wind speed map. This proposed new map, Figure R301.2(4)A is the ultimate map in the proposed new edition of ASCE 7 with the wind speeds divided by the square root of the load factor ($V/\sqrt{1.6}$) with contours corresponding to whole numbers. The use of a scaled down map was necessary due to the significant number of wind speed triggers embedded throughout that IRC that are based on the old nominal or design level map. This map is offered as an easy means to transition the triggers in the IRC to the new ultimate maps during the next code change cycle. Another new map, Figure R301.2(4)B is introduced which indicates where wind design is required. This map replaces the 100 mph limit specified in Section R301.2.1.1 in the 2009 IRC and corresponds to 130 mph on the ultimate map for most of the hurricane prone region. Because the locations of wind-borne debris regions are tied to the ultimate maps in the proposed new edition of ASCE 7, a new map (Figure R301.2(4)C has been introduced to delineate the various wind borne debris regions for use with ASTM E1996 and E1886.

ASCE/SEI 7 has been a referenced standard of the IBC since its inception and as such it is well known to the building community. ASCE/SEI 7 is published and maintained by the Structural Engineering Institute of the American Society of Civil Engineers (SEI/ASCE). The document is a nationally recognized consensus standard developed in full compliance with the ASCE *Rules for Standards Committees*. The ASCE standards process is fully accredited by the American National Standards Institute (ANSI).

As of the submission date of this code change, the ASCE 7 Standards Committee is completing the committee balloting portion of the 2010 edition of ASCE/SEI 7. The document is designated ASCE/SEI 7-10 *Minimum Design Loads for Buildings and Other Structures* and it is expected that it will be completed and available for purchase prior to the ICC Final Action Hearings in May of 2010 . Any person interested in obtaining a public comment copy of ASCE/SEI 7-10 may do so by contacting the proponent at jrossberg@asce.org .

Cost Impact: The overall, national cost impact is believed to be neutral.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

ICCFILENAME: Rossberg-RB-1-R202-R301-F. R301.2.4

INTERNATIONAL EXISTING BUILDING CODE

CCC 10 – #EB1

(note this is the new Chapter 3 below)

301.1 General. The *repair*, *alteration*, *change of occupancy*, *addition* or relocation of all *existing buildings* shall comply with one of the methods listed in Sections 301.1.1 through 301.1.3 as selected by the applicant. Application of a method shall be the sole basis for assessing the compliance of work performed under a single permit unless otherwise approved by the *code official*. Sections 301.1.1 through 301.1.3 shall not be applied in combination with each other. Where this code requires consideration of the seismic-force-resisting system of an *existing building* subject to *repair*, *alteration*, *change of occupancy*, *addition* or relocation of *existing buildings*, the seismic evaluation and design shall be based on Section 301.1.4 regardless of which compliance method is used.

> **Exception:** Subject to the approval of the *code official*, *alterations* complying with the laws in existence at the time the building or the affected portion of the building was built shall be considered in compliance with the provisions of this code unless the building is undergoing more than a limited structural *alteration* as defined in Section 907.4.3. New structural members added as part of the *alteration* shall comply with the *International Building Code*. *Alteration*s of *existing buildings* in *flood hazard areas* shall comply with Section 701.3. **(EB1-09/10)**

301.2 Additional codes. Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy or relocation, respectively, in this code and the *International Energy Conservation Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Property Maintenance Code, International Private Sewage Disposal Code*, *International Residential Code* and NFPA 70. Where provisions of the other codes conflict with provisions of this code the provisions of this code shall take precedence.

The following are existing chapter 3 sections:

~~[EC] 307.5 Energy.Buildings undergoing a change in occupancy that would result in an increase in demand for either fossil fuel or electrical energy shall comply with the International Energy Conservation Code .~~

~~307.6 Electrical.It shall be unlawful to make a change in the occupancy of a structure that will subject the structure to the special provisions of the International Building Code related to electrical installations applicable to the new occupancy without approval. The code official shall certify that the structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare.~~

~~[FG] 307.7 Fuel gas. It shall be unlawful to make a change in the occupancy of a structure that will subject the structure to the special provisions of the International Fuel Gas Code applicable to the new occupancy without approval. The code official shall certify that the structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare.~~

~~[M] 307.8 Mechanical. It shall be unlawful to make a change in the occupancy of a structure that will subject the structure to the special provisions of the International Mechanical Code applicable to the new occupancy without approval. The code official shall certify that the structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare.~~

~~[P] 307.9 Plumbing.It shall be unlawful to make a change in the occupancy of a structure that will subject the structure to the special provisions of the International Plumbing Code applicable to the new occupancy without approval. The code official shall certify that the structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare.~~

3401.3 (IEBC [B] 301.1.1) Compliance. Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy or relocation, respectively, in *the* *International Energy Conservation Code*, *International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Property Maintenance Code, International Private Sewage Disposal Code*, *International Residential Code* and NFPA 70. Where provisions of the other codes conflict with provisions of this Chapter, the provisions of this Chapter shall take precedence. **G188-AM, G189-AS, CCCBonowitz1-09**

301.1 Scope. The provisions of this chapter shall control the alteration, repair, addition and change of occupancy or relocation of existing buildings and structures, including historic ~~and moved~~ buildings and structures as referenced in Section 101.5.1. **CCCBonowitz1-09**

Exception: Existing bleachers, grandstands and folding and telescopic seating shall comply with ICC 300-02.

301.1.1 Compliance with other methods. Alterations, repairs, additions and changes of occupancy to or relocation of, existing buildings and structures shall comply with the provisions of this chapter or with one of the methods provided in Section 101.5. **G188-AM, CCCBonowitz1-09**

Reason: With the creation of a new chapter 3 and also due to lack of correlation with the 3401.3, Section 301.2 as shown above seems necessary. Adding this section also allows the deletion of several sections in chapter 3 which makes the correlation with Chapter 34 more straightforward and Chapter 34 does not have similar sections. Also, currently the similar Section in chapter 3 of the 2009 IEBC does not address and it seems necessary for such a list as the other codes are often still applicable in some cases (IFC chapter 46 for example). Section 3401.3 does not currently include the IECC and is proposed to be added here.

Generally G189-09/10 does not work with the current Section 301.1.1 of the IEBC. Sections 301.1 and 301.1.1 of the IEBC need to be revised as the IEBC does not go through a list of codes as Section 3401.3 of the IBC does. That particular list is being proposed for the new Chapter 3 (EB1-09/10) in a new section 301.2 as discussed above. Therefore I have simplified the changes for the IEBC Current Section 301.1 and 301.1.1. The change to 3401.3 of the IBC based upon G189-09/10, G188-09/10 and CCCBonowitz1-09 is shown below for reference.

[3401.3 (IEBC [B] 301.1.1) Compliance. Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy or relocation, respectively, in the *International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Property Maintenance Code, International Private Sewage Disposal Code*, *International Residential Code* and NFPA 70. Where provisions of the other codes conflict with provisions of this Chapter, the provisions of this Chapter shall take precedence.

Also see changes proposed in **IEBC 1-10 CCC that will correlate with this**

CCC 10 – #EB2

304.1 General. Buildings and structures, and parts thereof, shall be repaired in conformance with ~~this section~~ Section 304 and Section 301.2. Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the requirements for alterations in this chapter. Routine maintenance required by Section 301.2, ordinary repairs exempt from permit in accordance with Section 105.2, and abatement of wear due to normal service conditions shall not be subject to the requirements for repairs in this section. (**CCCBonowitz1-09)**

Reason: Preferred to have an actual section called out versus a generic reference to "this Section." Bonowitz originally added "with this section and."

CCC 10 – #EB4

704.2.4 Other required automatic sprinkler ~~suppression~~ systems. In buildings and areas listed in Table 903.2.11.6 of the International Building Code , work areas that have exits or corridors shared by more than one tenant or that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler system protection under the following conditions:

1. The work area is required to be provided with automatic sprinkler system protection in accordance with the International Building Code applicable to new construction; and

2. The building has sufficient municipal water supply for design of a automatic ~~fire~~ sprinkler system available to the floor without installation of a new fire pump.

804.1.2 Rubbish and linen chutes. Rubbish and linen chutes located in the work area shall be provided with automatic sprinklered system protection or an approved automatic fire extinguishing ~~suppression~~ system where protection of the rubbish and linen chute would be required under the provisions of the International Building Code for new construction.

1105.9 Finishes. Where interior finish materials are required to have a flame spread index of Class C or better, existing nonconforming materials shall be surfaced with approved fire-retardant paint or finish.

> **Exception:** Existing nonconforming materials need not be surfaced with an approved fire-retardant paint or finish where the building is equipped throughout with an automatic sprinkler system ~~fire-suppression~~ system installed in accordance with the International Building Code and the nonconforming materials can be substantiated as being historic in character.

Reason: Further correlation with IBC03-09 CCC

INTERNATIONAL FIRE CODE

CCC 10 – #F1

INTERNATIONAL FIRE CODE

Section: 315.2.2, among others

Revise as follows:

315.2.2 Means of egress. Combustible materials shall not be stored in exits or enclosure for stairways and ramps ~~exit enclosures~~.

Table 803.3 Revise the column titles for sprinklered and unsprinklered as follows (correlation with IBC Table 803.9):

(Columns 2 and 5) Interior exit stairways and interior exit ramps ~~Exit enclosures~~ and

exit passageways

(Columns 3 and 6) Corridors and enclosure for exit access stairways and exit access ramps

804.3.3.2 Minimum critical radiant flux. In all occupancies, new interior floor finish and floor covering materials in enclosures for stairways and ramps ~~exit enclosures~~, exit passageways, corridors and rooms or spaces not separated from corridors by full-height partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux. The minimum critical radiant flux shall not be less than Class I in Groups I-1, I-2 and I-3 and not less than Class II in Groups A, B, E, H, I- 4, M, R-1, R-2 and S.

> **Exception:** Where a building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, Class II materials are permitted in any area where Class I materials are required and materials complying with DOC FF-1 Apill test@ (CPSC 16 CFR, Part 1630) or with ASTM D 2859 are permitted in any area where Class II materials are required. **(New text per F51-09/10)**

1801.4 Existing buildings and existing fabrication areas. Existing buildings and existing fabrication areas shall comply with this chapter, except that transportation and handling of HPM in exit access corridors and enclosures for stairways and ramps ~~exit enclosures~~ shall be allowed when in compliance with Section 1805.3.2 and the International Building Code.

1803.8 ~~Exit access c~~ Corridors and ~~exit~~ enclosures for stairways and ramps. Hazardous materials shall not be used or stored in ~~exit access~~ corridors or enclosures for stairways and ramps ~~exit access enclosures~~.

1805.3.1 Corridors and ~~exit~~ enclosures for stairways and ramps. Corridors and enclosures for exit stairways and ramps ~~exit enclosures~~ in new buildings or serving new fabrication areas shall not contain HPM except as permitted for corridors by Section 415.8.6.3 of the *International Building Code*.

1805.3.4 Carts and trucks. Carts and trucks used to transport HPM in ~~exit access~~ corridors and enclosures for stairways and ramps ~~exit enclosures~~ in existing buildings shall comply with Section 2703.10.3.

2703.10 Handling and transportation. In addition to the requirements of Section 2703.2, the handling and transportation of hazardous materials in corridors or enclosures for stairways and ramps ~~exit enclosures~~ shall be in accordance with Sections 2703.10.1 through 2703.10.3.6.

2703.10.2 Carts and trucks required. Liquids in containers exceeding 5 gallons (19 L) in a corridor or enclosure for a stairway or ramp ~~exit enclosure~~ shall be transported on a cart or truck. Containers of hazardous materials having a hazard ranking of 3 or 4 in accordance with NFPA 704 and transported within corridors or interior exit stairways and ramps ~~exit enclosure~~, shall be on a cart or truck. Where carts and trucks are required for transporting hazardous materials, they shall be in accordance with Section 2703.10.3.

Exceptions: 1. Through 4. (No changes)

4604.19 Stairway discharge identification. An interior exit stairway or ramp ~~in an exit enclosure~~ which continues below its level of exit discharge shall be arranged and marked to make the direction of egress to a public way readily identifiable.

Exception: Stairs that continue one-half story beyond their levels of exit discharge need not be provided with barriers where the exit discharge is obvious.

Reason: These revisions are recommended to provide correlation with the revisions made by code change E5-09/10 (AS). They have been reviewed by the IBC-MOE Secretariat for correct correlation.

CCC 10 – #F2

INTERNATIONAL FIRE CODE

Section: 607

Revise as follows:

SECTION 607
ELEVATOR ~~RECALL~~ OPERATION, ~~AND~~ MAINTENANCE AND FIRE SERVICE KEYS

607.1 Emergency operation. Existing elevators with a travel distance of 25 feet (7620 mm) or more shall comply with the requirements in Chapter 46. New elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1.

[B] 607.2 Emergency signs. An approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the exit stairways and not to use the elevators in case of fire. The sign shall read: IN FIRE EMERGENCY, DO NOT USE ELEVATOR. USE EXIT STAIRS. The emergency sign shall not be required for elevators that are part of an accessible means of egress complying with Section 1007.4.

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

607.4 Elevator key~~s~~ location. Keys for the elevator car doors and fire-fighter service keys shall be kept in an approved location for immediate use by the fire department.

607.5 ~~506.3~~ Standardized fire service elevator keys. All buildings with elevators equipped with Phase I emergency recall, Phase II emergency in-car operation, or a fire service access elevator shall be equipped to operate with a standardized fire service elevator key approved by the fire code official.

Exception: The owner shall be permitted to place the building's non-standardized fire service elevator keys in a key box installed in accordance with Section 506.1. **(F20-09/10, Pt I)**

607.5.1 ~~506.3.1~~ Requirements for standardized fire service elevator keys. Standardized fire service elevator keys shall comply with all of the following:

1. All fire service elevator keys within the jurisdiction shall be uniform and specific for the jurisdiction. Keys shall be cut to a uniform key code.
2. Fire service elevator keys shall be a patent protected design to prevent unauthorized duplication.
3. Fire service elevator keys shall be factory restricted by the manufacturer to prevent the unauthorized distribution of key blanks. No uncut key blanks shall be permitted to leave the factory
4. Fire service elevator keys subject to these rules shall be engraved with the words "DO NOT DUPLICATE". **(F20-09/10, Pt I)**

607.5.2 ~~506.3.2~~ Access to standardized fire service keys. Access to standardized fire service elevator keys shall be restricted to the following:

1. Elevator owners or their authorized agents;
2. Elevator contractors.
3. Elevator Inspectors of the jurisdiction.
4. Fire code officials of the jurisdiction.

5. The fire department and other emergency response agencies designated by the fire code official. **(F20-09/10, Pt I)**

607.5.3 ~~506.3.3~~ Duplication or distribution of keys. No person ~~may~~ shall duplicate a standardized fire service elevator key or issue, give, or sell a duplicated key unless in accordance with this code. **(F20-09/10, Pt I)**

607.5.4 ~~506.3.4~~ Responsibility to provide keys. The building owner shall provide up to three (3) standardized fire service elevator keys where required by the fire code official, upon installation of a standardized fire service key switch or switches in the building. **(F20-09/10, Pt I)**

Reason: Code change F20-09/10, Part I adds new requirements for standardized fire service elevator keys to the IFC. In its AM form, the proposal would add the standardized key requirements to Chapter 5 as a fire service feature, however Chapter 6 already has Section 607 devoted to elevators, including fire fighter service keys. Accordingly, it is recommended that the new standardized key provisions more appropriately belong in Section 607 as a new section 607.5ff. Placing all elevator-related requirements in one section will make the code easier to apply and reduces the risk that one or the other set of requirements would be overlooked.

Note that in Section **607.5.3 ~~506.3.3~~**, the word ‘may’ is replaced with the mandatory term ‘shall’ for consistency with established code style.

CCC 10 – #F3

INTERNATIONAL FIRE CODE

Section: 605.11 (New) (F30-09/10)

Revise as follows:

605.11 Solar Photovoltaic Power Systems. Solar photovoltaic power systems shall be installed in accordance with this code, the *International Building Code* and NFPA 70.

Exception: Detached, non-habitable Group U structures ~~such as~~ including but not limited to parking shade structures, carports, solar trellises, and similar ~~type~~ structures ~~are~~ shall not be subject to the requirements of this section.

605.11.1 Marking. Marking is required on all interior and exterior ~~dc~~ Direct Current (DC) conduit, enclosures, raceways, cable assemblies, junction boxes, combiner boxes, and disconnects.

605.11.1.1 Materials. The materials used for marking shall be reflective, weather resistant and suitable for the environment. Marking as required in sections 605.11.1.2 through 605.11.1.4 shall have all letters capitalized with a minimum height of 3/8 inch (9.5 mm) white on red background.

605.11.1.2 Marking content. The marking shall contain the words “WARNING: PHOTOVOLTAIC POWER SOURCE”.

605.11.1.3 Main service disconnect. The marking shall be placed adjacent to the main service disconnect in a location clearly visible from the location where the disconnect is operated.

605.11.1.4 Location of Marking. Marking shall be placed on all interior and exterior DC conduit, raceways, enclosures and cable assemblies every 10 feet (3048 mm), within 1 foot (305 mm) of all turns or bends and within 1 foot (305 mm) above and below all penetrations of roof/ceiling assemblies and all walls ~~and/~~or barriers.

605.11.2 Locations of DC conductors. Conduit, wiring systems, and raceways for photovoltaic circuits shall be located as close as possible to the ridge or hip or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize ventilation opportunities. Conduit runs between sub arrays and to DC combiner boxes shall be installed in a manner that minimizes the total amount of conduit on the roof by taking the shortest path from the array to the DC combiner box. The DC combiner boxes shall be located such that conduit runs are minimized in the pathways between arrays. DC wiring shall be installed in metallic conduit or raceways when located within enclosed spaces in a building. Conduit shall run along the bottom of load bearing members.

605.11.3 Access and pathways. Roof access, pathways, and spacing requirements shall be provided in ~~order to ensure access to the roof; provide pathways to specific areas of the roof; provide for smoke ventilation operations; and to provide emergency egress from the roof~~ accordance with Sections 605.11.3.1 through 605.11.3.3.3.

Exceptions:

1. ~~Requirements relating to ridge, hip, and valleys shall not apply to roofs slopes of two units vertical in twelve units horizontal (2:12) or less.~~
1.2. Residential structures shall be designed so that each photovoltaic array is no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in either axis.

2.3.~~The fire chief may allow p~~ Panels/modules shall be permitted to be located up to the roof ridge where an alternative ventilation method ~~acceptable to~~ approved by the fire chief has been provided or where the fire chief has determined vertical ventilation techniques will not be employed.

605.11.3.1 Roof access points. Roof access points shall be ~~defined as an~~ located in areas that do ~~does~~ not require the placement of ground ladders over openings such as windows or doors, and ~~are~~ located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.

605.11.3.2 Residential systems for one- and two-family dwellings. Access to residential systems for one- and two-family dwellings shall be provided in accordance with Sections 605.11.3.2.1 through 605.11.3.2.4.

605.11.3.2.1 Residential buildings with hip roof layouts. Panels/modules installed on residential buildings with hip roof layouts shall be located in a manner that provides a 3 foot (914 mm) wide clear access pathway from the eave to the ridge on each roof slope where panels/modules are located. The access pathway shall be located at a structurally strong location on the building capable of supporting the live load of fire fighters accessing the roof.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in twelve units horizontal (2:12) or less.

605.11.3.2.2 Residential buildings with a single ridge. Panels/modules installed on residential buildings with a single ridge shall be located in a manner that provides two 3 foot (914 mm) wide access pathways from the eave to the ridge on each roof slope where panels/modules are located.

Exception: This requirement shall not apply to roofs with slopes of two units vertical in twelve units horizontal (2:12) or less.

605.11.3.2.3 Residential buildings with roof hips and valleys: Panels/modules installed on residential buildings with roof hips and valleys shall be located no closer than 18 inches (457 mm) to a hip or a valley where panels/modules are to be placed on both sides of a hip or valley. ~~If~~ Where panels are to be located on only one side of a hip or valley that is of equal length ~~then~~ the panels shall be permitted to be placed directly adjacent to the hip or valley.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in twelve units horizontal (2:12) or less.

605.11.3.2.4 Residential building smoke ventilation. Panels/modules installed on residential buildings shall be located no higher than 3 feet (914 mm) below the ridge in order to allow for fire department smoke ventilation operations.

605.11.3.3 All other occupancies. Access to systems for all occupancies other than one- and two-family dwellings shall be provided in accordance with Sections 605.11.3.3.1 through 605.11.3.3.3.

Exception: Where it is determined by the *fire code official* that the roof configuration is similar to that of a one- or two-family dwelling, ~~the *fire code official* may *approve*~~ the residential access and ventilation requirements ~~provided~~ in 605.11.3.2.1 through 605.11.3.2.4 shall be permitted to be used.

605.11.3.3.1 Access. There shall be a minimum 6 foot (1829 mm) wide clear perimeter around the edges of the roof.

Exception: ~~If~~ Where either axis of the building is 250 feet (76 200 mm) or less, there shall be a minimum 4 foot (1290 mm) wide clear perimeter around the edges of the roof.

605.11.3.3.2 Pathways. The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

1. The pathway shall be over areas capable of supporting the live load of fire fighters accessing the roof
2. The center line axis pathways shall be provided in both axis of the roof. Center line axis pathways shall run where the roof structure is capable of supporting the live load of firefighters accessing the roof.
3. Shall be straight line not less than 4 feet (1290 mm) clear to skylights or ventilation hatches
4. Shall be straight line not less than 4 feet (1290 mm) clear to roof standpipes
5. Shall provide not less than 4 feet (1290 mm) clear around roof access hatch with at least one not less than 4 feet (1290 mm) clear pathway to parapet or roof edge

605.11.3.3.3 Smoke Ventilation. The solar installation shall be designed to meet the following requirements:

1. Arrays shall be no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.
2. Smoke ventilation options between array sections shall be one of the following:

    2.1. A pathway 8 feet (2438 mm) or greater in width.
    2.2. A 4 foot (1290 mm) or greater in width pathway and bordering roof skylights or smoke and heat vents.
    2.3. A 4 foot (1290 mm) or greater in width pathway and bordering 4 foot (1290 mm) x 8 foot (2438 mm) “venting cutouts” every 20 feet (6096 mm) on alternating sides of the pathway.

605.11.4 Ground mounted photovoltaic arrays. Ground mounted photovoltaic arrays shall comply with Sections 605.11 through 605.11.2 and this section. Setback requirements shall ~~do~~ not apply to ground-mounted, free standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be ~~is~~ required for ground mounted photovoltaic arrays.

Reason: The recommended revisions to this new IFC section created by approved code change **F30-09/10** are editorial to bring the proposed text into conformance with established code style.

In Section 605.11.3, the charging text, which is essentially commentary, has been replaced with a simple reference to the subsections since they contain the specifics of the text being deleted. Also, Exception 1 has been relocated so as to appear in the specific subsections to which the original charging text applied it (i.e., 605.11.3.2.1, 605.11.3.2.2 and 605.11.3.2.3). In Sections 605.11.3.2 – 611.3.2.4, the text has been revised to include the section title language in order to clarify what it is applicable to. This is consistent with the style of the I-codes that views section titles as editorial only and not part of the enforceable text.

CCC 10 – #F4

INTERNATIONAL FIRE CODE

Section: 903.2.8

Revise as follows:

903.2.8 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R *fire area*.

903.2.8.1 Group R-3 or R-4 congregate residences. An *automatic sprinkler system* installed in accordance with 903.3.1.3 shall be permitted in Group R-3 or R-4 congregate residences with 16 or fewer residents.

903.2.8.2 Care facilities. An automatic sprinkler system installed in accordance with 903.3.1.3 shall be permitted in care facilities with 5 or fewer individuals in a single family dwelling.

Reason: Code change G20-09/10 added a new paragraph to Section 903.2.8. The new paragraph contains two distinct code application/enforcement issues which should be separately delineated. This suggested editorial revision is consistent with the on-going effort to “unpack” and assign section numbers to unwieldy segments of code text to make the code clearer and more easily applied.

CCC 10 – #F5

INTERNATIONAL FIRE CODE

Section: IBC Table [F]415.3.2

Revise as follows:

[F] TABLE 415.3.2
DETACHED BUILDING REQUIRED

(No change to Table)

a. For materials that are detonable, the distance to other buildings or lot lines shall be in accordance with Chapter 33 of the *International Fire Code* ~~as specified in Table 415.3.1~~ based on trinitrotoluene (TNT) equivalence of the material. For materials classified as explosives, see Chapter 33 of the *International Fire Code*. ~~For all other materials, the distance shall be as indicated in Section 415.3.1.~~

b. and c. (No change)

Reason: This proposed revision is to provide correlation with code change G73-09/10, Part I (AS) which deleted Table 415.3.1 and the text references to it for certain explosive and explosive-like materials in favor of the existing regulations in the IFC. Code change G73-09/10 is shown below for reference:

G73–09/10
415.3.1, Table 415.3.1; IFC 3904.1.2

Proponent: Larry Fluer, Fluer, Inc. representing self

THESE PROPOSALS ARE ON THE AGENDA OF THE IFC CODE DEVELOPMENT COMMITTEE AS TWO SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

PART I – IBC GENERAL

1. Revise as follows:

[F] 415.3.1 Group H occupancy minimum fire separation distance. Regardless of any other provisions, buildings containing Group H occupancies shall be set back to the minimum fire separation distance as set forth in Items 1 through 4 below. Distances shall be measured from the walls enclosing the occupancy to lot lines, including those on a public way. Distances to assumed lot lines established for the purpose of determining exterior wall and opening protection are not to be used to establish the minimum fire separation distance for buildings on sites where explosives are manufactured or used when separation is provided in accordance with the quantity distance tables specified for explosive materials in the *International Fire Code*.

1. Group H-1. Not less than 75 feet (22 860 mm) and not less than required by the *International Fire Code*.

   Exceptions:

   ~~1.~~ Fireworks manufacturing buildings separated in accordance with NFPA 1124.
   ~~2. Buildings containing the following materials when separated in accordance with Table 415.3.1:~~
   ~~2.1. Organic peroxides, unclassified detonable.~~
   ~~2.2. Unstable reactive materials, Class 4.~~
   ~~2.3. Unstable reactive materials, Class 3 detonable.~~
   ~~2.4. Detonable pyrophoric materials.~~

2. Group H-2. Not less than 30 feet (9144 mm) where the area of the occupancy exceeds 1,000 square feet (93 m^2) and it is not required to be located in a detached building.
3. Groups H-2 and H-3. Not less than 50 feet (15 240 mm) where a detached building is required (see Table 415.3.2).
4. Groups H-2 and H-3. Occupancies containing materials with explosive characteristics shall be separated as required by the *International Fire Code*. Where separations are not specified, the distances required shall be determined by a technical report issued in accordance with Section 414.1.3. ~~not be less than the distances required by Table 415.3.1.~~

2. Delete Table 415.3.1 without substitution:

~~**[F] TABLE 415.3.1**~~
~~**MINIMUM SEPARATION DISTANCES FOR BUILDINGS CONTAINING EXPLOSIVE MATERIALS**~~

PART II – IFC

Revise text as follows:

3904.1.2 Distance from detached ~~storage~~ buildings to exposures. In addition to the requirements of the *International Building Code*, detached storage buildings for Class I, II, III, IV and V organic peroxides shall be located in accordance with Table 3904.1.2. Detached buildings containing quantities of unclassified detonable organic peroxides in excess of those set forth in Table 2703.8.2 shall be located in accordance with Table 3304.5.2(1).

Reason: Section 415.3.1 was established to give direction to code users to determine location of buildings of Group H character. Users have frequently been confused as to application of Table 415.3.1 which was developed from the American Table of Distances, published by the Institute of Makers of Explosives. As the code evolved siting requirements for explosive materials were resolved with changes made to Chapter 33 of the IFC. Chapter 33 of the IFC contains specific requirements for each category of explosive material under consideration.

Exceptions to item 1 of Section 415.3.1 were intended to provide direction for specific materials as well as for specific occupancies. IBC Table 415.3.1 in application is now in conflict with requirements in the IFC for certain materials. With minor modification to the IFC and the proposed modifications to Section 415.3.1 the inconsistencies can be resolved. Deleting material specific classes of hazardous materials from the IBC results in occupancy specific guidance in the building code with material specific requirements to be determined by the fire code. Deleting Table 415.3.1 is an essential part of the change that is needed to clarify the approach. This change will result in a consistent application of requirements for building location based on tabular distances or direction determined by the IFC.

The following requirements will apply with this correlating change. By removing Exception items 2.1 through 2.4 from item 1 of Section 415.3.1 the default distances will be found in the IFC as follows:

Hazard Class	Existing Reference	Required distances
Fireworks	Exception 1, item 1	NFPA 1124 (no change)
Organic peroxide, unclassified detonable	Exception 1, item 2.1	IFC Section 3904.1.2 (as proposed for revision)
Unstable reactive materials, Class 4	Exception 1, item 2.2	Indoors IFC 4304.1; Outdoors IFC 4304.2.1
Unstable reactive materials, Class 3 detonable	Exception 1, item 2.3	Indoors IFC 4304.1; Outdoors IFC 4304.2.2
Detonable pyrophoric materials	Exception 1, item 2.4	Indoors, as for H-1 materials. See item 1 (75 feet minimum); Outdoors IFC 4104.2.1

The modification to 415.3.1, item 4 only applies when the materials under consideration are not addressed by the IFC. In these rare circumstances a technical opinion and report is required under the authority granted to the code official by Section 414.1.3.

IFC Section 3904.1.2 has been modified to address the category of unclassified detonable organic peroxides. As the classification system for organic peroxides addresses finished goods e.g., Class I through Class V, the category of unclassified detonable organic peroxides addresses organic peroxides in the manufacturing process. Building siting for such materials is determined by IFC Table 3304.5.2(1). The resultant distances determined using Table 3304.5.2(1) are comparable with those obtained using existing IBC Table 415.3.1 and the approach is consistent with regulation established by NFPA 400 (NFPA's new hazardous materials code) for detonable organic peroxides. It should be noted that the modification to address unclassified detonable material applies to such materials in conditions of storage or use (includes manufacturing).

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

PART I – IBC GENERAL **Final Action:** AS

PART II – IFC **Final Action:** AS

ICCFILENAME: FLUER-G2-415.3.1 (NEW)

CCC 10 – #F6

INTERNATIONAL BUILDING CODE

Section: [F] 906.2

Revise as follows:

[F] 906.2 General requirements. Portable fire extinguishers shall be selected~~,~~ and installed ~~and maintained~~ in accordance with this section and NFPA 10.

Exceptions~~:~~:

~~1.~~ The travel distance to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.

~~2. Thirty-day inspections shall not be required and maintenance shall be allowed to be once every three years for dry-chemical or halogenated agent portable fire extinguishers that are supervised by a listed and approved electronic monitoring device, provided that all of the following conditions are met:~~

~~2.1. Electronic monitoring shall confirm that extinguishers are properly positioned, properly charged and unobstructed.~~

~~2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal.~~

~~2.3. The extinguishers shall be installed inside of a building or cabinet in a noncorrosive environment.~~

~~2.4. Electronic monitoring devices and supervisory circuits shall be tested every three years when extinguisher maintenance is performed.~~

~~2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the owner to verify that hydrostatic tests are conducted at the frequency required by NFPA 10.~~

2. ~~3.~~ In Group I-3, portable fire extinguishers shall be permitted to be located at staff locations.

Reason: Code change FS165-07/08 duplicated the text of IFC Section 906 in the IBC/2009 and inadvertently included the maintenance provisions for portable fire extinguishers. This proposed revision removes those maintenance provisions because they should appear in the IFC only since maintenance is generally outside of the scope of the IBC. This is consistent with IFC 909.20 on the maintenance of smoke control systems and 901.6 on the maintenance of fire protection systems only appearing in the IFC.

CCC 10 – #F7

INTERNATIONAL FIRE CODE

Section: 107.5

Revise as follows:

109.2 ~~**107.5**~~ **Owner/occupant responsibility.** Correction and abatement of violations of this code shall be the responsibility of the owner. If an occupant creates, or allows to be created, hazardous conditions in violation of this code, the occupant shall be held responsible for the abatement of such hazardous conditions.

(Renumber subsequent sections.)

Reason: This section specifically deals with who is responsible for abatement of code violations and, therefore, should be located in Section 109. The current location has resulted in several interpretation requests since code users tend to look in Section 109 for assignment of responsibility for code violations.

CCC 10 – #F8

INTERNATIONAL FIRE CODE

Section: 703.3

Revise as follows:

314.3 ~~**703.3**~~ **Ceiling systems.** The hanging and displaying of salable goods and other decorative materials from acoustical ceiling systems ~~that are part of a fire-resistance-rated floor/ceiling or roof/ceiling assembly,~~ shall be prohibited.

(Renumber Section 314.4 to 314.5)

Reason: The prohibition on hanging items of salable goods or decorative materials from suspended acoustical ceiling systems should apply whether or not the ceiling is part of a fire-resistance rated assembly.

Section 808 of the *International Building Code*/2009 regulates the installation of acoustical ceiling systems. Section 808.1.1.1 requires that such systems be installed in accordance with ASTM C 635-06, *Specification for the Manufacture, Performance and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings,* including the structural load-carrying capabilities of the system contained in Chapter 4 of that standard. It is possible that adding the dead load weight of indoor displayed materials could exceed the original structural design parameters of the support grid system and create instability in it, possibly leading to collapse. The hazards of such an event are the same, whether the ceiling system is part of a fire-resistance-rated assembly or not.

CCC 10 – #F9

INTERNATIONAL FIRE CODE

Section: 1803.14.2 (IMC [F]502.10; IBC [F]415.8.2.6)

Revise as follows:

1803.14.2 Penetrations. Exhaust ducts penetrating fire barriers constructed in accordance with Section 707 of the *International Building Code* or horizontal assemblies constructed in accordance with Section 712 of the *International Building Code* ~~assemblies~~ shall be contained in a shaft of equivalent fire-resistance-rated construction. Exhaust ducts shall not penetrate fire walls. Fire dampers shall not be installed in exhaust ducts.

IMC Correlation:

[F] 502.10.2 Penetrations. Exhaust ducts penetrating 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 ~~assemblies~~ shall be contained in a shaft of equivalent ~~fire-resistive~~ fire-resistance-rated construction. Exhaust ducts shall not penetrate ~~building separation~~ fire walls. Fire dampers shall not be installed in exhaust ducts.

IBC Correlation:

[F] 415.8.2.6 Ventilation. Exhaust ducts penetrating ~~occupancy separations~~ fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711 shall be contained in a shaft of equivalent fire-resistance-rated construction. Exhaust ducts shall not penetrate *fire walls*. *Fire dampers* shall not be installed in exhaust ducts.

Reason: The proposed editorial revisions will provide correlation among the three I-Codes that share parallel requirements for the penetration of rated assemblies in Group H-5 occupancies. The revisions also continue the process of making the I-Codes more specific in citing the specific assembly types and their construction sections in the IBC that was begun several cycles ago.

8-24-10 CCC Action: AS

CCC 10 – #F10

INTERNATIONAL FIRE CODE

Section: 2206.7.9.2.2

Revise as follows:

2206.7.9.2.2 Location. Vapor-processing equipment shall be located at or above grade. Sources of ignition shall be located not less than 50 feet (15 240 mm) from fuel-transfer areas and not less than 18 inches (457 mm) above tank fill openings and tops of dispenser islands. Vapor-processing units shall be located not less than 10 feet (3048 mm) from the nearest building or lot line of a lot which can be built upon.

> **Exception:** Where the required distances to buildings, *lot lines* or fuel-transfer areas cannot be obtained, means shall be provided to protect equipment against fire exposure. Acceptable means shall include but not be limited to:
>
> 1. *Approved* protective enclosures, which extend at least 18 inches (457 mm) above the equipment, constructed of fire-resistant or noncombustible materials; or
>
> 2. Fire protection using an *approved* waterspray system.

2206.7.9.2.2.1 Distance from dispensing devices. Vapor-processing equipment shall be located a minimum of 20 feet (6096 mm) from dispensing devices.

2206.7.9.2.2.2 Physical Protection. Vapor ~~P~~ processing equipment shall be protected against physical damage by guardrails, curbs, protective enclosures or fencing. Where *approved* protective enclosures are used, *approved* means shall be provided to ventilate the volume within the enclosure to prevent pocketing of flammable vapors.

2206.7.9.2.2.3 Downslopes. Where a downslope exists toward the location of the vapor-processing unit from a fuel-transfer area, the *fire code official* is authorized to require additional separation by distance and height.

Reason: This suggested editorial revision is part of an on-going effort to clean up the code by eliminating huge paragraphs containing multiple enforcement items that can be reduced to stand alone enforcement items by assigning them a place in the decimal hierarchy.

CCC 10 – #F11

INTERNATIONAL FIRE CODE

Section: 2306.3.2.1

Revise as follows:

2306.3.2.1 Aggregate area. The aggregate of all high-piled storage areas within a building shall be used for the application of Table 2306.2 unless such areas are separated from each other by 1-hour fire barriers ~~walls~~ constructed in accordance with Section 707 of the *International Building Code*. Openings in such ~~walls~~ fire barriers shall be protected by opening protective assemblies having a 1-hour fire protection rating.

Reason: This recommended revision is editorial and part of an on-going correlation effort wherever reference is made to fire barriers to cite the proper IBC construction provisions.

CCC 10 – #F12

INTERNATIONAL FIRE CODE

Sections 2701.1 and 3401.2

Revise as follows:

2701.1 Scope. Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter.

This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that when specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.

Exceptions:

1. In retail or wholesale sales occupancies, the quantities of ~~alcoholic beverages,~~ medicines, foodstuffs, ~~cosmetics and~~ consumer or industrial products and cosmetics containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, ~~in retail or wholesale sales occupancies, are unlimited when~~ shall not be limited, provided such materials are packaged in individual containers not exceeding 1.3 gallons (5 L).

2. Quantities of alcoholic beverages in retail or wholesale sales occupancies shall not be limited providing the liquids are packaged in individual containers not exceeding 1.3 gallons (5 L).

(Renumber current Exceptions 2 through 10 to be Exceptions 3 through 11. No change to texts.)

3401.2 Nonapplicability. This chapter shall not apply to liquids as otherwise provided in other laws or regulations or chapters of this code, including:

1. Specific provisions for flammable liquids in motor fuel-dispensing facilities, repair garages, airports and marinas in Chapter 22.

2. Medicines, foodstuffs, cosmetics, and commercial, institutional and industrial products ~~in the same concentration and packaging~~ containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solution not being flammable~~, and~~ provided such materials are packaged in individual containers not exceeding 1.3 gallons (5 L).

3. Quantities of alcoholic beverages in retail or wholesale sales or storage occupancies ~~uses~~ providing the liquids are packaged in individual containers not exceeding 1.3 gallons (5 L).

(Renumber current Items 3 through 9 to be Items 4 through 10.)

Reason: This editorial revision is recommended as part of the on-going effort to "unpack" and clarify sections of code text that contain multiple technical provisions and create specific exception items for each provision. These particular items contain two different, unrelated provisions that should be set apart from one another to make the code more user-friendly and to highlight each provision. These revisions will also provide correlation between IFC Chapters 27

and 34 and IBC Section 307 on the same subject matter as well as with the referenced standard, NFPA 30-08 – *Flammable and Combustible Liquids Code*, which has always portrayed alcoholic beverages separately from medicines, foodstuffs, etc., as follows:

> ***NFPA 30-2008, Sections 9.1.4 and 10.1.3***
>
> *(3) Beverages where packaged in individual containers that do not exceed 1.3 gal (5 L) capacity.*
>
> *(4) Medicines, foodstuffs, cosmetics, and other consumer products that contain not more than 50 percent by volume of water-miscible flammable or combustible liquids, with the remainder of the product consisting of components that do not burn and where packaged in individual containers that do not exceed 1.3 gal (5 L) capacity.*

The proposed wording of Section 2701.1 Exception 2 and 3 and Section 3401.2, Items 2 and 3 is basically identical to the text of Table 2703.1.1(1) [IBC Table [F]307.1(1)], Note c, taking into account the different nature of the two lists (scope exceptions vs nonapplicability). It should also be noted that the three legacy fire codes portrayed alcoholic beverages and medicines, etc. separately as the revision proposes to do.

CCC 10 – #F13

INTERNATIONAL FIRE CODE

Section: 3301.8.1.1, 3301.8.1.2, 3301.8.1.3

Revise as follows:

3301.8.1.1 Mass-detonating explosives (Division 1.1, 1.2 or 1.5). The total net explosive weight of mass-detonating explosives Division 1.1, 1.2 or 1.5 ~~explosives~~ shall be used. See Table 3304.5.2(1) or Table 3305.3 as appropriate.

> **Exception:** When the TNT equivalence of the explosive material has been determined, the equivalence is allowed to be used to establish the net explosive weight.

3301.8.1.2 Nonmass-detonating explosives (excluding Division 1.4). Nonmass-detonating (excluding Division 1.4) explosives shall be as follows:

> 1. Division 1.3 propellants. The total weight of the propellants alone shall be the net explosive weight. The net weight of propellant shall be used. See Table 3304.5.2(2).
>
> 2. Combinations of bulk metal powder and pyrotechnic compositions. The sum of the net weights of metal powders and pyrotechnic compositions in the containers shall be the net explosive weight. See Table 3304.5.2(2).

3301.8.1.3 Combinations of mass-detonating and nonmass-detonating explosives (excluding Division 1.4). Combination of mass-detonating and nonmass-detonating explosives (excluding Division 1.4) shall be as follows:

> 1. through 4. (No change to current text.)

Reason: The revisions proposed to the three sections are editorial in nature and are based on the code style convention that section titles are considered to be editorial and are not part of the technical and enforceable code text. These revisions bring into the code technical text the full text and intent of the section titles as they were portrayed in code change F147-00 that originally added Section 3301.8 to the code.

CCC 10 – #F14

INTERNATIONAL FIRE CODE

Section: 3306

Revise as follows:

SECTION 3306
SMALL ARMS AMMUNITION AND SMALL ARMS AMMUNITION COMPONENTS

3306.1 General. Indoor storage and display of black powder, smokeless propellants, small arms primers and small arms ammunition shall comply with this section and NFPA 495.

3306.2 Prohibited storage. Small arms ammunition shall not be stored together with Division 1.1, Division 1.2 or Division 1.3 explosives unless the storage facility is suitable for the storage of explosive materials.

3306.3 Packages. Smokeless propellants shall be stored in approved shipping containers conforming to DOTn 49 CFR, Part 173.

3306.3.1 Repackaging. The bulk repackaging of smokeless propellants, black powder and small arms primers shall not be performed in retail establishments.

3306.3.2 Damaged packages. Damaged containers shall not be repackaged.

Exception: Approved repackaging of damaged containers of smokeless propellant into containers of the same type and size as the original container.

3306.4 Storage in Group R occupancies. The storage of small arms ammunition components in Group R occupancies shall comply with Sections 3306.4.1 ~~and~~ through ~~3306.4.2~~ 3306.4.3.

3306.4.1 Black powder ~~and smokeless propellants~~. ~~Propellants~~ Black powder for personal use in quantities not exceeding 20 pounds (9 kg) ~~of black powder or 20 pounds (9 kg) of smokeless powder~~ shall be stored in original containers in occupancies limited to Group R-3. ~~Smokeless powder in quantities exceeding 20 pounds (9 kg) but not exceeding 50 pounds (23 kg) kept in a wooden box or cabinet having walls of at least 1 inch (25 mm) nominal thickness shall be allowed to be stored in occupancies limited to Group R-3.~~ Quantities exceeding ~~these amounts~~ 20 pounds (9 kg) shall not be stored in any Group R occupancy.

3306.4.2 Smokeless propellants. Smokeless propellants for personal use in quantities not exceeding 20 pounds (9 kg) shall be stored in original containers in occupancies limited to Group R-3. Smokeless propellants in quantities exceeding 20 pounds (9 kg) but not exceeding 50 pounds (23 kg) kept in a wooden box or cabinet having walls of at least 1 inch (25 mm) nominal thickness shall be allowed to be stored in occupancies limited to Group R-3. Quantities exceeding these amounts shall not be stored in any Group R occupancy.

3306.4.3 ~~3306.4.2~~ Small arms primers. No more than 10,000 small arms primers shall be stored in occupancies limited to Group R-3.

3306.5 Display and storage in Group M occupancies. The display and storage of small arms ammunition components in Group M occupancies shall comply with ~~this section~~ Sections 3306.5.1 through 3306.5.2.3.

3306.5.1 Display. Display of small arms ammunition components in Group M occupancies shall comply with Sections 3306.5.1.1 through 3306.5.1.3.

3306.5.1.1 Smokeless propellant. No more than 20 pounds (9 kg) of smokeless propellant~~s~~, ~~each~~ in containers of 1 pound (0.454 kg) or less capacity each, shall be displayed in Group M occupancies.

3306.5.1.2 Black powder. No more than 1 pound (0.454 kg) of black powder shall be displayed in Group M occupancies.

3306.5.1.3 Small arms primers. No more than 10,000 small arms primers shall be displayed in Group M occupancies.

3306.5.2 Storage. Storage of small arms ammunition components shall comply with Sections 3306.5.2.1 through 3306.5.2.3.

3306.5.2.1 Smokeless propellant. Commercial stocks of smokeless propellants shall be stored as follows:

1. Quantities exceeding 20 pounds (9 kg), but not exceeding 100 pounds (45 kg) shall be stored in portable wooden boxes having walls of at least 1 inch (25 mm) nominal thickness.

2. Quantities exceeding 100 pounds (45 kg), but not exceeding 800 pounds (363 kg), shall be stored in nonportable storage cabinets having walls at least 1 inch (25 mm) nominal thickness. Not more than 400 pounds (182 kg) shall be stored in any one cabinet, and cabinets shall be separated by a distance of at least 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of at least 1 hour.

3. Storage of quantities exceeding 800 pounds (363 kg), but not exceeding 5,000 pounds (2270 kg) in a building shall comply with all of the following:

3.1. The warehouse or storage room is unaccessible to unauthorized personnel.
3.2. Smokeless propellant shall be stored in nonportable storage cabinets having wood walls at least 1 inch (25 mm) nominal thickness and having shelves with no more than 3 feet (914 mm) of separation between shelves.
3.3. No more than 400 pounds (182 kg) is stored in any one cabinet.
3.4. Cabinets shall be located against walls of the storage room or warehouse with at least 40 feet (12 192 mm) between cabinets.
3.5. The minimum required separation between cabinets shall be 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades must extend a minimum of 10 feet (3048 mm) outward, be firmly attached to the wall and be constructed of steel not less than 1/4 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick or concrete block.
3.6. Smokeless propellant shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids or oxidizing materials by a distance of 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of 1 hour.3.7. The building shall be equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

4. Smokeless propellants not stored according to Item 1, 2, or 3 above shall be stored in a Type 2 or 4 magazine in accordance with Section 3304 and NFPA 495.

3306.5.2.2 Black powder. Commercial stocks of black powder in quantities less than 50 pounds (23 kg) shall be allowed to be stored in Type 2 or 4 indoor or outdoor magazines. Quantities greater than 50 pounds (23 kg) shall be stored in outdoor Type 2 or 4 magazines. When black powder and smokeless propellants are stored together in the same magazine, the total quantity shall not exceed that permitted for black powder.

3306.5.2.3 Small arms primers. Commercial stocks of small arms primers shall be stored as follows:

1. Quantities not to exceed 750,000 small arms primers stored in a building shall be arranged such that not more than 100,000 small arms primers are stored in any one pile and piles are at least 15 feet (4572 mm) apart.

2. Quantities exceeding 750,000 small arms primers stored in a building shall comply with all of the following:

2.1. The warehouse or storage building shall not be accessible to unauthorized personnel.

2.2. Small arms primers shall be stored in cabinets. No more than 200,000 small arms primers shall be stored in any one cabinet.

2.3. Shelves in cabinets shall have vertical separation of at least 2 feet (610 mm).

2.4. Cabinets shall be located against walls of the warehouse or storage room with at least 40 feet (12 192 mm) between cabinets. The minimum required separation between cabinets shall be allowed to be reduced to 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades shall be firmly attached to the wall and shall be constructed of steel not less than 1/4 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick or concrete block.

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

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

3. Small arms primers not stored in accordance with Item 1 or 2 of this section shall be stored in a magazine meeting the requirements of Section 3304 and NFPA 495.

Reason: The interpretive history of the subject of “small arms ammunition” in the IFC has been confusing and checkered at best. A thorough review of Section 3306 has been conducted and a number of clarifying editorial revisions are being proposed as explained in the following itemized list:

Section title: The title is editorially revised to more accurately reflect the content of the section.

Section 3306.1: The added text completes the list of small arms ammunition components regulated by Section 3306.

Section 3306.4: This intro text is revised to more accurately reflect the content of the section which is *not* small arms ammunition as defined in Section 3302 but, rather, the components that go into its manufacture/assembly which, in Group R, will typically be sport reloading. Replacing “this section” with the section numbers included in the scope of the subsection is consistent with code style and part of an on-going effort to clarify introductory sections in this manner.

Sections 3306.4.1 and 3306.4.2: Current Section 3306.4.1 regulates two ammunition components and is being revised as part of the on-going effort to "unpack" lengthy IFC sections that contain multiple enforceable regulations as a means of improving the clarity of the requirements. The revision is consistent with the way each ammunition component is dealt with separately in other sub-sections of Section 3306.

In this revision also, the term "smokeless powder" is revised to "smokeless propellant" for consistency of terminology within Section 3306 and between it and the referenced standard, NFPA 495, the 1996 edition of which was the source text for Section 3306. While "smokeless powder" is included in the definition of smokeless propellant, the term is not used anywhere else in Section 3306 and this has led to user confusion. (**Note:** In the original 1997 drafting matrix of Section 3306, the NFPA 495 term "smokeless propellant" was used. However, when the matrix was converted to first draft code style, the secretariat at that time apparently changed the term to "smokeless powder", perhaps in an effort to correlate terminology for both of the components regulated by the unwieldy paragraph.)

Sections 3306.5: This intro text is revised to more accurately reflect the content of the section which is *not* small arms ammunition as defined in Section 3302 but, rather, the components that go into its manufacture. Replacing "this section" with the section numbers included in the scope of the subsection is consistent with code style and part of an on-going effort to clarify introductory sections in this manner.

Sections 3306.5.1 and 3306.5.2: These intro texts are revised to more accurately reflect the content of the sections which is *not* small arms ammunition as defined in Section 3302 but, rather, the components that go into its manufacture/assembly.

Committee Action: Approved as Editorial; Approved as Submitted August 24, 2010

CCC 10 – #F15

INTERNATIONAL FIRE CODE

Section: 3405.3.7

Revise as follows:

3405.3.7 Rooms or buildings for quantities exceeding the maximum allowable quantity per control area. Where required by Section 3405.3.5.3 or 3405.3.6.1, rooms or buildings used for use, dispensing or mixing of flammable and combustible liquids in quantities exceeding the maximum allowable quantity per control area shall be in accordance with Sections 3405.3.7.1 through 3405.3.7.6.3.

Reason: This section is applicable to activities using hazmat quantities exceeding the maximum allowable quantity per control area however, the charging text does not so state, only the section title. Since section titles are editorial and not considered part of the code text, the needed charging language should be added to properly establish the applicability of the provisions.

CCC 10 – #F16

INTERNATIONAL FIRE CODE

Section: 4604.17.2

Revise as follows:

IFC 4604.17.2 Protection of openings. Openings within 10 feet (3048 mm) of fire escape stairs shall be protected by ~~fire door assemblies~~ opening protectives having a minimum $^{3}/_{4}$-hour fire-~~resistance~~ protection rating.

> **Exception:** In buildings equipped throughout with an *approved automatic sprinkler system*, opening protection is not required.

Reason:

This suggested editorial revision is to correlate the terminology in the IFC with that used in the IBC on the subject of protection of door or window openings fronting on a fire escape. The corollary IBC section reads as follows:

> **IBC 3406.5 Opening protectives.** Doors and windows along the fire escape shall be protected with $^{3}/_{4}$-hour opening protectives.

Since the IBC regulates the protection of openings, the IFC should use the correct terminology, i.e. " opening protectives" (as in IBC Section 715) and “fire protection rating” (as in IBC Section 715.4).

CCC 10 – #F18

INTERNATIONAL FIRE CODE

Section: Table 4603.1

Revise as follows:

TABLE 4603.1
OCCUPANCY AND USE REQUIREMENTS

Section	Use			Occupancy Classification																			
	High Rise	Atrium or Covered Mall	Under ground Building	A	B	E	F	H					I				M	R				S
								1	2	3	4	5	1	2	3	4		1	2	3	4	
4603.4.1	-	-	-	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
4603.4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	R	-	-	-	-	-	-	-	-

R = means the building is required to comply

Reason: These proposed revisions are editorial and intend to clarify the application of the table. The rationale of the JFSRC in originally preparing Table 4603.1 was that they were “anticipating” (guessing) where pyroxylin plastics might be used or found when, in actuality, it could be applicable to any or all occupancy groups. Even the text of Section 4603.4.1 does not list occupancies. Therefore, an “R” should appear in all occupancy group cells on the 4603.4 row.

Additionally, Section 4603.4.2 was added by code change F154-07/08. This section only applies to existing Group I-2 fire areas. Since it is not the same as 4603.4.1, that section as well as the new section should have their own row in the table to properly portray the requirement.

CCC 10 – #F19

INTERNATIONAL FIRE CODE

Section: 4604.18

Revise as follows:

4604.18 Corridors. Corridors serving an occupant load greater than 30 and the openings therein shall provide an effective barrier to resist the movement of smoke. Transoms, louvers, doors and other openings shall be kept closed or self-closing.

Exceptions: (No change to Exceptions 1 through 4.)

4604.18.1 Corridor openings. Openings in corridor walls shall comply with the requirements of the *International Building Code*.

Exceptions: (No change to Exceptions 1 through 4.)

4604.18.2 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that dead ends do not exceed the limits specified in Table 4604.18.2.

Exception: (No change to Exception)

TABLE 4604.18.2
COMMON PATH, DEAD-END AND TRAVEL DISTANCE LIMITS (by occupancy)

OCCUPANCY	COMMON PATH LIMIT		DEAD-END LIMIT		TRAVEL DISTANCE LIMIT	
	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)
Group B	75	100	50	50	200	~~250~~ 300
Group U	75	75	20	50	~~200~~ 300	~~250~~ 400

(Portions of table and footnotes not shown remain unchanged)

4604.19 **~~4604.18.3~~ Exit access travel distance.** Exits shall be located so that the maximum length of exit access travel, measured from the most remote point to an approved exit along the natural and unobstructed path of egress travel, does not exceed the distances given in Table 4604.18.2.

4604.20 **~~4604.18.4~~ Common path of egress travel.** The common path of egress travel shall not exceed the distances given in Table 4604.18.2.

4604.21 **~~4604.19~~ Stairway discharge identification.** A stairway in an exit enclosure which continues below its level of exit discharge shall be arranged and marked to make the direction of egress to a public way readily identifiable.

Exception: (No change to Exception)

4604.22 **~~4604.20~~ Exterior stairway protection**. Exterior exit stairs shall be separated from the interior of the building as required in Section 1026.6. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions: (No change to Exceptions 1 through 4.)

4604.23 ~~**4604.21**~~ **Minimum aisle width.** The minimum clear width of aisles shall be:

(No change to Items 1 through 6)

4604.24 ~~**4604.22**~~ **Stairway floor number signs.** Existing stairs shall be marked in accordance with Section 1022.8.

4604.25 ~~**4604.23**~~ **Egress path markings.** Existing buildings of Groups A, B, E, I, M and R-1 having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with luminous egress path markings in accordance with Section 1024.

Exception: (No change to Exception)

Reason: The suggested revisions to the values for Groups B and U in Table 4604.18.2 are based on the underlying I-Code principle that the IBC and the IFC are to be correlated with one another and, in the case of the IFC, it must be internally correlated (Chapter 10 vs Chapter 46).

Currently, the retroactively-applicable travel distance limitations contained in the IFC table for existing Group B (200'/250') and U buildings (200'/250') are more restrictive that those contained in IBC/IFC Table 1016.1 for new Group B buildings (200'/300') and new Group U buildings (300'/400'). This can lead to a situation where a building is issued a Certificate of Occupancy only to be immediately in violation of the IFC as an existing building subject to the conflicting provisions of Chapter 46.

A thorough review of the code development history of the IFC table as well as the code development history of the companion requirements for new buildings in the IBC (and IFC) Chapter 10 was conducted with the following results:

Group U Travel distance (Unsprinklered/Sprinklered): The travel distances of 200/250' for Group U (among other changes to the table) were added to then-Table 1010.18.3 of the IFC-Final Draft of July, 1998 by code change E354-99. The overall purpose of the code change, as stated in the reason statement, was "…*to ensure that the IFC is internally consistent and consistent with the IBC*…". The Group U travel distances were added because "*The current table is incomplete since it contains no provisions for…Group U.*" The values chosen for then-Table 1010.18.3 were based on IBC-Final Draft of July, 1998, Table 1004.2.6 wherein Group U was included on the row with Groups A, B, E, F-1, I-1, M, R and S-1, all with travel distances of 200'/250'.

In the same code development cycle (1999), code change E208-99 revised IBC/IFC Table 1004.2.4 by relocating Group U from the row with Groups A, B, E, F-1, I-1, M, R and S-1, all with travel distances of 200'/250', to the row with Groups F-2 and S-2 with travel distances of 300'/400'. The proponent's reason statement for the change stated that "*Appendix Chapter 4-2 (Greenhouses), Section 4-2.4 already permits 300 ft travel distance in buildings of Use Group U. The inconsistencies between the Appendix Chapter and the body of the IBC must be resolved*."

It is apparent from the combined effect of these two code changes (approved by the same committee in the same cycle) that a reasonable travel distance limitation for Group U was the goal and that the IFC and the IBC were both intended to be both internally and externally consistent and correlated.

Group B Travel Distance Limit (sprinklered): The values contained in IFC Table 4604.18.2 (originally Table 1010.18.3) were based on IBC-Final Draft of July, 1998, Table 1004.2.6 wherein Group B was included on the row with Groups A, E, F-1, I-1, M, R, S-1 and U, all with travel distances of 200'/250'. Code change E207-99 revised IBC/IFC Table 1004.2.6 by relocating Group B from the row with Groups A, E, F-1, I-1, M, R, S-1 and U to its own row with travel distances of 200'/300'. As with the Group U issue discussed above, there was no correlation done to prevent the IFC travel distance from being more restrictive than the new building ones, as noted above.

Renumbering of sections: The current decimal hierarchy of Section 4604.18 has led to confusion in code application because it places exit access travel distance limitations (4604.18.3) and common path of

egress travel limits (4604.18.4) in the hierarchy of corridors when those features are not limited to corridors. This has resulted in mistakenly limiting the application of all of Table 4604.18.2's components to only corridors when, in fact, the intent is to apply the table's components in any applicable situation.

Accordingly, it is recommended that Section 4604.18.3 - *Exit access travel distance* and Section 4604.18.4 - *Common path of egress travel* be renumbered as stand-alone sections apart from the current corridor decimal hierarchy. This would be consistent with the portrayal of the corresponding non-corridor sections in Chapter 10, i.e., 1016 and 1014.3, respectively.

Note that code style is to number tables by the first section in which a reference is made to them.

IF APPROVED, in addition to being applicable to the 2012 IFC, the revisions to the table (only) should be entered as **errata** to the next printing of the 2000, 2003, 2006 and 2009 IFC.

CCC 10 – #F20

INTERNATIONAL FIRE CODE

Section: 907.6 (IBC [F]907.5)

Revise as follows:

907.6 (IBC [F] 907.5) Occupant notification systems. A fire alarm system shall annunciate at the fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors.
2. Automatic sprinkler system waterflow devices.
3. Manual fire alarm boxes.
4. Automatic ~~sprinkler~~ fire-extinguishing systems.

Exception: Where notification systems are allowed elsewhere in Section 907 to annunciate at a constantly attended location.

Reason: In the 2009 CCC agenda, item IBC3-09 CCC was a "global change" from Jeff Hugo of NFSA to "clean up" differing terms used to describe automatic sprinkler systems throughout the code. It was approved by the CCC and included the following revision to Section 907.6:

> **907.6 (IBC [F] 907.5) Occupant notification systems.** A fire alarm system shall annunciate at the panel and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:
>
> 1. Automatic fire detectors.
> 2. Sprinkler waterflow devices.
> 3. Manual fire alarm boxes.
> 4. Automatic ~~fire extinguishing~~ sprinkler systems.
>
> **Exception:** Where notification systems are allowed elsewhere in Section 907 to annunciate at a constantly attended location

In processing an errata to the IFC index, it was discovered that IFC/2006 Section 907.14, which read as follows:

> **907.14 Fire-extinguishing systems.** Automatic fire-extinguishing systems shall be connected to the building fire alarm system where a fire alarm system is required by another section of this code or is otherwise installed.

was relocated by code change F122-06/07 and became Section 907.6, Item 4. The intent of F122 was that the text of Section 907.6, Item #4 was sufficient to require that the discharge alarm of an alternative fire-extinguishing system be connected to the required building fire alarm system. The F122 reason statement on this topic said, in part (emphasis red text):

> **907.6** The existing section 907.7 is given a new title to more clearly indicate the function of the activation. The first sentence is added so that it is clear that activation begins by notifying the panel and then notifying the occupants of an alarm condition.

The existing sentence (now the second sentence) has terminology changed to “fire alarm system” which is defined and used elsewhere in the code. The existing term “alarm notification system” is undefined and therefore not well enforceable. It is assumed that the ‘alarm notification” was intended to indicate that an alarm condition would be sent to the fire alarm control unit but it is not clear that occupant notification would be included in the assumption. The revised text clarifies the issue.

In three locations “required” is deleted and in one place “provided” inserted. As stated previously, it is assumed that when there is a manual fire alarm box, that it performs the function of every other manual fire alarm box – whether the device is “required” or optionally “provided.” If there are special circumstances wherein the anticipated response to a provided system is other than expected by this section, it will be necessary to address that with coordination between the designer and the code official.

The fourth item in the list is…based on moving the provisions in the existing section 907.14 to this location. It is not intended to increase or decrease any provisions of the code – only combine similar requirements into one location for better ease of use.

In reviewing Section 907.6, it is apparent that sprinkler systems are already included in Item #2, so the Hugo revision was not necessary and had the unintended effect of deleting the intended requirement that alternative fire-extinguishing systems must be connected to the required building alarm system. This would be a technical change that would have been outside the scope and intent of Mr. Hugo’s proposal.

The suggested revision restores Item #4 to its original text and editorially revises Item #2 to clarify its applicability to automatic sprinkler systems as Mr. Hugo had intended.

INTERNATIONAL MECHANICAL CODE

CCC 10 – #M1

INTERNATIONAL MECHANICAL CODE/2009

Section: IMC [F] 502.9.1

Revise as follows:

IMC [F] 502.9.1 Compressed gases—medical gas systems. Rooms for the storage of compressed medical gases in amounts exceeding the permit amounts for compressed gases in the *International Fire Code* ~~maximum allowable exempt quantity per control area~~, and which do not have an exterior wall, shall be exhausted through a duct to the exterior of the building. Both separate airstreams shall be enclosed in a 1-hour-rated shaft enclosure from the room to the exterior. Approved mechanical ventilation shall be provided at a minimum rate of 1 cfm/ft2 [0.00508 m3/(s • m2)] of the area of the room. **[IFC 3006.2 and 3006.2.2]**

Gas cabinets for the storage of compressed medical gases in amounts exceeding the permit amounts for compressed gases in the *International Fire Code* ~~maximum allowable exempt quantity per control area~~ shall be connected to an exhaust system. The average velocity of ventilation at the face of access ports or windows shall be not less than 200 feet per minute (1.02 m/s) with a minimum velocity of 150 feet per minute (0.76 m/s) at any point at the access port or window. **[IFC 3006.2 and 3006.2.3]**

Reason: The proposed revisions are to provide correlation between Section 3006.2 of the IFC and Section [F]502.9.1 of the IMC. Line 54 of the 1998 IBC Scoping matrix indicates that exhaust ventilation requirements for flammable and combustible hazards are to reside in and be maintained by the IFC and be duplicated in the IMC. Section [F]502.9.1 of the IMC is not a duplication of the IFC requirements, as it should be, but is different as to the trigger amounts of medical gas requiring exhaust ventilation---it uses the MAQ whereas the IFC uses the more restrictive permit amount. The following table illustrates the differences:

Hazard Classification of Gas	Permit Amount (IFC Table 105.6.8) Cubic Feet @ NTP	Maximum Allowable Quantity per Control Area [from IFC Table 2703.1.1(1)] (IMC [F]502.9.1) Cubic Feet @ NTP
Corrosive	200	810
Flammable	200	1000
Highly Toxic	Any amount	20
Oxidizing	504	1,500
Inert	6,000	Unlimited

Recommendation: This conflict between the IFC and the IMC has caused numerous interpretive issues and should be corrected not only going forward but also as an errata to be posted on the ICC website. Such an errata would be applicable to the *International Mechanical Code* in the 2000, 2003, 2006 and 2009 editions.

CCC 10 – #M2

INTERNATIONAL MECHANICAL CODE

Section: [F]513

Revise as follows:

[F] 513.1 Scope and purpose. This section applies to mechanical and passive smoke control systems that are required by the *International Building Code* or the *International Fire Code*. The purpose of this section is to establish minimum requirements for the design, installation and acceptance testing of smoke control systems that are intended to provide a tenable environment for the evacuation or relocation of occupants. These provisions are not intended for the preservation of contents, the timely restoration of operations, or for assistance in fire suppression or overhaul activities. Smoke control systems regulated by this section serve a different purpose than the smoke- and heat-venting provisions found in Section 910 of the *International Building Code*.

[F] 513.2 General design requirements. Buildings, structures, or parts thereof required by ~~this code~~ the *International Building Code* or the *International Fire Code* to have a smoke control system or systems shall have such systems designed in accordance with the applicable requirements of Section 909 of the *International Building Code* and the generally accepted and well-established principles of engineering relevant to the design. The construction documents shall include sufficient information and detail to describe adequately the elements of the design necessary for the proper implementation of the smoke control systems. These documents shall be accompanied with sufficient information and analysis to demonstrate compliance with these provisions.

Reason: The IMC ("this code") does not provide any "where required" provisions for smoke control systems but, rather, duplicates the "how to" provisions once a system is required by another code, i.e., either the IFC or the IBC. It is recommended that the current text be revised as shown to reinforce this fact and provide correlation among the three codes that contain these requirements. The revisions would correlate with IFC Section 909.2 which reads, in part:

> "**909.2 General design requirements.** Buildings, structures, or parts thereof required by the *International Building Code* or this code to have a smoke control system or systems shall have such systems designed in accordance with the applicable requirements of…"

INTERNATIONAL PLUMBING CODE

CCC 10 – #P1

Table 403.1 (IBC [P]2902.1)

Revise as follows:

Footnote b. Toilet facilities for employees shall be separate from facilities for inmates or ~~patients~~ care recipients.

Reason:

Code change proposal G65-09/10 changed the term “patients” in the I-2 row to the term care recipient. The change failed to reflect the same change to the footnote. Correction needed for continuity.

CCC 10 – #P2

410.2 [B] (IBC 1109.5.1)

Proposal P45-09/10 successfully added 410.2 to the IPC. Section 410.2 is simply a duplicate of IBC section 1109..5.1

Revise as follows:

410.2 [B] Minimum number. Where drinking fountains are required, not fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons.

Reason:

As originally proposed, this new section for the IPC literally would require at least two drinking fountains for every building, tenant space or occupancy. Table 403.1 of the IPC indicates where drinking fountains are required; the intent of this section is to require not less than two drinking **fountains where drinking fountains are required by the IPC.**

The proposed additional text is further justified by looking at the parent IBC section for the section:

IBC **1109.5 Drinking fountains**. *Where drinking fountains are provided* on an exterior site, on a floor or within a secured area, the drinking fountains shall be provided in accordance with Sections 1109.5.1…..

608.15.4.1
Table 608.1

Revise as follows:

608.15.4.1 Deck-mounted and integral vacuum breakers. *Approved* deck-mounted or equipment-mounted vacuum breakers and faucets with integral atmospheric vacuum breakers or spill~~proof~~ –resistant vacuum breaker~~s~~ assemblies shall be installed in accordance with the manufacturer's instructions and the requirements for labeling. The critical level of the breakers and assemblies shall be located at not less than 1 inch (25 mm) above the *flood level rim*.

Table 608.1

Spill~~proof~~ resistant vacuum breaker assembly	High or low hazard	Backsiphonage only Sizes 1/4" -2"	ASSE 1056

Reason:
Proposals P83-09/10, P96-09/10, P97-09/10, & P98-09/10 were successful in changing the terminology in other code sections from "spillproof" to "spill-resistant". See sheet 2.

Proposals P96-09/10, P97-09/10, & P98-09/10 were successful in adding the term "assembly" to the phrase "spill-resistant vacuum breaker" in other code sections. See Sheet 2.

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IPC #3 **Sheet 2 of 2**

The proposed CCC change will make the terminology consistent and coordinated across all sections relating to spill-resistant vacuum breaker assemblies.

Code sections having successful actions:

608.3.1 Special equipment, water supply protection. The water supply for hospital fixtures shall be protected against backflow with a reduced pressure principle backflow prevention assembly, an atmospheric or spill-resistant vacuum breaker assembly, or an air gap. Vacuum breakers for bedpan washer hoses shall not be located less than 5 feet (1524 mm) above the floor. Vacuum breakers for hose connections in health care or laboratory areas shall not be less than 6 feet (1829 mm) above the floor.
(P98-09/10)

608.13.5 Pressure vacuum breaker assemblies. Pressure vacuum breaker assemblies shall conform to ASSE 1020 or CSA B64.1.2. Spill-resistant vacuum breaker assemblies shall comply with ASSE 1056. These assemblies are designed for installation under continuous pressure conditions where the critical level is installed at the required height. Pressure vacuum breaker assemblies shall not be installed in locations where spillage could cause damage to the structure.
(P96-09/10, PART I)

608.13.8 Spill-resistant pressure vacuum breaker assemblies. Spill-resistant pressure vacuum breaker assemblies shall conform to ASSE 1056 or CSA B64.1.3. These assemblies are designed for installation under continuous-pressure conditions where the critical level is installed at the required height.
(P83-09/10, PART I)(P97-09/10)

Table 608.1

Revise as follows:

Table 608.1

Reduced pressure principle backflow preventer and reduced pressure principle fire protection backflow preventer~~r~~ion assembly	High or low hazard	Backpressure or backsiphonage Sizes 3/8" - 16"	ASSE 1013, AWWA C511, CAN/CSA B64.4, CSA B64.4.1

Reason:

Proposals P99-09/10 & P105-09/10 were successful in changing the terminology in other code sections from “reduced pressure fire protection principle backflow preventer” to “reduced pressure principle fire protection backflow prevention assembly”. See sheet 2.

The proposed CCC change will make the terminology consistent and coordinated across all sections relating to reduced pressure principle fire protection backflow prevention assemblies.

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IPC #4 Sheet 2 of 2

Code sections having successful actions:

608.16.4.1 Additives or nonpotable source. Where systems under continuous pressure contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly. Where chemical additives or antifreeze are added to only a portion of an automatic fire sprinkler or standpipe system, the reduced pressure principle backflow prevention assembly or the reduced pressure principle fire protection backflow prevention assembly shall be permitted to be located so as to isolate that portion of the system. Where systems are not under continuous pressure, the potable water supply shall be protected against backflow by an air gap or an atmospheric vacuum breaker conforming to ASSE 1001 or CSA B64.1.1.
(P99-09/10, PART I)

608.16.4 Connections to automatic fire sprinkler systems and standpipe systems. The potable water supply to automatic fire sprinkler and standpipe systems shall be protected against backflow by a double check backflow prevention assembly, a double check fire protection backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly.
P99-09/10, PART I)

608.15.2 Protection by reduced pressure principle backflow prevention assembly. Openings and outlets shall be protected by a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly on potable water supplies.
(P105-09/10)

Chapter 2 Definition
REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER

Table 608.1

Revise as follows:

Chapter 2 Definition
REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENT~~ER~~ION ASSEMBLY

Table 608.1

Reduced pressure principle backflow prevent~~er~~ion assembly and reduced pressure principle fire protection backflow preventer	High or low hazard	Backpressure or backsiphonage Sizes 3/8" - 16"	ASSE 1013, AWWA C511, CAN/CSA B64.4, CSA B64.4.1

608.13.2 Reduced pressure principle backflow prevent~~ers~~ion assemblies. Reduced pressure principle backflow prevent~~ers~~ion assemblies shall conform to ASSE 1013, AWWA C511, CSA B64.4 or CSA B64.4.1. Reduced pressure detector assembly backflow preventers shall conform to ASSE 1047. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.

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Reason:

Proposals P99-09/10 P100-09/10, P100-09/10 & P105-09/10 were successful in changing the terminology in other code sections from “reduced pressure principle backflow preventer” to “reduced pressure principle backflow prevention assembly”. See sheets 2 and 3.

The proposed CCC change will make the terminology consistent and coordinated across all sections relating to reduced pressure principle backflow prevention assemblies.

Code sections having successful actions:

608.16.4.1 Additives or nonpotable source. Where systems under continuous pressure contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly. Where chemical additives or antifreeze are added to only a portion of an automatic fire sprinkler or standpipe system, the reduced pressure principle backflow prevention assembly or the reduced pressure principle fire protection backflow prevention assembly shall be permitted to be located so as to isolate that portion of the system. Where systems are not under continuous pressure, the potable water supply shall be protected against backflow by an air gap or an atmospheric vacuum breaker conforming to ASSE 1001 or CSA B64.1.1.

(P99-09/10, PART I)

608.15.2 Protection by reduced pressure principle backflow prevention assembly. Openings and outlets shall be protected by a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly on potable water supplies.
(P105-09/10)

608.16.4.1 Additives or nonpotable source. Where systems under continuous pressure contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly. Where chemical additives or antifreeze are added to only a portion of an automatic fire sprinkler or standpipe system, the reduced pressure principle backflow prevention assembly or the reduced pressure principle fire protection backflow prevention assembly shall be permitted to be located so as to isolate that portion of the system. Where systems are not under continuous pressure, the potable water supply shall be protected against backflow by an air gap or an atmospheric vacuum breaker conforming to ASSE 1001 or CSA B64.1.1.
(P99-09/10, PART I)

608.16.5 Connections to lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric vacuum breaker, a pressure vacuum breaker assembly or a reduced pressure principle backflow prevention assembly. Valves shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly.
(P100-09/10, PART I)

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IPC #5 Sheet 4 of 4

608.16.6 Connections subject to backpressure. Where a potable water connection is made to a nonpotable line, fixture, tank, vat, pump or other equipment subject to high hazard back-pressure, the potable water connection shall be protected by a reduced pressure principle backflow prevention assembly.
(P101-09/10) (P91-09/10)

Section 305.4

Revise as follows:

Create a new section heading

SECTION 315
PENETRATIONS

Move Section 305.4 (and renumber) to be under new Section 315

Reason:

Section 305.4 was completely revised in the 09/10 cycle. The revisions caused the focus of the section to be totally unrelated to the scope of its parent Section 305 PROTECTION OF PIPES AND PLUMBING SYSTEM COMPONENTS. Moving the section under a new section heading will bring the new requirements out of a position of obscurity and provide for better understanding of Chapter 3.

Supporting Information:

Section 305.4 code text for the 2012 IPC

305.4 Sealing of annular spaces. The annular space between the outside of a pipe and the inside of a pipe sleeve or between the outside of a pipe and an opening in a building envelope wall, floor, or ceiling assembly penetrated by a pipe shall be sealed in an approved manner with caulking material, foam sealant or closed with a gasketing system. The caulking material or gasketing system shall be designed for the conditions at the penetration location and shall be compatible with the pipe, sleeve and building materials in contact with the sealing materials. Annular spaces created by pipes penetrating fire resistance-rated assemblies or membranes of such assemblies shall be sealed or closed in accordance with Section 713 of the *International Building Code*.

INTERNATIONAL RESIDENTIAL CODE - PLUMBING

CCC 10 – #RP1

Table P2902.3

Revise as follows:

Table P2902.3

Reduced pressure principle backflow preventer and reduced pressure principle fire protection backflow preventer~~r~~ion assembly	High or low hazard	Backpressure or backsiphonage Sizes 3/8" - 16"	ASSE 1013, AWWA C511, CAN/CSA B64.4, CSA B64.4.1

Reason:

Proposals P99-09/10, Part II & P95-09/10, Part II were successful in changing the terminology in other code sections from “reduced pressure fire protection principle backflow preventer” to “reduced pressure principle fire protection backflow prevention assembly”. See sheet 2.

The proposed CCC change will make the terminology consistent and coordinated across all sections relating to reduced pressure principle fire protection backflow prevention assemblies.

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IRC-P #1 **Sheet 2 of 2**

Code sections having successful actions:

P2902.5.4.1 Additives or nonpotable source. Where systems contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly. Where chemical additives or antifreeze is added to only a portion of an automatic fire sprinkler or standpipe system, the reduced pressure principle fire protection backflow preventer shall be permitted to be located so as to isolate that portion of the system.
(P99-09/10, PART II)

P2902.3.5 Reduced pressure principle backflow prevention assemblies. Reduced pressure principle backflow prevention assemblies and reduced pressure principle fire protection backflow prevention assemblies shall conform to ASSE 1013, AWWA C511, CSA B64.4 or CSA B64.4.1. Reduced pressure detector fire protection backflow prevention assemblies shall conform to ASSE 1047. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.
(P95-09/10, PART II)

CCC 10 – #RP2

Table P2902.3
P2902.5.5

Revise as follows:

Table P2902.3

Reduced pressure principle backflow preventer assembly and reduced pressure principle fire protection backflow preventer	High or low hazard	Backpressure or backsiphonage Sizes 3/8" - 16"	ASSE 1013, AWWA C511, CAN/CSA B64.4, CSA B64.4.1

P2902.5.5 Solar systems. The potable water supply to a solar system shall be equipped with a backflow preventer with intermediate atmospheric vent complying with ASSE 1012 or a reduced pressure principle backflow preventerion assembly complying with ASSE 1013. Where chemicals are used, the potable water supply shall be protected by a reduced pressure principle backflow preventerion assembly.

Exception: Where all solar system piping is a part of the potable water distribution system, in accordance with the requirements of the *International Plumbing Code*, and all components of the piping system are listed for potable water use, cross-connection protection measures shall not be required.

2010 CCC AGENDA ITEM

IRC-P #2 **Sheet 2 of 2**

Reason:

Proposals P99-09/10, Part II & P95-09/10, Part II were successful in changing the terminology in other code sections from “reduced pressure principle backflow preventer” to “reduced pressure principle backflow prevention assembly”. See sheet 2.

The proposed CCC change will make the terminology consistent and coordinated across all sections relating to reduced pressure principle backflow prevention assemblies.

Code sections having successful actions:

P2902.5.4.1 Additives or nonpotable source. Where systems contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly. Where chemical additives or antifreeze is added to only a portion of an automatic fire sprinkler or standpipe system, the reduced pressure principle fire protection backflow preventer shall be permitted to be located so as to isolate that portion of the system.
(P99-09/10, PART II)

P2902.3.5 Reduced pressure principle backflow prevention assemblies. Reduced pressure principle backflow prevention assemblies and reduced pressure principle fire protection backflow prevention assemblies shall conform to ASSE 1013, AWWA C511, CSA B64.4 or CSA B64.4.1. Reduced pressure detector fire protection backflow prevention assemblies shall conform to ASSE 1047. These devices shall be permitted to be installed where subject to continuous pressure conditions. The relief opening shall discharge by air gap and shall be prevented from being submerged.
(P95-09/10, PART II)

CCC 10 – #RP3 **Sheet 1 of 2**

P2902.4.2

Revise as follows:

P2902.4.2 Deck-mounted and integral vacuum breakers. *Approved* deck-mounted or equipment-mounted vacuum breakers and faucets with integral atmospheric vacuum breakers or spill~~proof~~ –resistant vacuum breaker~~s~~ assemblies shall be installed in accordance with the manufacturer's instructions and the requirements for labeling. The critical level of the breakers and assemblies shall be located at not less than 1 inch (25 mm) above the *flood level rim*.

Reason:

Proposals P83-09/10 Part II was successful in changing the terminology in another code section from "spillproof vacuum breaker"" to "spill-resistant vacuum breaker assembly". See sheet 2.

The proposed CCC change will make the terminology consistent and coordinated across all sections relating to spill-resistant vacuum breaker assemblies.

2010 CCC AGENDA ITEM

IPC #3 **Sheet 2 of 2**

Code section having successful actions:

Table 608.1

Spill-resistant vacuum breaker assembly	High or low hazard	Backsiphonage only Sizes 1/4" -2"	ASSE 1056

(P83-09/10)

Section P2603.4

Revise as follows:

Create a new section heading

SECTION 2606
PENETRATIONS

Move Section P2603.4 (and renumber) to be under new Section 2606

(Renumber remaining code sections as required)

Reason:

Section P2603.4 was completely revised in the 09/10 cycle. The revisions caused the focus of the section to be totally unrelated to the scope of its parent Section P2603 STRUCTURAL AND PIPING PROTECTION. Moving the section under a new section heading will bring the new requirements out of a position of obscurity and provide for better understanding of Chapter 3.

Supporting Information:

Section P2603.4 code text for the 2012 IRC

P2603.4 Sealing of annular spaces. The annular space between the outside of a pipe and the inside of a pipe sleeve or between the outside of a pipe and an opening in a building envelope wall, floor, or ceiling assembly penetrated by a pipe shall be sealed with caulking material, foam sealant or closed with a gasketing system. The caulking material, foam sealant or gasketing system shall be designed for the conditions at the penetration location and shall be compatible with the pipe, sleeve and building materials in contact with the sealing materials. Annular spaces created by pipes penetrating fire resistance-rated assemblies or membranes of such assemblies shall be sealed or closed in accordance with the building portion of this code.