

2009-2010 ICC CODE DEVELOPMENT CYCLE

2009 CODE CORRELATION COMMITTEE ACTIONS



August 6, 2009

This document is a compilation of editorial changes made to the 2009 I-Codes that will appear in the 2012 I-Codes. Most of these editorial changes are code change proposals received that were deemed editorial, and therefore not required to be considered by the applicable code change committee during the 2009-2010 Code Change Cycle. These are shown with the original proponent's name. Additionally, the Code Correlation Committee identified needed editorial revisions to some code provisions. In those cases, the Code Correlation Committee is listed as the proponent.

2009/2010 PROPOSED CHANGES TO THE CODE CORRELATION COMMITTEE

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INTERNATIONAL BUILDING CODE

IBC1-09 CCC

105.2 (12)

Proponent: Timothy H. Swanson, City of Greeley, Colorado Chapter of the International Code Council

Revise as follows:

105.2 Work exempt from permit. Exemptions from *permit* requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. *Permits* shall not be required for the following:

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m²).
2. Fences not over 6 feet (1829 mm) high.
3. Oil derricks.
4. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or IIIA liquids.
5. Water tanks supported directly on grade if the capacity does not exceed 5,000 gallons (18 925 L) and the ratio of height to diameter or width does not exceed 2:1.
6. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade, and not over any basement or *story* below and are not part of an *accessible route*.
7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
8. Temporary motion picture, television and theater stage sets and scenery.
9. Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 24 inches (610 mm) deep, do not exceed 5,000 gallons (18 925 L) and are installed entirely above ground.
10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
11. Swings and other playground equipment accessory to detached one- and two-family *dwellings*.
12. ~~Window awnings supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support of Groups R-3 and U occupancies.~~
12. Window awnings in Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
13. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753mm) in height.

Electrical-Plumbing (*No change to current text*)

Reason: By rearranging the same information in a more logical order, WHAT is exempt, WHERE it is exempt, and WHEN it is exempt, the revision will clarify when the exemption will apply. Matching the structure of how the other exemptions of 105.2 are laid out, specifically 105.2 (9). Matches the verbiage in the IRC, except the addition of the effected occupancy groups.

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

ICCFILENAME: SWANSON-ADM1-105.2.DOC

IBC2-09 CCC

202

Proponent: Code Correlation Committee

Revise as follows:

APPROVED: Acceptable to the ~~code~~ building official or authority having jurisdiction.

Reason: The membership decided nearly 10 years ago that the 'code official' for the building code is to be called "Building Official". Some may argue that others players have roles for approving things in the building code such as a fire chief or fire department. That is covered by the rest of the definition as well as the definition of Building Official which says 'other person' in two ways. Finally Code Official is not defined in this code.

ICC FILENAME: IBC 202

IBC3-09 CCC

IFC 907.2.6.3.1, 907.6 (IBC F907.2.6.3.1, [F] 907.5); IBC 101.4.5, 402.11, 402.12.2, [F] 402.17, 410.3.1, [F] 410.6, [F] 415.8.3, [F] 416.5, 504.1, [F] 505.5.2, 508.2.5, 508.2.5.2, 508.2.5.3, Table 508.2.5, 708.11, 901.6.3, 3412.5.1, 3412.6.19, Table 3412.6.19

Proponent: Jeff Hugo, CBO, National Fire Sprinkler Association

THESE PROPOSALS WILL BE ON THE AGENDA FOR THE IFC CODE DEVELOPMENT COMMITTEE AS TWO SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING AGENDA FOR THE IFC COMMITTEE.

PART I – IFC

Revise as follows:

907.2.6.3.1 (IBC [F] 907.2.6.3.1) System initiation. Actuation of an automatic fire-extinguishing system, automatic sprinkler system, a manual fire alarm box or a fire detector shall initiate an approved fire alarm signal which automatically notifies staff. Presignal systems shall not be used.

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*

PART II – IBC

Revise as follows:

101.4.5 Fire prevention. The provisions of the *International Fire Code* shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, alteration or removal of fire suppression, automatic sprinkler systems and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

402.11 Kiosks. Kiosks and similar structures (temporary or permanent) shall meet the following requirements:

1. Combustible kiosks or other structures shall not be located within the mall unless constructed of any of the following materials:
 - 1.1. Fire-retardant-treated wood complying with Section 2303.2.
 - 1.2. Foam plastics having a maximum heat-release rate not greater than 100kW (105 Btu/h) when tested in accordance with the exhibit booth protocol in UL 1975.
 - 1.3. Aluminum composite material (ACM) having a flame spread index of not more than 25 and a smoke-developed index of not more than 450 when tested as an assembly in the maximum thickness intended for use in accordance with ASTM E 84 or UL 723.
2. Kiosks or similar structures located within the mall shall be provided with approved ~~fire-suppression~~ automatic sprinkler system and detection devices.

402.12.2 Fire protection. Children's playground structures located within the mall shall be provided with the same level of approved ~~fire suppression~~ automatic sprinkler system and detection devices required for kiosks and similar structures.

[F] 402.17 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.

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:

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 Type IIA, IIIA and VA construction, a fire-resistance-rated floor is not required, provided the space below the stage is equipped with an automatic sprinkler system or fire-extinguishing system in accordance with Section 903 or 904.

[F] 410.6 Automatic sprinkler system. Stages shall be equipped with an automatic ~~fire-extinguishing~~ sprinkler system system in accordance with Chapter 9. Sprinklers shall be installed under the roof and gridiron and under all catwalks and galleries over the stage. Sprinklers shall be installed in dressing rooms, performer lounges, shops and storerooms accessory to such stages.

[F] 415.8.3 Corridors. Corridors shall comply with Chapter 10 and shall be separated from fabrication areas as specified in Section 415.8.2.2. Corridors shall not contain HPM and shall not be used for transporting such materials, except through closed piping systems as provided in Section 415.8.6.3.

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 1017 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 ~~fire-extinguishing~~ sprinkler system.

[F] 416.5 Fire protection. An automatic sprinkler system or fire-extinguishing system shall be provided in all spray, dip and immersing spaces and storage rooms and shall be installed in accordance with Chapter 9.

504.1 General. The building height permitted by Table 503 shall be increased in accordance with this section.

Exception: The building height of one-story aircraft hangars, aircraft paint hangars and buildings used for the manufacturing of aircraft shall not be limited if the building is provided with an automatic sprinkler system or automatic fire-extinguishing system in accordance with Chapter 9 and is entirely surrounded by public ways or yards not less in width than one and one-half times the building height.

[F] 505.5.2 ~~Fire suppression~~ Automatic sprinkler system. Where located in a building that is required to be protected by an automatic sprinkler system, equipment platforms shall be fully protected by sprinklers above and below the platform, where required by the standards referenced in Section 903.3.

508.2.5 Separation of incidental accessory occupancies. The incidental accessory occupancies listed in Table 508.2.5 shall be separated from the remainder of the building or equipped with an automatic sprinkler system ~~fire-~~

~~extinguishing system~~, or both, in accordance with Table 508.2.5.

Exception: Incidental accessory occupancies within and serving a *dwelling unit* are not required to comply with this section.

508.2.5.2 Nonfire-resistance-rated separation and protection. Where Table 508.2.5 permits an automatic ~~fire-extinguishing~~ sprinkler system without a *fire barrier*, the incidental accessory occupancies shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The walls shall extend from the top of the foundation or floor assembly below to the underside of the ceiling that is a component of a fire-resistance-rated floor assembly or roof assembly above or to the underside of the floor or roof sheathing, deck or slab above. Doors shall be self- or automatic-closing upon detection of smoke in accordance with Section 715.4.8.3. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80. Walls surrounding the incidental accessory occupancy shall not have air transfer openings unless provided with smoke dampers in accordance with Section 711.7.

508.2.5.3 Protection. Automatic Sprinkler System. Except as specified in Table 508.2.5 for certain incidental accessory occupancies, where an ~~automatic fire-extinguishing system~~ or an *automatic sprinkler system* is provided in accordance with Table 508.2.5, only the space occupied by the incidental accessory occupancy need be equipped with such a system.

**TABLE 508.2.5
INCIDENTAL ACCESSORY OCCUPANCIES**

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 fire-extinguishing <u>sprinkler</u> system
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	1 hour or provide automatic fire-extinguishing <u>sprinkler</u> system
Refrigerant machinery room	1 hour or provide automatic sprinkler system
Hydrogen cut-off rooms, not classified as Group H	1 hour in Groups B, F, M, S and U occupancies. 2 hour in Groups 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 fire-extinguishing <u>sprinkler</u> system
Laboratories and vocational shops, not classified as Group H, located in Group E or I-2 occupancies	1 hour or provide automatic fire-extinguishing <u>sprinkler</u> system
Laundry rooms over 100 square feet	1 hour or provide automatic fire-extinguishing <u>sprinkler</u> system
Group I-3 cells equipped with padded surfaces	1 hour
Group I-2 waste and linen collection rooms	1 hour
Waste and linen collection rooms over 100 square feet	1 hour or provide automatic fire-extinguishing <u>sprinkler</u> system
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies	1 hour in Groups B, F, M, S and U occupancies. 2 hour in Groups A, E, I and R occupancies.
Rooms containing fire pumps in nonhigh-rise buildings	2 hours; or 1 hour and provide automatic sprinkler system throughout the building
Rooms containing fire pumps in high-rise buildings	2 hours

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 watts, 1 gallon = 3.785 L

708.11 Enclosure at the bottom. Shafts that do not extend to the bottom of the building or structure shall comply with one of the following:

1. They shall be enclosed at the lowest level with construction of the same *fire-resistance rating* as the lowest floor through which the shaft passes, but not less than the rating required for the shaft enclosure.
2. They shall terminate in a room having a use related to the purpose of the shaft. The room shall be separated from the remainder of the building by *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. The *fire-resistance rating* and opening protectives shall be at least equal to the protection required for the shaft enclosure.

- They shall be protected by *approved fire dampers* installed in accordance with their listing at the lowest floor level within the shaft enclosure.

Exceptions:

- The fire-resistance-rated room separation is not required, provided there are no openings in or penetrations of the shaft enclosure to the interior of the building except at the bottom. The bottom of the shaft shall be closed off around the penetrating items with materials permitted by Section 717.3.1 for draftstopping, or the room shall be provided with an *approved automatic fire suppression sprinkler system*.

901.6.3 Group H. Manual fire alarm, automatic fire-extinguishing, automatic sprinkler system and emergency alarm systems in Group H occupancies shall be monitored by an approved supervising station.

Exception: When approved by the building official, on-site monitoring at a constantly attended location shall be permitted provided that notifications to the fire department will be equal to those provided by an approved supervising station.

3412.5.1 Fire safety. Included within the fire safety category are the structural fire resistance, automatic fire detection, fire alarm, automatic sprinkler system and fire suppression system features of the facility.

3412.6.19 Incidental accessory occupancy. Evaluate the protection of incidental accessory occupancies in accordance with Section 508.2.5. Do not include those where this code requires ~~suppression~~ automatic sprinkler systems 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. 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 AREA VALUES^a**

PROTECTION REQUIRED BY TABLE 508.2.5	PROTECTION PROVIDED						
	None	1 Hour	AFSS AS	AFSS AS with SP	1 Hour and AFSS AS	2 Hours	2 Hours and AFSS AS
2 Hours and AFSS-AS	-4	-3	-2	-2	-1	-2	0
2 Hours, or 1 Hour and AFSS-AS	-3	-2	-1	-1	0	0	0
1 Hour and AFSS-AS	-3	-2	-1	-1	0	-1	0
1 Hour	-1	0	-1	0	0	0	0
1 Hour, or AFSS-AS with SP	-1	0	-1	0	0	0	0
AFSS AS with SP	-1	-1	-1	0	0	-1	0
1 Hour or AFSS-AS	-1	0	0	0	0	0	0

a. AFSS-AS= Automatic fire suppression sprinkler system; SP = Smoke partitions (See Section 508.2.2).

NOTE: For Table 3412.7, see next page.

(Provisions not shown remain unchanged)

Reason: The purpose of this change is to promote consistency throughout the document. The text “Fire Protection” is usually the heading of a section, meaning the section will state the fire protection requirements whether it be sprinklers or suppression for that particular component of the building.

There is no definition for “suppression” in the IBC. Suppression, in the fire fighter occupation and the fire sprinkler trade means to put the fire completely out. Fire sprinklers are designed and meant to control the fire, except for the ESFR sprinkler, which is designed to put the fire totally out and is typically used in high piled storage structures. To have the word suppression in the text, it could be interpreted by the code official that an automatic fire suppression system, such as a kitchen hood suppression or similar systems is required throughout the building, which is clearly not the intent of the above sections.

Automatic extinguishing system is defined as an approved system of devices and equipment which automatically detects a fire and discharges an approved fire-extinguishing agent onto or in the area of a fire. While water is the agent in a fire sprinkler system, the word extinguish is similar to the word suppress, leading the user to think that a sprinkler system that is designed to control a fire is not adequate. This definition also states that the agent is dispersed onto or in the area of a fire. Fire sprinklers are only activated by heat and do not automatically open other sprinklers to wet the adjacent areas that are not affected or consumed by fire yet.

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

Analysis: If this proposal is approved, staff will editorially correct other section titles to state "Automatic sprinkler system" when that is the only requirement in the section. Where a section addresses other systems such as standpipes, or alarms or alternative suppression, the section title will be corrected to "Fire Protection". Where the section only addresses fire suppression in lieu of automatic sprinklers, the section title will be "Fire suppression." The section numbers underlined below would be changed to the title indicated on the left. The other sections already have the assigned title.

Section Title:	Code Sections:
"Automatic sprinkler system"	402.9, 403.3, <u>404.3</u> , 405.3, 407.5, 410.6, 411.4, <u>415.6.2.4</u> , <u>505.5.2</u> , 708.13.6, 901.6.1, <u>1028.6.2.3</u> , <u>2606.7.4</u> , 2607.5, 3008.6
"Fire protection"	402.12.2, <u>406.3.10</u> , 419.5, 901.2
"Fire suppression"	412.4.6, 412.6.5, <u>416.5</u> , <u>417.4</u>

ICCFILENAME: HUGO-G2-402.10.doc

IBC4-09 CCC

402.12.1

Proponent: Marcelo M. Hirschler, GBH International

Revise as follows:

402.12 Children's playground structures. Structures intended as children's playgrounds that exceed 10 feet (3048 mm) in height and 150 square feet (14 m²) in area shall comply with the following.

402.12.1 Materials. Children's playground structures shall be constructed of noncombustible materials or of combustible materials that comply with the following:

1. Fire-retardant-treated wood complying with Section 2303.2.
2. Light-transmitting plastics complying with Section 2606.
3. Foam plastics (including the pipe foam used in soft-contained play equipment structures) having a maximum heat-release rate not greater than 100 kW when tested in accordance with UL 1975.
4. Aluminum composite material (ACM) meeting the requirements of Class A interior finish in accordance with Chapter 8 when tested as an assembly in the maximum thickness intended for use.
5. Textiles and films complying with the flame propagation performance criteria contained in NFPA 701.
6. Plastic materials used to construct rigid components of soft-contained play equipment structures (such as tubes, windows, panels, junction boxes, pipes, slides and decks) exhibiting a peak rate of heat release not exceeding 400 kW/m² when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m² in the horizontal orientation at a thickness of 6 mm.
7. Ball pool balls, used in soft-contained play equipment structures, having a maximum heat release rate not greater than 100 kW when tested in accordance with UL 1975. The minimum specimen test size shall be 36 inches by 36 inches (914 mm by 914 mm) by an average of 21 inches (533 mm) deep, and the balls shall be held in a box constructed of galvanized steel poultry netting wire mesh.
8. Foam plastics shall be covered by a fabric, coating or film meeting the flame propagation performance criteria of NFPA 701.
9. The floor covering placed under the children's playground structure shall exhibit a Class I interior floor finish classification, as described in Section 804, when tested in accordance with NFPA 253.

Reason: This change is purely editorial for consistency with other references to fire retardant treated wood.

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

ICCFILENAME: HIRSCHLER-G4-402.12.1.doc

IBC5-09 CCC

Section 403.3; 406.4, 406.6, 406.9, 406.10, 408. 412.7, 415.6.2.4, 420.

Proponent: Code Correlation Committee

1. Add new Section 403.4.3 as follows:

403.4.3 Standpipe system. A high-rise building shall be equipped with a standpipe system as required by Section 905.3.

(Renumber subsequent sections)

2. Add new Section 406.4.3 as follows:

406.4.3 Automatic sprinkler system. An enclosed parking garage shall be equipped with an automatic sprinkler system in accordance with Section 903.2.10.

3. Add new Section 406.6.7 as follows:

406.6.7 Automatic sprinkler system. A repair garage shall be equipped with an automatic sprinkler system in accordance with Section 903.2.9.1.

4. Revise Section 406.3.9 as follows:

~~406.3.9 Standpipes.~~ Standpipes shall be installed where required by the provisions of Chapter 9. **Standpipe system.** An open parking garage shall be equipped with a standpipe system as required by Section 905.3.

5. Delete without replacement Section 406.3.10:

~~406.3.10 Sprinkler systems.~~ Where required by other provisions of this code, automatic sprinkler systems and standpipes shall be installed in accordance with the provisions of Chapter 9.

6. Add new Section 408.11 as follows:

408.11 Automatic sprinkler system. Group I-3 occupancies shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.2.6.

7. Add new Section 412.7.5 as follows:

412.7.5 Standpipe system. In buildings equipped with a standpipe system, the standpipe shall extend to the roof level in accordance with Section 905.3.6.

8. Relocate and revise Section 415.6.2.4 to be Section 415.4 as follows

~~415.6.2.4 Suppression.~~ **415.4 Automatic sprinkler system.** Group H occupancies shall be equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.2.5.

(Renumber subsequent sections)

9. Add new Sections 420.4 and 420.5 as follows:

420.4 Automatic sprinkler system. Group R occupancies shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.2.8. Group I-1 occupancies shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.2.6. Quick-response or residential automatic sprinklers shall be installed in accordance with Section 903.3.2.

420.5. Smoke detection and fire alarm systems. Fire alarm systems and smoke alarms shall be provided in Group I-1, R-1 and R-2 occupancies in accordance with Sections 907.2.6, 907.2.8 and 907.2.9, respectively. Single-or multiple-station smoke alarms shall be in accordance with Section 907.2.11.

Reason: The reference from Chapter 4 specific use and occupancy provisions to Chapter 9 requirements are inconsistent. Sometimes there is a reference to Chapter 9 but it also includes unique provisions for the occupancy that are not found in Chapter 9. In other places, there is a simple reference to Chapter 9. For the most part the references are provided if there is something unique in Chapter 9 with respect to that occupancy or building type. There generally isn't a reference if Chapter 9 does not specifically call out the occupancy or building type. To be consistent we should either add in the references proposed above. At the end of the reason is a list of the references provided in Chapter 4.

An alternative approach would be to eliminate the sections which just provide reference, but contain no other specific provisions. The first approach would add 7 new sections, revise 2 and delete one. The alternative approach would not add any, but would delete 20 or 21 sections which only refer the reader to other requirements. If you select the alternative approach to delete the references that are simple references, those sections shown in red font below would be deleted. Some of these were just added in the 2009 code.

Detailed reason for the changes proposed:

1. Standpipes will occur in highrises because of their height.
2. There are specific requirements for sprinklers for enclosed garages
3. There are specific requirements for sprinklers for repair garages.
4. The standpipe reference for open parking garages is not in language consistent with the other references.
5. This is a misleading reference. First it is partially redundant with Section 403.9. Secondly it says do sprinklers where required by other provisions of this code. Such a reference is misleading if not beyond vague. You could put tons of references like this in chapter 4. Provide stairways when required by other provisions of the code. This isn't needed.
6. I-3 occupancies are specially called out in 903.
7. 905 has specific direction on the standpipes for helistops.
8. Sec 415.6.2.4 restates the sprinkler requirement for H occupancies found in Sec. 903. But as currently located it is under the special provisions for H-2 occupancies. All H's have to be sprinklered, not just H-2. If there is a reference at all, it needs to be its own subsection before the specific occupancy provisions.
9. Group R and I-1 occupancies have unique sprinkler and alarm provisions, a reference is appropriate.

Summary of current 2009 IBC is as follows:

402 – MALLS

- 402.9 – Sprinkler system required
Special provisions cited
- 402.9.1 – Standpipes systems – reference only to 905.3.3
- 402.15 – voice/alarm communication system

403 – High-rise

- 403.3 – Sprinklers required
Special provisions cited
- 403.4.1 – smoke detection – reference only
- 403.4.2 – fire alarms system – reference only
- 403.4.3 – voice/alarm system – reference only

404 – Atriums

- 404.3 – Sprinklers required
Special provisions cited
- 404.4 – fire alarm system – reference only

405 – Underground buildings

- 405.3 – sprinklers required
Special provisions cited
- 405.6 – fire alarm system – reference only
- 405.10 – standpipe system – reference only

406 – motor vehicle

- 406.1 – private garages
Nothing
- 406.2 – 'public' parking garages
Nothing
- 406.3 – open parking garages
403.3.9 – standpipes installed where required by Chapter 9
403.3.10 – sprinklers and standpipes where required elsewhere in code
- 406.4 – enclosed garages
Nothing
- 406.5 – fuel dispensing
Nothing
- 406.6 – repair garages
Nothing

407 – I-2 occs

- 407.5 – sprinklers required
Special provisions
- 407.6 – fire alarm system – reference only
- 407.7 - auto fire detection – specifics

408 – I-3 occs

- 408.10 fire alarms system – reference only

409 – Projection rooms

- Nothing

410 – Stages

- 410.6 sprinklers required
Special provisions
- 410.7 – standpipes – reference only

411 – amusement

- 411.3 – auto fire detection – reference only
- 411.4 – sprinklers required
Special provisions

412 – aircraft related

- 412.3 towers
412.3.4 – auto fire detection – reference only
- 412.4 aircraft hangars
412.4.6 – fire suppression
Specific provisions
- 412.5 residential hangars

- 412.5.3 – smoke alarms – reference only
- 412.6 paint hangers
 - Fire suppression per NFPA 409
- 412.7 – helicopter places
 - Nothing
- 413 Combustible storage** – see fire code
- 414 – Haz Materials**
 - 414.5.3 – auto fire detection – all H's get – reference
- 415 – H occupancies**
 - 415.6.2.4- all group H has sprinklers – reference only – But this is buried in the special provisions for H-2 – its in the wrong place
 - 415.8.4.6 – emergency alarm systems – special provisions = it will only apply to H-5
 - 415.8.8 – manual alarm – maybe special provisions
- 416 – Flammable finishes**
 - 416.5 – fire extinguishing per Chapter 9 but only for specific uses
- 417 – Drying rooms**
 - 417.4 – fire protection – mostly a reference
- 418 – organic coatings**
 - Nothing
- 419 – live/work**
 - 419.5 fire protection – references only for both fire alarm system and sprinkler system
- 420 – Groups R1, R-2, R-3 and I-1**
 - Nothing
- 421 – Hydrogen cutoff rooms**
 - Nothing
- 422 – Ambulatory health care**
 - 422.5 – sprinklers required – reference only
 - 422.6 – fire alarm – reference only
- 423 – Storm shelters**
 - Nothing

FILENAME: IBC 403

IBC6-09 CCC

[F]406.6.6 AND [F]406.6.6.1

1. Revise as follows:

[F] 406.6.6 Gas detection system. Repair garages used for the repair of vehicles fueled by nonodorized gases such as hydrogen and nonodorized LNG, shall be provided with ~~an approved~~ flammable gas detection system.

[F] 406.6.6.1 System design. The flammable gas detection system shall be listed or approved and shall be calibrated to the types of fuels or gases used by vehicles to be repaired. Gas detectors or sensors shall be listed in accordance with UL 2075 and shall indicate the gases they are intended to detect. The gas detection system shall be designed to activate when the level of flammable gas exceeds 25 percent of the lower explosive limit. Gas detection shall also be provided in lubrication or chassis repair pits of garages used for repairing nonodorized LNG-fueled vehicles.

2. Add standard to IBC Chapter 35 as follows:

UL

2075-2007 Standard for Gas and Vapor Detectors and Sensors

Reason: The proposed revision will provide correlation of these two IBC sections with their parallel sections in the IFC, Sections 2211.7.2 and 2211.7.2.1, which read as follows:

2211.7.2 Gas detection system. Repair garages used for repair of vehicles fueled by nonodorized gases, such as hydrogen and nonodorized LNG, shall be provided with a flammable gas detection system.

2211.7.2.1 System design. The flammable gas detection system shall be *listed or approved* and shall be calibrated to the types of fuels or gases used by vehicles to be repaired. Gas detectors or sensors shall be *listed* in accordance with UL 2075 and shall indicate the gases they are intended to detect. The gas detection system shall be designed to activate when the level of flammable gas exceeds 25 percent of the lower flammable limit (LFL). Gas detection shall also be provided in lubrication or chassis service pits of repair garages used for repairing nonodorized LNG-fueled vehicles.

This proposal is based on code changes F157-06/07 (AM) and F235-07/08 (AS) which revised the IFC sections with the dashed-out/underlined text shown in the parallel IBC sections but the changes were not carried over into the parallel IBC sections in the 2009 edition.

FILENAME: IBC [F]406.6.6-406.6.6.1

IBC7-09 CCC

504.2, 506.3

Revise as follows:

504.2 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the value specified in Table 503 for maximum height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one. These increases are permitted in addition to the area increase in accordance with Sections 506.2 and 506.3. For Group R buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.2, the value specified in Table 503 for maximum height is increased by 20 feet (6096 mm) and the maximum number of stories is increased by one, but shall not exceed 60 feet (18 288 mm) or four stories, respectively.

Exceptions: The use of an automatic sprinkler system to increase building heights shall not be permitted for the following conditions:

1. Buildings, or portions of buildings, classified as a Group I-2 occupancy of Type IIB, III, IV or V construction.
2. Buildings, or portions of buildings, classified as a Group H-1, H-2, H-3 or H-5 occupancy.
3. Fire-resistance rating substitution Buildings where an automatic sprinkler system is substituted for fire-resistance rated construction in accordance with Table 601, Note d.

506.3 Automatic sprinkler system increase. Where a building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the area limitation in Table 503 is permitted to be increased by an additional 200 percent ($I_s = 2$) for buildings with more than one story above grade plane and an additional 300 percent ($I_s = 3$) for buildings with no more than one story above grade plane. These increases are permitted in addition to the height and story increases in accordance with Section 504.2.

Exception: The use of an automatic sprinkler system to increase the building area limitation-increases shall not be permitted for the following conditions:

1. The automatic sprinkler system increase shall not apply to Buildings with an occupancy in Group H-1. Buildings classified as a Group H-1 occupancy.
2. The automatic sprinkler system increase shall not apply to the building area of an occupancy in Group H-2 or H-3. Buildings, or portions of buildings, classified as either a Group H-2 or H-3 occupancy. For buildings containing such occupancies, the allowable area shall be determined in accordance with Section 508.4.2, with the sprinkler system increase applicable only to the portions of the building not classified as Group H-2 or H-3.
3. Buildings where an automatic sprinkler system is substituted for fire-resistance rated construction Fire-resistance rating substitution in accordance with Table 601, Note d.

Reason: There is a proposal which will be heard by the General committee which would not allow use of automatic sprinklers for both height and area increase in the same building. Without considering the merits of that proposal, what it did was point out the inconsistency in format and language between Sections 504.2 and 506.3. Many of these exceptions are incomplete sentences and therefore vague. 506.3 has all the exceptions as one. That is a good format, and should be in 504.2.

FILENAME: ccc G9 504.2

IBC8-09 CCC

Table 508.3.3

Proponent: Richard Linderman, AIA representing Linderman Group Architects, Inc.

Revise as follows:

Revise Table 508.3.3 by eliminating all references to fire separation requirements for non-sprinklered R occupancy groups. Place NP (not permitted) in all boxes in columns under NS in occupancy row R.

Reason:

1. This change is required to correct the table. Non-sprinklered buildings with a R occupancy are prohibited by: [F] 903.2.7 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.
2. This will eliminate confusion from the table's incorrect implication that non-sprinklered buildings with a R occupancy are allowed.

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

FILENAME: LINDERMAN-G1-T508.4

IBC9–09 CCC

Table 508.4

Proponent: Sarah A. Rice, C.B.O., representing self

Revise as follows:

**Table 508.4
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)**

Occupancy	A ^{d,c} , E		I-1, I-2, I-3		I-2		R		F-2, S-2 ^{b,a} , U		B, F-1, M, S-1		H-1		H-2		H-3, H-4, H-5		H-5	
	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS	S	NS
A ^{d,c} , E	N	N	1	2	2	NP	1	2	N	1	1	2	NP	NP	3	4	2	3 ^a	2	NP
I-1, I-3, I-4			N	N	2	NP	1	NP	1	2	1	2	NP	NP	3	NP	2	NP	2	NP
I-2					N	N	2	NP	2	NP	2	NP	NP	NP	3	NP	3	NP	3	NP
R							N	NP	1 ^{e,b}	2 ^{e,b}	1	2	NP	NP	3	NP	2	NP	2	NP
F-2, S-2 ^{b,a} , U									N	N	1	2	NP	NP	3	4	2	3 ^a	2	NP
B, M, F-1, S-1											N	N	NP	NP	2	3	1	2 ^a	1	NP
H-1													N	NP	NP	NP	NP	NP	NP	NP
H-2															N	NP	1	NP	1	NP
H-3, H-4, H-5																	1 ^{e,f,d}	NP	1	NP
H-5																			N	NP

- a. For Group H-5 occupancies, See Section 903.2.5.2
- b. a. 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. b. See Section 406.1.4 (separations between dwelling unit and private garage)
- d. c. Commercial kitchens need not be separated from the restaurant seating areas that they serve
- e. d. Separation is not required between occupancies in the same classification
- f. For H-5 occupancies, See Section 415.8.2.2.

Reason: The reason for the changes are to clarify the application of the table for H-3, H-4 and H-5 occupancies. In the current table these three H-occupancies are lumped in the same column and row. But the H-5 sprinkler requirement is not the same as the other H-occupancies, requiring a footnote in 3 places to explain that the separation rating listed in the NS column doesn't apply to a building containing an H-5. The current footnote 'a' sends the user to Section 903.2.5.2 where you discover that H-5 occupancies must be in a fully sprinkler protected building. Therefore for H-5's, the proper thing for all cells in the NS column is NP. By giving H-5 its own column, the footnote can be deleted, and the code user doesn't have to chase around Chapter 9 for the answer.

Footnote f is proposed for deletion because it sends the code user to Section 415.8.2.2. That section has nothing to do with separation of unlike occupancies, but contains H-5 regulations that require rated walls within the H-5. If we were to put a footnote in the table for every provision that required rated separations, the table would be unusable. Therefore, for consistency it is proposed to delete footnote f without replacement.

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

ICCFILENAME: RICE G4 T508.4.doc

IBC10–09 CCC

Table 601

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

Revise as follows:

**TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (hours)**

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A ^d	B	A ^d	B	HT	A	B
Primary structural frame ^g (see Section 202)	(No change in this row.)								
Bearing walls Exterior ^{f, g} Interior	(No change in this row.)								
Nonbearing walls and partitions	(No change in this row.)								

Exterior	
Nonbearing walls and partitions Interior	(No change in this row.)
Floor construction and <u>associated</u> secondary members (see Section 202)	(No change in this row.)
Roof construction and <u>associated</u> secondary members (see Section 202)	(No change in this row.)

(Portions of table not shown remain unchanged)

Reason: Table 601 is unclear about the fire protection requirements for secondary members. Secondary members are listed twice in the table, with each listing referring the reader to Section 202. Section 202 covers a variety of secondary members, and this table does not differentiate between them. This proposal clarifies which types of secondary members are to have the indicated fire-resistance rating requirements.

In its current form, Table 601 appears to require protection of curtain walls and seismic bracing, since these can qualify as secondary members. It has never been the intent of the code (going back to at least one of the legacy codes) to require a fire resistance rating for these types of members. The confusion appears to stem from the series of changes made to the table in the last code development cycle. Item FS115-07/08 made the change to add "secondary members" to the rows for floor and roof construction in the table. Previously, the rows referenced "including supporting beams and joists". However, the discussion on Item FS115-07/08 indicated that there was no intent to change the application of the code to these other members. This proposal clarifies that "secondary members" are only those associated with a floor or roof, and is consistent with the intent of the code.

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

ICCFILENAME: Traxler-G6-T601.doc

IBC11-09 CCC

Table 602.4

Revise the title of the table as follows:

WOOD MEMBER SIZE EQUIVALENCIES

(Balance of TABLE is to remain unchanged)

REASON The table itself is meaningless without use of Section 602.4, however the title of the table gives no hint of what it does other than provide numbers.

FILENAME: CCC G3 IBC 602

IBC12-09 CCC

705.2

Proponent: Maureen Traxler, City of Seattle, representing Seattle Dept of Planning & Development

Revise as follows:

705.2 Projections. Cornices, eave overhangs, exterior balconies and similar projections extending beyond the *exterior wall* (2006 said "beyond the floor area") shall conform to the requirements of this section and Section 1406. Exterior egress balconies and *exterior exit stairways* shall also comply with Sections 1019 and 1026, respectively. Projections shall not extend beyond the distance determined by the following three methods, whichever results in the lesser projection:

1. A point one-third the distance from the exterior face of the wall to the *lot line* where protected openings or a combination of protected and unprotected openings are required in the *exterior wall*.
2. A point one-half the distance from the exterior face of the wall to the *lot line* where all openings in the *exterior wall* are permitted to be unprotected, or the building is equipped ~~throughout~~ with a water curtain and an automatic sprinkler system installed throughout under the provisions of Section 705.8.2.
3. More than 12 inches (305 mm) into areas where openings are prohibited.
Buildings on the same lot and considered as portions of one building in accordance with Section 705.3 are not required to comply with this section.

Reason: We have found this provision to be confusing and misleading. Because it specifically mentions only the sprinkler system, it can be read not to require the water curtain. This proposal clarifies that the water curtain required by the exception to Section 705.8.2 is required in addition to the sprinkler system.

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

FILENAME: Traxler-FS5-705.2 sub only

IBC13–09 CCC Table 705.8

Proponent: Homer Maiel, PE, CBO, City of San Jose, representing ICC Tri-Chapter (Peninsula, East Bay, Monterey Bay)

Revise as follows:

**TABLE 705.8
MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE
OF OPENING PROTECTION**

FIRE SEPARATION DISTANCE (feet)	DEGREE OF OPENING PROTECTION	ALLOWABLE AREA ^a
0 to less than 3 ^{b,c}	Unprotected, Nonsprinklered (UP,NS)	Not Permitted
	Unprotected,Sprinklered (UP, S) ⁱ	Not Permitted
	Protected (P)	Not Permitted
3 to less than 5 ^{d,e}	Unprotected, Nonsprinklered (UP,NS)	Not Permitted
	Unprotected,Sprinklered (UP, S) ⁱ	15%
	Protected (P)	15%
5 to less than 10 ^{e,fi}	Unprotected, Nonsprinklered (UP,NS)	10% ⁿ
	Unprotected,Sprinklered (UP, S) ⁱ	25%
	Protected (P)	25%

(Portions of table not shown remain unchanged)

(Portions of footnotes not shown remain unchanged)

i. For special requirements for Group U occupancies, see Section 406.1.2.

Reason: This footnote is copied from 2006 IBC. It has been left out in 2009 IBC. For the reader it is important to have this footnote, to realize that there is an exception to this table in Section 406.1.2

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

FILENAME: MAIEL-FS1-TABLE 705.8

IBC14–09 CCC 705.8.1 & 801.7

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

Revise as follows:

705.8.1 Allowable area of openings. The maximum area of unprotected and protected openings permitted in an exterior wall in any story of a building shall not exceed the percentages specified in Table 705.8.

Exceptions:

1. In other than Group H occupancies, unlimited unprotected openings are permitted in the first story above grade plane either:
 - 1.1. Where the wall faces a street and has a fire separation distance of more than 15 feet (4572 mm); or
 - 1.2. Where the wall faces an unoccupied space. The unoccupied space shall be on the same lot or dedicated for public use, shall not be less than 30 feet (9144 mm) in width and shall have access from a street by a posted fire lane in accordance with the *International Fire Code*.
2. Buildings whose exterior bearing walls, exterior nonbearing walls and exterior primary structural frame are not required to be fire-resistance rated shall be permitted to have unlimited unprotected openings.

801.7 Windows. Show windows in the exterior walls of the first *story* above grade plane shall be permitted to be of wood or of unprotected metal framing.

Reason: This proposal corrects the use of the term “grade plane” in two places. Stories are measured from grade plane.

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

ICCFILENAME: Traxler-FS4-705.8.1 sub only

IBC15–09 CCC

708.2

Proponent: Tony Crimi, A.C. Consulting Solutions Inc., representing International Firestop Council

Revise as follows:

708.2 Shaft enclosure required. Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this section.

Exceptions:

1. A shaft enclosure is not required for openings totally within an individual residential *dwelling unit* and connecting four *stories* or less.
2. A shaft enclosure is not required in a building equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 for an escalator opening or *stairway* that is not a portion of the *means of egress* protected according to Item 2.1 or 2.2.
 - 2.1. Where the area of the floor opening between *stories* does not exceed twice the horizontal projected area of the escalator or *stairway* and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Groups B and M, this application is limited to openings that do not connect more than four *stories*.
 - 2.2. Where the opening is protected by *approved* power-operated automatic shutters at every penetrated floor. The shutters shall be of noncombustible construction and have a *fire-resistance rating* of not less than 1.5 hours. The shutter shall be so constructed as to close immediately upon the actuation of a smoke detector installed in accordance with Section 907.3 and shall completely shut off the well opening. Escalators shall cease operation when the shutter begins to close. The shutter shall operate at a speed of not more than 30 feet per minute (152.4 mm/s) and shall be equipped with a sensitive leading edge to arrest its progress where in contact with any obstacle, and to continue its progress on release there from.
3. A shaft enclosure is not required for penetrations ~~by pipe, tube, conduit, wire, cable and vents~~ protected in accordance with Section 713.4.
4. (*Continue without change*)

Reason: Because Exception 3 in 708.2 points directly to 713.4, there is no need for a list of items to be incorporated in this article. In fact, the list in this article is now different from the list in 713.4, potentially causing enforcement and interpretation problems.

Justification: The sole purpose of this exception in 708.2 is to act as a pointer for the penetrating items addressed in Article 713.4. As such, there is no need for a list of items to be incorporated in this article. Article 713.4 already contains a list of penetrating items that it applies to, which is slightly different than the list contained here. In order to avoid having to maintain the list of items in these articles identical, the proposed language should be deleted so that this exception is only a pointer to 713.4.

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

FILENAME: CRIMI-FS4-708.2

IBC16–09 CCC

708.14.2

Proponent: Robert J Davidson, Code Consultant/Alan Shuman, President, representing the National Association of State Fire Marshals (NASFM)

Revise section scoping as follows:

708.14 Elevator, dumbwaiter and other hoistways.

Elevator, dumbwaiter and other hoistway enclosures shall be constructed in accordance with Section 708 and Chapter 30.

708.14.1 Elevator lobby. *(No change to current text)*

Exceptions:

- 1.- 5 *(No change to existing text)*
6. Enclosed elevator lobbies are not required where the elevator hoistway is pressurized in accordance with Section ~~708.14.2~~ **909.21**.
7. *(No change to existing text)*

708.14.2 909.21 Enclosed elevator lobby pressurization alternative. Where elevator hoistway pressurization is provided in lieu of required enclosed elevator lobbies, the pressurization system shall comply with this section.

708.14.2.1 909.21.1 Pressurization requirements. *(No change to current text)*

708.14.2.2 909.21.2 Rational analysis. *(No change to current text)*

708.14.2.3 909.21.3 Ducts for system. *(No change to current text)*

708.14.2.4 909.21.4 Fan system. The fan system provided for the pressurization system shall be as required by this section.

708.14.2.4.1 909.21.4.1 Fire resistance. *(No change to current text)*

708.14.2.4.2 909.21.4.2 Smoke detection. *(No change to current text)*

708.14.2.4.3 909.21.4.3 Separate systems. *(No change to current text)*

708.14.2.4.4 909.21.4.4 Fan capacity. *(No change to current text)*

708.14.2.5 909.21.5 Standby power. *(No change to current text)*

708.14.2.6 909.21.6 Activation of pressurization system. *(No change to current text)*

708.14.2.7 909.21.7 Special inspection. *(No change to current text)*

708.14.2.8 909.21.8 Marking and identification. *(No change to current text)*

708.14.2.9 909.21.9 Control diagrams. *(No change to current text)*

708.14.2.10 909.21.10 Control panel. *(No change to current text)*

708.14.2.11 909.21.11 System response time. *(No change to current text)*

Reason: There are no technical changes proposed. The purpose of this change is to place the hoistway pressurization system requirements which are a form of a smoke control system under Section 909 Smoke Control Systems. This will consolidate the requirements for the various types of smoke control systems in one location of the code.

The obvious need for this change starts with consistency of review by having the same committee handle similar topics, and the need was verified in the last cycle as a number of sections were added to 708.14.2 linking back to Section 909.

The option to use the hoistway pressurization method will remain at Section 798.14.1, Exception 6, only the design and installation requirements for the pressurization system will be relocated. This change will be consistent with how the pressurized stairway provisions are handled, i.e., Section 1022.9 provides for the use of pressurized stairways as an option and then refers to Section 909.20 for the design and installation requirements.

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

ICCFILENAME: Davidson-Shuman-FS1-708.14.2 Sub only

IBC17-09 CCC

713.4.1.3

Proponent: Bob Eugene, representing Underwriters Laboratories Inc

Delete without substitution:

~~**713.4.1.3 Ducts and air transfer openings.** Penetrations of horizontal assemblies by ducts and air transfer openings shall comply with Section 716.~~

Reason: With the addition of section 713.1.1 into the 2009 IBC, which covers ducts and air transfer openings for both vertical and horizontal assemblies, this section is no longer needed.

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

ICCFILENAME: EUGENE-FS3-713.4.1.3

IBC18-09 CCC

716.1

Proponent: Maureen Traxler, representing City of Seattle, Seattle Dept of Planning & Development

Revise as follows:

716.1 General. The provisions of this section shall govern the protection of duct penetrations and air transfer openings in assemblies required to be protected and duct penetrations in nonfire-resistance-rated floor assemblies.

Reason: Section 716.6.3 includes requirements for duct systems that penetrate nonfire-resistance-rated floor assemblies. Therefore, the charging paragraph should also include assemblies that are not required to be fire-resistance-rated.

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

FILENAME: Traxler-FS2-716.1

IBC19-09 CCC

Table 721.5.1(1)

Proponent: Phil Zanghi representing W.R. Grace

Revise as follows:

**TABLE 721.5.1(1)
W/D RATIOS FOR STEEL COLUMNS**

STRUCTURAL SHAPE	CONTOUR PROFILE	BOX PROFILE	STRUCTURAL SHAPE	CONTOUR PROFILE	BOX PROFILE
W14 x 233	2.49 <u>2.55</u>	3.65	W10 x 112	1.78 <u>1.81</u>	2.57
x 211	2.28 <u>2.32</u>	3.35	x 100	1.64 <u>1.64</u>	2.33
x 193	2.10 <u>2.14</u>	3.09	x 88	1.43 <u>1.45</u>	2.08
x 176	1.93 <u>1.96</u>	2.85	x 77	1.26 <u>1.28</u>	1.85
x 159	1.75 <u>1.78</u>	2.60	x 68	1.13 <u>1.15</u>	1.66
x 145	1.64 <u>1.64</u>	2.39	x 60	1.00 <u>1.01</u>	1.48
x 132	1.52 <u>1.56</u>	2.25	x 54	0.94 <u>0.922</u>	1.34
x 120	1.39 <u>1.42</u>	2.06	x 49	0.83 <u>0.84</u>	1.23
x 109	1.27 <u>1.29</u>	1.88	x 45	0.87 <u>0.888</u>	1.24
x 99	1.16 <u>1.18</u>	1.72	x 39	0.76 <u>0.78</u>	1.09
x 90	1.06 <u>1.08</u>	1.58	x 33	0.65 <u>0.661</u>	0.93
x 82	1.20 <u>1.23</u>	1.68			
x 74	1.09 <u>1.12</u>	1.53	W8 x 67	1.34 <u>1.37</u>	1.94
x 68	1.04 <u>1.04</u>	1.41	x 58	1.18 <u>1.20</u>	1.71
x 61	0.94 <u>0.928</u>	1.28	x 48	0.99 <u>1.00</u>	1.44

STRUCTURAL SHAPE	CONTOUR PROFILE	BOX PROFILE	STRUCTURAL SHAPE	CONTOUR PROFILE	BOX PROFILE
x 53	<u>0.89</u> <u>0.915</u>	1.21	x 40	<u>0.83</u> <u>0.849</u>	1.23
x 48	<u>0.84</u> <u>0.835</u>	1.10	x 35	<u>0.73</u> <u>0.749</u>	1.08
x 43	<u>0.73</u> <u>0.752</u>	0.99	x 31	<u>0.65</u> <u>0.665</u>	0.97
			x 28	<u>0.67</u> <u>0.688</u>	0.96
W12 x 190	<u>2.46</u> <u>2.50</u>	3.51	x 24	<u>0.58</u> <u>0.591</u>	0.83
x 170	<u>2.22</u> <u>2.26</u>	3.20	x 21	<u>0.57</u> <u>0.577</u>	0.77
x 152	<u>2.04</u> <u>2.04</u>	2.90	x 18	<u>0.49</u> <u>0.499</u>	0.67
x 136	<u>1.82</u> <u>1.86</u>	2.63			
x 120	<u>1.62</u> <u>1.65</u>	2.36	W6 x 25	<u>0.69</u> <u>0.696</u>	1.00
x 106	<u>1.44</u> <u>1.47</u>	2.11	x 20	<u>0.56</u> <u>0.563</u>	0.82
x 96	<u>1.32</u> <u>1.34</u>	1.93	x 16	<u>0.57</u> <u>0.584</u>	0.78
x 87	<u>1.20</u> <u>1.22</u>	1.76	x 15	<u>0.42</u> <u>0.431</u>	0.63
x 79	<u>1.10</u> <u>1.11</u>	1.61	x 12	<u>0.43</u> <u>0.448</u>	0.60
x 72	<u>1.00</u> <u>1.02</u>	1.48	x 9	<u>0.33</u> <u>0.338</u>	0.46
x 65	<u>0.94</u> <u>0.925</u>	1.35			
x 58	<u>0.94</u> <u>0.925</u>	1.31	W5 x 19	<u>0.64</u> <u>0.644</u>	0.93
x 53	<u>0.84</u> <u>0.855</u>	1.20	x 16	<u>0.54</u> <u>0.55</u>	0.80
x 50	<u>0.89</u> <u>0.909</u>	1.23			
x 45	<u>0.84</u> <u>0.829</u>	1.12	W4 x 13	<u>0.54</u> <u>0.556</u>	0.79
x 40	<u>0.72</u> <u>0.734</u>	1.00			

For SI: 1 pound per linear foot per inch = 0.059 kg/m/mm.

TABLE 721.5.1(4)
WEIGHT-TO-HEATED-PERIMETER RATIOS (W/D)
FOR TYPICAL WIDE FLANGE BEAM AND GIRDER SHAPES

STRUCTURAL SHAPE	CONTOUR PROFILE	BOX PROFILE	STRUCTURAL SHAPE	CONTOUR PROFILE	BOX PROFILE
W36 x 300	<u>2.47</u> <u>2.50</u>	3.33	x 68	<u>0.92</u> <u>0.942</u>	1.21
x 280	<u>2.34</u> <u>2.35</u>	3.12	x 62	<u>0.92</u> <u>0.934</u>	1.14
x 260	<u>2.16</u> <u>2.18</u>	2.92	x 55	<u>0.82</u> <u>0.828</u>	1.02
x 245	<u>2.04</u> <u>2.08</u>	2.76			
x 230	<u>1.92</u> <u>1.95</u>	2.61	W21 x 147	<u>1.83</u> <u>1.87</u>	2.60
x 210	<u>1.94</u> <u>1.96</u>	2.45	x 132	<u>1.66</u> <u>1.68</u>	2.35
x 194	<u>1.80</u> <u>1.81</u>	2.28	x 122	<u>1.54</u> <u>1.57</u>	2.19
x 182	<u>1.69</u> <u>1.72</u>	2.15	x 111	<u>1.44</u> <u>1.43</u>	2.01
x 170	<u>1.59</u> <u>1.60</u>	2.01	x 101	<u>1.29</u> <u>1.30</u>	1.84
x 160	<u>1.50</u> <u>1.51</u>	1.90	x 93	<u>1.38</u> <u>1.40</u>	1.80
x 150	<u>1.44</u> <u>1.43</u>	1.79	x 83	<u>1.24</u> <u>1.26</u>	1.62
x 135	<u>1.28</u> <u>1.29</u>	1.63	x 73	<u>1.10</u> <u>1.11</u>	1.44
			x 68	<u>1.03</u> <u>1.04</u>	1.35
W33 x 241	<u>2.11</u> <u>2.13</u>	2.86	x 62	<u>0.94</u> <u>0.952</u>	1.23
x 221	<u>1.94</u> <u>1.97</u>	2.64	x 57	<u>0.93</u> <u>0.952</u>	1.17
x 201	<u>1.78</u> <u>1.79</u>	2.42	x 50	<u>0.83</u> <u>0.838</u>	1.04
x 152	<u>1.54</u> <u>1.53</u>	1.94	x 44	<u>0.73</u> <u>0.746</u>	0.92
x 141	<u>1.44</u> <u>1.43</u>	1.80			
x 130	<u>1.34</u> <u>1.32</u>	1.67	W18 x 119	<u>1.69</u> <u>1.72</u>	2.42
x 118	<u>1.19</u> <u>1.21</u>	1.53	x 106	<u>1.52</u> <u>1.55</u>	2.18
			x 97	<u>1.39</u> <u>1.42</u>	2.01
W30 x 211	<u>2.00</u> <u>2.01</u>	2.74	x 86	<u>1.24</u> <u>1.27</u>	1.80
x 191	<u>1.82</u> <u>1.85</u>	2.50	x 76	<u>1.11</u> <u>1.13</u>	1.60
x 173	<u>1.66</u>	2.28	x 71	<u>1.21</u> <u>1.22</u>	1.59
x 132	<u>1.45</u> <u>1.47</u>	1.85	x 65	<u>1.11</u> <u>1.13</u>	1.47
x 124	<u>1.37</u> <u>1.39</u>	1.75	x 60	<u>1.03</u> <u>1.04</u>	1.36
x 116	<u>1.28</u> <u>1.30</u>	1.65	x 55	<u>0.95</u> <u>0.963</u>	1.26
x 108	<u>1.20</u> <u>1.21</u>	1.54	x 50	<u>0.87</u> <u>0.88</u>	1.15
x 99	<u>1.10</u> <u>1.12</u>	1.42	x 46	<u>0.86</u> <u>0.878</u>	1.09
			x 40	<u>0.75</u> <u>0.768</u>	0.96

W27 x 178	<u>4.85</u> <u>1.87</u>	2.55	× 35	<u>0.66</u> <u>0.672</u>	0.85
× 161	<u>4.68</u> <u>1.70</u>	2.33			
× 146	<u>4.53</u> <u>1.55</u>	2.12	W16 x 100	<u>4.56</u> <u>1.59</u>	2.25
× 114	<u>4.36</u> <u>1.39</u>	1.76	× 89	<u>4.40</u> <u>1.43</u>	2.03
× 102	<u>4.23</u> <u>1.24</u>	1.59	× 77	<u>4.22</u> <u>1.25</u>	1.78
× 94	<u>4.13</u> <u>1.15</u>	1.47	× 67	<u>4.07</u> <u>1.09</u>	1.56
× 84	<u>4.02</u> <u>1.03</u>	1.33	× 57	<u>4.07</u> <u>1.09</u>	1.43
			× 50	<u>0.94</u> <u>0.962</u>	1.26
			× 45	<u>0.85</u> <u>0.870</u>	1.15
W24 x 162	<u>4.85</u> <u>1.88</u>	2.57	× 40	<u>0.76</u> <u>0.780</u>	1.03
× 146	<u>4.68</u> <u>1.70</u>	2.34	× 36	<u>0.69</u> <u>0.702</u>	0.93
× 131	<u>4.52</u> <u>1.54</u>	2.12	× 31	<u>0.65</u> <u>0.661</u>	0.83
× 117	<u>4.36</u> <u>1.38</u>	1.91	× 26	<u>0.55</u> <u>0.558</u>	0.70
× 104	<u>4.22</u> <u>1.24</u>	1.71			
× 94	<u>4.26</u> <u>1.28</u>	1.63	W14 x 132	<u>4.83</u> <u>1.89</u>	3.00
× 84	<u>4.13</u> <u>1.15</u>	1.47	× 120	<u>4.67</u> <u>1.71</u>	2.75
× 76	<u>4.03</u> <u>1.05</u>	1.34	× 109	<u>4.53</u> <u>1.57</u>	2.52

TABLE 721.5.1(4)—continued
WEIGHT-TO-HEATED-PERIMETER RATIOS (W/D)
FOR TYPICAL WIDE FLANGE BEAM AND GIRDER SHAPES

STRUCTURAL SHAPE	CONTOUR PROFILE	BOX PROFILE	STRUCTURAL SHAPE	CONTOUR PROFILE	BOX PROFILE
× 99	<u>4.39</u> <u>1.43</u>	2.31	× 30	<u>0.79</u> <u>0.806</u>	1.12
× 90	<u>4.27</u> <u>1.31</u>	2.11	× 26	<u>0.69</u> <u>0.708</u>	0.98
× 82	<u>4.41</u> <u>1.45</u>	2.12	× 22	<u>0.59</u> <u>0.606</u>	0.84
× 74	<u>4.28</u> <u>1.32</u>	1.93	× 19	<u>0.59</u> <u>0.607</u>	0.78
× 68	<u>4.19</u> <u>1.22</u>	1.78	× 17	<u>0.54</u> <u>0.543</u>	0.70
× 61	<u>4.07</u> <u>1.10</u>	1.61	× 15	<u>0.48</u> <u>0.484</u>	0.63
× 53	<u>4.03</u> <u>1.06</u>	1.48	× 12	<u>0.38</u> <u>0.392</u>	0.51
× 48	<u>0.94</u> <u>0.970</u>	1.35			
× 43	<u>0.85</u> <u>0.874</u>	1.22	W8 x 67	<u>4.64</u> <u>1.65</u>	2.55
× 38	<u>0.79</u> <u>0.809</u>	1.09	× 58	<u>4.41</u> <u>1.44</u>	2.26
× 34	<u>0.74</u> <u>0.725</u>	0.98	× 48	<u>4.18</u> <u>1.21</u>	1.91
× 30	<u>0.63</u> <u>0.644</u>	0.87	× 40	<u>4.00</u> <u>1.03</u>	1.63
× 26	<u>0.64</u> <u>0.628</u>	0.79	× 35	<u>0.88</u> <u>0.907</u>	1.44
× 22	<u>0.52</u> <u>0.534</u>	0.68	× 31	<u>0.79</u> <u>0.803</u>	1.29
			× 28	<u>0.80</u> <u>0.819</u>	1.24
W12 x 87	<u>4.44</u> <u>1.47</u>	2.34	× 24	<u>0.69</u> <u>0.704</u>	1.07
× 79	<u>4.32</u> <u>1.34</u>	2.14	× 21	<u>0.66</u> <u>0.675</u>	0.96
× 72	<u>4.20</u> <u>1.23</u>	1.97	× 18	<u>0.57</u> <u>0.583</u>	0.84
× 65	<u>4.09</u> <u>1.11</u>	1.79	× 15	<u>0.54</u> <u>0.551</u>	0.74
× 58	<u>4.08</u> <u>1.10</u>	1.69	× 13	<u>0.47</u> <u>0.483</u>	0.65
× 53	<u>0.99</u> <u>1.02</u>	1.55	× 10	<u>0.37</u> <u>0.375</u>	0.51
× 50	<u>4.04</u> <u>1.06</u>	1.54			
× 45	<u>0.95</u> <u>0.974</u>	1.40	W6 x 25	<u>0.82</u> <u>0.839</u>	1.33
× 40	<u>0.85</u> <u>0.860</u>	1.25	× 20	<u>0.67</u> <u>0.678</u>	1.09
× 35	<u>0.79</u> <u>0.810</u>	1.11	× 16	<u>0.66</u> <u>0.684</u>	0.96
× 30	<u>0.69</u> <u>0.699</u>	0.96	× 15	<u>0.54</u> <u>0.521</u>	0.83
× 26	<u>0.60</u> <u>0.612</u>	0.84	× 12	<u>0.54</u> <u>0.526</u>	0.75
× 22	<u>0.64</u> <u>0.623</u>	0.77	× 9	<u>0.39</u> <u>0.398</u>	0.57
× 19	<u>0.53</u> <u>0.540</u>	0.67			
× 16	<u>0.45</u> <u>0.457</u>	0.57	W5 x 19	<u>0.76</u> <u>0.776</u>	1.24
× 14	<u>0.40</u> <u>0.405</u>	0.50	× 16	<u>0.65</u> <u>0.664</u>	1.07
W10 x 112	<u>2.14</u> <u>2.17</u>	3.38	W4 x 13	<u>0.65</u> <u>0.670</u>	1.05
× 100	<u>4.93</u> <u>1.97</u>	3.07			
× 88	<u>4.70</u> <u>1.74</u>	2.75			

× 77	1.52 1.54	2.45
× 68	1.35 1.38	2.20
× 60	1.20 1.22	1.97
× 54	1.09 1.11	1.79
× 49	0.99 1.01	1.64
× 45	1.03 1.06	1.59
× 39	0.94	1.40
× 33	0.77	1.20

For SI: Pounds per linear foot per inch = 0.059 kg/m/mm.

Reason: The purpose of the proposed code change is to revise outdated W/D ratios for W shaped steel columns and beams in Tables 721.5.1(1) and 721.5.1(4) respectively. The third and latest edition of AISC's Manual of Steel Construction – Load and Resistance Factor Design¹ published in 2001, details W/D ratios for contour profiles as shown in this code change proposal. Prior to 2001, the AISC refined the measurement of the shape perimeter to take into account the fillet profile between the flange and web. In doing so, the W/D ratios for virtually all W-shapes changed slightly. While the change may seem insignificant, the slight increase in W/D ratio when applied to UL's equation for thickness adjustment may result in a slightly lower requirement for fireproofing thickness.

To ensure consistency across documents, this code change proposal should be corrected to eliminate confusion.

¹ "Load and Resistance Factor Design – Third Edition", American Institute of Steel Construction, Chicago, IL, November 2001.

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

FILENAME: Zanghi-FS1-T721.5.1(1)

IBC20–09 CCC

803.1.2.1

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

Revise as follows:

803.1.2.1 Acceptance criteria for NFPA 286. The interior finish shall comply with the following:

1. During the 40 kW exposure, flames shall not spread to the ceiling.
2. The flame shall not spread to the outer extremity of the sample on any wall or ceiling.
3. Flashover, as defined in NFPA 286, shall not occur.
4. The peak heat release rate throughout the test shall not exceed 800 kW.
5. The total smoke released throughout the test shall not exceed 1,000 m².

~~During the 40 kW exposure, the interior finish shall comply with Item 1. During the 160 kW exposure, the interior finish shall comply with Item 2. During the entire test, the interior finish shall comply with Items 3 and 4.~~

- ~~1. During the 40 kW exposure, flames shall not spread to the ceiling.~~
- ~~2. During the 160 kW exposure, the interior finish shall comply with the following:~~
 - ~~–2.1. Flame shall not spread to the outer extremity of the sample on any wall or ceiling.~~
 - ~~–2.2. Flashover, as defined in NFPA 286, shall not occur.~~
- ~~3. The peak rate of heat release throughout the NFPA 286 test shall not exceed 800 kW.~~
- ~~4. The total smoke released throughout the NFPA 286 test shall not exceed 1,000 m².~~

Reason: This is purely editorial and intended for simplification. Clearly the interior finish should fail the criteria if the material has flame spreading to the outer extremity of the sample (meaning all the way to the end of the room or ceiling) even before the burner is raised to 160 kW. Also, the material should fail the test if flashover occurs when the burner is still at 40 kW. The present language could be interpreted to mean that a material that burns completely within a minute and/or reaches flashover does not fail the test. That should not be the case.

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

HIRSCHLER-FS12-803.1.2.1 sub only

IBC21-09 CCC

803.1.3.1

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

Revise as follows:

803.1.3.1 Acceptance Criteria for NFPA 265. ~~During the 40 kW exposure the interior finish shall comply with Item 1. During the 150 kW exposure the interior finish shall comply with Item 2. During the entire test the interior finish shall comply with Item 3.~~

- ~~1. During the 40 kW exposure, flames shall not spread to the ceiling.~~
- ~~2. During the 150 kW exposure, the interior finish shall comply with the following:~~
 - ~~2.1. Flame shall not spread to the outer extremities of the samples on the 8 foot by 12 foot (203 mm by 305 mm) walls.~~
 - ~~2.2. Flashover, as defined in NFPA 265, shall not occur.~~
- ~~3. The total smoke released throughout the test shall not exceed 1,000 m².~~

The interior finish shall comply with the following:

1. During the 40 kW exposure, flames shall not spread to the ceiling.
2. The flame shall not spread to the outer extremities of the samples on the 8 foot by 12 foot (203 by 305 mm) walls.
3. Flashover, as defined in NFPA 265, shall not occur.
4. The total smoke released throughout the test shall not exceed 1,000 m².

Reason: This proposal is purely editorial and intended for simplification. Clearly the interior finish should fail the criteria if the material has flame spreading to the outer extremity of the sample (meaning all the way to the end of the room or ceiling) even before the burner is raised to 150 kW. Also, the material should fail the test if flashover occurs when the burner is still at 40 kW. The present language could be interpreted to mean that a material that burns completely within a minute and/or reaches flashover does not fail the test. That should not be the case.

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

HIRSCHLER-FS9- 803.1.3.1 sub only

IBC22-09 CCC

803.13

Proponent: Marcelo M. Hirschler (GBH International)

Revise as follows:

803.13 Site-fabricated stretch systems. Where used as interior wall or interior ceiling finish materials, site-fabricated stretch systems containing all three components described in the definition in Section 802 shall be tested in the manner intended for use, and shall comply with the requirements of Section 803.1.1 or 803.1.2. If the materials are tested in accordance with ASTM E 84 or UL 723, specimen preparation and mounting shall be in accordance with ASTM E 2573.

Reason: Some systems do not consist of all three components of site-fabricated stretch systems and they should be tested in a manner appropriate to their use. In particular systems that contain a stretch membrane only and no core material have been shown to behave very differently in a fire situation from the site-fabricated stretch systems. It is important that the correct mounting method be used for each system.

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

FILENAME: HIRSCHLER-FS3-803.13

IBC23-09 CCC

906.1

Revise as follows:

[F] 906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

1. In ~~new and existing~~ Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

Exception: In ~~new and existing~~ Group A, B and E occupancies equipped throughout with quick response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.

2. Within 30 feet (9144 mm) of commercial cooking equipment.
3. In areas where flammable or combustible liquids are stored, used or dispensed.
4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 1415.1 of the *International Fire Code*.
5. Where required by the *International Fire Code* sections indicated in Table 906.1.
6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.

Reason: Deleting the reference to "new and existing" will make this section consistent with established code style in that other IBC sections do not call out "new and existing". Also, the scope of the IBC does not apply retroactively to existing buildings as does the IFC.

Cost Impact: None given.

FILENAME: IBC [F]906.1

IBC24-09 CCC

1008.1.4.4 (IFC [B] 1008.1.4.4)

Proponent: Tom Lariviere, Chairman, Joint Fire Service Review Committee

Revise as follows:

1008.1.4.4 1008.1.9.8 (IFC [B] 1008.1.4.4 1008.1.9.8) Access-controlled egress doors. The entrance doors in a *means of egress* in buildings with an occupancy in Group A, B, E, I-2, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Groups A, B, E, I-2, M, R-1 and R-2 are permitted to be equipped with an *approved* entrance and egress access control system which shall be installed in accordance with all of the following criteria:

1. A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.
2. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.
3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock—*independent of the access control system electronics*—and the doors shall remain unlocked for a minimum of 30 seconds.
4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.
5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.
6. Entrance doors in buildings with an occupancy in Group A, B, E or M shall not be secured from the egress side during periods that the building is open to the general public.

(Renumber subsequent sections)

Reason: This proposal will relocate the requirements for access controlled egress doors from a position in the code dealing with "special doors" to a position in the code which covers "door operations". Section 1008.1.9 et. al. contains requirements for delayed egress, locks and latches, hardware, unlatching, and electromagnetically locked egress doors. It is appropriate to locate the access controlled egress doors into this same general section of 1008.1.9 which is "door operation".

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

ICCFILENAME:Lariviere-E2-1008.1.4.4

IBC25-09 CCC

1002.1, 1008.1.7 (IFC [B] 1002.1, 1008.1.7); R202

Proponent: John Woestman, The Kellen Company, representing the Window and Door Manufacturers Association (WDMA)

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE MEANS OF EGRESS COMMITTEE. PART II WILL BE HEARD BY THE IRC BUILDING/ENERGY COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Add a new definition:

1002.1 (IFC [B] 1002.1) 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:

LANDING. A floor area or a designated portion of a floor area, at the head or foot of a flight of stairs or set of steps.

Revise as follows:

1008.1.7 (IFC [B] 1008.1.7) Thresholds. Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height for sliding doors serving dwelling units or 1/2 inch (12.7 mm) for other doors. Raised thresholds and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exception: The threshold height shall be limited to 7-3/4 inches (197 mm) where the occupancy is Group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; the door, other than an exterior storm or screen door, does not swing over the a landing or step; and the doorway is not on an accessible route as required by Chapter 11 and is not part of an Accessible unit, Type A unit or Type B unit.

PART II – IRC

Add a new definition:

SECTION R202 DEFINITIONS

LANDING. A floor area or a designated portion of a floor area, at the head or foot of a flight of stairs or set of steps.

Reason:

PART I – IBC - This proposal adds a definition to the IBC for "Landing" which is beneficial when attempting to interpret and apply the IBC. The revision in the exception in Section 1008.1.7 is minor and essentially editorial, and improves ease of understanding the IBC.

There is not always a landing or step at every door, and the revision accommodates this. Also, "the" implies there is always a landing or step.

PART II – IRC - This proposal adds a definition to the IRC for "Landing" which is beneficial when attempting to interpret and apply the IRC. "Landing" is used in numerous locations in the IRC but currently is not defined.

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

ICCFILENAME:Woestman-E2-1008.1.7

IBC26-09 CCC

1024.2.1 (IFC [B] 1024.2.1)

Proponent: Manny Muniz, California Deputy State Fire Marshal (Ret.), representing self

Revise as follows:

1024.2.1 (IFC [B] 1024.2.1) Steps. A solid and continuous stripe shall be applied to the horizontal leading edge of each step and shall extend for the full length of the step. Outlining stripes shall have a minimum horizontal width of 1

inch (25 mm) and a maximum width of 2 inches (51 mm). The leading edge of the stripe shall be placed at a maximum of 1/2 inch (13 mm) from the leading edge of the step and the stripe shall not overlap the leading edge of the step by ~~not~~ more than 1/2 inch (13 mm) down the vertical face of the step.

Exception: The minimum width of 1 inch (25 mm) shall not apply to outlining stripes *listed* in accordance with UL 1994.

Reason: As written, the third sentence requires that the stripe shall overlap the leading edge of the step by not more than 1/2 inch down the vertical face of the step. This was not the intent of the original proponent, James Colgate, as evidenced by the original proposal wording which states "The leading edge of the stripe shall be placed at a maximum of 1/2 inch (13 mm) from the leading edge of the step and the stripe shall not overlap the leading edge of the step by not more than 1/2 inch (13 mm) down the vertical face of the step."

This may have been changed editorially when published in order to reduce the number of negatives in the sentence by eliminating the first "not" in the third sentence and keeping the second "not". Unfortunately, this changed the meaning of the original sentence. A more appropriate grammatical correction is to keep the first "not" and delete the second "not". This will keep the original intent of the sentence.

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

ICCFILENAME:Muniz-E4-1024.2.1

IBC27-09 CCC

1029.1 (IFC [B] 1029.1)

Proponent: Sarah A. Rice, C.B.O., representing self

Revise as follows:

1029.1 (IFC [B] 1029.1) General. In addition to the means of egress required by this chapter, provisions shall be made for emergency escape and rescue in Group R and I-4 R-3 occupancies. Basements and sleeping rooms below the fourth story above grade plane shall have at least one exterior emergency escape and rescue opening in accordance with this section. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Such openings shall open directly into a public way or to a yard or court that opens to a public way.

Exceptions:

- ~~1. In other than Group R-3 occupancies, buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.~~
- ~~2. In other than Group R-3 occupancies, sleeping rooms provided with a door to a fire-resistance-rated corridor having access to two remote exits in opposite directions.~~
- ~~3. The emergency escape and rescue opening is permitted to open onto a balcony within an atrium in accordance with the requirements of Section 404, provided the balcony provides access to an exit and the dwelling unit or sleeping unit has a means of egress that is not open to the atrium.~~
- ~~4.1. Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue windows.~~
- ~~5. High-rise buildings in accordance with Section 403.~~
- ~~6.2. Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court or exterior exit balcony that opens to a public way.~~
- ~~7.3. Basements without habitable spaces and having no more than 200 square feet (18.6m²) in floor area shall not be required to have emergency escape windows.~~

Reason: The proposal is intended to revise and eliminate outdated material. Group I-1 and all R occupancies are required to be protected by automatic sprinkler system per sections 903.2.5 and 903.2.7, respectively. Existing exception #2 exempts all occupancies other than R-3 when protected by a sprinkler system. Thus Section 1029 only applies to R-3 occupancies and the exceptions related to other occupancies can be deleted. Specifically exception 1 is the sprinkler exception; it is not needed. Exception 2 only applies to occupancies other than R-3; therefore it is not needed. Exception 3 applies in atriums; atriums are unlikely to have R-3 occupancies. Exception 5 applies to High-rise buildings which have to have a sprinkler system per section 403, thus they have been exempted twice. These provisions are remnants from the time when the code did not require sprinkler protection in all R and I-1 occupancies and are no longer needed. Arguments that these exceptions should not be eliminated because some jurisdictions do not require sprinklers for all R-occupancies, or that they use it for guidance of existing structures which are not sprinklered should not be a consideration. If jurisdictions are amending the code to eliminate requirements, they should be balancing that with appropriate additions. This section should not be used for existing buildings.

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

ICCFILENAME:Rice-E3-1029.1

IBC28-09 CCC

1210, 2903

1. Revise as follows:

SECTION 1210 **SURROUNDING MATERIALS TOILET AND BATHROOM REQUIREMENTS**

1210.1 Required fixtures. The number and type of plumbing fixtures provided in any occupancy shall comply with Chapter 29.

1210.2 Finish materials. Walls, floors and partitions in toilet and bathrooms shall comply with Sections 1210.2.1 through 1210.2.4.

1210.2.1 Floors and wall bases *(Text from 2009 Sec. 1210.1)*

1210.2.2 Walls and partitions *(Text from 2009 Sec. 1210.2)*

1210.2.3 Showers *(Text from 2009 Sec. 1210.3)*

1210.2.4 Waterproof joints *(Text from 2009 Sec. 1210.4)*

[P] 1210.3 Privacy. Privacy at water closets and urinals shall be provided in accordance with Sections 1210.2.1 and 1210.2.2.

[P] 1210.3.1 Water closet compartments. *(text from 2009 Sec. 2903.1)*

[P] 1210.3.2 Urinal partitions. *(Text from 2009 Sec. 2903.2)*

1210.3 Toilet room location. Toilet rooms shall not open directly into a room used for the preparation of food for service to the public. *(2009 Sec. 1210.5)*

2901.1. Scope. The provisions of this chapter and the International Plumbing Code shall govern the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing equipment and systems. Toilet and bathrooms shall be constructed in accordance with Section 1210. Plumbing systems and equipment shall be constructed, installed and maintained in accordance with the International Plumbing Code. Private sewage disposal systems shall conform to the International Private Sewage Disposal Code.

2. Delete Section 2903 in its entirety.

REASON

Sections 1210 and 2903 are both telling designers how to design and finish the spaces that are either toilet rooms, bathrooms or both. The only distinction is that Chapter 29 provisions are repeats of the Plumbing Code whereas the Chapter 12 provisions are not repeated in the IPC. The proposal simply consolidates the provisions in Section 1210 and adds some quick paragraphs to give it a framework. There is no change in content or requirements.

The existing code organization is as follows:

Existing organization.

SECTION 1210 **SURROUNDING MATERIALS**

1210.1 Floors and wall base finish materials

1210.2 Walls and partitions

1210.3 Showers

1210.4 Waterproof Joints

1210.5 Toilet rooms. Toilet rooms shall not open directly into a room used for the preparation of food for service to the public.

SECTION 2903 TOILET ROOM REQUIREMENTS

[P] 2903.1 Water closet compartment

[P] 2903.2 Urinal partitions

[P] 2903.3 Interior finish. Interior finish surfaces of toilet rooms shall comply with Section 1210.

There is nothing magic about moving things to Chapter 12. They could as easily be consolidated in Chapter 29. See the following.

SECTION 2903 TOILET AND BATHROOM REQUIREMENTS

2903.1 Finish materials. Walls, floors and partitions in toilet and bathrooms shall comply with Sections 1210.2.1 through 1210.2.4.

2903.1.1 Floors and wall bases *(former 1210.1)*

2903.1.2 Walls and partitions *(former 1210.2)*

2903.1.3 Showers *(former 1210.3)*

2903.1.4 Waterproof joints *(former 1210.4)*

[P] 2903.2 Privacy. Privacy at water closets and urinals shall be provided in accordance with Sections 1210.2.1 and 1210.2.2.

[P] 2903.2.1 Water closet compartments. *(former 2903.1)*

[P] 2903.2.2 Urinal partitions. *(former 2903.2)*

~~**[P] 2903.3 Interior finish.** Interior finish surfaces of toilet rooms shall comply with Section 1210. *(This can die because 1210 is moved to here.)*~~

2903.3 Toilet room location. Toilet rooms shall not open directly into a room used for the preparation of food for service to the public. *(former 1210.5)*

FRED'S Alternative

Add new text and revise as follows:

SECTION 1210 TOILET AND BATHROOM REQUIREMENTS

1210.1 Required fixtures. The number and type of plumbing fixtures provided in any occupancy shall comply with Chapter 29.

1210.2 Finish materials. Walls, floors and partitions in toilet and bathrooms shall comply with Sections 1210.2.1 through 1210.2.4.

~~4210.1~~**1210.2.1 Floors and wall bases.**

~~4210.2~~**1210.2.2 Walls and partitions.**

~~4210.3~~**1210.2.3 Showers.**

~~4210.4~~**1210.2.4 Waterproof joints.**

1210.3 Privacy features. Privacy features at water closets and urinals shall be provided in accordance with Sections 2903.1 through 2903.2.3.

[P] 2901.1. Scope. The provisions of this chapter and the International Plumbing Code shall govern the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing equipment and systems. Toilet and bathrooms shall be constructed in accordance with Section 1210. Plumbing systems and equipment shall be constructed, installed and maintained in accordance with the International Plumbing Code. Private sewage disposal systems shall conform to the International Private Sewage Disposal Code.

3. Delete and substitute as follows:

~~**[P] 2903.3 Interior finish.** Interior finish surfaces of toilet rooms shall comply with Section 1210.~~

[P] 2903.3 Toilet room location. Toilet rooms shall not open directly into a room used for the preparation of food for service to the public.

ICCFILENAME: CC G5 IBC1210

IBC29-09 CCC

1405.3

Proponent: Maureen Traxler, Washington Association of Building Officials Technical Code Development

Revise as follows:

1405.3 Vapor retarders. Class I or II vapor retarders shall be provided on the interior side of frame walls in Zones 5, 6, 7, 8 and Marine 4. The appropriate zone shall be selected in accordance with Chapter 3 of the *International Energy Conservation Code*.

Exceptions:

1. Basement walls.
2. Below-grade portion of any wall.
3. Construction where moisture or its freezing will not damage the materials.

Reason: In the 2007-2008 code change cycle, the vapor retarder provisions were relocated from the IECC to IBC Section 1405.3, but no provisions for climate zones were added to the IBC. The reference to the IECC climate zones is necessary to complete the transition. We chose to cross reference the IECC climate zone provisions instead of adding them to the IBC because they are 16 pages long.

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

ICCFILENAME: TRAXLER-FS1-1405.3

IBC30-09 CCC

602.4, 1604.8, 1605, 1609, 1716, 2105, 2109, 2210, 2303, 2304, 2308

Revise as follows:

602.4 Type IV. Type IV construction (Heavy Timber, HT) is that type of construction in which the exterior walls are of noncombustible materials and the interior building elements are of solid or laminated wood without concealed spaces. The details of Type IV construction shall comply with the provisions of this section and Section 2304.10. Fire-retardant-treated wood framing complying with Section 2303.2 shall be permitted within exterior wall assemblies with a 2-hour rating or less. Minimum solid sawn nominal dimensions are required for structures built using Type IV construction (HT). For glued-laminated members the equivalent net finished width and depths corresponding to the minimum nominal width and depths of solid sawn lumber are required as specified in Table 602.4.

1604.8 Anchorage. Buildings and other structures, and portions thereof, shall be provided with anchorage in accordance with Sections 1604.8.1 through 1604.8.3, as applicable.

1604.8.1 General. Anchorage of the roof to walls and columns, and of walls and columns to foundations, shall be provided to resist the uplift and sliding forces that result from the application of the prescribed loads.

1605.1 General. Buildings and other structures, and portions thereof, shall be designed to resist:

1. The load combinations specified in Section 1605.2, 1605.3.1 or 1605.3.2,
2. The load combinations specified in Chapters 18 through 23, and
3. The load combinations with overstrength factor specified in Section 12.4.3.2 of ASCE 7 where required by

Section 12.2.5.2, 12.3.3.3 or 12.10.2.1 of ASCE 7. With the simplified procedure of ASCE 7 Section 12.14, the load combinations with overstrength factor of Section 12.14.3.2 of ASCE 7 shall be used.

Applicable loads shall be considered, including both earthquake and wind, in accordance with the specified load combinations. Each load combination shall also be investigated with one or more of the variable loads set to zero.

Where the load combinations with overstrength factor in Section 12.4.3.2 of ASCE 7 apply, they shall be used as follows:

1. The basic combinations for strength design with overstrength factor in lieu of Equations 16-5 and 16-7 in Section ~~1605.2.4~~ 1605.2.
2. The basic combinations for allowable stress design with overstrength factor in lieu of Equations 16-12, 16-13 and 16-15 in Section 1605.3.1.
3. The basic combinations for allowable stress design with overstrength factor in lieu of Equations 16-20 and 16-21 in Section 1605.3.2.

1605.2 Load combinations using strength design or load and resistance factor design.

~~1605.2.1 Basic load combinations.~~ Where strength design or load and resistance factor design is used, buildings and other structures, and portions thereof, shall be designed to resist the most critical effects resulting from the following combinations of factored loads:

(Remainder of Section 1605.2.1 remains unchanged)

~~1605.2.2~~ **1605.2.1 Flood loads.** Where flood loads, F_a , are to be considered in the design, the load combinations of Section 2.3.3 of ASCE 7 shall be used.

1609.5 Roof systems. Roof systems shall be designed and constructed in accordance with Sections 1609.5.1 through 1609.5.3, as applicable.

1609.5.1 Roof deck. The roof deck shall be designed to withstand the wind pressures determined in accordance with ASCE 7.

~~1716.1 Test standards for Joist hangers and connectors.~~ Testing of joist hangers shall be in accordance with Sections 1716.1.1 through 1716.1.3, as applicable.

~~1716.1.1 Test standards for joist hangers~~ **General.** The vertical load-bearing capacity, torsional moment capacity and deflection characteristics of joist hangers shall be determined in accordance with ASTM D 1761, using lumber having a specific gravity of 0.49 or greater, but not greater than 0.55, as determined in accordance with AF&PA NDS for the joist and headers.

Exception: The joist length shall not be required to exceed 24 inches (610 mm).

1716.1.2 Vertical load capacity for joist hangers. The vertical load-bearing capacity for the joist hanger shall be determined by testing a minimum of three joist hanger assemblies as specified in ASTM D 1761. If the ultimate vertical load for any one of the tests varies more than 20 percent from the average ultimate vertical load, at least three additional tests shall be conducted. The allowable vertical load-bearing capacity of the joist hanger shall be the lowest value determined from the following:

1. The lowest ultimate vertical load for a single hanger from any test divided by three (where three tests are conducted and each ultimate vertical load does not vary more than 20 percent from the average ultimate vertical load).
2. The average ultimate vertical load for a single hanger from all tests divided by three (where six or more tests are conducted).

3. The average from all tests of the vertical load that produce a vertical movement of the joist with respect to the header of 1/8 inch (3.2 mm).
4. The sum of the allowable design loads for nails or other fasteners utilized to secure the joist hanger to the wood members and allowable bearing loads that contribute to the capacity of the hanger.
5. The allowable design load for the wood members forming the connection.

4716.1.4 1716.1.2.1 Design value modifications for joist hangers. Allowable design values for joist hangers that are determined by Item 4 or 5 in Section 1716.1.2 shall be permitted to be modified by the appropriate load duration of loading factors as specified in AF&PA NDS but shall not exceed the direct loads as determined by Item 1, 2 or 3 in Section 1716.1.2. Allowable design values determined by Item 1, 2 or 3 in Section 1716.1.2 shall not be modified by load duration of loading factors.

1716.2 Concrete and clay roof tiles. Testing of concrete and clay roof tiles shall be in accordance with Sections 1716.2.1 and 1716.2.2, as applicable.

1716.2.1 Overturning resistance. Concrete and clay roof tiles shall be tested to determine their resistance to overturning due to wind in accordance with SBCCI SSTD 11 and Chapter 15.

1716.2.2 Wind tunnel testing. ~~When~~ Where concrete and clay roof tiles do not satisfy the limitations in Chapter 16 for rigid tile, a wind tunnel test shall be used to determine the wind characteristics of the concrete or clay tile roof covering in accordance with SBCCI SSTD 11 and Chapter 15.

2105.1 General. A quality assurance program shall be used to ensure that the constructed masonry is in compliance with the construction documents.

The quality assurance program shall comply with the inspection and testing requirements of Chapter 17.

2105.2 Acceptance relative to strength requirements. Where required by Chapter 17, verification of the strength of masonry shall be in accordance with Sections 2105.2.1 and 2105.2.2.

2105.2.1 Compliance with f'_m and f'_{AAC} . Compressive strength of masonry shall be considered satisfactory if the compressive strength of each masonry wythe and grouted collar joint equals or exceeds the value of f'_m for clay and concrete masonry and f'_{AAC} for AAC masonry. For partially grouted clay and concrete masonry, the compressive strength of both the grouted and ungrouted masonry shall equal or exceed the applicable f'_m . At the time of prestress, the compressive strength of the masonry shall equal or exceed f'_{mi} , which shall be less than or equal to f'_m .

2105.2.2 Determination of compressive strength. The compressive strength for each wythe shall be determined by the unit strength method or by the prism test method as specified herein.

2105.2.2.1 Unit strength method. The determination of compressive strength by the unit strength method shall be in accordance with Section 2105.2.2.1.1 for clay masonry, Section 2105.2.2.1.2 for concrete masonry and Section 2105.2.2.1.3 for AAC masonry.

2105.2.2.1.1 Clay masonry. The compressive strength of masonry shall be determined based on the strength of the units and the type of mortar specified using Table 2105.2.2.1.1, provided:

1. Units are sampled and tested to verify conformance with ASTM C 62, ASTM C 216 or ASTM C 652.
2. Thickness of bed joints does not exceed 5/8 inch (15.9 mm).
3. For grouted masonry, the grout meets one of the following requirements:
 - 3.1. Grout conforms to Article 2.2 of TMS 602/ACI 530.1/ASCE 6.
 - 3.2. Minimum grout compressive strength equals or exceeds f'_m but not less than 2,000 psi (13.79 Mpa).
The compressive strength of grout shall be determined in accordance with ASTM C 1019.

2105.2.2.2 Prism test method. The determination of compressive strength by the prism test method shall be in accordance with Sections 2105.2.2.2.1 and 2105.2.2.2.2.

2105.2.2.2.1 General. The compressive strength of clay and concrete masonry shall be determined by the prism test method:

1. Where specified in the construction documents.
2. Where masonry does not meet the requirements for application of the unit strength method in Section 2105.2.2.1.

2109.3 Adobe construction. Adobe construction shall comply with this section and shall be subject to the requirements of this code for Type V construction, Chapter 5 of TMS 402/ACI 530/ASCE 5 and this section.

2109.3.1 Unstabilized adobe. Unstabilized adobe shall comply with Sections 2109.3.1.1 through 2109.3.1.4.

2109.3.1.1 Compressive strength. Adobe units shall have an average compressive strength of 300 psi (2068 kPa) when tested in accordance with ASTM C 67. Five samples shall be tested and no individual unit is permitted to have a compressive strength of less than 250 psi (1724 kPa).

2109.3.2 Stabilized adobe. ~~2109.3.2.1 Material requirements.~~ Stabilized adobe shall comply with ~~the material requirements of~~ Section 2109.3.1 for unstabilized adobe in addition to Sections 2109.3.2.1.1 and 2109.3.2.1.2.

2109.3.4 Construction Detailed requirements. Adobe construction shall also comply with Sections 2109.3.4.1 through 2109.3.4.9.

~~2109.3.4.1 General.~~ Adobe construction shall be limited as stated in Sections 2109.3.4.1.1 through 2109.3.4.1.4.

2109.3.4.1.1 2109.3.4.1 Height restrictions Number of stories. Adobe construction shall be limited to buildings not exceeding one story, except that two-story construction is allowed when designed by a registered design professional.

2109.3.4.2 Mortar. Mortar for adobe construction shall comply with Sections 2109.3.4.2.1 and 2109.3.4.2.2.

~~2109.3.4.1.2 2109.3.4.2.1 Mortar restrictions General.~~ Mortar for stabilized adobe units shall comply with Chapter 21 or adobe soil. Adobe soil used as mortar shall comply with material requirements for stabilized adobe. Mortar for unstabilized adobe shall be portland cement mortar.

~~2109.3.4.1.3 2109.3.4.2.2 Mortar joints.~~ Adobe units shall be laid with full head and bed joints and in full running bond.

~~2109.3.4.1.4 2109.3.4.3 Parapet walls.~~ Parapet walls constructed of adobe units shall be waterproofed.

2109.3.4.2 2109.3.4.4 Wall thickness. The minimum thickness of exterior walls in one-story buildings shall be 10 inches (254 mm). The walls shall be laterally supported at intervals not exceeding 24 feet (7315 mm). The minimum thickness of interior load-bearing walls shall be 8 inches (203 mm). In no case shall the unsupported height of any wall constructed of adobe units exceed 10 times the thickness of such wall.

(Renumber Sections 2109.3.4.3 through 2109.3.4.7)

~~2210.3 Trusses.~~ **2210.3.1 Truss Design.** Cold-formed steel trusses shall be designed in accordance with AISI S214, Sections 2210.3.1 through 2210.3.5 and accepted engineering practice.

~~2210.3.2~~ **2210.3.1 Truss Design Drawings.** The truss design drawings shall conform to the requirements of Section B2.3 of AISI S214 and shall be provided with the shipment of trusses delivered to the job site. The truss design drawings shall include the details of permanent individual truss member restraint/bracing in accordance with Section B6(a) or B6(c) of AISI S214 if these methods are utilized to provide restraint/bracing.

(Renumber Sections 2110.3.3 through 2110.3.5)

2303.4 Trusses. Wood trusses shall comply with Sections 2303.4.1 through 2303.4.7.

2303.4.1 Design. Wood trusses shall be designed in accordance with the provisions of this code and accepted engineering practice. Members are permitted to be joined by nails, glue, bolts, timber connectors, metal connector plates and other approved framing devices.

2304.7 Floor and roof sheathing. Structural floor sheathing and structural roof sheathing shall comply with Sections 2304.7.1 and 2304.7.2, respectively.

2304.7.1 Structural floor sheathing. Structural floor sheathing shall be designed in accordance with the general provisions of this code and the special provisions in this section. Floor sheathing conforming to the provisions of Table 2304.7(1), 2304.7(2), 2304.7(3) or 2304.7(4) shall be deemed to meet the requirements of this section.

2304.8 Lumber decking. Lumber decking shall be designed and installed in accordance with the general provisions of this code and Sections 2304.8.1 through 2304.8.5.3.

2304.8.1 General. ~~Lumber decking shall be designed and installed in accordance with the general provisions of this code and Section 2304.8.~~ Each piece of lumber decking shall be square-end trimmed. When random lengths are furnished, each piece shall be square-end trimmed across the face so that at least 90 percent of the pieces are within 0.5 degrees (0.00873 rad) of square. The ends of the pieces shall be permitted to be beveled up to 2 degrees (0.0349 rad) from the vertical with the exposed face of the piece slightly longer than the opposite face of the piece. Tongue-and-groove decking shall be installed with the tongues up on sloped or pitched roofs with pattern faces down.

2304.8.3 Mechanically laminated decking. Mechanically laminated decking shall comply with Sections 2304.8.3.1 through 2304.8.3.3.

2304.8.3.1 General. Mechanically laminated decking consists of square-edged dimension lumber laminations set on edge and nailed to the adjacent pieces and to the supports.

2304.8.4 Two-inch sawn tongue-and-groove decking. Two-inch sawn tongue-and-groove decking shall comply with Sections 2304.8.4.1 through 2304.8.4.3.

2304.8.4.1 General. Two-inch (51 mm) decking shall have a maximum moisture content of 15 percent. Decking shall be machined with a single tongue-and-groove pattern. Each decking piece shall be nailed to each support.

2304.8.5 Three- and 4-inch sawn tongue-and-groove decking. Three- and four-inch sawn tongue-and-groove decking shall comply with Sections 2304.8.5.1 through 2304.8.5.3.

2304.8.5.1 General. Three-inch (76 mm) and 4-inch (102 mm) decking shall have a maximum moisture content of 19 percent. Decking shall be machined with a double tongue-and-groove pattern. Decking pieces shall be interconnected and nailed to the supports.

2304.9 Connections Connectors and fasteners. Connectors and fasteners shall comply with the applicable provisions of Sections 2304.9.1 through 2304.9.7.

2304.9.1 Fastener requirements. Connections for wood members shall be designed in accordance with the appropriate methodology in Section 2301.2. The number and size of nails connecting wood members shall not be less than that set forth in Table 2304.9.1.

2304.10 Heavy timber construction. Where a structure or portion thereof is required to be of Type IV construction by other provisions of this code, the building elements therein shall comply with the applicable provisions of Sections 2304.10.1 through 2304.10.5.

2304.10.1 Columns. Columns shall be continuous or superimposed throughout all stories by means of reinforced concrete or metal caps with brackets, or shall be connected by properly designed steel or iron caps, with pintles and base plates, or by timber splice plates affixed to the columns by metal connectors housed within the contact faces, or by other approved methods.

2304.11 Protection against decay and termites. Wood shall be protected from decay and termites in accordance with the applicable provisions of Sections 2304.11.1 through 2304.11.9.

2304.11.1 General. Where required by this section, protection from decay and termites shall be provided by the use of naturally durable or preservative-treated wood.

2308.5 Connections Connectors and fasteners. ~~Connections~~ Connectors and fasteners used in conventional construction shall comply with the requirements of Section 2304.9.

2308.9 Wall framing. Walls and partitions shall be constructed in accordance with the applicable provisions of Sections 2308.9.1 through 2308.9.4.2.

2308.9.1 Size, height and spacing. The size, height and spacing of studs shall be in accordance with Table 2308.9.1 except that utility-grade studs shall not be spaced more than 16 inches (406 mm) o.c., or support more than a roof and ceiling, or exceed 8 feet (2438 mm) in height for exterior walls and load-bearing walls or 10 feet (3048 mm) for interior nonload-bearing walls. Studs shall be continuous from a support at the sole plate to a support at the top plate to resist

loads perpendicular to the wall. The support shall be a foundation or floor, ceiling or roof diaphragm or shall be designed in accordance with accepted engineering practice.

Exception: Jack studs, trimmer studs and cripple studs at openings in walls that comply with Table 2308.9.5.

2308.9.5 Openings in exterior walls. Openings in exterior walls shall be constructed in accordance with Sections 2308.9.5.1 and 2308.9.5.2.

2308.9.5.1 Headers. Headers shall be provided over each opening in exterior-bearing walls. The spans in Table 2308.9.5 are permitted to be used for one- and two-family dwellings. Headers for other buildings shall be designed in accordance with Section 2301.2, Item 1 or 2. Headers shall be of two pieces of nominal 2-inch (51 mm) framing lumber set on edge as permitted by Table 2308.9.5 and nailed together in accordance with Table 2304.9.1 or of solid lumber of equivalent size.

Reason: The purpose for this proposal is to provide charging text at section headings that currently serve, in most cases, as titles to technical requirements and to make certain editorial changes where warranted. Without charging text, these titles are nonmandatory and, as such, serve no purpose other than as commentary. All instances of section headings without charging text in Chapters 16 through 23 of the 2009 IBC are included in this proposal except for Sections 1605.3, 2113.11.2, 2113.11.3, 2113.13 and 2306.2. A separate proposal is warranted for Sections 2113.11.2, 2113.11.3 and 2113.13 due to the complexity in providing charging text for these sections. The lack of charging text in Sections 1605.3 and 2306.2 is addressed by separate proposals on the alternative basic load combinations (Section 1605.3) and allowable shear values for wood-frame diaphragms and shear walls where the shear-resisting panels are fastened with staples (Section 2306.2).

In Section 1605.2, the reference to load combinations using strength design or load and resistance factor design as “basic” load combinations is deleted because it serves no useful purpose in the IBC. The reference to them as basic load combinations in Item #1 of the third paragraph at Section 1605.1, however, is retained because ASCE 7 continues to refer to them as basic combinations. This is done in ASCE 7 to distinguish them from load combinations including flood load (Section 2.3.3) and atmospheric ice loads (Section 2.3.4), which are not specified in the IBC except by reference to ASCE 7 (e.g., flood loads).

In Sections 2304.9 and 2308.5, the scope is clarified as consisting of connectors and fasteners. With this change, a connection as referenced in Sections 2304.9.1 and 2304.9.3 becomes a collective term for connectors and fasteners. An alternative would be to change the title and the scoping text to “connections.” The current title, however, is problematic because a fastener is a type of connection and Sections 2304.9.5 and 2304.9.5.1 refer to “fasteners and connectors.”

In Section 2304.10, the scope is clarified as applying to structures or portions thereof required to be of Type IV construction by other provisions of the IBC. Heavy timber construction is not defined in the IBC except for a parenthetical reference in Section 602.4 on Type IV construction (Heavy Timber, HT). The construction requirements of Sections 2304.10.1 through 2304.10.5 have traditionally been considered as applying to structural members where Type IV construction is required. However, they have not been considered as applying to structural members that may meet the minimum dimensions for Type IV construction but are located in structures or portions thereof other than of Type IV construction. A correlating change is also made in Section 602.4.

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

ICCFILENAME: Brazil-S29 1604.8 Text sub only

IBC31–09 CCC

Table 1607.1

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

Revise as follows:

TABLE 1607.1
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L_o, AND
MINIMUM CONCENTRATED LIVE LOADS⁹

29. Roofs		
All roof surfaces subject to maintenance workers		300
Awnings and canopies		
Fabric construction supported by a lightweight rigid skeleton structure	5 nonreducible	
All other construction	20	
Ordinary flat, pitched, and curved roofs	20	
Where primary Primary roof members, are exposed to a work floor, at single Single panel points of lower chord of roof trusses or any point along primary structural members supporting roofs:		
Over manufacturing, storage warehouses, and repair garages		2,000

All other occupancies		300
Roofs used for other special purposes	Note I	Note I
Roofs used for promenade purposes	60	
Roofs used for roof gardens or assembly purposes	100	

(Portions of the table not shown remain unchanged.)

Reason: This portion of the table was revised for the 2006 IBC. The line for "roofs" in the 2003 IBC included only a cross reference to Section 1607.11. The original proposal read: "Single panel point of lower chord of roof trusses or any point along primary structural members supporting roofs over manufacturing, storage warehouses and repair garages..... 2000 lb." "All other occupancies.....300 lb."

The committee modified the proposal to read as shown in the 2006 IBC: "Over manufacturing, storage warehouses and repair garages..... 2000 lb." and

"All other occupancies.....300 lb." The Committee intended to make it clear that the phrase "Single panel point of lower chord of roof trusses or any point along primary structural members supporting roofs" applies to both "manufacturing, storage warehouses and repair garages" as well as "All other occupancies"

In attempting the clarification, however, the Committee did not go quite far enough. Incorporating what now is the first subheading, "Single panel point of lower chord of roof trusses or any point along primary structural members supporting roofs" into the main heading, "Primary roof members exposed to a work floor" completes what the Committee meant to do in the code development cycle that produced the 2006 IBC.

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

ICCFILENAME: Traxler-S1-T1607.1 Sub only

IBC32-09 CCC 1607

Revise as follows:

1607.1 General. Live loads are those loads defined in Section 1602.1.

1607.2 Loads not specified. For occupancies or uses not designated in Table 1607.1, the live load shall be determined in accordance with a method approved by the building official.

1607.3 Uniform live loads. The live loads used in the design of buildings and other structures shall be the maximum loads expected by the intended use or occupancy but shall in no case be less than the minimum uniformly distributed unit live loads required by given in Table 1607.1.

1607.4 Concentrated live loads. Floors and other similar surfaces shall be designed to support the uniformly distributed live loads prescribed in Section 1607.3 or the concentrated live loads, in pounds (kilonewtons), given in Table 1607.1, whichever produces the greater load effects. Unless otherwise specified, the indicated concentration shall be assumed to be uniformly distributed over an area of 2-1/2 feet by 2-1/2 feet [6-1/4 square feet (0.58 m²)] and shall be located so as to produce the maximum load effects in the structural members.

1607.9 Reduction in uniform live loads. Except for uniform live loads at roofs, all other minimum uniformly distributed live loads, L_o , in Table 1607.1 are permitted to be reduced in accordance with Section 1607.9.1 or 1607.9.2. Roof uniform live loads, other than special purpose roofs of Section 1607.11.2.2 are permitted to be reduced in accordance with Section 1607.11.2. Roof uniform live loads of special purpose roofs are permitted to be reduced in accordance with Section 1607.9.1 or 1607.9.2.

1607.9.1 General Basic uniform live load reduction. Subject to the limitations of Sections 1607.9.1.1 through 1607.9.1.4, members for which a value of $K_{LL} A_T$ is 400 square feet (37.16 m²) or more are permitted to be designed for a reduced uniformly distributed live load, L , in accordance with the following equation:

$$L = L_o [0.25 + 15 / (\sqrt{K_{LL} A_T})] \text{ (Equation 16-22)}$$

$$\text{In SI: } L = L_o [0.25 + 4.57 / (\sqrt{K_{LL} A_T})]$$

where:

L = Reduced design live load per square foot (meter) of area supported by the member.

L_o = Unreduced design live load per square foot (meter) of area supported by the member (see Table 1607.1).

K_{LL} = Live load element factor (see Table 1607.9.1).

A_T = Tributary area, in square feet (square meters).

L shall not be less than $0.50 L_o$ for members supporting one floor and L shall not be less than $0.40 L_o$ for members supporting two or more floors.

**TABLE 1607.9.1
LIVE LOAD ELEMENT FACTOR, K_{LL}**

ELEMENT	K_{LL}
Interior columns	4
Exterior columns without cantilever slabs	4
Edge columns with cantilever slabs	3
Corner columns with cantilever slabs	2
Edge beams without cantilever slabs	2
Interior beams	2
All other members not identified above including: Edge beams with cantilever slabs Cantilever beams One-way slabs Two-way slabs Members without provisions for continuous shear transfer normal to their span	1

1607.9.1.1 One-way slabs. The tributary area, A_T , for use in Equation 16-22 for one-way slabs shall not exceed an area defined by the slab span times a width normal to the span of 1.5 times the slab span.

1607.9.1.2 Heavy live loads. Live loads that exceed 100 psf (4.79 kN/m²) shall not be reduced.

Exceptions:

1. The live loads for members supporting two or more floors are permitted to be reduced by a maximum of 20 percent, but the live load shall not be less than L as calculated in Section 1607.9.1.
2. For uses other than storage, where approved, additional live load reductions shall be permitted where shown by the registered design professional that a rational approach has been used and that such reductions are warranted.

1607.9.1.3 Passenger vehicle garages. The live loads shall not be reduced in passenger vehicle garages.

Exception: The live loads for members supporting two or more floors are permitted to be reduced by a maximum of 20 percent, but the live load shall not be less than L as calculated in Section 1607.9.1.

1607.9.1.4 Group A occupancies. Live loads of 100 psf (4.79 kN/m²) and at areas where fixed seats are located shall not be reduced in Group A occupancies.

1607.9.1.5 Roofs members. Live loads of 100 psf (4.79 kN/m²) or less shall not be reduced for roof members except as specified in Section 1607.11.2.

1607.9.2 Alternate floor Alternative uniform live load reduction. As an alternative to Section 1607.9.1, ~~floor~~ uniformly distributed live loads are permitted to be reduced in accordance with the following provisions. Such reductions shall apply to slab systems, beams, girders, columns, piers, walls and foundations.

1. A reduction shall not be permitted in Group A occupancies.
2. A reduction shall not be permitted ~~when~~ where the live load exceeds 100 psf (4.79 kN/m²) except that the design live load for members supporting two or more floors is permitted to be reduced by a maximum of 20 percent.

Exception: For uses other than storage, where approved, additional live load reductions shall be permitted where shown by the registered design professional that a rational approach has been used and that such reductions are warranted.

3. A reduction shall not be permitted in passenger vehicle parking garages except that the live loads for members supporting two or more floors are permitted to be reduced by a maximum of 20 percent.
4. For live loads not exceeding 100 psf (4.79 kN/m²), the design live load for any structural member supporting 150 square feet (13.94 m²) or more is permitted to be reduced in accordance with Equation 16-23.

5. For one-way slabs, the area, A , for use in Equation 16-23 shall not exceed the product of the slab span and a width normal to the span of 0.5 times the slab span.

$$R = 0.08 (A - 150) \text{ (Equation 16-23)}$$

$$\text{For SI: } R = 0.861 (A - 13.94)$$

Such reduction shall not exceed the smallest of:

1. 40 percent for horizontal members,
2. 60 percent for vertical members, or
3. R as determined by the following equation:

$$R = 23.1 (1 + D / L_o) \text{ (Equation 16-24)}$$

where:

A = Area of floor supported by the member, square feet (m^2).

D = Dead load per square foot (m^2) of area supported.

L_o = Unreduced live load per square foot (m^2) of area supported.

R = Reduction in percent.

Reason: This proposal was prepared in conjunction with proposals to editorially correlate IBC Section 1607 with Chapter 4 of ASCE 7-10 and to correlate the IBC with changes to the provisions of ASCE 7-10 where reduction of live loads at floors and occupied roofs is restricted or prohibited. This proposal is intended to further align IBC Section 1607 with Chapter 4 of ASCE 7-10 without any overlapping or conflicting changes between the three proposals. The changes are seen as largely editorial. In Section 1607.3, "required by" Table 1607.1 is change to "given in" Table 1607.1 because this table does not require anything.

Although Section 1607.9.2 on alternate floor live load reduction is being modified in this proposal, the deletion of Section 1607.9.2 is the subject of a separate proposal. Should the deletion of the procedures for alternate floor live load reduction be approved by the ICC membership, it is not the intent of the proponent to retain Section 1607.9.2 in the 2012 IBC for the purpose of revising the IBC in accordance with this proposal.

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

ICCFILENAME: Brazil-S13-1607.3-text sub only

IBC33–09 CCC

1613.3

Proponent: David Bonowitz, David Bonowitz, S.E., National Council of Structural Engineers Associations, Code Advisory Committee, Existing Buildings Subcommittee (NCSEA EBS)

Delete without substitution:

~~**1613.3 Existing buildings.** Additions, alterations, repairs or change of occupancy of existing buildings shall be in accordance with Chapter 34.~~

Reason: Section 1613.3 is unnecessary. It is not necessary to refer to other sections or chapters whose scope is already clear. Further, some jurisdictions adopt Chapter 16 but not Chapter 34 and therefore should not be bound by a provision such as 1613.3.

The reference to Chapter 34 might be confusing or misleading since it comes only from a section on Earthquake Loads and no similar reference comes from other sections of Chapter 16 or from other Chapters.

Cost Impact: No cost increase.

ICCFILENAME: Bonowitz-S1-1613.3

IBC34–09 CCC

Table 1613.5.6 (1)

Proponent: John England, MCO, England Enterprises Inc. representing self

Revise as follows:

TABLE 1613.5.6(1)
SEISMIC DESIGN CATEGORY BASED ON SHORT-PERIOD (0.2 sec) RESPONSE ACCELERATIONS
(No change to Table)

Reason: All maps are in 0.2 seconds therefore the table should reflect the same.

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

ICCFILENAM: England-S3-T1613.5.6-1 Sub only

IBC35-09 CCC

Chapter 17

Proponent: D. Kirk Harman, The Harman Group, The National Council of Structural Engineers Associations (NCSEA) Code Advisory Committee, Quality Assurance and Special Inspection Subcommittee

Revise as follows:

CHAPTER 17
~~STRUCTURAL TESTS AND SPECIAL INSPECTIONS~~
SPECIAL INSPECTIONS AND TESTS

Reason: The chapter now includes other inspections in addition to structural inspections and tests. The intent of this proposal is to delete the word "structural" to better reflect the content of the chapter. The dominant subject of the chapter is Special Inspections and the Special Inspection requirements dictate the Tests required so "Special Inspections" has been moved to the first position in the title.

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

ICCFILENAME: Harman-S4-Chpt 17 Title Sub only

IBC36-09 CCC

1704.12.4.2, 1704.12.6.1

Revise as follows:

1704.12.4.2 Floor, roof and wall assemblies. The thickness of the sprayed fire-resistant material applied to floor, roof and wall assemblies shall be determined in accordance with ASTM E 605, making not less than four measurements for each 1,000 square feet (93 m2) of the sprayed area or portion thereof in each ~~story or portion thereof~~.

1704.12.6.1 Floor, roof and wall assemblies. The test samples for determining the cohesive/adhesive bond strength of the sprayed fire-resistant materials shall be selected from each floor, roof and wall assembly at the rate of not less than one sample for every 2,500 square feet (232 m2) of the sprayed area or portion thereof in each ~~story or portion thereof~~.

Reason: The phrase "or portion thereof" is relocated to follow "sprayed area" in Sections 1704.12.4.2 and 1704.12.6.1 for consistency with similar wording in Sections 1704.12.5(1), 1704.12.5(2) and 1704.12.6.2. Portions of floor areas, sprayed or otherwise, are possible, but not portions of stories.

ICCFILENAME: 1704_12

IBC37-09 CCC

1705.3.1

Revise as follows:

1705.3.1 The seismic-force-resisting systems in structures assigned to Seismic Design Category C, D, E or F, ~~in accordance with Section 1613.~~

Exception: Requirements for the seismic-force resisting system are permitted to be excluded from the statement of special inspections for steel systems in structures assigned to Seismic Design Category C that are not specifically detailed for seismic resistance, with a response modification coefficient, R , of 3 or less, excluding cantilever column systems.

1707.1 Special inspections for seismic resistance. Special inspections itemized in Sections 1707.2 through 1707.9, unless exempted by the exceptions of Section 1704.1, 1705.3 or 1705.3.1, are required for the following:

1. The seismic-force-resisting systems in structures assigned to Seismic Design Category C, D, E or F, ~~as determined in Section 1613.~~
2. Designated seismic systems in structures assigned to Seismic Design Category D, E or F.

3. Architectural, mechanical and electrical components in structures assigned to Seismic Design Category C, D, E or F that are required in Sections 1707.6 and 1707.7.

1708.1 Testing and qualification for seismic resistance. The testing and qualification specified in Sections 1708.2 through 1708.5, unless exempted from special inspection by the exceptions of Section 1704.1, 1705.3 or 1705.3.1 are required as follows:

1. The seismic-force-resisting systems in structures assigned to Seismic Design Category C, D, E or F, ~~as determined in Section 1613~~ shall meet the requirements of Sections 1708.2 and 1708.3, as applicable.
2. Designated seismic systems in structures assigned to Seismic Design Category C, D, E or F subject to the special certification requirements of ASCE 7 Section 13.2.2 are required to be tested in accordance with Section 1708.4.
3. Architectural, mechanical and electrical components in structures assigned to Seismic Design Category C, D, E or F with an $I_p = 1.0$ are required to be tested in accordance with Section 1708.4 where the general design requirements of ASCE 7 Section 13.2.1, Item 2 for manufacturer's certification are satisfied by testing.
4. The seismic isolation system in seismically isolated structures shall meet the testing requirements of Section 1708.5.

1708.2 Concrete reinforcement. Where reinforcement complying with ASTM A 615 is used to resist earthquake-induced flexural and axial forces in special moment frames, special structural walls and coupling beams connecting special structural walls, in structures assigned to Seismic Design Category B, C, D, E or F, ~~as determined in Section 1613~~, the reinforcement shall comply with Section 21.1.5.2 of ACI 318. Certified mill test reports shall be provided for each shipment of such reinforcement. Where reinforcement complying with ASTM A 615 is to be welded, chemical tests shall be performed to determine weldability in accordance with Section 3.5.2 of ACI 318.

1710.2 Structural observations for seismic resistance. Structural observations shall be provided for those structures assigned to Seismic Design Category D, E or F, ~~as determined in Section 1613~~, where one or more of the following conditions exist:

1. The structure is classified as Occupancy Category III or IV in accordance with Section 1604.5.
2. The height of the structure is greater than 75 feet (22 860 mm) above the base.
3. The structure is assigned to Seismic Design Category E, is classified as Occupancy Category I or II in accordance with Section 1604.5 and is greater than two stories above grade plane.
4. When so designated by the registered design professional responsible for the structural design.
5. When such observation is specifically required by the building official.

1803.5.11 Seismic Design Categories C through F. For structures assigned to Seismic Design Category C, D, E, or F ~~in accordance with Section 1613~~, a geotechnical investigation shall be conducted, and shall include an evaluation of all of the following potential geologic and seismic hazards:

1. Slope instability.
2. Liquefaction.
3. Differential settlement.
4. Surface displacement due to faulting or lateral spreading.

1803.5.12 Seismic Design Categories D through F. For structures assigned to Seismic Design Category D, E or F ~~in accordance with Section 1613~~, the geotechnical investigation required by Section 1803.5.11 shall also include:

1. The determination of lateral pressures on foundation walls and retaining walls due to earthquake motions.
2. The potential for liquefaction and soil strength loss evaluated for site peak ground accelerations, magnitudes, and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration shall be permitted to be determined based on a site-specific study taking into account soil amplification effects, as specified in Chapter 21 of ASCE 7, or, in the absence of such a study, peak ground accelerations shall be assumed equal to $S_{DS} / 2.5$, where S_{DS} is determined in accordance with Section 1613.5.4.
3. An assessment of potential consequences of liquefaction and soil strength loss, including estimation of differential settlement, lateral movement, lateral loads on foundations, reduction in foundation soil-bearing capacity, increases in lateral pressures on retaining walls and flotation of buried structures.
4. Discussion of mitigation measures such as, but not limited to, ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements and forces, or any combination of these measures and how they shall be considered in the design of the structure.

1809.13 Footing seismic ties. Where a structure is assigned to Seismic Design Category D, E or F ~~in accordance with Section 1613~~, individual spread footings founded on soil defined in Section 1613.5.2 as Site Class E or F shall be interconnected by ties. Unless it is demonstrated that equivalent restraint is provided by reinforced concrete beams within slabs on grade or reinforced concrete slabs on grade, ties shall be capable of carrying, in tension or compression, a force equal to the lesser of the product of the larger footing design gravity load times the seismic coefficient S_{DS} divided by 10, and 25 percent of the smaller footing design gravity load.

1810.3.2.1.1 Seismic hooks. For structures assigned to Seismic Design Category C, D, E, or F ~~in accordance with Section 1613~~, the ends of hoops, spirals and ties used in concrete deep foundation elements shall be terminated with seismic hooks, as defined in ACI 318, and shall be turned into the confined concrete core.

1810.3.8.2.2 Seismic reinforcement in Seismic Design Categories C through F. For structures assigned to Seismic Design Category C, D, E, or F ~~in accordance with Section 1613~~, precast nonprestressed piles shall be reinforced as specified in this section. The minimum longitudinal reinforcement ratio shall be 0.01 throughout the length. Transverse reinforcement shall consist of closed ties or spirals with a minimum 3/8 inch (9.5 mm) diameter. Spacing of transverse reinforcement shall not exceed the smaller of eight times the diameter of the smallest longitudinal bar or 6 inches (152 mm) within a distance of three times the least pile dimension from the bottom of the pile cap. Spacing of transverse reinforcement shall not exceed 6 inches (152 mm) throughout the remainder of the pile.

1810.3.8.2.3 Additional seismic reinforcement in Seismic Design Categories D through F. For structures assigned to Seismic Design Category D, E or F ~~in accordance with Section 1613~~, transverse reinforcement shall be in accordance with Section 1810.3.9.4.2.

1810.3.8.3.2 Seismic reinforcement in Seismic Design Category C. For structures assigned to Seismic Design Category C ~~in accordance with Section 1613~~, precast prestressed piles shall have transverse reinforcement in accordance with this section. The volumetric ratio of spiral reinforcement shall not be less than the amount required by the following formula for the upper 20 feet (6096 mm) of the pile.

(Remainder of section remains unchanged)

1810.3.8.3.3 Seismic reinforcement in Seismic Design Categories D through F. For structures assigned to Seismic Design Category D, E or F ~~in accordance with Section 1613~~, precast prestressed piles shall have transverse reinforcement in accordance with the following:

(Remainder of section remains unchanged)

1810.3.9.4.1 Seismic reinforcement in Seismic Design Category C. For structures assigned to Seismic Design Category C ~~in accordance with Section 1613~~, cast-in-place deep foundation elements shall be reinforced as specified in this section. Reinforcement shall be provided where required by analysis.

(Remainder of section remains unchanged)

1810.3.9.4.2 Seismic reinforcement in Seismic Design Categories D through F. For structures assigned to Seismic Design Category D, E or F ~~in accordance with Section 1613~~, cast-in-place deep foundation elements shall be reinforced as specified in this section. Reinforcement shall be provided where required by analysis.

(Remainder of section remains unchanged)

1810.3.11.1 Seismic Design Categories C through F. For structures assigned to Seismic Design Category C, D, E, or F ~~in accordance with Section 1613~~, concrete deep foundation elements shall be connected to the pile cap by embedding the element reinforcement or field-placed dowels anchored in the element into the pile cap for a distance equal to their development length in accordance with ACI 318. It shall be permitted to connect precast prestressed piles to the pile cap by developing the element prestressing strands into the pile cap provided the connection is ductile. For deformed bars, the development length is the full development length for compression, or tension in the case of uplift, without reduction for excess reinforcement in accordance with Section 12.2.5 of ACI 318. Alternative measures for laterally confining concrete and maintaining toughness and ductile-like behavior at the top of the element shall be permitted provided the design is such that any hinging occurs in the confined region.

The minimum transverse steel ratio for confinement shall not be less than one-half of that required for columns. For resistance to uplift forces, anchorage of steel pipes, tubes, or H-piles to the pile cap shall be made by means other than concrete bond to the bare steel section. Concrete-filled steel pipes or tubes shall have reinforcement of not less than 0.01 times the cross-sectional area of the concrete fill developed into the cap and extending into the fill a length equal to two times the required cap embedment, but not less than the development length in tension of the reinforcement.

1810.3.11.2 Seismic Design Categories D through F. For structures assigned to Seismic Design Category D, E, or F ~~in accordance with Section 1613~~, deep foundation element resistance to uplift forces or rotational restraint shall be provided by anchorage into the pile cap, designed considering the combined effect of axial forces due to uplift and bending moments due to fixity to the pile cap. Anchorage shall develop a minimum of 25 percent of the strength of the element in tension. Anchorage into the pile cap shall be capable of developing the following:

(Remainder of section remains unchanged)

1810.3.12 Grade beams. For structures assigned to Seismic Design Category D, E, or F ~~in accordance with Section 1613~~, grade beams shall comply with the provisions in Section 21.12.3 of ACI 318 for grade beams, except where they have the capacity to resist the forces from the load combinations with overstrength factor in Section 12.4.3.2 of ASCE 7.

1810.3.13 Seismic ties. For structures assigned to Seismic Design Category C, D, E, or F ~~in accordance with Section 1613~~, individual deep foundations shall be interconnected by ties. Unless it can be demonstrated that equivalent restraint is provided by reinforced concrete beams within slabs on grade or reinforced concrete slabs on grade or confinement by competent rock, hard cohesive soils or very dense granular soils, ties shall be capable of carrying, in tension or compression, a force equal to the lesser of the product of the larger pile cap or column design gravity load times the seismic coefficient, S_{DS} , divided by 10, and 25 percent of the smaller pile cap or column design gravity load.

Exception: In Group R-3 and U occupancies of light-frame construction, deep foundation elements supporting foundation walls, isolated interior posts detailed so the element is not subject to lateral loads, or exterior decks and patios are not subject to interconnection where the soils are of adequate stiffness, subject to the approval of the building official.

2106.1 Seismic design requirements for masonry. Masonry structures and components shall comply with the requirements in Section 1.17 of TMS 402/ACI 530/ASCE 5 depending on the structure's seismic design category ~~as determined in Section 1613~~.

2308.2 Limitations. Buildings are permitted to be constructed in accordance with the provisions of conventional light-frame construction, subject to the following limitations, and to further limitations of Sections 2308.11 and 2308.12.

1. Buildings shall be limited to a maximum of three stories above grade plane. For the purposes of this section, for buildings in Seismic Design Category D or E ~~as determined in Section 1613~~, cripple stud walls shall be considered to be a story.

Exception: Solid blocked cripple walls not exceeding 14 inches (356 mm) in height need not be considered a story.

2. Maximum floor-to-floor height shall not exceed 11 feet, 7 inches (3531 mm). Bearing wall height shall not exceed a stud height of 10 feet (3048 mm).
3. Loads as determined in Chapter 16 shall not exceed the following:
 - 3.1. Average dead loads shall not exceed 15 psf (718 N/m²) for combined roof and ceiling, exterior walls, floors and partitions.

Exceptions:

1. Subject to the limitations of Sections 2308.11.2 and 2308.12.2, stone or masonry veneer up to the lesser of 5 inches (127 mm) thick or 50 psf (2395 N/m²) and installed in accordance with Chapter 14 is permitted to a height of 30 feet (9144 mm) above a noncombustible foundation, with an additional 8 feet (2438 mm) permitted for gable ends.
2. Concrete or masonry fireplaces, heaters and chimneys shall be permitted in accordance with the provisions of this code.
- 3.2. Live loads shall not exceed 40 psf (1916 N/m²) for floors.
- 3.3. Ground snow loads shall not exceed 50 psf (2395 N/m²).
4. Wind speeds shall not exceed 100 miles per hour (mph) (44 m/s) (3-second gust).

Exception: Wind speeds shall not exceed 110 mph (48.4 m/s) 3-second gust for buildings in Exposure Category B that are not located in a hurricane prone region.

5. Roof trusses and rafters shall not span more than 40 feet (12 192 mm) between points of vertical support.
6. The use of the provisions for conventional light-frame construction in this section shall not be permitted for Occupancy Category IV buildings assigned to Seismic Design Category B, C, D, E or F, ~~as determined in Section 1613.~~
7. Conventional light-frame construction is limited in irregular structures in Seismic Design Category D or E, as specified in Section 2308.12.6.

2308.2.2 Buildings in Seismic Design Category B, C, D or E. Buildings of conventional light-frame construction in Seismic Design Category B or C, ~~as determined in Section 1613,~~ shall comply with the additional requirements in Section 2308.11.

Buildings of conventional light-frame construction in Seismic Design Category D or E, ~~as determined in Section 1613,~~ shall comply with the additional requirements in Section 2308.12.

2308.11 Additional requirements for conventional construction in Seismic Design Category B or C. Structures of conventional light-frame construction in Seismic Design Category B or C, ~~as determined in Section 1613,~~ shall comply with Sections 2308.11.1 through 2308.11.3, in addition to the provisions of Sections 2308.1 through 2308.10.

2308.12 Additional requirements for conventional construction in Seismic Design Category D or E. Structures of conventional light-frame construction in Seismic Design Category D or E, ~~as determined in Section 1613,~~ shall conform to Sections 2308.12.1 through 2308.12.9, in addition to the requirements for Seismic Design Category B or C in Section 2308.11.

Reason: The purpose for this proposal is to delete superfluous references to Section 1613 for the determination of seismic design category. All such instances in the 2009 IBC are included in this proposal.

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

ICCFILENAME: Brazil-S21-1705.3.1 Text Sub Only

IBC38-09 CCC

1807.3.2.1

Proponent: Edwin Huston, National Council of Structural Engineers Association

Revise as follows:

1807.3.2.1 Nonconstrained. The following formula shall be used in determining the depth of embedment required to resist lateral loads where no lateral constraint is provided at the ground surface, such as by a rigid floor or rigid ground surface pavement, and where no lateral constraint is provided above the ground surface, such as by a structural diaphragm.

$$d = 0.5A\{1 + [1 + (4.36h/A)]^{1/2}\} \quad \text{(Equation 18-1)}$$

where:

$$A = 2.34Pl \quad (S_1 b.)$$

b = Diameter of round post or footing or diagonal dimension of square post or footing, feet (m).

d = Depth of embedment in earth in feet (m) but not over 12 feet (3,658mm) for purpose of computing lateral pressure.

h = Distance in feet (m) from ground surface to point of application of "P".

P = Applied lateral force in pounds (kN).

S_1 = Allowable lateral soil-bearing pressure as set forth in Section 1806.2 based on a depth of one-third the depth of embedment in pounds per square foot (psf) (kPa).

Reason: The proposed changes are intended to address a formatting inconsistency and an error in the definition of the term 'A'.

1. The formula defining the term 'A' was improperly transcribed from its original form. In the legacy code(s) the formula for the term "A" had the 'b' term in the denominator of the equation. The formula in its current form may be interpreted as having 'b' in the numerator. Adding the parentheses will help clarify the equation.
2. In the definition of 'd', where the metric units are shown, both meters (m) and millimeters (mm) are used. Switching the millimeter term to meters will make the metric units consistent in the definition of 'd' as well as making the units consistent with the English units.

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

ICCFILENAME: HUSTON-S5-1807.3.2.1 sub only

IBC39-09 CCC

2111.3

Revise as follows:

2111.3 Seismic reinforcing. In structures assigned to Seismic Design Category A or B, reinforcement and seismic anchorage is not required. Masonry or concrete fireplaces shall be constructed, anchored, supported and reinforced as required in this chapter. In structures assigned to Seismic Design Category C or D, masonry and concrete fireplaces shall be reinforced and anchored as detailed in Sections 2111.3.1, 2111.3.2, 2111.4 and 2111.4.1 for chimneys serving fireplaces. ~~In Seismic Design Category A or B, reinforcement and seismic anchorage is not required.~~ In structures assigned to Seismic Design Category E or F, masonry and concrete chimneys shall be reinforced in accordance with the requirements of Sections 2101 through 2108. **2111.4 Seismic anchorage.** Masonry and concrete chimneys in structures assigned to Seismic Design Category C or D shall be anchored at each floor, ceiling or roof line more than 6 feet (1829 mm) above grade, except where constructed completely within the exterior walls. Anchorage shall conform to the following requirements.

2112.4 Seismic reinforcing. In structures assigned to Seismic Design Category D, E and F, masonry heaters shall be anchored to the masonry foundation in accordance with Section 2113.3. Seismic reinforcing shall not be required within the body of a masonry heater with a height that is equal to or less than 3.5 times its body width and where the masonry chimney serving the heater is not supported by the body of the heater. Where the masonry chimney shares a common wall with the facing of the masonry heater, the chimney portion of the structure shall be reinforced in accordance with Section 2113.

2113.3 Seismic reinforcing. Masonry or concrete chimneys shall be constructed, anchored, supported and reinforced as required in this chapter. In structures assigned to Seismic Design Category C or D, masonry and concrete chimneys shall be reinforced and anchored as detailed in Sections 2113.3.1, 2113.3.2 and 2113.4. In structures assigned to Seismic Design Category A or B, reinforcement and seismic anchorage is not required. In structures assigned to Seismic Design Category E or F, masonry and concrete chimneys shall be reinforced in accordance with the requirements of Sections 2101 through 2108.

2113.4 Seismic anchorage. Masonry and concrete chimneys and foundations in structures assigned to Seismic Design Category C or D shall be anchored at each floor, ceiling or roof line more than 6 feet (1829 mm) above grade, except where constructed completely within the exterior walls. Anchorage shall conform to the following requirements.

2205.3 Seismic requirements for composite construction. The design, construction and quality of composite steel and concrete components that resist seismic forces shall conform to the requirements of the AISC 360 and ACI 318. An *R* factor as set forth in Section 12.2.1 of ASCE 7 for the appropriate composite steel and concrete system is permitted where the structure is designed and detailed in accordance with the provisions of AISC 341, Part II. In structures assigned to Seismic Design Category B or above, the design of such systems shall conform to the requirements of AISC 341, Part II.

2205.3.1 Seismic Design Categories D, E and F. Composite structures ~~steel and concrete systems~~ are permitted in structures assigned to Seismic Design Categories D, E and F, subject to the limitations in Section 12.2.1 of ASCE 7, where substantiating evidence is provided to demonstrate that the proposed system will perform as intended by AISC 341, Part II. The substantiating evidence shall be subject to building official approval. Where composite elements or connections are required to sustain inelastic deformations, the substantiating evidence shall be based on cyclic testing.

2307.1.1 Wood structural panel shear walls. In structures assigned to Seismic Design Category D, E or F, where shear design values exceed 490 pounds per lineal foot (7154 N/m), all framing members receiving edge nailing from abutting panels shall not be less than a single 3-inch (76 mm) nominal member or two 2-inch (51 mm) nominal members fastened together in accordance with AF&PA NDS to transfer the design shear value between framing

members. Wood structural panel joint and sill plate nailing shall be staggered at all panel edges. See Sections 4.3.6.1 and 4.3.6.4.2 of AF&PA SDPWS for sill plate size and anchorage requirements.

2308.2 Limitations. Buildings are permitted to be constructed in accordance with the provisions of conventional light-frame construction, subject to the following limitations, and to further limitations of Sections 2308.11 and 2308.12.

1. Buildings shall be limited to a maximum of three stories above grade plane. For the purposes of this section, for buildings ~~in~~ assigned to Seismic Design Category D or E as determined in Section 1613, cripple stud walls shall be considered to be a story.
Exception: Solid blocked cripple walls not exceeding 14 inches (356 mm) in height need not be considered a story.
2. Maximum floor-to-floor height shall not exceed 11 feet, 7 inches (3531 mm). Bearing wall height shall not exceed a stud height of 10 feet (3048 mm).
3. Loads as determined in Chapter 16 shall not exceed the following:
 - 3.1. Average dead loads shall not exceed 15 psf (718 N/m²) for combined roof and ceiling, exterior walls, floors and partitions.

Exceptions:

1. Subject to the limitations of Sections 2308.11.2 and 2308.12.2, stone or masonry veneer up to the lesser of 5 inches (127 mm) thick or 50 psf (2395 N/m²) and installed in accordance with Chapter 14 is permitted to a height of 30 feet (9144 mm) above a noncombustible foundation, with an additional 8 feet (2438 mm) permitted for gable ends.
2. Concrete or masonry fireplaces, heaters and chimneys shall be permitted in accordance with the provisions of this code.
- 3.2. Live loads shall not exceed 40 psf (1916 N/m²) for floors.
- 3.3. Ground snow loads shall not exceed 50 psf (2395 N/m²).
4. Wind speeds shall not exceed 100 miles per hour (mph) (44 m/s) (3-second gust).

Exception: Wind speeds shall not exceed 110 mph (48.4 m/s) 3-second gust for buildings in Exposure Category B that are not located in a hurricane prone region.

5. Roof trusses and rafters shall not span more than 40 feet (12 192 mm) between points of vertical support.
6. The use of the provisions for conventional light-frame construction in this section shall not be permitted for Occupancy Category IV buildings assigned to Seismic Design Category B, C, D, E or F, as determined in Section 1613.
7. Conventional light-frame construction is limited in irregular structures ~~in~~ assigned to Seismic Design Category D or E, as specified in Section 2308.12.6.

2308.2.2 Buildings in Seismic Design Category B, C, D or E. Buildings of conventional light-frame construction ~~in~~ and assigned to Seismic Design Category B or C, as determined in Section 1613, shall comply with the additional requirements in Section 2308.11.

Buildings of conventional light-frame construction ~~in~~ and assigned to Seismic Design Category D or E, as determined in Section 1613, shall comply with the additional requirements in Section 2308.12.

2308.9.4.1 Bracing. For the purposes of this section, cripple walls having a stud height exceeding 14 inches (356 mm) in structures assigned to Seismic Design Category A, B or C shall be considered a story and shall be braced in accordance with Table 2308.9.3(1) ~~for Seismic Design Category A, B or C~~. See Section 2308.12.4 for cripple walls in structures assigned to Seismic Design Category D or E.

2308.11 Additional requirements for conventional construction in Seismic Design Category B or C. Structures of conventional light-frame construction ~~in~~ and assigned to Seismic Design Category B or C, as determined in Section 1613, shall comply with Sections 2308.11.1 through 2308.11.3, in addition to the provisions of Sections 2308.1 through 2308.10.

2308.11.1 Number of stories. Structures of conventional light-frame construction and assigned to Seismic Design Category C shall not exceed two stories above grade plane ~~in Seismic Design Category C~~.

2308.11.2 Concrete or masonry. Concrete or masonry walls and stone or masonry veneer shall not extend above a basement.

Exceptions:

1. In structures assigned to Seismic Design Category B, stone and masonry veneer is permitted to be used in the first two stories above grade plane or the first three stories above grade plane where the lowest story has concrete or masonry walls ~~in Seismic Design Category B~~, provided that structural use panel wall bracing is used, and the length of bracing provided is 1.5 times the required length as determined in Table 2308.9.3(1).
2. In structures assigned to Seismic Design Category B or C, stone and masonry veneer is permitted to be used in the first story above grade plane or the first two stories above grade plane where the lowest story has concrete or masonry walls ~~in Seismic Design Category B or C~~.
3. In structures assigned to Seismic Design Category B or C, stone and masonry veneer is permitted to be used in both stories of buildings with two stories above grade plane ~~in Seismic Design Categories B and C~~, provided the following criteria are met:
 - 3.1. Type of brace per Section 2308.9.3 shall be Method 3 and the allowable shear capacity in accordance with Table 2306.3 shall be a minimum of 350 plf (5108 N/m).
 - 3.2. Braced wall panels in the second story shall be located in accordance with Section 2308.9.3 and not more than 25 feet (7620 mm) on center, and the total length of braced wall panels shall be not less than 25 percent of the braced wall line length. Braced wall panels in the first story shall be located in accordance with Section 2308.9.3 and not more than 25 feet (7620 mm) on center, and the total length of braced wall panels shall be not less than 45 percent of the braced wall line length.
 - 3.3. Hold-down connectors shall be provided at the ends of each braced wall panel for the second story to first story connection with an allowable design of 2,000 pounds (907.0 kg). Hold-down connectors shall be provided at the ends of each braced wall panel for the first story to foundation connection with an allowable capacity of 3,900 pounds (1768 kg). In all cases, the hold down connector force shall be transferred to the foundation.
 - 3.4. Cripple walls shall not be permitted.

2308.12 Additional requirements for conventional construction in Seismic Design Category D or E. Structures of conventional light-frame construction ~~in~~ and assigned to Seismic Design Category D or E, as determined in Section 1613, shall conform to Sections 2308.12.1 through 2308.12.9, in addition to the requirements for structures assigned to Seismic Design Category B or C in Section 2308.11.

2308.12.1 Number of stories. Structures of conventional light-frame construction and assigned to Seismic Design Category D or E shall not exceed one story above grade plane ~~in Seismic Design Category D or E~~.

2308.12.2 Concrete or masonry. Concrete or masonry walls and stone or masonry veneer shall not extend above a basement.

Exception: In structures assigned to Seismic Design Category D, stone and masonry veneer is permitted to be used in the first story above grade plane ~~in Seismic Design Category D~~, provided the following criteria are met:

1. Type of brace in accordance with Section 2308.9.3 shall be Method 3 and the allowable shear capacity in accordance with Table 2306.3 shall be a minimum of 350 plf (5108 N/m).
2. The bracing of the first story shall be located at each end and at least every 25 feet (7620 mm) o.c. but not less than 45 percent of the braced wall line.
3. Hold-down connectors shall be provided at the ends of braced walls for the first floor to foundation with an allowable capacity of 2,100 pounds (1768 kg).
4. Cripple walls shall not be permitted.

2308.12.6 Irregular structures. Conventional light-frame construction shall not be used in irregular portions of structures ~~in~~ assigned to Seismic Design Category D or E. Such irregular portions of structures shall be designed to resist the forces specified in Chapter 16 to the extent such irregular features affect the performance of the conventional framing system. A portion of a structure shall be considered to be irregular where one or more of the conditions described in Items 1 through 6 below are present.

1. Where exterior braced wall panels are not in one plane vertically from the foundation to the uppermost story in which they are required, the structure shall be considered to be irregular [see Figure 2308.12.6(1)].

Exception: Floors with cantilevers or setbacks not exceeding four times the nominal depth of the floor joists [see Figure 2308.12.6(2)] are permitted to support braced wall panels provided:

1. Floor joists are 2 inches by 10 inches (51 mm by 254 mm) or larger and spaced not more than 16 inches (406 mm) o.c.
 2. The ratio of the back span to the cantilever is at least 2:1.
 3. Floor joists at ends of braced wall panels are doubled.
 4. A continuous rim joist is connected to the ends of cantilevered joists. The rim joist is permitted to be spliced using a metal tie not less than 0.058 inch (1.47 mm) (16 galvanized gage) and 1-1/2 inches (38 mm) wide fastened with six 16d common nails on each side. The metal tie shall have a minimum yield of 33,000 psi (227 MPa).
 5. Joists at setbacks or the end of cantilevered joists shall not carry gravity loads from more than a single story having uniform wall and roof loads, nor carry the reactions from headers having a span of 8 feet (2438 mm) or more.
2. Where a section of floor or roof is not laterally supported by braced wall lines on all edges, the structure shall be considered to be irregular [see Figure 2308.12.6(3)].

Exception: Portions of roofs or floors that do not support braced wall panels above are permitted to extend up to 6 feet (1829 mm) beyond a braced wall line [see Figure 2308.12.6(4)].

3. Where the end of a required braced wall panel extends more than 1 foot (305 mm) over an opening in the wall below, the structure shall be considered to be irregular. This requirement is applicable to braced wall panels offset in plane and to braced wall panels offset out of plane as permitted by the exception to Item 1 above in this section [see Figure 2308.12.6(5)].

Exception: Braced wall panels are permitted to extend over an opening not more than 8 feet (2438 mm) in width where the header is a 4-inch by 12-inch (102 mm by 305 mm) or larger member.

4. Where portions of a floor level are vertically offset such that the framing members on either side of the offset cannot be lapped or tied together in an approved manner, the structure shall be considered to be irregular [see Figure 2308.12.6(6)].

Exception: Framing supported directly by foundations need not be lapped or tied directly together.

5. Where braced wall lines are not perpendicular to each other, the structure shall be considered to be irregular [see Figure 2308.12.6(7)].
6. Where openings in floor and roof diaphragms having a maximum dimension greater than 50 percent of the distance between lines of bracing or an area greater than 25 percent of the area between orthogonal pairs of braced wall lines are present, the structure shall be considered to be irregular [see Figure 2308.12.6(8)].

2308.12.9 Sill plate anchorage in Seismic Design Category E. In structures assigned to Seismic Design Category E, steel bolts with a minimum nominal diameter of 5/8 inch (15.9 mm) or approved anchor straps load rated in accordance with Section 1716.1 and spaced to provide equivalent anchorage shall be used in Seismic Design Category E.

Reason: Structures are not located in seismic design categories but are assigned a seismic design category based on the severity of the design earthquake ground motion at the site (see definition of "seismic design category" in Section 1613.1). The proposal includes all instances in the 2009 IBC that refer to seismic design categories as locations and revises the text accordingly. Section 2205.3.1 is also revised for consistency with Section 2205.3. An editorial change is also made in Section 211.3 by reversing the order of the first two sentences so that the provisions applicable to Seismic Design Categories A and B precede those for Seismic Design Categories C and D.

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

ICCFILENAME: Brazil-S17-2111.3 text sub only

IBC40–09 CCC

2304.6.1

Proponent: Sam Francis, American Forest & Paper Association

Revise as follows:

2304.6.1 Wood structural panel sheathing. Where wood structural panel sheathing is used as the exposed finish on the ~~outside exterior of exterior outside~~ walls, it shall have an exterior exposure durability classification. Where wood structural panel sheathing is used elsewhere, but not as the exposed finish, it shall be of a type manufactured with exterior glue (Exposure 1 or Exterior). Wood structural panel wall sheathing or siding used as structural sheathing shall be capable of resisting wind pressures in accordance with Section 1609. Maximum wind speeds for wood structural panel sheathing used to resist wind pressures shall be in accordance with Table 2304.6.1 for enclosed building with a mean roof height not greater than 30 feet (9144 mm) importance factor (I) of 1.0 and topographic factor (K_{zt}) of 1.0.

Reason: This is essentially an editorial revision. Elsewhere in the IBC, particularly in Chapters 6 and 7, the walls that determine the perimeter of the building are referred to as "exterior" walls. Exterior wall is a defined term. This proposal simply makes reference to these walls in this section consistent with what's found elsewhere. Outside means the outdoor side of the wall plane, not both indoor and outdoor side.

ICCFILENAME: FRANCIS-S3-2304.6.1 sub only

IBC41–09 CCC

Table 2308.10.3(2)

Proponent: John England, MCO, England Enterprises Inc., representing self

Revise as follows:

TABLE 2308.10.3(2)
RAFTER SPANS FOR COMMON LUMBER SPECIES
(Roof Live Load = 20 pounds per square foot, Ceiling Not Attached to Rafters, L/Δ = 240)
(Table remains unchanged)

Reason: All L / 240 are attached to rafters -- the L/180 is not attached -- this mistake has been in the code since 2000.

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

ICCFILENAME: England-S5-T2308.10.3-2

IBC42–09 CCC

Tables 2308.8(1), 2308.8(2), 2308.10.2(1), 2308.10.2(2), 2308.10.3(1), 2308.10.3(2), 2308.10.3(3), 2308.10.3(4), 2308.10.3(5)

Proponent: Dennis Pitts, American Forest & Paper Association

ITEM #1

Revise as follows:

TABLE 2308.8(1)
(No change to Table)

~~Check sources for availability of lumber in lengths greater than 20 feet.~~
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 4.79 N/m²

TABLE 2308.8(2)
(No change to Table)

~~Check sources for availability of lumber in lengths greater than 20 feet.~~
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 4.79 N/m²
a. End bearing length shall be increased to 2 inches

Reason: These tables were taken from an AF&PA publication that contained this note. The note was intended to be advisory in nature because solid-sawn lumber in lengths greater than 20 feet may be difficult to find. It is not a requirement. Deleting it has no effect on the use of the table.

ITEM #2

IBC TABLES 2308.10.2(1), 2308.10.2(2), 2308.10.3(1), 2308.10.3(2), 2308.10.3(3), 2308.10.3(4), 2308.10.3(5)

In all instances where "Note a" appears in the tables revise as follows:

Note a 26-0

Revise footnotes as follows:

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 4.79 N/m²

a. ~~Span exceeds 26 feet in length. Check sources for availability of lumber in lengths greater than 20 feet.~~

Reason:

Item #1: These tables were taken from an AF&PA publication that contained this note. The note was intended to be advisory in nature because solid-sawn lumber in lengths greater than 20 feet may be difficult to find. It is not a requirement. Deleting it has no effect on the use of the table.

Item #2: Footnote "a" in these tables is awkward wording intended to limit spans. A straightforward span limitation of 26 feet accomplishes what was intended and is more proper code language.

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

ICCFILENAME: PITTS-S1-TABLE 2308.8(1)

IBC43-09 CCC

2603.5.5

Proponent: Jesse J. Beitel, Hughes Associates, Inc. representing The Extruded Polystyrene Foam Association

Revise as follows:

2603.5.5 Test Standard Vertical and Lateral Fire Propagation. The exterior wall assembly shall be tested in accordance with and comply with the acceptance criteria of NFPA 285.

(Exception remains unchanged)

Reason: This Code proposal is simply a clarification of the intent of this Section based on the performance that if measured in the NFPA 285 test. The additional of the word "exterior" clarifies that it applies only to exterior walls.

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

ICCFILENAME: Beitel-FS7-2603.5.5 Sub only

IBC44-09 CCC

3008.1

Revise as follows:

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 3008.14. Where other elevators are used for occupant self-evacuation, they shall also comply with these sections.

~~**3008.4 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 having elevators used for occupant self-evacuation in accordance with this section~~ provided with occupant evacuation elevators complying with Section 3008.1.

3008.5 3008.4 Emergency voice/alarm communication system. *(Text remains unchanged)*

(Renumber section numbers)

REASON: The key purpose of this change is to relocate 3008.4. Except for 3008.4, the balance of 3008 contains design standards for Occupant Self-Evacuation Elevators. Sec. 3008.4, on the other hand, is more akin to a scoping provision – when you use it – not how to design it.

The other change to 3008.4 (3008.1.1) is to make a clearer sentence that links it to the whole Sec 3008.

The change to Sec 3008.1 is in the preferred format of charging sections that tells the user to comply with all the subsequent sections.

The committee should note that there are 2 proposals to eliminate Section 3008.4 (or as proposed here 3008.1.1). If either of those is approved, this becomes a moot issue. But if the provision survives, it should be relocated as proposed.

ICCFILENAME: CCC G7 IBC 3008

IBC45-09 CCC

Removed 12/30/2009

IBC46-09 CCC

3302.1, 3311.4, 1401.3

1. Revise IBC as follows:

3302.1 Remodeling Alterations, repairs 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. When the existing building is not occupied.

2. Delete and substitute as follows:

~~**3311.4 Water supply.** Water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material accumulates.~~

3313.1 When required. An approved water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material arrives on the site.

(Scope the new Section 3313 to the Fire Code)

3. Also – Scope Section 1401.3 of the IEBC to the Building Code.

[B] 1401.3 Alterations, repairs, and additions. Required exits, existing structural elements, fire protection devices, and sanitary safeguards shall be maintained at all times during alterations, repairs, or additions to any building or structure.

Exceptions:

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

REASON: There is an intended correlation between Chapter 14 of the IEBC and Chapter 33 of the IBC as well as portions of Chapter 14 of the IFC. Most of what is contained in Chapter 14 of the IEBC originates in either the Fire Code or Building Code. Over time a couple of provisions 'fell out' of coordination. IBC 3302.1 and IEBC 1401.3 are identical except the IBC uses the term remodeling. The IEBC language is more appropriate.

And Section 1401.3 should be scoped to the Building Code. All provisions immediately before and after this section are scoped to the IBC, for some reason in the 2009 code 1401.3 is not so marked.

The water supply language is very similar but not identical. The IEBC has a stand alone section which repeats the IFC language and is scoped to the IFC. For some reason the IBC provision is misplaced in the Standpipe section and isn't the same text. This proposal makes the language and formatting consistent – and scopes the new IBC section to the Fire Code

ICCFILENAME: CCC G6 IBC 3301 IEBC

IBC47–09 CCC

3404.5 (IEBC [B] 303.5)

Proponent: David Bonowitz, David Bonowitz, SE, National Council of Structural Engineers Associations, Code Advisory Committee, Existing Buildings Subcommittee (NCSEA EBS)

Revise as follows:

3404.5 (IEBC [B] 303.5) Voluntary seismic improvements. Alterations to existing structural elements or additions of new structural elements that are not otherwise required by this chapter and are initiated for the purpose of improving the performance of the seismic force-resisting system of an existing structure or the performance of seismic bracing or anchorage of existing nonstructural elements shall be permitted, provided that an engineering analysis is submitted demonstrating the following:

1. The altered structure and the altered nonstructural elements are no less conforming with the provisions of this code with respect to earthquake design than they were prior to the alteration.
2. New structural elements are detailed and connected to the existing structural elements as required by Chapter 16 for new construction.
3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by Chapter 16 for new construction.
4. The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

Reason: This is an editorial clarification of intent. The intent is not to invoke the force levels of Chapter 16, because no minimum force levels should be given for voluntary work. For new structural elements (item 2), the intent is only to invoke the prescriptive detailing requirements for the selected system. For new or relocated nonstructural elements (item 3), the intent is that they should be anchored as if in new construction, for which the provisions are not exclusively in Chapter 16.

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

ICCFILENAME: Bonowitz-G6-3404.5.doc

IBC48–09 CCC

3402, 3411.2, 3411.3, 3411.6, 3411.7, 3411.8.1, 3411.8.5, 3411.9 (IEBC [B] 202, 310.2, 310.3, 310.6, 310.7, 310.8.1, 310.8.5, 310.9); IEBC 605.1, 605.2, 605.1.1, 605.1.4, 605.1.14, 1104.1, 1105.15

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

THIS IS A 2 PART CODE CHANGE. PART I AND II WILL BE HEARD BY THE INTERNATIONAL EXISTING BUIDLING COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THIS COMMITTEE.

PART I – IBC

Revise as follows:

SECTION 3402 (IEBC [B] 202) DEFINITIONS

TECHNICALLY INFEASIBLE. An *alteration* of a building or a facility that has little likelihood of being accomplished because the existing structural conditions require the removal or *alteration* of a load-bearing member that is an essential part of the structural frame, or because other existing physical or site constraints prohibit modification or addition of elements, spaces or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.

3411.2 (IEBC [B] 310.2) Maintenance of facilities. A building, facility or element that is constructed or altered to be *accessible* shall be maintained *accessible* during occupancy.

3411.3 (IEBC [B] 310.3) Extent of application. An *alteration* of an existing element, space or area of a building or facility shall not impose a requirement for greater accessibility than that which would be required for new construction.

Alterations shall not reduce or have the effect of reducing accessibility of a ~~building, portion of a building, or facility or portion of a facility.~~

3411.6 (IEBC [B] 310.6) Alterations. A ~~building, facility or element~~ that is altered shall comply with the applicable provisions in Chapter 11 of this code and ICC A117.1, unless *technically infeasible*. Where compliance with this section is *technically infeasible*, the *alteration* shall provide access to the maximum extent technically feasible.

Exceptions:

1. The altered element or space is not required to be on an *accessible* route, unless required by Section 3411.7.
2. *Accessible means of egress* required by Chapter 10 are not required to be provided in existing ~~buildings and facilities.~~
3. The *alteration* to Type A individually owned *dwelling* units within a Group R-2 occupancy shall meet the provision for a Type B *dwelling* unit and shall comply with the applicable provisions in Chapter 11 and ICC A117.1.

3411.7 (IEBC [B] 310.7) Alterations affecting an area containing a primary function. Where an *alteration* affects the accessibility to, or contains an area of *primary function*, the route to the *primary function* area shall be *accessible*. The *accessible* route to the *primary function* area shall include toilet facilities or drinking fountains serving the area of *primary function*.

Exceptions:

1. The costs of providing the *accessible* route are not required to exceed 20 percent of the costs of the *alterations* affecting the area of *primary function*.
2. This provision does not apply to *alterations* limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to *alterations* limited solely to mechanical systems, electrical systems, installation or *alteration* of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to *alterations* undertaken for the primary purpose of increasing the accessibility of an ~~existing building, a facility or element.~~

3411.8.1 (IEBC [B] 310.8.1) Entrances. *Accessible* entrances shall be provided in accordance with Section 1105.

Exception: Where an *alteration* includes alterations to an entrance, and the ~~building or facility~~ has an *accessible* entrance, the altered entrance is not required to be *accessible*, unless required by Section 3411.7. Signs complying with Section 1110 shall be provided.

3411.8.5 (IEBC [B] 310.8.5) Ramps. Where slopes steeper than allowed by Section 1010.2 are necessitated by space limitations, the slope of ramps in or providing access to existing ~~buildings or facilities~~ shall comply with Table 3411.8.5.

3411.9 (IEBC [B] 310.9) Historic buildings. These provisions shall apply to ~~buildings and facilities~~ designated as historic structures that undergo alterations or a change of occupancy, unless *technically infeasible*. Where compliance with the requirements for *accessible* routes, entrances or toilet facilities would threaten or destroy the historic significance of the ~~building or facility~~, as determined by the applicable governing authority, the alternative requirements of Sections 3411.9.1 through 3411.9.4 for that element shall be permitted.

PART II – IEBC

**SECTION 605
ACCESSIBILITY**

605.1 General. A ~~building, facility or element~~ that is altered shall comply with the applicable provisions in Sections 605.1.1 through 605.1.14, Chapter 11 of the *International Building Code* and ICC A117.1 unless it is *technically infeasible*. Where compliance with this section is *technically infeasible*, the *alteration* shall provide access to the maximum extent that is technically feasible.

A ~~building, facility or element~~ that is constructed or altered to be accessible shall be maintained accessible during occupancy.

Exceptions:

1. The altered element or space is not required to be on an accessible route unless required by Section 605.2.
2. Accessible means of egress required by Chapter 10 of the *International Building Code* are not required to be provided in existing ~~buildings and~~ facilities.
3. Type B dwelling or sleeping units required by Section 1107 of the *International Building Code* are not required to be provided in existing ~~buildings and~~ facilities.
4. The *alteration* to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provisions for Type B dwelling units and shall comply with the applicable provisions in Chapter 11 of the *International Building Code* and ICC A117.1.

605.1.1 Entrances. Where an *alteration* includes alterations to an entrance, and the ~~building or~~ facility has an accessible entrance on an accessible route, the altered entrance is not required to be accessible unless required by Section 605.2. Signs complying with Section 1110 of the *International Building Code* shall be provided.

605.1.4 Ramps. Where steeper slopes than allowed by Section 1010.2 of the *International Building Code* are necessitated by space limitations, the slope of ramps in or providing access to existing ~~buildings or~~ facilities shall comply with Table 605.1.4.

605.1.14 Extent of application. An *alteration* of an existing ~~element, space, or area of a building or~~ facility shall not impose a requirement for greater accessibility than that which would be required for new construction. Alterations shall not reduce or have the effect of reducing accessibility of a ~~building, portion of a building, or~~ facility or portion of a facility.

605.2 Alterations affecting an area containing a primary function. Where an *alteration* affects the accessibility to a, or contains an area of, *primary function*, the route to the *primary function* area shall be accessible. The accessible route to the *primary function* area shall include toilet facilities or drinking fountains serving the area of *primary function*.

Exceptions:

1. The costs of providing the accessible route are not required to exceed 20 percent of the costs of the alterations affecting the area of *primary function*.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, installation or *alteration* of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of ~~an existing building, a~~ facility or element.

1104.1 Accessibility requirements. The provisions of 605 and 706, as applicable, shall apply to ~~buildings and~~ facilities designated as historic structures that undergo alterations, unless *technically infeasible*. Where compliance with the requirements for accessible routes, entrances or toilet facilities would threaten or destroy the historic significance of the building or facility, as determined by the *code official*, the alternative requirements of Sections 1104.1.1 through 1104.1.4 for that element shall be permitted.

1105.15 Accessibility requirements. The provisions of Section 912.8 shall apply to ~~buildings and~~ facilities designated as historic structures that undergo a *change of occupancy*, unless *technically infeasible*. Where compliance with the requirements for accessible routes, ramps, entrances, or toilet facilities would threaten or destroy the historic significance of the building or facility, as determined by the authority having jurisdiction, the alternative requirements of Sections 1104.1.1 through 1104.1.5 for those elements shall be permitted.

Reason: "Facility" is defined in Section 1102 broadly to include "all or any portion of buildings, structures, site improvements, elements and pedestrian or vehicular routes located on a site." In the above code provisions, the mention of buildings, elements, spaces and areas have been removed, as there is no need for the redundancy. There are other portions of Chapter 34 (such as 3412.5.1, 3412.5.2 and the definition of "Primary Function") which refer only to the broader term "facility" and this proposal keeps the use of the term consistent throughout the chapter.

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

ICCFILENAME: Traxler-G8-3411.doc

IBC49–09 CCC

3411.8.11, 3411.9 (IEBC [B] 310.8.11, 310.9); IEBC 605.1.10, 1104.1, 1105.15

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

THIS IS A 2 PART CODE CHANGE. PART I AND II WILL BE HEARD BY THE INTERNATIONAL EXISTING BUILDING COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THIS COMMITTEE.

PART I – IBC

Revise as follows:

3411.8.11 (IEBC [B] 310.8.11) Toilet rooms. Where it is *technically infeasible* to alter existing toilet and bathing ~~facilities~~ rooms to be *accessible*, an *accessible* family or assisted-use toilet or bathing ~~facility~~ room constructed in accordance with Section 1109.2.1 is permitted. The family or assisted-use ~~facility~~ toilet or bathing room shall be located on the same floor and in the same area as the existing ~~facilities~~ toilet or bathing rooms.

3411.9 (IEBC [B] 310.9) Historic buildings. These provisions shall apply to buildings and facilities designated as historic structures that undergo alterations or a change of occupancy, unless *technically infeasible*. Where compliance with the requirements for *accessible* routes, entrances or toilet ~~facilities~~ rooms would threaten or destroy the historic significance of the building or facility, as determined by the applicable governing authority, the alternative requirements of Sections 3411.9.1 through 3411.9.4 for that element shall be permitted.

PART II – IEBC

605.1.10 Toilet rooms. Where it is *technically infeasible* to alter existing toilet and bathing ~~facilities~~ rooms to be accessible, an accessible family or assisted-use toilet or bathing ~~facility~~ room constructed in accordance with Section 1109.2.1 of the *International Building Code* is permitted. The family or assisted-use ~~facility~~ toilet or bathing room shall be located on the same floor and in the same area as the existing ~~facilities~~ toilet or bathing rooms.

1104.1 Accessibility requirements. The provisions of 605 and 706, as applicable, shall apply to buildings and facilities designated as historic structures that undergo alterations, unless *technically infeasible*. Where compliance with the requirements for accessible routes, entrances or toilet ~~facilities~~ rooms would threaten or destroy the historic significance of the building or facility, as determined by the *code official*, the alternative requirements of Sections 1104.1.1 through 1104.1.4 for that element shall be permitted.

1105.15 Accessibility requirements. The provisions of Section 912.8 shall apply to buildings and facilities designated as historic structures that undergo a *change of occupancy*, unless *technically infeasible*. Where compliance with the requirements for accessible routes, ramps, entrances, or toilet ~~facilities~~ rooms would threaten or destroy the historic significance of the building or facility, as determined by the authority having jurisdiction, the alternative requirements of Sections 1104.1.1 through 1104.1.5 for those elements shall be permitted.

Reason: The use of the term “facility” or “facilities” as used in this section is ambiguous. “Facility” is defined in Section 1102 broadly to include “all or any portion of buildings, structures, site improvements, elements and pedestrian or vehicular routes located on a site.” Replacing the term “facility” or “facilities” with a more meaningful term, such as “room” or “rooms,” removes the ambiguity and is consistent with the terminology used in Section 1109.

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

ICCFILENAME: Traxler-G9-3411.doc

IBC50–09 CCC

Terms: Property Line(s), Property, Site Property

Proponent: Carroll Lee Pruitt, FAIA, NCARB, Pruitt Consulting, Inc.

PART I - IBC:

702.1 Definitions. (No change to text.)

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.

1509.2.4 Type of construction. *(No change to text.)*

Exceptions:

1. *(No change to text.)*
2. *(No change to text.)*
3. On buildings of Type III, IV and V construction, the exterior walls of penthouses with a *fire separation distance* of more than 5 feet (1524 mm) and less than 20 feet (6096 mm) shall be at least 1-hour fire-resistance-rated construction. Walls with a *fire separation distance* of 20 feet (6096 mm) or greater from a common ~~property line~~ lot line shall be of Type IV construction or noncombustible, or *fire-retardant-treated wood* construction. Roofs shall be constructed of materials and fire-resistance rated as required in Table 601 and Section 603, Item 1.3. Interior framing and walls shall be Type IV construction or noncombustible or *fire-retardant-treated wood* construction.
4. *(No change to text.)*
5. *(No change to text.)*
6. On one-story buildings, combustible unroofed mechanical equipment screens, fences or similar enclosures are permitted where located with a *fire separation distance* of at least 20 feet (6096 mm) from adjacent ~~property lines~~ lot lines and where not exceeding 4 feet (1219 mm) in height above the roof surface.
7. *(No change to text.)*

3106.2 Thickness. The maximum height or thickness of a marquee measured vertically from its lowest to its highest point shall not exceed 3 feet (914 mm) where the marquee projects more than two-thirds of the distance from the ~~property line~~ lot line to the curb line, and shall not exceed 9 feet (2743 mm) where the marquee is less than two-thirds of the distance from the ~~property line~~ lot line to the curb line.

D102.2.6 Exterior walls. Exterior load-bearing walls of Type II buildings shall have a *fire-resistance rating* of 2 hours or more where such walls are located within 30 feet (9144 mm) of a common ~~property line~~ lot line or an assumed ~~property line~~ lot line. Exterior nonload-bearing walls of Type II buildings located within 30 feet (9144 mm) of a common ~~property line~~ lot line or an assumed ~~property line~~ lot line shall have fire-resistance ratings as required by Table 601, but not less than 1 hour. Exterior walls located more than 30 feet (9144 mm) from a common ~~property line~~ lot line or an assumed ~~property line~~ lot line shall comply with Table 601.

Exception: In the case of one-story buildings that are 2,000 square feet (186 m²) or less in area, exterior walls located more than 15 feet (4572 mm) from a common ~~property line~~ lot line or an assumed ~~property line~~ lot line need only comply with Table 601.

D105.1 General. *(No change to text.)*

1. through 6. *(No change to text.)*
7. Porches on dwellings not over one *story* in height, and not over 10 feet (3048 mm) wide from the face of the building, provided such porch does not come within 5 feet (1524 mm) of any ~~property line~~ lot line.
8. through 12. *(No change to text.)*

J108.1 General. Cut and fill slopes shall be set back from the ~~property lines~~ lot lines in accordance with this section. Setback dimensions shall be measured perpendicular to the ~~property line~~ lot line and shall be as shown in Figure J108.1, unless substantiating data is submitted justifying reduced setbacks.

J109.4 Drainage across ~~property lines~~ lot lines. Drainage across ~~property lines~~ lot lines shall not exceed that which existed prior to grading. Excess or concentrated drainage shall be contained on site or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of nonerosive down drains or other devices.

PART II - IFC:

315.3 Outside storage. Outside storage of combustible materials shall not be located within 10 feet (3048 mm) of a ~~property line~~ lot line.

Exceptions:

1. The separation distance is allowed to be reduced to 3 feet (914 mm) for storage not exceeding 6 feet (1829 mm) in height.
2. The separation distance is allowed to be reduced when the fire code official determines that no hazard to the adjoining property exists.

911.2 (IBC [F] 911.2) Required deflagration venting. (No change to text.)

1. through 5. (No change to text.)
6. Vents designed to release from the *exterior walls* or roofs of the building when venting a *deflagration* shall discharge directly to the exterior of the building where an unoccupied space not less than 50 feet (15 240 mm) in width is provided between the exterior walls of the building and the ~~property line~~ lot line.

Exception: Vents complying with Item 7 of this section.

7. Vents designed to remain attached to the building when venting a *deflagration* shall be so located that the discharge opening shall not be less than 10 feet (3048 mm) vertically from window openings and *exits* in the building and 20 feet (6096 mm) horizontally from *exits* in the building, from window openings and *exits* in adjacent buildings on the same ~~property lot~~, and from the ~~property line~~ lot line.
8. (No change to text.)

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 ~~property lot~~ that can be built upon or public thoroughfare by a minimum clear distance of 25 feet (7620 mm).

**TABLE 2206.2.3
MINIMUM SEPARATION REQUIREMENTS FOR ABOVE-GROUND TANKS**

CLASS OF LIQUID AND TANK TYPE	INDIVIDUAL TANK CAPACITY (gallons)	MINIMUM DISTANCE FROM NEAREST IMPORTANT BUILDING ON SAME PROPERTY LOT (feet)	MINIMUM DISTANCE FROM NEAREST FUEL DISPENSER (feet)	MINIMUM DISTANCE FROM LOT LINE THAT IS OR CAN BE BUILT UPON, INCLUDING THE OPPOSITE SIDE OF A PUBLIC WAY (feet)	MINIMUM DISTANCE FROM NEAREST SIDE OF ANY PUBLIC WAY (feet)	MINIMUM DISTANCE BETWEEN TANKS (feet)
(Portions of table not shown remain unchanged.)						

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 ~~property lot~~ 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 ~~property 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.

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 ~~property~~ lot 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.

2209.3.2.5.1 Location on ~~property~~ lot. In addition to the requirements of Section 2203.1, above-ground liquefied hydrogen storage containers, compression and vaporization equipment serving motor fuel-dispensing operations shall be located 25 feet (7620 mm) 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; wall openings; *lot lines* of ~~property~~ lot that could be built on; public streets and parked vehicles.

TABLE 2209.5.4.3.4
VENT PIPE HEIGHT AND SEPARATION DISTANCE
VERSUS HYDROGEN FLOW RATE AND VENT PIPE DIAMETER ^{a,b,c,d,e,f}
(No change to table.)

- a. Minimum distance to ~~property line~~ lot line is 1.25D.
- b. to h. (No change to text.)

3205.3.1 Separation. Distances from ~~property lines~~ lot lines, buildings and exposure hazards shall comply with Section 3204.3 and the material-specific provisions of Section 3201.1.

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 ~~property~~ lot 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:

TRANSFERRING FUEL OTHER THAN CLASS IIIB COMBUSTIBLE LIQUID TO THIS TANK CONNECTION IS A VIOLATION OF THE FIRE CODE AND IS STRICTLY PROHIBITED.

3404.4.2 Location on ~~property~~ lot. 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 ~~property~~ 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 PROPERTY LOT 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 ~~property lot~~ lot 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 PROPERTY LOT 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)

3406.5.4.5 Commercial, industrial, governmental or manufacturing. Dispensing of Class II and III motor vehicle fuel from tank vehicles into the fuel tanks of motor vehicles located at commercial, industrial, governmental or manufacturing establishments is allowed where permitted, provided such dispensing operations are conducted in accordance with the following:

1. and 2. *(No change to text.)*
3. A detailed site plan shall be submitted with each application for a permit. The site plan shall indicate: all buildings, structures and appurtenances on site and their use or function; all uses adjacent to the ~~property lines~~ lot lines of the site; the locations of all storm drain openings, adjacent waterways or wetlands; information regarding slope, natural drainage, curbing, impounding and how a spill will be retained upon the ~~site property lot~~ lot; and the scale of the site plan.
4. and 5. *(No change to text.)*
6. Mobile fueling shall not take place within 15 feet (4572 mm) of buildings, ~~property lines~~ lot lines, combustible storage or storm drains.
7. through 25. *(No change to text.)*

3804.3 Container location. LP-gas containers shall be located with respect to buildings, *public ways* and *lot lines* of adjoining ~~property lot~~ lot 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 PROPERTY LOT 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 PROPERTY LOT THAT CAN BE BUILT UPON (feet)	MINIMUM DISTANCE TO PUBLIC STREETS, PUBLIC ALLEYS OR PUBLIC WAYS (feet)	MINIMUM DISTANCE TO BUILDINGS ON THE SAME PROPERTY 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 III - IRC:

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B or C roofing shall be installed in areas designated by law as requiring their use or when the edge of the roof is less than 3 feet (914 mm) from a ~~property line~~ lot line. Classes A, B and C roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

M2201.2.2 Outside above-ground tanks. Tanks installed outside above ground shall be a minimum of 5 feet (1524 mm) from an adjoining ~~property line~~ lot line. Such tanks shall be suitably protected from the weather and from physical damage.

M2201.3 Underground tanks. Excavations for underground tanks shall not undermine the foundations of existing structures. The clearance from the tank to the nearest wall of a *basement*, pit or ~~property line~~ lot line shall not be less than 1 foot (305 mm). Tanks shall be set on and surrounded with noncorrosive inert materials such as clean earth, sand or gravel well tamped in place. Tanks shall be covered with not less than 1 foot (305 mm) of earth. Corrosion protection shall be provided in accordance with Section M2203.7.

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 line in accordance with local requirements.

AO103.8 Subsurface landscape irrigation site location. The surface grade of all soil absorption systems shall be located at a point lower than the surface grade of any water well or reservoir on the same or adjoining ~~property lot~~. Where this is not possible, the site shall be located so surface water drainage from the site is not directed toward a well or reservoir. The soil absorption system shall be located with a minimum horizontal distance between various elements as indicated in TableAO103.8. Private sewage disposal systems in compacted areas, such as parking lots and driveways, are prohibited. Surface water shall be diverted away from any soil absorption site on the same or neighboring lots.

PART IV - IPC:

**TABLE C103.8
LOCATION OF GRAYWATER SYSTEM**

ELEMENT	MINIMUM HORIZONTAL DISTANCE	
	HOLDING TANK (feet)	IRRIGATION DISPOSAL FIELD (feet)
Buildings	5	2
Property line <u>Lot line</u> adjoining private property	5	5
Water wells	50	100
Streams and lakes	50	50
Seepage pits	5	5
Septic tanks	0	5
Water service	5	5
Public water main	10	10

PART V - 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 ~~property line~~ lot line that could be built on, public street, sidewalk or source of ignition.
3. through 5. (No change to text.)

PART VI - IUWIC:

108.7 Vicinity plan. In addition to the requirements for site plans, plans shall include details regarding the vicinity within 300 feet (91 440 mm) of ~~property lines~~ lot lines, including other structures, slope, vegetation, *fuel breaks*, water supply systems and access roads.

504.10.1 Vent locations. Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located at least 10 feet (3048 mm) from ~~property lines~~ lot lines. Underfloor ventilation openings shall be located as close to grade as practical.

603.2 Fuel modification. Buildings or structures, constructed in compliance with the conforming *defensible space* category of Table 503.1, shall comply with the *fuel modification* distances contained in Table 603.2. For all other purposes the *fuel modification* distance shall not be less than 30 feet (9144 mm) or to the ~~property line~~ lot line, whichever is less. Distances specified in Table 603.2 shall be measured on a horizontal plane from the perimeter or projection of the building or structure as shown in Figure 603.2. Distances specified in Table 603.2 are allowed to be increased by the code official because of a site-specific analysis based on local conditions and the fire protection plan.

B101.2 Plan content. Vegetation management plans shall describe all actions that will be taken to prevent a fire from being carried toward or away from the building. A vegetation management plan shall include at least the following information:

1. A copy of the site plan.
2. Methods and timetables for controlling, changing or modifying areas on the ~~property lot~~. Elements of the plan shall include removal of slash, snags, vegetation that may grow into overhead electrical lines, other ground fuels, ladder fuels and dead trees, and the thinning of live trees.
3. A plan for maintaining the proposed fuel-reduction measures.

APPENDIX G SELF-DEFENSE MECHANISMS

Building location. The location of a new building within ~~property lines~~ lot lines should be considered as it relates to topography and fire behavior. Buildings located in natural chimneys, such as narrow canyons and saddles, are especially fire prone because winds are funneled into these areas and eddies are created. Buildings located on narrow ridges without setbacks may be subjected to increased flame and convective heat exposure from a fire advancing from below. Stone or masonry walls can act as heat shields and deflect the flames. Swimming pools and rated or *noncombustible* decks and patios can be used to create a setback, decreasing the exposure to the structure. Attic and under floor vents, picture windows and sliding glass doors should not face possible corridors due to the increased risk of flame or ember penetration.

PART VII - IZC:

SECTION 202 GENERAL DEFINITIONS

BUILDING LINE. The perimeter of that portion of a building or structure nearest a ~~property line~~ lot line, but excluding open steps, terraces, cornices and other ornamental features projecting from the walls of the building or structure.

1004.5 Computation of frontage. If a premises contains walls facing more than one ~~property lot~~ lot line or encompasses ~~property lot~~ lot frontage bounded by more than one street or other ~~property lot~~ lot usages, the sign area(s) for each building wall or ~~property lot~~ lot frontage will be computed separately for each building wall or ~~property lot~~ lot line facing a different frontage. The sign area(s) thus calculated shall be permitted to then be applied to permitted signs placed on each separate wall or ~~property lot~~ lot line frontage.

PART VIII - IMC:

506.3.12.3 Termination location. Exhaust outlets shall be located not less than 10 feet (3048 mm) horizontally from parts of the same or contiguous buildings, adjacent buildings and adjacent property lines and shall be located not less than 10 feet (3048 mm) above the adjoining grade level. Exhaust outlets shall be located not less than 10 feet (3048 mm) horizontally from or not less than 3 feet (914 mm) above air intake openings into any building.

Exception: Exhaust outlets shall terminate not less than 5 feet (1524 mm) from parts of the same or contiguous building, an adjacent building, adjacent ~~property~~ lot line and air intake openings into a building where air from the exhaust outlet discharges away from such locations.

1105.6.1 Discharge location. The discharge of the air shall be to the outdoors in accordance with Chapter 5. Exhaust from mechanical ventilation systems shall be discharged not less than 20 feet (6096 mm) from a ~~property~~ lot line or openings into buildings.

Reason: This code change is intended only to put the proper terms in the code as defined by the code. The proper code term for property line is lot line, The proper term for property in most cases is lot. The proper term for Imaginary property line is imaginary line. This code change should be more editorial in nature by using the defined terms in the code, thus bringing consistency to code language.

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

ICCFILENAME: Pruitt-G1-Term Property Line

Updated 12/30/2009

IBC51–09/10

508.3.1

Proponent: Daniel E. Nichols, P.E., New York State Div. of Code Enforcement and Administration

Revise as follows:

508.3.1 Occupancy Classification: Nonseparated occupancies shall be individually classified in accordance with Section 302.1. The requirements of this code shall apply to each portion of the building based on the occupancy classification of that space except that the most restrictive applicable provisions of Section 403 and Chapter 9 shall apply to the building or portion thereof in which the nonseparated occupancies are located. The most restrictive provisions of Chapter 9 which apply to the non-separated occupancies shall apply to the total nonseparated occupancy area. Where nonseparated occupancies occur in a high-rise building, the most restrictive requirements of Section 403 which apply to the nonseparated occupancies shall apply throughout the high-rise building.

Reason: Though not the intent, the current sentence structure could be read to state that the high-rise provisions apply to all buildings utilizing nonseparated occupancies. This proposal explicitly makes Chapter 403 and Chapter 9 mutually exclusive.

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

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

ICCFILENAME: NICHOLS-G3-508.3.1.doc

Updated 12/30/2009

IBC52–09/10

Chapter 34, 3401.1, 3401.3, 3401.4.1, 3403.3, 3404.5, 3405.2.1, 3405.2.3, 3408.3, 3408.4; IEBC [B]301.1, [B]301.2.1, [B]302.3, [B]304.1, [B]304.2.1, [B]304.2.3, [B]307.3, [B]307.4

Proponent: David Bonowitz, David Bonowitz, S.E., National Council of Structural Engineers Associations, Code Advisory Committee, Existing Buildings Subcommittee (NCSEA EBS)

Revise as follows:

**CHAPTER 34
EXISTING BUILDINGS AND STRUCTURES**

3401.1 (IEBC [B] 301.1) Scope. The provisions of this chapter shall control the alteration, repair, addition and change of occupancy of existing buildings and structures.

Exception: Existing bleachers, grandstands and folding and telescoping seating shall comply with ICC 300.

3401.3 Compliance with other codes. Alterations, repairs, additions and changes of occupancy to existing buildings and structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy 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.

3401.4.1 (IEBC [B] 301.2.1) Existing materials. . Materials already in use in a building in conformance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the building ~~code~~ official to be *dangerous* to life, health or safety. Where such conditions are determined to be *dangerous* to life, health or safety, they shall be mitigated or made safe.

3403.3 (IEBC [B] 302.3) Existing structural elements carrying gravity load. Any existing gravity load-carrying structural element for which an addition and its related alterations cause an increase in design gravity load of more than 5 percent shall be strengthened, supplemented, replaced or otherwise altered as needed to carry the increased gravity load required by this code for new structures. Any existing gravity load-carrying structural element whose gravity load-carrying capacity is decreased shall be considered an altered element subject to the requirements of Section 3404.3. Any existing element that will form part of the lateral load path for any part of the *addition* shall be considered an existing lateral load-carrying structural element subject to the requirements of Section 3403.4.

3405.2.1 (IEBC [B] 304.2.1) Evaluation. The building shall be evaluated by a *registered design professional*, and the evaluation findings shall be submitted to the ~~code~~ building official. The evaluation shall establish whether the damaged building, if repaired to its pre-damage state, would comply with the provisions of this code for wind and earthquake loads. Evaluation for earthquake loads shall be required if the substantial structural damage was caused by ~~or related~~ to earthquake effects or if the building is in Seismic Design Category C, D, E or F.

Wind loads for this evaluation shall be those prescribed in Section 1609. Earthquake loads for this evaluation, if required, shall be permitted to be 75 percent of those prescribed in Section 1613. Values of R , Ω_e and C_d for the existing seismic force-resisting system shall be those specified by this code for an ordinary system unless it is demonstrated that the existing system will provide performance equivalent to that of an intermediate or special system.

3405.2.3 (IEBC [B] 304.2.3) Extent of repair for noncompliant buildings. If the evaluation does not establish compliance of the pre-damage building in accordance with Section 3404.2.1, then the building shall be rehabilitated to comply with applicable provisions of this code for load combinations, ~~including that include~~ including wind or seismic loads. The wind loads for the repair shall be as required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be as required by the code in effect at the time of original construction or as required by this code, whichever are greater. Earthquake loads for this rehabilitation design shall be those required for the design of the pre-damage building, but not less than seventy-five percent of those prescribed in Section 1613. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of this code for new buildings of similar structure, purpose and location.

3408.3 (IEBC [B] 307.3) Stairways. ~~Existing stairways in an existing structure~~ An existing stairway shall not be required to comply with the requirements of ~~a new stairway as outlined~~ in Section 1009 where the existing space and construction ~~will~~ does not allow a reduction in pitch or slope.

Reason: This proposal is editorial, for consistency throughout the Chapter. Section by section reasons:

Title, 3401.1, 3401.3	Chapter 34 is mostly about buildings, not just about structures or structural elements. Many of its provisions refer to exiting, life safety systems, accessibility, and other issues not related to structure.
3401.4.1, 3405.2.1	According to correspondence from ICC staff, the term "building official" is preferred for use in the IBC.
3403.3	Clarification that section 3403.3 applies only to gravity loads.
3405.2.3	
3405.1	The words "this section and" clarify the intent of the section. These words were in the approved proposal G206-07/08 but were mistakenly omitted by ICC staff when preparing the 2009 IBC.
3405.2.1	The words "or related to", while meaningful in some contexts, are too vague for code language.
3405.2.3	The proposal removes a potential confusion raised by ICC's errant insertion of a comma after "combinations" that changes the meaning. The intent is that only those combinations that include wind or seismic effects need be considered here.
3408.3	The proposed revision matches section 3404.1 Exception 1, which has the same intent with clearer wording.
3408.4	The title change is an editorial revision proposed so that the name of the subsection is more appropriate and does not duplicate the name of the larger section. The words "this code or" and "this code and" should be removed because ICC

Cost Impact: No cost increase.

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

ICCFILENAME: BONOWITZ-G1-CHPT 34.doc

Updated 12/30/2009

IBC53-09/10

3403.2 (IEBC [B] 302.2), 3404.2 (IEBC [B] 303.2), 3405.5 (IEBC [B] 304.5)

Proponent: Rebecca C. Quinn , RC Quinn Consulting, Inc. representing Department of Homeland Security, Federal Emergency Management Agency

Revise as follows:

3403.2 (IEBC [B] 302.2) Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3, any addition that constitutes substantial improvement of the existing structure, as defined in Section 1612.2, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3, any additions that do not constitute substantial improvement or ~~substantial damage~~ of the existing structure, as defined in Section 1612.2, are not required to comply with the flood design requirements for new construction.

3404.2 (IEBC [B] 303.2) Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3, any alteration that constitutes substantial improvement of the existing structure, as defined in Section 1612.2, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3, any alterations that do not constitute substantial improvement or ~~substantial damage~~ of the existing structure, as defined in Section 1612.2, are not required to comply with the flood design requirements for new construction.

3405.5 (IEBC [B] 304.5) Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3, any repair that constitutes substantial improvement of the existing structure, as defined in Section 1612.2, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3, any repairs that do not constitute substantial improvement or ~~repair of~~ substantial damage of the existing structure, as defined in Section 1612.2, are not required to comply with the flood design requirements for new construction.

Reason: Chapter 34 of the 2009 *International Building Code* was modified to have separate sections for additions (Sec. 3403), alterations (Sec. 3404) and repairs (Sec. 3405). A different code change that is related to work on existing buildings in flood hazard areas was repeated in each of the three new sections. That code change includes the phrase "substantial improvement or substantial damage." The proposed changes are editorial and intended solely to be consistent with the subject of each section:

1. Section 3403.2, additions may be determined to constitute substantial improvement, but an addition is not a repair, specifically, an addition would not be proposed to repair substantial damage.
2. Section 3404.2 addresses alterations, and an alteration as defined by the code may constitute "substantial improvement," but an alteration is not a repair, specifically an alteration would not be proposed to repair substantial damage.
3. Section 3405.5 addresses repairs, thus It is clearer to refer to repair of substantial damage.

Cost Impact: The code change proposal will not increase the cost of construction. No impact on cost (editorial).

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

ICCFILENAME: QUINN-G1-3403.2.doc

INTERNATIONAL ENERGY CONSERVATION CODE

EC1-09 CCC

3.2

Proponent: Ronald Majette, US Department of Energy

Revise as follows:

BUILDING THERMAL ENVELOPE. The basement walls, exterior walls, floor, roof, and any other building element that encloses *conditioned space*. ~~This boundary also includes the boundary between *conditioned space* and any exempt or unconditioned space or provides a boundary between *conditioned space* and exempt or unconditioned space.~~

Reason: Editorial.

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

ICCFILENAME: Majette-EC-33-202

EC2-09 CCC

402.4.5, N1102.4.5

Proponent: Ronald Majette, US Department of Energy

PART I: IECC

Revise text to read as follows:

402.4.5 Recessed lighting. Recessed luminaires installed in the *building thermal envelope* shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) meeting ASTM E 283 when tested in accordance with ASTM E 283 at a 1.57 psf (75 Pa) pressure differential ~~with no more than 2.0 cfm (0.944 L/s) of air movement from the conditioned space to the ceiling cavity.~~ All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

PART II- IRC

Revise text to read as follows:

N1102.4.5 Recessed lighting. Recessed luminaires installed in the *building thermal envelope* shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) meeting ASTM E 283 when tested in accordance with ASTM E 283 at a 1.57 psf (75 Pa) pressure differential ~~with no more than 2.0 cfm (0.944 L/s) of air movement from the conditioned space to the ceiling cavity.~~ All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

Reason: Clarification and consistency with other sections. It is appropriate to provide the criterion first and then the relevant test condition and reference standard. In addition it is not relevant to indicate where the air movement comes from or goes to as the issue of leakage rate is addressed in the standard. In addition the current text refers to sealing the housing and an interior wall yet the current text for testing refers only to ceiling cavity. This is inconsistent and is taken care of in the proposed text.

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

ICCFILENAME: Majette-EC-80-402.4.5 - N1102.4.5

EC3–09 CCC

502.4.8

Proponent: Ronald Majette, US Department of Energy

Revise text to read as follows:

502.4.8 Recessed lighting. Recessed luminaires installed in the *building thermal envelope* shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate or no more 2.0 cfm (0.944 L/s) meeting ASTM E 283 when tested in accordance with ASTM E 283 at a 1.57 psf (75 Pa) pressure differential with no more than 2.0 cfm (0.944 L/s) of air movement from the conditioned space to the ceiling cavity. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

Reason: Clarification and consistency with other sections. It is appropriate to provide the criterion first and then the relevant test condition and reference standard. In addition, it is not relevant to indicate where the air movement comes from or goes to as the issue of leakage rate is addressed in the standard. In addition the current text refers to sealing the housing and an interior wall yet the current text for testing refers only to ceiling cavity. This is inconsistent and is taken care of in the proposed text.

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

ICCFILENAME: Majette-EC-45-502.4.8

INTERNATIONAL EXISTING BUILDING CODE

EB1–09 CCC

506.2.1, 506.2.2.1, 506.2.2.3, 807.4.2

Proponent: David Bonowitz, David Bonowitz, S.E., National Council of Structural Engineers Associations, Code Advisory Committee, Existing Buildings Subcommittee (NCSEA EBS)

Revise as follows:

506.2.1 Repairs for less than substantial structural damage. For damage less than substantial structural damage, the damaged elements shall be permitted to be restored to their ~~predamage~~ pre-damage condition.

506.2.2.1 Evaluation. The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the *code official*. The evaluation shall establish whether the damaged building, if repaired to its ~~predamaged~~ pre-damage state, would comply with the provisions of the *International Building Code*, except that the seismic ~~design criteria~~ forces shall be the reduced IBC-level seismic forces ~~specified in Section 101.5.4.2.~~

506.2.2.3 Extent of repair for noncompliant buildings. If the evaluation does not establish that the building in its ~~predamage~~ pre-damage condition complies with the provisions of Section 506.2.2.1, then the building shall be rehabilitated to comply with the provisions of this section. The wind load for the repair and rehabilitation shall be those required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance with the *International Building Code*. The seismic loads for this rehabilitation design shall be those required by the building code in effect at the time of original construction, but not less than the reduced IBC-level seismic forces ~~specified in Section 101.5.4.2.~~

807.4.2 Substantial structural alteration. Where more than 30 percent of the total floor and roof areas of the building or structure have been or are proposed to be involved in structural alteration within a 12-month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the *International Building Code* for wind loading and with reduced ~~*International Building Code*~~ IBC-level seismic forces ~~as specified in Section 101.5.4.2 for seismic loading.~~ For seismic considerations, the analysis shall be based on one of the procedures specified in ~~Section 101.5.4.~~ The areas to be counted toward the 30 percent shall be those areas tributary to the vertical load-carrying components, such as joists, beams, columns, walls and other structural components that have been or will be removed, added or altered, as well as areas such as mezzanines, penthouses, roof structures and in-filled courts and shafts.

Reason:

This proposal is editorial, for consistency throughout the Chapter. Section by section proposals:

- | | |
|-----------|---|
| 506.2.1 | Use "pre-damage", not "predamage" or "predamaged". "Pre-damage" means "before the damage," and this is the intended meaning. "Pre-damaged" means "damaged in advance," which is not the intended meaning. |
| 506.2.2.1 | "Pre-damage."
"Design criteria" is the wrong term.
Specific reference to section 101.5.4.2 is not necessary, as the name of that section already includes the words "reduced IBC-level seismic forces." |
| 506.2.2.3 | "Pre-damage."
Reference to reduced IBC-level seismic forces. |
| 807.4.2 | Reference to reduced IBC-level seismic forces. Also, the sentence proposed for deletion is redundant once the reduced IBC-level forces are specified. |

Cost Impact: No cost increase.

ICCFILENAME: Bonowitz-EB32-506.2.1 Sub onlydoc

EB2-09 CCC

A402

Proponent: Gary R. Searer/Wiss, Janney, Elstner Associates, Inc./ National Council of Structural Engineers Association (NCSEA) Existing Buildings Subcommittee

Delete without substitution:

SECTION A402 DEFINITIONS

~~**APARTMENT HOUSE.** Any building or portion thereof that contains three or more dwelling units. For the purposes of this chapter, "apartment house" includes residential condominiums.~~

~~**CONGREGATE RESIDENCE.** A congregate residence is any building or portion thereof for occupancy by other than a family that contains facilities for living, sleeping and sanitation as required by the building code and that may include facilities for eating and cooking. A congregate residence may be a shelter, convent, monastery, dormitory, fraternity or sorority house, but does not include jails, hospitals, nursing homes, hotels or lodging houses.~~

~~**DWELLING UNIT.** Any building or portion thereof for not more than one family that contains living facilities, including provisions for sleeping, eating, cooking and sanitation as required by the building code or congregate residence for 10 or fewer persons.~~

~~**GUESTROOM.** Any room or rooms used or intended to be used by a guest for sleeping purposes. Every 100 square feet (9.3m²) of superficial floor area in a congregate residence shall be considered a guestroom.~~

~~**HOTEL.** Any building containing six or more guestrooms intended or designed to be used, rented, hired out to be occupied, or that are occupied, for sleeping purposes by guests.~~

~~**LIFE SAFETY PERFORMANCE LEVEL.** The building performance level that includes significant damage to both structural and nonstructural components during a design earthquake, though at least some margin against either partial or total structural collapse remains. Injuries may occur, but the level of risk for life-threatening injury and entrapment is low.~~

~~**LODGING HOUSE.** Any building or portion thereof containing at least one but not more than five guest rooms where rent is paid in money, goods, labor or otherwise.~~

~~**MOTEL.** Motel shall mean a hotel as defined in this chapter.~~

~~**MULTIUNIT RESIDENTIAL BUILDINGS.** Hotels, lodging houses, congregate residences and apartment houses.~~

Reason: Section A401.2 already limits the scope of this Appendix Chapter to buildings with R-1 or R-2 Occupancy Groups. With the exception of "Multiunit Residential Buildings", which appears in the Section A401 Purpose, none of the above terms is even used in this Chapter. The term "Multiunit Residential Buildings" is fairly obvious as to its intent (which is then specifically spelled out in the Scope) so a definition for this term is not even needed.

These definitions are unnecessary, may conflict with the definitions in the IBC, and do not belong in this Appendix Chapter, which is exclusively a structural engineering chapter designed to reduce the seismic life-safety hazards associated with R-1 or R-2 Occupancy Group buildings.

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

ICCFILENAME: Searer-EB15-A402 - Chapter A4 - Definitions

EB3–09 CCC

A402

Proponent: Gary R. Searer/Wiss, Janney, Elstner Associates, Inc./ National Council of Structural Engineers Association (NCSEA) Existing Buildings Subcommittee

Revise as follows:

SECTION A402 DEFINITIONS

ASPECT RATIO. The span-width ratio for horizontal diaphragms and the height-length ratio for shear walls ~~vertical diaphragms~~.

Reason: This proposal is editorial and provides terminology consistent with the IBC and ASCE 7.

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

ICCFILENAME: Searer-EB6- A402 - Chapter A4 - Aspect Ratio

EB4–09 CCC

A402

Proponent: Gary R. Searer/Wiss, Janney, Elstner Associates, Inc./ National Council of Structural Engineers Association (NCSEA) Existing Buildings Subcommittee

Delete without substitution:

SECTION A402 DEFINITIONS

~~**APARTMENT HOUSE.** Any building or portion thereof that contains three or more dwelling units. For the purposes of this chapter, "apartment house" includes residential condominiums.~~

~~**CONGREGATE RESIDENCE.** A congregate residence is any building or portion thereof for occupancy by other than a family that contains facilities for living, sleeping and sanitation as required by the building code and that may include facilities for eating and cooking. A congregate residence may be a shelter, convent, monastery, dormitory, fraternity or sorority house, but does not include jails, hospitals, nursing homes, hotels or lodging houses.~~

~~**DWELLING UNIT.** Any building or portion thereof for not more than one family that contains living facilities, including provisions for sleeping, eating, cooking and sanitation as required by the building code or congregate residence for 10 or fewer persons.~~

~~**GUESTROOM.** Any room or rooms used or intended to be used by a guest for sleeping purposes. Every 100 square feet (9.3m²) of superficial floor area in a congregate residence shall be considered a guestroom.~~

~~**HOTEL.** Any building containing six or more guestrooms intended or designed to be used, rented, hired out to be occupied, or that are occupied, for sleeping purposes by guests.~~

~~**LIFE SAFETY PERFORMANCE LEVEL.** The building performance level that includes significant damage to both structural and nonstructural components during a design earthquake, though at least some margin against either partial or total structural collapse remains. Injuries may occur, but the level of risk for life-threatening injury and entrapment is low.~~

~~**LODGING HOUSE.** Any building or portion thereof containing at least one but not more than five guest rooms where rent is paid in money, goods, labor or otherwise.~~

~~**MOTEL.** Motel shall mean a hotel as defined in this chapter.~~

~~**MULTIUNIT RESIDENTIAL BUILDINGS.** Hotels, lodging houses, congregate residences and apartment houses.~~

Reason: Section A401.2 already limits the scope of this Appendix Chapter to buildings with R-1 or R-2 Occupancy Groups. With the exception of "Multiunit Residential Buildings", which appears in the Section A401 Purpose, none of the above terms is even used in this Chapter. The term

"Multiunit Residential Buildings" is fairly obvious as to its intent (which is then specifically spelled out in the Scope) so a definition for this term is not even needed.

These definitions are unnecessary, may conflict with the definitions in the IBC, and do not belong in this Appendix Chapter, which is exclusively a structural engineering chapter designed to reduce the seismic life-safety hazards associated with R-1 or R-2 Occupancy Group buildings.

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

ICCFILENAME: Searer-EB15-A402 - Chapter A4 - Definitions

INTERNATIONAL FIRE CODE

F1-09 CCC

[F] 307.2 (IFC 202), Table 508.2.5; IFC 608.1

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

1. Revise IBC as follows:

[F] 307.1 (IFC 202) 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. through 8. *(No change to current text)*
9. Stationary batteries utilized for facility emergency power, ~~uninterrupted~~ 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*.

**TABLE 508.2.5
INCIDENTAL ACCESSORY OCCUPANCIES**

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted <u>uninterruptible</u> power supplies	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.

(Portions of table and notes not shown do not change)

2. Revise IFC as follows:

608.1 Scope. Stationary storage battery systems having an electrolyte capacity of more than 50 gallons (189 L) for flooded lead-acid, nickel cadmium and VRLA, or 1,000 pounds (454 kg) for lithium-ion and lithium metal polymer, used for facility standby power, emergency power or ~~uninterrupted~~ uninterruptible power supplies shall comply with this section and Table 608.1.

Reason: The use of the term "uninterruptible power supply" is coordinated with the National Electrical Code. See NEC Article 700.12(C).

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

ICCFILENAME: Traxler-F1-608 and G7-307.1 COMBINED

F2-09 CCC

408.8, 408.9

Revise as follows:

408.8 Group R-1 occupancies. Group R-1 occupancies shall comply with the requirements of Sections 408.8.1 through 408.8.3 and Sections 401 through 406.

408.8.1 Evacuation diagrams. A diagram depicting two evacuation routes shall be posted on or immediately adjacent to every required egress door from each hotel, ~~or motel or dormitory~~ *sleeping unit*.

408.8.2 Emergency duties. Upon discovery of a fire or suspected fire, hotel, ~~and motel and dormitory~~ employees shall perform the following duties:

1. Activate the fire alarm system, where provided.
2. Notify the public fire department.
3. Take other action as previously instructed.

408.8.3 Fire safety and evacuation instructions. Information shall be provided in the fire safety and evacuation plan required by Section 404 to allow guests to decide whether to evacuate to the outside, evacuate to an *area of refuge*, remain in place, or any combination of the three.

408.9 Group R-2 occupancies. Group R-2 occupancies shall comply with the requirements of Sections 408.9.1 through ~~408.9.4~~ ~~408.9.3~~ and Sections 401 through 406.

408.9.1 Emergency guide. A fire emergency guide shall be provided which describes the location, function and use of fire protection equipment and appliances accessible to residents, including fire alarm systems, smoke alarms, and portable fire extinguishers. The guide shall also include an emergency evacuation plan for each *dwelling unit*.

408.9.2 Evacuation diagrams in Group R-2 dormitories. A diagram depicting two evacuation routes shall be posted on or immediately adjacent to every required egress door from each Group R-2 dormitory *sleeping unit*.

408.9.3 ~~408.9.2~~ Maintenance. Emergency guides shall be reviewed and *approved* in accordance with Section 401.2. Evacuation diagrams shall be reviewed and updated in accordance with Section 404.4.

408.9.4 ~~408.9.3~~ Distribution. A copy of the emergency guide shall be given to each tenant prior to initial occupancy.

Reason: The recommended revisions are to provide correlation with the IBC Section 310 which classifies dormitories in occupancy Group R-2, not Group R-1 as Section 408.8.1 and 408.8.2 currently indicate. So as not to lose the evacuation diagram requirement for dormitories, a new Section 408.9.2 is also being proposed along with an added, non-technical reference sentence on diagram maintenance.

IBC Section 310.1 reads as follows:

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)
Hotels (transient)
Motels (transient)
Congregate living facilities (transient) with 10 or fewer occupants are permitted to comply with the construction requirements for Group R-3.

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)
Convents
Dormitories
Fraternities and sororities

ICCFILENAME: IFC 408.8 and 408.9

F3–09 CCC

Table 608.1

Proponent: Stephen McCluer, APC by Schneider Electric, representing IEEE Stationary Battery Committee

Revise as follows:

**TABLE 608.1
BATTERY REQUIREMENTS**

	Non-Recombinant Batteries		Recombinant Batteries		Other Batteries
REQUIREMENT	<u>Vented (Flooded) Lead-Acid Batteries Cells</u>	<u>Vented (Flooded) Nickel-Cadmium (Ni-Cd) Batteries Cells</u>	<u>Valve-Regulated Lead-Acid (VRLA) Batteries Cells</u>	<u>Lithium-ion Cells</u>	<u>Lithium Metal Polymer Cells</u>

(Portions of Table not shown do not change.)

Reason: Add “BATTERIES” to the top row for consistency. The entire Section 608 applies to “batteries”

Change “Batteries” in the sub-headings to “Cells” because a *battery* is composed of *cells*, and it is actually the cells that are defined by the active chemical technology (e.g., VRLA, Lithium-ion, etc.). By definition, a “battery” contains more than just the cells. For example, inter-cell connectors, cables, and battery racks are also part of a battery, but the chemical description does not apply to them.

Change “Vented” to “Vented (Flooded)” because “vented” is the technically correct term (reference various IEEE battery standards). The term describes a feature of the cell that allows continuous release (venting) of the products of electrolysis (gases) into the battery room space. The term “flooded” is also a commonly used term that describes a feature of the cell: i.e., it contains free-flowing liquid electrolyte that is visible inside the cell container. Both terms refer to the same type of cell, but the preferred term is “vented”. The parenthetical use of “(flooded)” acknowledges that this is the term by which many people know this type of cell, even though it is not the preferred usage and its use should be discouraged.

Cost Impact: None. This is an editorial change.

ICCFILENAME: MCCLUER-F2 and F4-Table 608.1

F4–09 CCC 803.1

Proponent: Marcelo M. Hirschler (GBH International)

Revise as follows:

803.1 General. The provisions of this section shall limit the allowable fire performance ~~flame spread~~ and smoke development of interior wall and ceiling finishes and interior wall and ceiling trim in existing buildings based on location and occupancy classification. Interior wall and ceiling finishes shall be classified in accordance with Section 803 of the *International Building Code*. Such materials shall be grouped in accordance with ASTM E 84, as indicated in Section 803.1.1, or in accordance with NFPA 286, as indicated in Section 803.1.2.

Exceptions:

1. Materials having a thickness less than 0.036 inch (0.9 mm) applied directly to the surface of walls and ceilings.
2. Exposed portions of structural members complying with the requirements of buildings of Type IV construction in accordance with the *International Building Code* shall not be subject to interior finish requirements.

Reason: This is purely editorial and intended for consistency with the terminology in Section 803.1 of the IBC. NFPA 286 assesses fire performance beyond flame spread and ASTM E 84 or UL 723 assess in terms of flame spread index and smoke developed index. Section 803.1 of the IBC reads as follows: **803.1 General.** *Interior wall and ceiling finish* materials shall be classified for fire performance and smoke development in accordance with Section 803.1.1 or 803.1.2, except as shown in Sections 803.2 through 803.13. Materials tested in accordance with Section 803.1.2 shall not be required to be tested in accordance with Section 803.1.1.

Cost Impact: None

ICCFILENAME: HIRSCHLER-F16- 803.1 sub only

F5–09 CCC

803.1.2.1

Proponent: Marcelo M. Hirschler (GBH International) (Representing American Fire Safety Council)

Revise as follows:

803.1.2.1 Acceptance criteria for NFPA 286. The interior finish shall comply with the following:

1. During the 40 kW exposure, flames shall not spread to the ceiling.
2. The flame shall not spread to the outer extremity of the sample on any wall or ceiling.
3. Flashover, as defined in NFPA 286, shall not occur.
4. The peak heat release rate throughout the test shall not exceed 800 kW.
5. The total smoke released throughout the test shall not exceed 1,000 m².

~~During the 40 kW exposure, the interior finish shall comply with Item 1. During the 160 kW exposure, the interior finish shall comply with Item 2. During the entire test, the interior finish shall comply with Items 3 and 4.~~

- ~~1. During the 40 kW exposure, flames shall not spread to the ceiling.~~
- ~~2. During the 160 kW exposure, the interior finish shall comply with the following:~~
 - ~~2.1. Flame shall not spread to the outer extremity of the sample on any wall or ceiling.~~
 - ~~2.2. Flashover, as defined in NFPA 286, shall not occur.~~
- ~~3. The peak rate of heat release throughout the NFPA 286 test shall not exceed 800 kW.~~
- ~~4. The total smoke released throughout the NFPA 286 test shall not exceed 1,000 m².~~

Reason: This is purely editorial and intended for simplification. Clearly the interior finish should fail the criteria if the material has flame spreading to the outer extremity of the sample (meaning all the way to the end of the room or ceiling) even before the burner is raised to 160 kW. Also, the material should fail the test if flashover occurs when the burner is still at 40 kW. The present language could be interpreted to mean that a material that burns completely within a minute and/or reaches flashover does not fail the test. That should not be the case.

Cost Impact: None

ICCFILENAME: HIRSCHLER-F11-803.1.2.1

F6–09 CCC

803.5.1.2

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

Revise as follows:

803.5.1.2 Method B test protocol. ~~During the Method B protocol, flames shall not spread to the ceiling at any time during the 40 kW exposure. During the 150 kW exposure, the textile wall covering shall comply with the following:~~

- ~~1. Flame shall not spread to the outer extremities of the samples on the 8 foot by 12 foot (203 mm by 305 mm) walls.~~
- ~~2. Flashover, as defined in NFPA 265, shall not occur.~~

During the Method B protocol, the textile wall covering or expanded vinyl wall covering shall comply with the following:

1. During the 40 kW exposure, flames shall not spread to the ceiling.
2. The flame shall not spread to the outer extremities of the samples on the 8 foot by 12 foot (203 by 305 mm) walls.
3. Flashover, as defined in NFPA 265, shall not occur.
4. For newly introduced wall and ceiling coverings, the total smoke released throughout the test shall not exceed 1,000 m².

Reason: The addition of the requirements for smoke (for newly introduced materials) are intended for consistency with the requirements in the IBC, where section 803.1.3 already requires textile and expanded vinyl wall coverings tested to NFPA 265 to meet the smoke requirements. Moreover, all materials tested to ASTM E 84 or UL 723 (unless protected by sprinklers) or to NFPA 286 have to meet smoke requirements.

The remainder of this proposal is purely editorial and intended for simplification. A similar proposal has been submitted to the IBC. Clearly the textile wall covering should fail the criteria if the material has flame spreading to the outer extremity of the sample (meaning all the way to the end of the room or ceiling) even before the burner is raised to 150 kW. Also, the material should fail the test if flashover occurs when the burner is still at 40 kW. The present language could be interpreted to mean that a material that burns completely within a minute and/or reaches flashover does not fail the test. That should not be the case.

Cost Impact: None

ICCFILENAME: HIRSCHLER-F2-803.5.1.2

F7-09 CCC 803.9

Proponent: Marcelo M. Hirschler (GBH International)

Revise as follows:

803.9 Site-fabricated stretch systems. Where used as newly installed interior wall or interior ceiling finish materials, site-fabricated stretch systems containing all three components described in the definition in Section 802 shall be tested in the manner intended for use, and shall comply with the requirements of Section 803.1.1 or 803.1.2. If the materials are tested in accordance with ASTM E 84 or UL 723, specimen preparation and mounting shall be in accordance with ASTM E 2573.

Reason: Some systems do not consist of all three components of site-fabricated stretch systems and they should be tested in a manner appropriate to their use. In particular systems that contain a stretch membrane only and no core material have been shown to behave very differently in a fire situation from the site-fabricated stretch systems. It is important that the correct mounting method be used for each system.

Cost Impact: None

ICCFILENAME: HIRSCHLER-F8-803.9

F8-09 CCC 805.1.2.2, 805.3.2.2

Revise as follows:

805.1.2.2 Heat release rate. Newly introduced mattresses shall have limited rates of heat release when tested in accordance with ASTM E 1590 or California Technical Bulletin 129, as follows:

1. The peak rate of heat release for the single ~~upholstered furniture item~~ mattress shall not exceed 100 kW.

Exception: Mattresses in rooms or spaces protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.

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

Exception: Mattresses in rooms or spaces protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.

805.3.2.2 Heat release rate. Newly introduced mattresses shall have limited rates of heat release when tested in accordance with ASTM E 1590 or California Technical Bulletin 129, as follows:

1. The peak rate of heat release for the single mattress shall not exceed 100 kW.
2. The total energy released by the single ~~upholstered furniture item~~ mattress during the first 10 minutes of the test shall not exceed 25 MJ.

Reason: An editorial revision for internal correlation within the sections.

Note: Applies to both 2006 and 2009 IFC text.

ICCFILENAME: IFC 805

F9-09 CCC

901.4.2

Proponent: National Burglar and Fire Alarm Association

Revise as follows:

901.4.2 Nonrequired fire protection systems. Any *fire protection system* or portion thereof not required by this code or the *International Building Code* shall be allowed to be furnished for partial or complete protection provided such installed system meets the applicable requirements of this code and the *International Building Code*.

Reason: Nonrequired fire alarm systems may be installed by the owner for property protection, environmental protection, or historic preservation, in which case notification appliances may not be used. Also, automatic detection or manual pull boxes at each exit are not always components of these nonrequired systems. The problem is, unless specifically stated, it could be interpreted that any *equipment related* rules or system *features and functions* described in this section could be applied.

Section 901.4 "Installations" also uses the word "applicable" when referring to "alterations", and Section 901.4.3 "Additional fire protection systems" uses the word "applicable" to cover additional fire protection systems that exceed the code's minimum requirements.

Cost Impact: None

ICCFILENAME: SHEETS-F3-901.4.2 sub only

F10-09 CCC

903.2.11.6

Proponent: Tom Lariviere, Chairman - Joint Fire Service Review Committee

Revise IFC Table 903.2.11.6 as follows:

**TABLE 903.2.11.6
ADDITIONAL REQUIRED FIRE-EXTINGUISHING SYSTEMS**

SECTION	SUBJECT
<u>3006.2.1</u>	<u>Exterior Medical Gas Storage Room</u>
<u>3006.2.2</u>	<u>Interior Medical Gas Storage Room</u>
<u>3006.2.3</u>	<u>Medical Gas Storage Cabinet</u>

(Portions of table not shown do not change)

Reason: This proposal is merely a correlation between the current requirements in Sections 3006.2.1, 3006.2.2 and 3006.2.3, and Table 903.2.11.6. Sections 3006.2.1, 3006.2.2 and 3006.2.3 require the installation of sprinklers. Table 903.2.11.6 does not show a reference to these sections. Inclusion of the references in Table 903.2.11.6 to those sections does not change the requirements, it only directs the user to those sections.

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

ICCFILENAME: LARIVIERE-F31-TABLE 903.2.11.6 sub only

F11–09 CCC

903.3.1.3

Proponent: Roland J. Huggins, PE., American Fire Sprinkler Association

Revise as follows:

903.3.1.3 NFPA 13D sprinkler systems. Where allowed, ~~automatic sprinkler systems~~ in one- and two-family dwellings and townhouses, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13D.

Reason: This change provides better grammatical flow and follows the format used in 903.3.1.2

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

ICCFILENAME: HUGGINS-F3-903.3.1.3-A

F12–09 CCC

903.6

Proponent: Gene Boecker, Code Consultants, Inc., representing Code Consultants, Inc.

Revise as follows:

903.6 Where required in existing Existing buildings and structures. ~~The provisions of this section are intended to provide a reasonable degree of safety in existing structures not complying with the minimum requirements of the *International Building Code* by requiring installation of an automatic fire extinguishing system. An automatic sprinkler system shall be provided in existing buildings and structures where required in Chapter 46.~~

~~**903.6.1 Pyroxylin plastics.** All structures occupied for the manufacture or storage of articles of cellulose nitrate (pyroxylin) plastic shall be equipped with an approved automatic fire extinguishing system where required in Chapter 46.~~

~~**903.6.2 Group I-2.** An automatic sprinkler system shall be provided throughout Group I-2 fire areas where required in Chapter 46.~~

Reason: The first sentence in 903.6 is commentary and does not belong in the code. The added sentence is consistent with the language used in Section 907 which directs the reader to Chapter 46 for provisions for existing buildings and structures. The changed title also reflects the similar language used.

Sections 903.6.1 and 903.6.2 are being deleted because eth requirements are all located in Chapter 46. There is no reason to duplicate these requirements. Providing the same information in multiple locations only leads to the potential for a future change to bring the two sets of requirements into conflict. By simply pointing to Chapter 46, the appropriate reference is made.

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

ICCFILENAME: BOECKER-F1-903.6 sub only

F13–09 CCC

907.2.5

Proponent: Gene Boecker, Code Consultants, Inc, representing Code Consultants, Inc.

Revise as follows:

907.2.5 Group H. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group H-5 occupancies and in occupancies used for the manufacture of organic coatings. An automatic smoke detection system shall be installed for highly toxic gases, organic peroxides and oxidizers in accordance with Chapters 37, 39 and 40, respectively.

Reason: The code now clearly indicates that occupant notification is required and it does indicate that the occupant notification is required to be activated. However, it does not indicate the section for which the requirement is referenced. The added text removes the ambiguity and aligns with the other occupancies throughout this section using uniform language.

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

ICCFILENAME: BOECKER-F4-907.2.5 sub only

F14-09 CCC

907.2.6

Proponent: Gene Boecker, Code Consultants, Inc., representing Code Consultants, Inc.

Revise as follows:

907.2.6 Group I. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group I occupancies. An automatic smoke detection system shall be provided in accordance with Sections 907.2.6.1 and 907.2.6.3.3.

Reason: The code now clearly indicates that occupant notification is required and it does indicate that the occupant notification is required to be activated. However, it does not indicate the section for which the requirement is referenced. The added text removes the ambiguity and aligns with the other occupancies throughout this section using uniform language.

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

ICCFILENAME: BOECKER-F6-907.2.6 sub only

F15- 09 CCC

202, 907.2.13

Proponent: Daniel E. Nichols, PE, New York State Div. of Code Enforcement and Administration

1. Add as follows:

SECTION 202 DEFINITIONS

HIGH-RISE BUILDING. A building with an occupied floor located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

2. Revise as follows:

907.2.13 High-rise buildings. ~~Buildings with a floor used for human occupancy located more than 75 feet above the lowest level of fire department vehicle access~~ High-rise buildings 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.

REASON High-rise building is now a defined term and the definition is the same as the text proposed for striking out. This proposal adds the definition into Chapter 2 verbatim from the IBC.

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

ICCFILENAME: NICHOLS-F5-907.2.13-RENAMED-A

F16–09 CCC

[F] 907.2.13

Proponent: National Burglar and Fire Alarm Association

Revise as follows:

[F] **907.2.13 High-rise buildings.** Buildings with a floor used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with an automatic 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:

1. Airport traffic control towers in accordance with Sections 907.2.22 and 412.
2. *Open parking garages* in accordance with Section 406.3.
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1.
4. Low-hazard special occupancies in accordance with Section 503.1.1.
5. Buildings with an occupancy in Group H-1, H-2 or H-3 in accordance with Section 415.
6. In Group I-1 and I-2 occupancies, the alarm shall sound at *a constantly attended location* and ~~general~~ occupant notification shall be broadcast by the emergency voice/alarm communication system.

Reason: The inclusion of the word “general” is misleading, confusing, and contradictory language. The purpose of an emergency voice/alarm communication system is not for “general” occupant notification, but is intended to be used for selected/partial evacuation or the directed relocation instructions to occupants.

The proposed change permits both “general” and specific evacuation/relocation instructions.

Cost Impact: None.

ICCFILENAME: SHEETS-F10-907.2.13 sub only

F17–09 CCC

[F] 907.2.13.1. [F] 907.2.13.1.1

Proponent: National Burglar and Fire Alarm Association

Revise as follows:

[F] **907.2.13.1 Automatic smoke detection.** Automatic smoke detection in high-rise buildings shall be in accordance with Sections 907.2.13.1.1 and 907.2.13.1.2.

[F] **907.2.13.1.1 Area smoke detection.** Area smoke detectors shall be provided in accordance with this section. Smoke detectors shall be connected to an automatic fire alarm system The activation of any detector required by this section shall ~~operate~~ activate the emergency voice/alarm communication system in accordance with Section 907.5.2.2. Smoke detectors shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection.
2. In each elevator machine room and in elevator lobbies.

Reason: Confusing terminology. The term “activate” is consistent with IFC/IBC usage. The word “Operate” is not used in other codes and standards in the manner it is used here.

Cost Impact: None.

ICCFILENAME: SHEETS-F11-907.2.13.1 sub only

F18–09 CCC

907.3

Proponent: Gene Boecker, Code Consultants, Inc., representing Code Consultants, Inc.

Revise as follows:

907.3–907.9 Where required in existing buildings and structures. An approved fire alarm system shall be ~~installed~~ provided in existing buildings and structures where required in Chapter 46.

(Renumber remaining sections)

Reason: Currently the numbering in the International Fire Code (IFC) and the International Building Code (IBC) differ due to this section and its location in the IFC. During the last cycle, a proposal was submitted to the IBC committee and the IFC committee to insert a placeholder in the IBC that referred the reader to the IFC for existing building requirements. The IBC committee and subsequently the membership voted down this proposal. Subsequently the numbering is different.

The differing numbering is not only confusing in practice; it can lead to problems in enforcement since the citation can be misleading to both the person writing it as well as the one receiving it. Although it relocated the existing building “where required” provisions to the end of the Section, this task was already performed in a major way when all the provisions were removed from Section 907 and relocated in Chapter 46 as part of a general reorganizing of the “existing building” requirements into a single chapter.

The change will re-align the numbering which is common between Chapter 9 in the IFC and the IBC.

The change from “installed” to “provided” is intended to simply be consistent with the nomenclature used elsewhere in the codes.

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

ICCFILENAME: BOECKER-F7-907.3 sub only

F19–09 CCC

907.6

Proponent: Gene Boecker, Code Consultants, Inc. representing Code Consultants, Inc.

Revise as follows:

907.6 Occupant notification systems. A fire alarm system shall annunciate at the ~~panel~~ fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.6.1 through 907.6.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors.
2. Sprinkler waterflow devices.
3. Manual fire alarm boxes.
4. Automatic fire-extinguishing systems.

Exception: Where notification systems are allowed elsewhere in Section 907 to annunciate at a constantly attended location.

Reason: The term is being changed to be consistent with the change in terminology generated during the last code change cycle when this section was re-written. The term “fire alarm panel” is no longer in use in NFPA 72. The new terminology is “fire alarm control unit.”

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

ICCFILENAME: BOECKER-F9-907.6 sub only

F20-09 CCC

909.11.1 (IBC [F] 909.11.1)

Proponent: Homer Maiel, PE, CBO, City of San Jose, representing ICC Tri-Chapter (Peninsula, East Bay, Monterey Bay)

Revise as follows:

[F] 909.11.1 Power sources and power surges. Elements of the smoke ~~management control~~ system relying on volatile memories or the like shall be supplied with uninterruptable power sources of sufficient duration to span 15-minute primary power interruption. Elements of the smoke ~~management control~~ system susceptible to power surges shall be suitably protected by conditioners, suppressors or other approved means.

Reason: The entire Section 909 is on "smoke control system". NFPA 92B refers to "smoke control system" as "smoke management system". This change is to make sure that term "smoke control system" is used throughout IBC and "smoke management system" is not used interchangeably.

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

ICCFILENAME: MAIEL-F1-909.11.1 sub only

F21-09 CCC

2206.6.2

Revise as follows:

2206.6.2 Piping, valves, fittings and ancillary equipment for above-ground tanks for Class I, II and IIIA liquids. Piping, valves, fittings and ancillary equipment for above-ground tanks storing Class I, II and IIIA liquids shall comply with Sections 2206.6.2.1 through 2206.6.2.6.

Reason: This recommended revision will bring this section into proper code style. Since section titles are considered to be editorial only, the subject matter of the section needs to appear in the body of the code text, not just in the title, in order to be enforceable.

ICCFILENAME: IFC 2206.6.2

F22-09 CCC

2210.4

Revise as follows:

2210.4 Fueling of marine vehicles at other than approved marine motor fuel-dispensing facilities. Fueling of floating marine craft at other than a marine motor fuel-dispensing facility shall comply with Sections 2210.4.1 and 2210.4.2.

2210.4.1 Class I liquid fuels. Fueling of floating marine craft with Class I fuels at other than a marine motor fuel-dispensing facility is prohibited.

2210.4.2 Class II or III liquid fuels. Fueling of floating marine craft with Class II or III fuels at other than a marine motor fuel-dispensing facility shall be in accordance with all of the following:

1. The premises and operations shall be approved by the fire code official.
2. Tank vehicles and fueling operations shall comply with Section 3406.6.
3. The dispensing nozzle shall be of the listed automatic-closing type without a latch-open device.
4. Nighttime deliveries shall only be made in lighted areas.
5. The tank vehicle flasher lights shall be in operation while dispensing.
6. Fuel expansion space shall be left in each fuel tank to prevent overflow in the event of temperature increase.

Reason: The suggested revision will clarify the text and set apart the two distinct enforcement elements of the paragraph. This is consistent with code style and the continuing effort to "unpack" code sections that have multiple enforcement elements within.

ICCFILENAME: IFC 2210.4

F23-09 CCC

Table 2703.1.1(1) [IBC Table [F]307.1(1)]; 3302.1 (IBC [F] 307.1)

Proponent: Rick Thornberry, PE, The Code Consortium, Inc., representing: American Pyrotechnics Association (APA)

Revise as follows:

**TABLE 2703.1.1(1) IBC Table [F]307.1(1)
MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A PHYSICAL HAZARD^{a, j, m, n, p}**

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE ^b			USE-CLOSED SYSTEMS ^b			USE-OPEN SYSTEMS ^b	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)
Consumer fireworks (Class C Common)	1.4G	H-3	125 ^{d, e, l}	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

(Portions of table and notes not shown do not change)

3302.1 (IBC [F]307.2) Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

EXPLOSIVE. A chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, igniters and display fireworks, 1.3G (~~Class B, Special~~).

The term “Explosive” includes any material determined to be within the scope of USC Title 18: Chapter 40 and also includes any material classified as an explosive other than consumer fireworks, 1.4G (~~Class C, Common~~) by hazardous materials regulations of DOTn 49 CFR Parts 100-185.

Low explosive. Explosive material that will burn or deflagrate when ignited. It is characterized by a rate of reaction that is less than the speed of sound. Examples of low explosives include, but are not limited to, black powder; safety fuse; igniters; igniter cord; fuse lighters; fireworks, 1.3G (~~Class B, Special~~) and propellants, 1.3C.

(All other subdefinitions under “EXPLOSIVE” remain unchanged.)

FIREWORKS. Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, *deflagration* or *detonation* that meets the definition of 1.4G fireworks or 1.3G fireworks as set forth herein.

Fireworks, 1.4G. (~~Formerly known as Class C, Common Fireworks.~~) Small fireworks devices containing restricted amounts of pyrotechnic composition designed primarily to produce visible or audible effects by combustion. Such 1.4G fireworks which comply with the construction, chemical composition and labeling regulations of the DOTn for Fireworks, UN 0336, and the U.S. Consumer Product Safety Commission as set forth in CPSC 16 CFR: Parts 1500 and 1507, are not *explosive materials* for the purpose of this code.

Fireworks, 1.3G. (~~Formerly Class B, Special Fireworks.~~) Large fireworks devices, which are *explosive materials*, intended for use in fireworks displays and designed to produce audible or visible effects by combustion, *deflagration* or *detonation*. Such 1.3G fireworks include, but are not limited to, firecrackers containing more than 130 milligrams (2 grains) of explosive composition, aerial shells containing more than 40 grams of pyrotechnic composition and other display pieces which exceed the limits for classification as 1.4G fireworks. Such 1.3G fireworks are also described as Fireworks, UN0335 by the DOTn.

Reason: The terms “Class C, Common” and “Class B, Special” are archaic.

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

ICCFILENAME: Thornberry-F3-T2703.1.1(1)-COMBINED w-G4-T307.1-1

F24 –09 CCC

3301.8.1.4

Proponent: Rick Thornberry, PE, The Code Consortium, Inc., representing: American Pyrotechnics Association (APA)

Revise as follows:

3301.8.1.4 Moderate fire—no blast hazards (Division 1.4). For Division 1.4 explosives. ~~The~~ the total weight of the explosive material alone is the net weight. The net weight of the explosive material shall be used.

Reason:

Editorial clarification which also makes this section enforceable.

Cost Impact: The proponent shall indicate one of the following regarding the cost impact of the code change proposal:
The code change proposal will not increase the cost of construction.

ICCFILENAME: Thornberry-F2-3301.8.1.4 sub only

INTERNATIONAL MECHANICAL CODE

M1-09 CCC

502.4.3, 502.5.3

Proponent: Jonathan C. Siu, City of Seattle, representing Seattle Department of Planning & Development

Add new text as follows:

[F] 502.4.3 Supervision. Mechanical ventilation systems where required by Section 502.4 shall be supervised by an approved central, proprietary or remote station service or shall initiate an audible and visual signal at a constantly attended on-site location

[F] 502.5.3 Supervision. Mechanical ventilation systems where required by Section 502.5 shall be supervised by an approved central, proprietary or remote station service or shall initiate an audible and visual signal at a constantly attended on-site location.

Reason: The purpose of this proposal is to correlate Sections 502.4 and 502.5 of the Mechanical Code with Section 608.6.3 of the Fire Code.

Cost Impact:

CCC STAFF ANALYSIS: Code change F54-06/07 added Section 608.6.3 to the IFC which reads as follows:

608.6.3 Supervision. Mechanical ventilation systems where required by Sections 608.6.1 and 608.6.2 shall be supervised by an *approved* central, proprietary or remote station service or shall initiate an audible and visual signal at a constantly attended on- site location.

Since the intent of the original scoping report was that the IFC and IMC be correlated on ventilation issues by using parallel text, the text of IFC 608.6.3 should then appear in the locations being proposed in the IMC by this proposal.

ICCFILENAME: Siu-M-4-502.4.3-502.5.3-CCC ANNOTATED

M2-09 CCC

[F]502.9.11

Revise text as follows:

[F] 502.9.11 Silane gas. Exhausted enclosures and gas cabinets for the indoor storage of silane gas in amounts exceeding the maximum allowable quantities per control area shall comply with ~~this section.~~ Chapter 41 of the International Fire Code.

- ~~1. Exhausted enclosures and gas cabinets shall be in accordance with Section 502.8.2.~~
- ~~2. The velocity of ventilation across unwelded fittings and connections on the piping system shall not be less than 200 feet per minute (1.02 m/s).~~
- ~~3. The average velocity at the face of the access ports or windows in the gas cabinet shall not be 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.~~

Reason: IMC section [F] 502.9.11 is based on IFC text, which is controlled by the IFC committee. The Fire Code text upon which this is based was Section 4106.2.2. This text was deleted from the IFC as part of Code Change F206-06/07. The text was deleted as part of a code change that replaced text in the Fire Code dealing with silane gas with a reference to standard CGA-13. Therefore, Section [F] 502.9.11 should be revised in the IMC for consistency. CGA 13 deals with ventilation systems in Chapter 13.

F206-06/07 is printed below for reference:

Code Change No: F206-06/07

Original Proposal

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

1. Revise as follows:

4104.1 Indoor storage. Indoor storage of pyrophoric materials in amounts exceeding the maximum allowable quantity per control area indicated in Table 2703.1.1(1), shall be in accordance with Sections 2701, 2703, 2704 and this chapter.

The storage of silane gas and gas mixtures with a silane concentration of ~~≥ 1.37~~ percent or more by volume, shall be in accordance with ~~Section 4106 CGA G-13.~~

4104.2 Outdoor storage. Outdoor storage of pyrophoric materials in amounts exceeding the maximum allowable quantity per control area indicated in Table 2703.1.1(3) shall be in accordance with Sections 2701, 2703, 2704 and this chapter.

The storage of silane gas, and gas mixtures with a silane concentration of ~~≥ 1.37~~ percent or more by volume, shall be in accordance with ~~Section 4106 CGA G-13.~~

4105.3 Silane gas. The use of silane gas, and gas mixtures with a silane concentration of ~~≥ 1.37~~ percent or more by volume, shall be in accordance with ~~Section 4106 CGA G-13.~~

2. Delete section without substitution:

**SECTION 4106
SILANE GAS**

4106.1 General requirements. ~~The storage and use of silane gas and gas mixtures with a silane concentration of 2 percent or more by volume, in amounts exceeding the maximum allowable quantity per control area indicated in Table 2703.1.1(1) or 2703.1.1(3), shall be in accordance with this section.~~

4106.1.1 Building construction. ~~Indoor storage and use of silane gas shall be within a room or building conforming to the *International Building Code*.~~

4106.1.2 Flow control. ~~Compressed gas containers, cylinders and tanks containing silane gas, and gas mixtures with a silane concentration of 2 percent or more by volume, shall be equipped with reduced flow valves equipped with restrictive flow orifices not exceeding 0.010 inch (0.254 mm) in diameter. The presence of the restrictive flow orifice shall be indicated on the valve and on the container, cylinder or tank by means of a label placed at a prominent location by the manufacturer.~~

Exceptions:

1. Manufacturing and filling facilities where silane is produced or mixed and stored prior to sale.
2. Outdoor installations consisting of permanently mounted cylinders connected to a manifold, provided that the outlet connection from the manifold is equipped with a restrictive flow orifice not exceeding 0.125 inch (3.175 mm) in diameter and the setback distance to exposures is not less than 40 feet (12 192 mm). Footnote a of Table 4104.2.1 shall not apply.

4106.1.3 Valves. ~~Container, cylinder and tank valves shall be constructed of stainless steel or other approved materials. Valves shall be equipped with outlet fittings in accordance with CGA V-1.~~

4106.2 Indoor storage. ~~Indoor storage of silane gas, and gas mixtures with a silane concentration of 2 percent or more by volume, shall be in accordance with Section 4104.1 and Sections 4106.2.1 through 4106.2.3.~~

4106.2.1 Fire protection. ~~When automatic fire extinguishing systems are required, automatic sprinkler systems shall be used.~~

4106.2.2 Exhausted enclosures or gas cabinets. ~~When provided, exhausted enclosures and gas cabinets shall be constructed as follows:~~

1. Exhausted enclosures and gas cabinets shall be in accordance with Sections 2703.8.5 and 2703.8.6, respectively.
2. Exhausted enclosures and gas cabinets shall be internally sprinklered.
3. The velocity of ventilation across unwelded fittings and connections on the piping system shall not be less than 200 feet per minute (1.02 m/s).
4. The average velocity at the face of the access ports or windows in the gas cabinet shall not be 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 of the access port or window.

**TABLE 4104.2.1
PYROPHORIC GASES—DISTANCE FROM STORAGE TO EXPOSURES^a**

(Delete entire contents of table)

For SI: 1 foot = 304.8 mm, 1 cubic foot = 0.02832m³.

- a. The minimum required distances shall be reduced to 5 feet when protective structures having a minimum fire resistance of 2 hours interrupt the line of sight between the container and the exposure. The protective structure shall be at least 5 feet from the exposure. The configuration of the protective structure shall allow natural ventilation to prevent the accumulation of hazardous gas concentrations.

4106.2.3 Emergency power. ~~The ventilation system shall be provided with an automatic emergency power source in accordance with Section 604 and designed to operate at full capacity.~~

4106.3 Outdoor storage. ~~Outdoor storage of silane gas, and gas mixtures with a silane concentration of 2 percent or more by volume, shall be in accordance with Section 4104.2 and Sections 4106.3.1 through 4106.3.4.~~

~~4106.3.1 Volume.~~ The maximum volume for each nest shall not exceed 10,000 cubic feet (283.2 m³) of gas.

~~4106.3.2 Aisles.~~ Storage nests shall be separated by aisles a minimum of 6 feet (1829 mm) in width.

~~4106.3.3 Separation.~~ Storage shall be located a minimum of 25 feet (7620 mm) from lot lines, public streets, public alleys, public ways, means of egress or buildings.

~~4106.3.4 Weather protection.~~ The clear height of overhead construction provided for sheltering of outdoor storage shall not be less than 12 feet (3658 mm).

~~4106.4 Indoor use and dispensing.~~ The indoor use and dispensing of silane gas and gas mixtures with a silane concentration of 2 percent or more by volume, in amounts exceeding the maximum allowable quantity per control area indicated in Table 2703.1.1(1) shall be in accordance with Sections 4105 and this section.

~~4106.4.1 Exhausted enclosures or gas cabinets.~~ When provided, exhausted enclosures and gas cabinets shall be installed in accordance with Section 4106.2.2.

~~4106.4.2 Remote manual shutdown.~~ A remotely located, manually activated shutdown control shall be provided outside each gas cabinet.

~~4106.4.3 Emergency power.~~ The ventilation system shall be provided with an approved automatic emergency power source in accordance with Section 604 and designed to operate at full capacity.

~~4106.4.4 Purge panels.~~ Automated purge panels shall be provided.

~~4106.4.4.1 Purge gases.~~ Purging of piping and controls located in gas cabinets or exhausted enclosures shall only be performed using a dedicated inert gas supply that is designed to prevent silane from entering the inert gas supply. The use of nondedicated systems or portions of piping systems is allowed on portions of the venting system that are continuously vented to atmosphere. Devices that could interrupt the continuous flow of purge gas to the atmosphere shall be prohibited.

~~Exception:~~ Manufacturing and filling facilities where silane is produced or mixed.

~~4106.4.4.2 Venting.~~ Gas vent headers or individual purge panel vent lines shall have a continuous flow of inert gas. The inert gas shall be introduced upstream of the first vent or exhaust connection to the header.

~~4106.4.4.3 Purging operations.~~ Purging operations shall be performed by means ensuring complete purging of the piping and control system before the system is opened to the atmosphere.

~~4106.5 Outdoor use and dispensing.~~ The outdoor use and dispensing of silane gas, and gas mixtures with a silane concentration of 2 percent or more by volume, exceeding the maximum allowable quantity per control area indicated in Table 2703.1.1(3) shall be in accordance with Sections 4105, 4106.4 and 4106.5.1.

~~4106.5.1 Outdoor use weather protection.~~ When overhead construction is provided for sheltering outdoor use areas containing silane gas, or gas mixtures with a silane concentration of 2 percent or more by volume, the use areas shall be provided with approved automatic fire-extinguishing system protection.

3. Delete without substitution:

~~604.2.13 Pyrophoric materials.~~ Emergency power shall be provided for occupancies with silane gas in accordance with Sections 4106.2.3 and 4106.4.3.

4. Revise table as follows:

TABLE 903.2.13
ADDITIONAL REQUIRED FIRE-EXTINGUISHING SYSTEMS

SECTION	SUBJECT
4106.2.2	Exhaust enclosures or gas cabinets for silane gas

(Portions of table not shown do not change)

5. Add standard to Chapter 45 as follows:

Compressed Gas Association (CGA)

CGA G13-06 Storage and Handling of Silane and Silane Mixtures

Reason: (Items 1. and 2.) The Compressed Gas Association (CGA) proposed the introduction of a CGA standard (then P-32) to be adopted into the IFC with code change F174-00 (2000) for the regulation of the pyrophoric gas silane. When first introduced, the First Edition of the standard had not gone through the ANSI process, and therefore, it was not in a form that could be accepted into the I-Codes. Since that time CGA has responded and has developed the Section Edition of the document, now designated as G-13. The publication of the 2006 Edition of G-13 has undergone the ANSI review process. Comments received from users, producers, and regulatory officials were evaluated by CGA's technical committee and modifications were made to address technical issues and concerns raised in the evaluation process under the published procedures of ANSI.

The use of silane continues to be a major raw material in the production of silicon in various forms as consumed by the semiconductor and solar energy industries. The unique character of this material and the need for specialized controls became apparent to the regulatory community as a result of fires and explosions that occurred in the early use of this material. As the use of the material grew, the CGA engaged an independent testing laboratory to test large scale releases such as those that may be encountered should release occur from a large high pressure bulk source. The flammable range of the material has been established by testing from a low of 1.37% to a high of 96%. The material has also been studied in some detail by SEMATECH, the semiconductor industry's research consortium and by Factory Mutual Insurance an insurer of highly protected risk

entities. CGA's technical committee has considered the output of these other organizations throughout the development of the standard beginning with the first edition and continuing into this second edition of the standard. References to pertinent studies are provided in Chapters 18 and 19 of the document.

The standard has been prepared to present a control strategy to address the supply of this material up until the first point at which the user assumes control. CGA G-13 replaces IFC Section 4106. There is no intent for the G-13 standard to replace the requirements of IFC Chapter 18 for H-5 Occupancies. Areas where overlap may occur include requirements for gas cabinets when they are used and special care has been taken to avoid the creation of conflicts to include having the user community represented in the ANSI canvass process.

The requirements of the IFC for silane have been reviewed and compared to requirements of CGA G-13. The table below reflects the comparison based on the subjects addressed by the IFC. CGA G-13 is a fifty (50) page document that addresses the subject in a comprehensive manner. As a result there are a considerable number of elements addressed by the standard that are not reflected in the table below, however, the purpose of the table was to demonstrate to the reader that NOTHING IS BEING LOST by the deletion of Section 4106, rather there is much being gained as the control strategies have been developed to address systems and circumstances not envisioned when the provisions for the gas were crafted into the IFC.

Public Hearing Results

Note: The following analysis was not in the Code Change Proposal book but was published in the Errata to the 2006/2007 Proposed Changes to the International Codes and Analysis of Proposed Referenced Standards® provided at the code development hearings:

Analysis: Review of the proposed new standard indicated that, in the opinion of ICC staff, the standard did comply with ICC standards criteria.

Committee Action:

Approved as Modified

Modify the proposal as follows:

TABLE 4104.2.1 **PYROPHORIC GASES DISTANCE FROM** **STORAGE TO EXPOSURES^a**

(Retain entire contents of table)

For SI: 1 foot = 304.8 mm, 1 cubic foot = 0.02832m³.

a. The minimum required distances shall be reduced to 5 feet when protective structures having a minimum fire resistance of 2 hours interrupt the line of sight between the container and the exposure. The protective structure shall be at least 5 feet from the exposure. The configuration of the protective structure shall allow natural ventilation to prevent the accumulation of hazardous gas concentrations.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal represents the results of the Compressed Gas Association's response to direction given by the committee regarding CGA's silane gas standard. The standard has achieved designation as an ANSI standard and provides for comprehensive regulation of the hazards of silane gas, thereby eliminating the need to retain IFC Section 4106. The modification corrects an erratum in the monograph.

ICCFILENAME: IMC 502.9.11 GG

M3-09 CCC

[F] 1106.5.1

Revise as follows:

[F] 1106.5.1 Refrigeration system emergency shutoff. A clearly identified switch of the break-glass type or with an approved tamper resistant cover shall provide off-only control of electrically energized equipment and appliances in the machinery room, other than refrigerant leak detectors and machinery room ventilation. refrigerant compressors, refrigerant pumps, and normally closed, automatic refrigerant valves located in the machinery room. In addition, this equipment shall be automatically shut off whenever the refrigerant vapor concentration in the machinery room exceeds the vapor detector's upper detection limit or 25 percent of the LEL, whichever is lower.

Exception: In machinery rooms where only nonflammable refrigerants are used, electrical equipment and appliances, other than compressors, are not required to be provided with a only compressors are required to be stopped by vapor detection or the cut-off switch.

Reason: This proposed revision to the IMC is to correct a correlation oversight that occurred when companion IFC Section 606.9.1 was revised by code change F52-06/07 (Approved as Submitted) resulting in the 2009 text of that section which reads as follows:

606.9.1 Refrigeration system emergency shutoff. A clearly identified switch of the break-glass type or with an *approved* tamper-resistant cover shall provide off-only control of refrigerant compressors, refrigerant pumps and normally closed automatic refrigerant valves located in the machinery room. Additionally, this equipment shall be automatically shut off whenever the refrigerant vapor concentration in the machinery room exceeds the vapor detector's upper detection limit or 25 percent of the LEL, whichever is lower.

Exception: In machinery rooms where only nonflammable refrigerants are used, only compressors are required to be stopped by vapor

detection or the cut-off switch.

The proponent's reason statement for code change F52-06/07 was as follows:

"This change will help prevent the release of a large amount of refrigerant if there is a significant leak in the machinery room. It is similar in intent to Section 3704.2.2.10.2 Shut off of gas supply, for toxic gases. Energized equipment is changed to the primary equipment of concern in stopping a release, including compressors, pumps, and normally closed, automatic valves. The cost impact is expected to be minimal, because the needed equipment is already being used, including system controllers for automatic valves, pumps, and compressors, which can be connected to the gas detector."

In order to maintain proper correlation of the IFC and IMC on the same subject, the changes made to IFC 606.9.1 should also have been and should now be applied to IMC [F] 1106.5.1.

ICCFILENAME: IMC [F]1106.5.1

INTERNATIONAL PLUMBING CODE

P1-09 CCC

Table 604.5, E103.1, E103, Table E103.3(2), Table E103.3(3)

Proponent: Logan G. Sauter - Salt Lake City, Utah representing the Utah Chapter of ICC

Revise as follows:

**TABLE 604.5
MINIMUM SIZES OF FIXTURE WATER SUPPLY PIPES**

FIXTURE	MINIMUM PIPE SIZE (inch)
Urinal, flush flushometer valve	3/4
Water closet, flush flushometer valve	1

(Portions of table not shown remain unchanged)

E103.1 General. Decide from Table 604.3 what is the desirable minimum residual pressure that should be maintained at the highest fixture in the supply system. If the highest group of fixtures contains ~~flush~~ flushometer valves, the pressure for the group should not be less than 15 pounds per square inch (psi) (103.4 kPa) flowing. For flush tank supplies, the available pressure should not be less than 8 psi (55.2 kPa) flowing, except blowout action fixtures must not be less than 25 psi (172.4 kPa) flowing

(Portions of text not shown remain unchanged)

E103.3, 3. Selection of pipe size, Step 6 Column 5: When selecting a trial pipe size, the length from the water service or meter to the most remote fixture outlet must be measured to determine the developed length. However, in systems having a ~~flush~~ flushometer valve or temperature controlled shower at the top most floors the developed length would be from the water meter to the most remote ~~flush~~ flushometer valve on the system.

(Portions of text not shown remain unchanged)

**TABLE E103.3(2)
LOAD VALUES ASSIGNED TO FIXTURES**

FIXTURE	OCCUPANCY	TYPE OF SUPPLY CONTROL	LOAD VALUES, IN WATER SUPPLY FIXTURE UNITS (wsfu)		
			Cold	Hot	Total
Bathroom group	Private	Flush Flushometer valve	6.0	3.0	8.0
Urinal	Public	1" flush flushometer valve	10.0	—	10.0
Urinal	Public	3/4" flush flushometer valve	5.0	—	5.0
Water closet	Private	Flush Flushometer valve	6.0	—	6.0
Water closet	Public	Flush Flushometer valve	10.0	—	10.0

(Portions of table not shown remain unchanged)

**TABLE E103.3(3)
TABLE FOR ESTIMATING DEMAND**

SUPPLY SYSTEMS PREDOMINANTLY FOR FLUSH TANKS			SUPPLY SYSTEMS PREDOMINANTLY FOR <u>FLUSH FLUSHOMETER VALVES</u>		
Load	Demand		Load	Demand	
(Water supply fixture units)	(Gallons per minute)	(Cubic feet per minute)	(Water supply fixture units)	(Gallons per minute)	(Cubic feet per minute)

(Portions of table not shown remain unchanged)

Reason: A flush valve and a flushometer valve are not the same plumbing device. A flush valve (or Douglas valve) is located in the bottom of a flush tank and, when actuated by the tank trip lever, controls the flushing action of that tank. A flushometer valve, on the other hand, is a valve that when activated, dispenses a predetermined amount of water to flush a water closet, urinal, bedpan washer, and other fixtures designed for flushometer controlled flushing. Please note IPC 202 definition for a flush tank, "A tank designed with a fill valve and flush valve to flush the contents of the bowl or usable portion of the fixture". Note also IRC R202 definition for a flush valve, "A device located at the bottom of a flush tank that is operated to flush water closets".

Cost Impact: None

Analysis: Staff surveyed entire code with appendices to find all occurrences of the term "flush" to make sure proponent didn't miss any other locations. The proponent is correct that the word "flush" in all the indicated locations should be changed to "flushometer" for clarity. This change does not result in any change of intent of section or table.

ICCFILENAME: Sauter-P1-T604.5_FG

INTERNATIONAL RESIDENTIAL CODE

IRC1-09 CCC

R104.10.1, R109.1.3, R112.2.1, R112.2.2, R322.1.4, R401.1, R408.7, M1301.1.1, M1401.5, M1601.3.8, M1701.6, M2001.4, M2201.6, P2601.3, P2602.2, P2705.1, P3001.3, R3101.5

Proponent: Rebecca C. Quinn, RCQuinn Consulting, Inc, representing the Department of Homeland Security, Federal Emergency Management Agency

Revise as follows:

R104.10.1 Flood hazard areas ~~Areas prone to flooding~~. The building official shall not grant modifications to any provision related to flood hazard areas as established by Table R301.2(1) without the granting of a variance to such provisions by the board of appeals.

R105.3.1.1 Substantially improved or substantially damaged existing buildings in flood hazard areas. For applications for reconstruction, rehabilitation, addition or other improvement of existing buildings or structures located in a flood hazard areas ~~an area prone to flooding~~ as established by Table R301.2(1), the building official shall examine or cause to be examined the construction documents and shall prepare a finding with regard to the value of the proposed work. For buildings that have sustained damage of any origin, the value of the proposed work shall include the cost to repair the building or structure to its predamage condition. If the building official finds that the value of proposed work equals or exceeds 50 percent of the market value of the building or structure before the damage has occurred or the improvement is started, the finding shall be provided to the board of appeals for a determination of substantial improvement or substantial damage. Applications determined by the board of appeals to constitute substantial improvement or substantial damage shall require all existing portions of the entire building or structure to meet the requirements of R322

R109.1.3 Floodplain inspections. For construction in flood hazard areas ~~areas prone to flooding~~ as established by Table 301.2(1), upon placement of the lowest floor, including basement, and prior to further vertical construction, the building official shall require submission of documentation, prepared and sealed by a registered design professional, of the elevation of the lowest floor, including basement, required in Section R322.

R112.2.1 Determination of substantial improvement in flood hazard areas ~~areas prone to flooding~~. When the building official provides a finding required in Section R105.3.1.1, the board of appeals shall determine whether the value of the proposed work constitutes a substantial improvement. A substantial improvement means any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. If the building or structure has sustained substantial damage, all repairs are considered substantial improvement regardless of the actual repair work performed. The term does not include:

[Remainder not shown]

R112.2.2 Criteria for issuance of a variance for flood hazard areas ~~areas prone to flooding~~. A variance shall only be issued upon:

[Remainder not shown]

R322.1.4 Establishing the design flood elevation. The design flood elevation shall be used to define flood hazard areas ~~areas prone to flooding~~. At a minimum, the design flood elevation is the higher of:

[Remainder not shown]

R401.1 Application. The provisions of this chapter shall control the design and construction of the foundation and foundation spaces for all buildings. In addition to the provisions of this chapter, the design and construction of foundations in flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1) shall meet the provisions of Section R322. Wood foundations shall be designed and installed in accordance with AF&PA Report No. 7.

R408.7 Flood resistance. For buildings located in flood hazard areas ~~areas prone to flooding~~ as established in Table

R301.2(1):

[Remainder not shown]

M1301.1.1 Flood-resistant installation. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), mechanical appliances, equipment and systems shall be located or installed in accordance with Section R322.1.6

M1401.5 Flood hazard. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), heating and cooling equipment and appliances shall be located or installed in accordance with Section R322.1.6

M1601.3.8 Flood hazard areas. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), duct systems shall be located or installed in accordance with Section R322.1.6.

M1701.6 Opening location. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), openings shall be located at or above the elevation required in Section R322.3.1 (flood hazard areas including A Zones) or R322.3.2 (coastal high-hazard areas including V Zones).

M2001.4 Flood-resistant installation. In flood hazard areas ~~areas prone to flooding~~ as established in Table R301.2(1), boilers, water heaters and their control systems shall be located or installed in accordance with Section R322.1.6.

M2201.6 Flood resistant installation. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), tanks shall be installed at or above the elevation required in Section R322.3.1 (flood hazard areas including A Zones) or R322.3.2 (coastal high-hazard areas including V Zones) or shall be anchored to prevent flotation, collapse and lateral movement under conditions of the design flood.

P2601.3 Flood hazard area. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), plumbing fixtures, drains, and appliances shall be located or installed in accordance with Section R322.1.6.

P2602.2 Flood resistant installation. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1):

[Remainder not shown]

P2705.1 General.

[Portions not shown]

7. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), plumbing fixtures shall be located or installed in accordance with Section R322.1.6.

P3001.3 Flood resistant installation. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), drainage, waste and vent systems shall be located and installed to prevent infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

P3101.5 Flood resistance. In flood hazard areas ~~areas prone to flooding~~ as established by Table R301.2(1), vents shall be located at or above the elevation required in Section R322.3.1 (flood hazard areas including A Zones) or R322.3.2 (coastal high-hazard areas including V Zones).

Reason: This proposal is editorial. This proposal will replace the term "areas prone to flooding" with the term "flood hazard area. In the 2009 *International Residential Code* the term "areas prone to flooding" is used in 19 places and "flood hazard areas" is used 38 times in the body of the code and appendices. "Flood hazard areas" is defined and used in the *International Building Code*.

Cost Impact: There is no cost impact associated with this proposal.

ICCFILENAME: Quinn-RB-3-R104.10.1

IRC2–09 CCC R202

Proponent: Bob Eugene representing Underwriters Laboratories

Revise as follows:

SECTION R202

FLAME SPREAD INDEX. A comparative measure expressed as a dimensionless number, derived from visual measurements of the spread of flame versus time for a material tested in accordance with ASTM E84 or UL 723.

SMOKE DEVELOPED INDEX. A comparative measure, expressed as a dimensionless number, derived from measurements of smoke obscuration versus time for a material tested in accordance with ASTM E84 or UL 723.

Reason: UL 723 is an alternative standard to ASTM E84, as determined in the last code cycle. Either ASTM E84 or UL 723 is used to produce these indices for various materials.

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

ICCFILENAME: Eugene-RB-1-R202

IRC3–09 CCC R301.2.2.2.5, R301.2.2.3.1, R703.7

Proponent: Maureen Traxler, City of Seattle, Seattle Dept of Planning & Development

Revise as follows:

R301.2.2.2.5 Irregular buildings.

7. When stories above-grade plane 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.

R301.2.2.3.1 Height limitations. Wood framed buildings shall be limited to three stories above grade plane or the limits given in Table R602.10.1.2(2). Cold-formed steel framed buildings shall be limited to less than or equal to three stories above grade plane in accordance with AISI S230. Mezzanines as defined in Section R202 shall not be considered as stories. Structural insulated panel buildings shall be limited to two stories above grade plane.

R703.7 Stone and masonry veneer, general. Stone and masonry veneer shall be installed in accordance with this chapter, Table R703.4 and Figure R703.7. These veneers installed over a backing of wood or cold-formed steel shall be limited to the first *story* above grade plane and shall not exceed 5 inches (127 mm) in thickness. See Section R602.12 for wall bracing requirements for masonry veneer for wood framed construction and Section R603.9.5 for wall bracing requirements for masonry veneer for cold-formed steel construction.

Exceptions:

1. For all buildings in Seismic Design Categories A, B and C, exterior stone or masonry veneer, as specified in Table R703.7(1), with a backing of wood or steel Table R703.7(1) above a noncombustible foundation.
2. For detached one- or two-family *dwelling*s in Seismic Design Categories D0, D1 and D2, exterior stone or masonry veneer, as specified in Table R703.7(2), with a backing of wood framing shall be permitted to the height specified in Table R703.7(2) above a noncombustible foundation.

Reason: In the definition section of the 2009 IRC, the term “Story above grade” has been replaced with “Story above grade plane”. The above code sections are modified to reflect the new term. This proposal does not change the effect of these code sections, nor did the change from “story above grade” to “story above grade plane.” Both definitions use the same reference plane to determine the number of stories.

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

ICCFILENAME: Traxler-RB-1-R301.2.2.2.5-R301.2.2.3.1-R703.7

IRC4–09 CCC

R301.2.3, R322.1, AE101

Revise as follows:

R301.2.4 Floodplain construction. Buildings and structures constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1) shall be designed and constructed in accordance with Section R322.

Exception: Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with *Flood Resistant Design and Construction* (ASCE 24).

R322.1 General. Buildings and structures constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1) shall be designed and constructed in accordance with the provisions contained in this section. **Exception:** Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

Reason: At the last code change hearing, the Committee concurred that the exception should be moved to the body of the section. ICC staff has advised that doing so is consistent with code drafting protocol in that a requirement, especially a more restrictive requirement, should not be in an exception.

Cost Impact: No impact on cost.

ICCFILENAME: Quinn-RB-1-R301.2.4

IRC5–09 CCC

R301.7, Table R301.7

Proponent: Stephen Kerr, PE, SE, representing self

Revise as follows:

R301.7 Deflection. The allowable deflection of any structural member under the live load listed in Sections R301.5 and R301.6 or wind loads determined by Section R301.2.1 shall not exceed the values in Table R301.7.

Table R301.7
ALLOWABLE DEFLECTION OF STRUCTURAL MEMBERS^{a, b, c, d, e}

STRUCTURAL MEMBER	ALLOWABLE DEFLECTION
Rafters having slopes greater than 3/12 with no finished ceiling attached to rafters	L / 180
Interior walls and partitions	H / 180
Floors and plastered ceilings	L / 360
All other structural members	L / 240
Exterior walls with plaster or stucco finish	H / 360
Exterior walls —wind loads^a with brittle finishes	H / 240
Exterior walls —wind loads^a with flexible finishes	L / 120 ^d
Lintels supporting masonry veneer walls ^e	L / 600

(footnotes not shown remain unchanged)

Reason: This proposal is to add clarity and remove conflicting language contained in this section of the IRC. Table R301.7 contains deflection limits for both Live and Wind loads, however, the code section referencing the table (R301.7) only references Live loads.

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

ICCFILENAME: Kerr-RB-1-R301.7-T. R301.7

IRC6–09 CCC

Table R302.1

Proponent: Homer Maiel, PE, CBO, City of San Jose, representing ICC Tri-Chapter (Peninsula, East Bay, Monterey Bay)

Revise as follows:

**TABLE R302.1
EXTERIOR WALLS**

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	(Fire-resistance rated)	1 hour-tested in accordance with ASTM E 119 or UL 263 with exposure form <u>from</u> both sides	5 feet
	(Not fire-resistance rated)	0 hours	5 feet
Projections	(Fire-resistance rated)	1 hour on the underside	2 feet to <u>5 feet</u> 5 feet
	(Not fire-resistance rated)	0 hours	<u>5 feet</u> 5 feet

(the remaining of this table is unchanged)

Reason: The projections distance criteria as currently written contain a conflict at a distance of 5 feet. In the upper row rated projections are required from 2 feet to 5 feet (including 5 feet). The lower row indicates that at a minimum fire separation distance of 5 feet (including 5 feet) no rating is necessary. This code change is proposed to make the projections distance criteria match that specified for walls such that rated projections are required from 2 feet to less than 5 feet and projections that are equal or more than 5 feet are not required to be rated. In addition an editorial change is made in the minimum rating of walls column changing the word “form” to the intended word “from”.

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

ICCFILENAME: Maiel-RB-1-T. R302.1

IRC7–09 CCC

R316.6

Proponent: Craig Conner, Building Quality, representing Icnene

Revise as follows:

R316.6 Specific approval: Foam plastic not meeting the requirements of Sections R316.3 through R316.5 shall be specifically approved on the basis of one of the following approved tests: NFPA 286 with the acceptance criteria of section R302.9.4, FM4880, ASTM E 84, UL723, UL1040 or UL17715, or fire tests related to actual end-use configurations including slopes of the applicable surfaces. The specific approval shall be based on the actual end use configuration and shall be performed on the finished foam plastic assembly in the maximum thickness intended for use. Assemblies tested shall include seams, joints and other typical details used in the installation of the assembly and shall be tested in the manner intended for use.

Reason: Testing applied to the ceiling or roof deck is more accurate if it uses the proper orientation of the surfaces. Some of the named tests specify vertical surfaces appropriate to walls. The added text makes it clear that ceiling and roof decks are to be tested with their proper geometry.

ASTM E 84 is already an alternative to UL723 in Section R316.3, but not this section. The older version of ASTM E 84 was not in this section because it only allowed thicknesses up to 4 inches. The new version of ASTM E 84 allows any thicknesses and therefore is appropriate to this section’s specification of “actual end use configuration” at “the maximum thickness intended for use”.

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

ICCFILENAME: Conner-RB-1-R316.6

IRC8–09 CCC

R316.5.6, R316.5.11

Proponent: Bob Eugene representing Underwriters Laboratories Inc

Revise as follows:

R316.5.9 Interior trim. The thermal barrier specified in Section R316.4 is not required for exposed foam plastic interior trim, provided all of the following are met:

1. The minimum density is 20 pounds per cubic foot (320 kg/m³).
2. The maximum thickness of the trim is 0.5 inch (12.7 mm) and the maximum width is 8 inches (204 mm).
3. The interior trim shall not constitute more than 10 percent of the aggregate wall and ceiling area of any room or space.
4. The flame spread index does not exceed 75 when tested per ASTM E 84 or UL 723. The smoke-developed index is not limited.

R316.5.11 Sill plates and headers. Foam plastic shall be permitted to be spray applied to a sill plate and header without the thermal barrier specified in Section R316.4 subject to all of the following:

1. The maximum thickness of the foam plastic shall be 3¼ inches (83 mm).
2. The density of the foam plastic shall be in the range of 0.5 to 2.0 pounds per cubic foot (8 to 32 kg/m³).
3. The foam plastic shall have a flame spread index of 25 or less and an accompanying smoke developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723.

Reason: UL 723 is an alternative standard to ASTM E84, as determined in the last code cycle.

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

ICCFILENA ME: Eugene-RB-2-R316.5.9

IRC9–09 CCC

R322.1.9

Revise as follows:

R322.1.9 Manufactured homes. New or replacement manufactured homes shall be elevated in accordance with Section R322.2 (flood hazard areas including A Zones) or Section R322.3 in coastal high-hazard areas (V Zones). The anchor and tie-down requirements of Sections AE604 and AE605 of Appendix E shall apply. The foundation and anchorage of manufactured homes to be located in identified floodways shall be designed and constructed in accordance with ASCE 24.

Reason: This code change is editorial; it will make the phrasing in R322.1.9 consistent with other places in the code where the parenthetical phrase is added for clarity. The change does not alter any requirement.

Cost Impact: No impact on cost because the change is editorial.

ICCFILENAME: Quinn-RB-7-R322.1.9

IRC10–09 CCC

R322.2.3

Revise as follows:

R322.2.3 Foundation design and construction. Foundation walls for all buildings and structures erected in flood hazard areas shall meet the requirements of Chapter 4.

Exception: Unless designed in accordance with Section 404:

1. The unsupported height of 6-inch (152 mm) plain masonry walls shall be no more than 3 feet (914 mm).
2. The unsupported height of 8-inch (203 mm) plain masonry walls shall be no more than 4 feet (1219 mm).
3. The unsupported height of 8 inch (203 mm) reinforced masonry walls shall be no more than 8 feet (2438 mm).

For the purpose of this exception, unsupported height is the distance from the finished grade of the under-floor space ~~and~~ to the top of the wall.

Reason: This code change is editorial. The intent is to describe the term “unsupported height” as the distance from one reference point to another reference point. It is clearer to use that phrasing.

Cost Impact: No impact on cost because the change is editorial.

ICCFILENAME: Quinn-RB-2-R322.2.3

IRC11–09 CCC

Table R503.2.1.1(1)

Proponent: Edward L. Keith, PE, APA – The Engineered Wood Association

Revise as follows:

SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (inch)	ALLOWABLE LIVE LOAD (psf) ^{h, i}		MAXIMUM SPAN (inches.)		LOAD (pounds per square foot, at maximum span)		MAXIMUM SPAN (inches.)
		SPAN @ 16" o.c.	SPAN @ 24" o.c.	With edge support ^d	Without edge support	Total load	Live load	
40/20	19/32, 5/8	305	130	40	32	40	30	20 ^{h, i}
48/24	23/32, 3/4 8	--	175	48	36	45	35	24

(Portions of table not shown are unchanged.)

Reason: This code change makes 2 typographical corrections to Table R503.2.1. These are explained below”

1. Elimination of footnote h callout in “ALLOWABLE LIVE LOAD” cell at the top of column 3. (The font of the “h” has been increased to ease locating the change.) This is the incorrect location for the callout. Currently the footnote “h” is called out in 2 other locations in the last column on the right of the table. These locations are correct.
2. In the 48/24 row under “SPAN @ 16” o.c.”, the 3/48 value should be ¾. There is no such wood structural panel thickness and it is clear from the rest of the numbers in the column that ¾ is the correct value. This is in line with APA recommendations located on page 57 of APA’s Engineered Wood Construction Guide (Form number E30U), available free from apawood.org. Copies made available to committee members.

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

ICCFILENAME: Keith-RB-4-Table R503.2.1

IRC12-09 CCC

R613.5; R202

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

1. Revise as follows:

R613.5 Vehicular access Garage doors. ~~Vehicular access~~ Garage doors shall be tested in accordance with either ASTM E 330 or ANSI/DASMA 108, and shall meet the acceptance criteria of ANSI/DASMA 108.

2. Delete without substitution

SECTION R202 DEFINITIONS

~~**VEHICULAR ACCESS DOOR.** A door that is used primarily for vehicular traffic at entrances of buildings such as garages and parking lots, and that is not generally used for pedestrian traffic.~~

Reason: The purpose of the proposal is to replace the term “vehicular access” with “garage”, and consequently delete the definition of “vehicular access door”, since the term “garage door” or “garage doors” is already used through the code in Sections R301.2.1, R309.6 and R314.5.6 and does not need a definition.

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

ICCFLEAME: Hetzel-RB-1-R612.7

IRC13-09 CCC

R802.1.3

Proponent: Bob Eugene representing Underwriters Laboratories Inc

Revise as follows:

R802.1.3 Fire-retardant-treated wood. Fire-retardant- treated wood (FRTW) is any wood product which, when impregnated with chemicals by a pressure process or other means during manufacture, shall have, when tested in accordance with ASTM E 84 or UL 723, a listed flame spread index of 25 or less and shows no evidence of significant progressive combustion when the test is continued for an additional 20-minute period. In addition, the flame front shall not progress more than 10.5 feet (3200 mm) beyond the center line of the burners at any time during the test.

Reason: UL 723 is an alternative standard to ASTM E84, as determined in the last code cycle.

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

ICCFLEAME: Eugene-RB-5-R802.1.3

IRC14-09 CCC

R906.1

Proponent: Bob Eugene representing Underwriters Laboratories Inc

Revise as follows:

R906.1 General.

The use of above-deck thermal insulation shall be permitted provided such insulation is covered with an approved roof covering and ~~passes~~ complies with FM 4450 or UL 1256.

Reason: The insulation needs to comply with the standard. The term ‘passes’ is not definitive.

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

ICCFLEAME: Eugene-RB-6-R906.1

IRC15–09 CCC

R1002.6

Proponent: Bob Eugene representing Underwriters Laboratories Inc

Revise as follows:

R1002.5 Masonry heater clearance. Combustible materials shall not be placed within 36 inches (914 mm) of the outside surface of a masonry heater in accordance with NFPA 211 Section 8-7 (clearances for solid-fuel-burning appliances), and the required space between the heater and combustible material shall be fully vented to permit the free flow of air around all heater surfaces.

Exceptions:

1. When the masonry heater wall is at least 8 inches (203 mm) thick of solid masonry and the wall of the heat exchange channels is at least 5 inches (127 mm) thick of solid masonry, combustible materials shall not be placed within 4 inches (102 mm) of the outside surface of a masonry heater. A clearance of at least 8 inches (203 mm) shall be provided between the gas-tight capping slab of the heater and a combustible ceiling.
2. Masonry heaters ~~tested and listed by an American National Standards Association (ANSI)-accredited laboratory to the requirements of~~ listed and labeled in accordance with UL1482 may be installed in accordance with the listing specifications and the manufacturer's written instructions.

Reason: Only listed products that are labeled have been subjected to periodic, unannounced inspections during production. There are other laboratory accreditation bodies recognized by building officials. Listing by definition requires an agency approved by the building official.

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

ICCFILENAME: Eugene-RB-12-R1002.5